

**OAN 77-2019  
REMOTE DE-ICING PAD OPERATION**

<b>OAN REF:-</b>	77/2019	<b>DATE OF ISSUE:-</b>	24/07/19	<b>EFFECTIVE DATE:-</b>	31/07/19
<b>MANUAL REFERENCE(S):-</b>	N/A			<b>EXPIRY DATE:-</b>	N/A

PLEASE ENSURE THIS INFORMATION IS PROMULGATED TO ALL STAFF

**1.0 SUMMARY**

1.1 Manchester Airport, in collaboration with Menzies Aviation, EasyJet and Jet2.com, will be trialling the concept of a remote de-icing pad for Winter 2019/2020. However, a pre-season test of the process will be undertaken at the end of July.

**2.0 PROGRAMME**

2.1 The remote de-icing pad test will take place on the Wednesday 31<sup>st</sup> July 2019, during first wave operations.

2.2 The approximate operational times will be 05:00 – 09:00hrs local.

**3.0 LOCATION**

3.1 The remote de-icing pad is located between intermediate taxiway hold points (IHP) Bravo 4 (B4) and Bravo 5 (B5).

3.2 The remote de-icing pad can operate in either an Easterly or a Westerly direction.

**4.0 DE-ICING PAD LAYOUT**

4.1 The remote de-icing pad can accommodate 2 x Code-C aircraft. This consists of 1 aircraft being de-iced and 1 aircraft in the standby position.

4.2 ATC may use adjacent taxiways to hold additional aircraft and/or circulate aircraft around taxiway islands to maximise flow to the de-icing pad.

4.3 Taxiway Bravo between IHP B4 and B5 will remain as a Code E Taxiway at all times when the de-icing pad is not in use.

### 5.0 PRE-PLANNING

- 5.1 Menzies Aviation, in collaboration with EasyJet and Jet2.com, will determine which aircraft are to be de-iced within the pad and enter the appropriate code into Chroma. This will be undertaken every evening for the following day to assist the Airline, ATC, Airfield Control and the Ground Handlers by knowing in advance where the aircraft is to be de-iced.
- 5.2 Menzies Aviation have the ability to amend the plan as dynamic scenarios dictate. Communication is extremely important when a change occurs and Menzies Aviation must amend Chroma but also support with verbal communications to airlines, GHAs, Airfield Control and ATC.

### 6.0 REMOTE DE-ICING PAD LOCATION AND DESIGN

- 6.1 The remote de-icing pad is located on Taxiway Bravo, between ITHPs Bravo 4 and Bravo 5.
- 6.2 The remote de-icing pad can be utilised in either a Westerly or an Easterly direction.
- 6.3 The remote de-icing pad can accommodate 2 x Code C aircraft (A320/B737), 1 position for active de-icing and 1 position for standby (aircraft reconfiguration for de-icing).
- 6.4 During active de-icing operations Taxiway Bravo between IHP Bravo 4 and 5 will be operated as a code C taxiway.

### 7.0 AIRCRAFT PUSHBACK AND TAXI

- 7.1 Aircraft will request pushback clearance in the normal way.
- 7.2 When the remote de-icing pad is operating efficiently, ATC will aim to pushback aircraft when the de-icing and standby position in the remote de-icing pad is occupied. This should allow the aircraft to push, start and taxi directly into the standby position (as by this time the standby aircraft will now be engaged in active de-icing). This will ensure a continuous supply of aircraft to the remote de-icing pad.
- 7.3 Aircraft will request taxi clearance to the remote de-icing pad and continue under own power as directed by ATC.
- 7.4 At an appropriate point, ATC will hand the aircraft onto the remote de-icing Pad Controller (call sign 'Menzies De-icing') on 135.005 MHz Aircraft should ensure that their standby frequency is selected as Manchester Ground on 121.855 MHz in case of emergency.

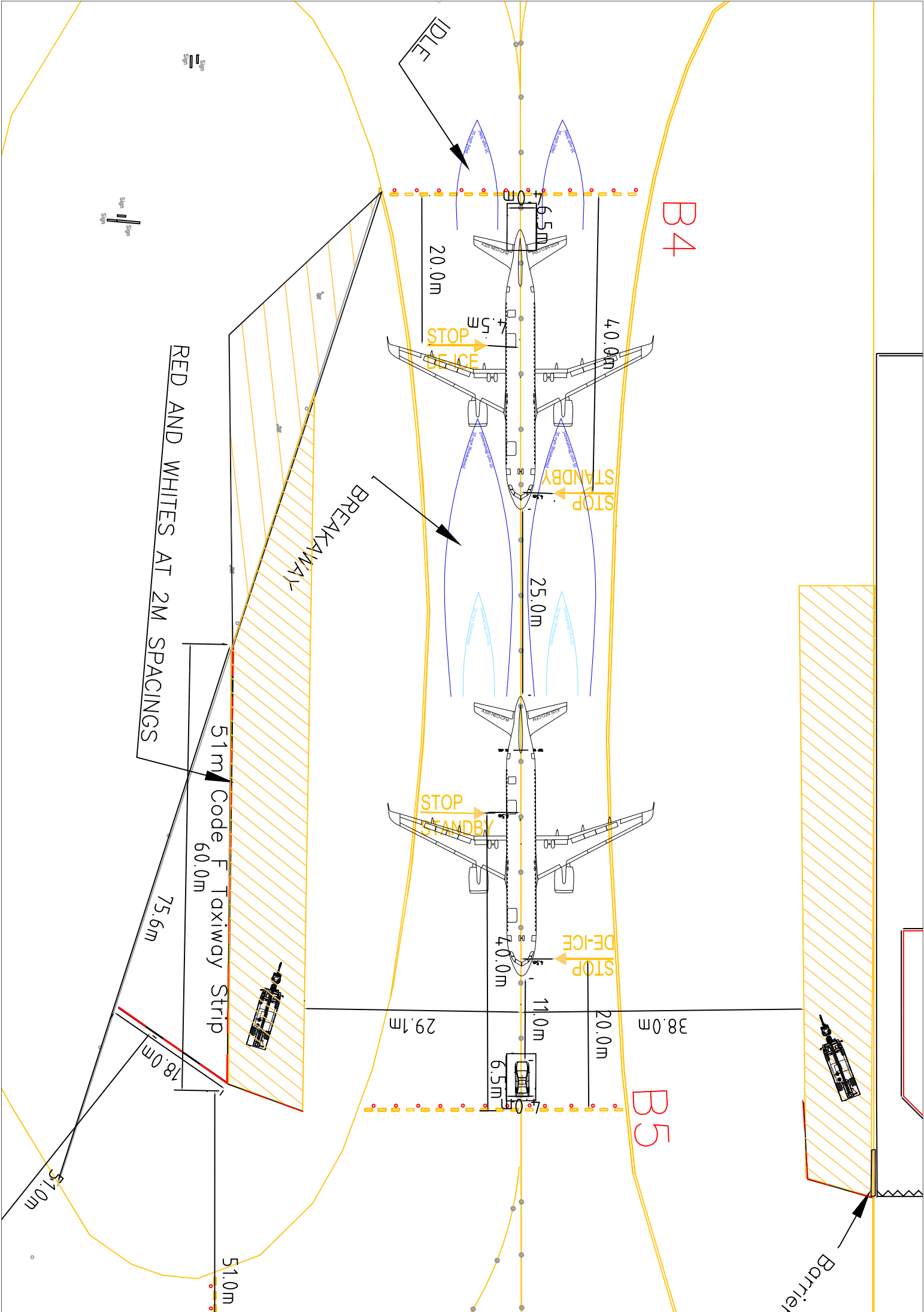
### 8.0 ENTERING THE REMOTE DE-ICING PAD

- 8.1 Aircraft will either stop abeam (commander side) the 'STOP DE-ICE' or 'STOP STANDBY' depending on traffic in the pad. Expediency of aircraft movements is paramount to ensure efficiency of the remote de-icing pad is maintained.

- 8.2 The aircraft Commander will then configure and prepare their aircraft for de-icing. Aircraft will ideally be configure their aircraft in the standby position.
- 8.3 When safe to do so and the de-icing pad aircraft position is clear, the Commander of the queuing aircraft will taxi their aircraft on to the pad to the 'STOP DE-ICE' position and set the parking brake.
- 8.4 **NOTE:** If both the aircraft queuing position and de-icing pad position are both clear of aircraft, the aircraft Commander shall immediately enter the de-icing pad and come to a stop at the 'STOP DE-ICE' position and set the parking brake.
- 8.5 Using the aircraft registration as the call-sign, the remote de-icing Pad Controller (call sign 'Menzies De-icing') will contact the aircraft Commander on 135.005 MHz to confirm that the aircraft parking brake is set, the aircraft is configured for de-icing and to request any details as to specific requirements.
- 8.6 All remote de-icing pad servicing vehicles are to remain in the paint marked Safe Zones whilst aircraft are manoeuvring on the remote de-icing pad. This ensures vehicles remain clear of the Code-C taxiway strip.
- 9.0 OPERATING WITHIN THE REMOTE DE-ICING PAD**
- 9.1 If for any reason the aircraft, having entered the de-icing pad is not in the correct position on the taxiway, either in relation to the designated 'Stop' position or in relation to the Taxiway Centre Line, the de-icing Pad Controller will ask the aircraft Commander to contact MANCHESTER GROUND on VHF radio on frequency 121.855 MHz to request permission to taxi the aircraft around in order to reposition in the correct position within the remote de-icing pad.
- 9.2 Prior to utilising the de-icing rigs for remote 'engines running' de-icing, a FOD check for loose items will be completed by the driver in addition to ensuring the equipment doors on the de-icing rig equipment bays are securely fastened in the closed position.
- 9.3 Each de-icing rig involved in the de-icing process shall remain in the Safe Zone, with the de-icing rig positioned so that the de-icing rig faces the flight deck of the aircraft when the aircraft has come to a stop on the remote de-icing pad. The Safe Zone shall be a previously designated and identified area adjacent to the pad. Each de-icing rig will remain in its Safe Zone until instructed to move by the de-icing Pad Controller.
- 9.4 The Pad Controllers vehicle will then enter the taxiway and stop in position with the handbrake applied in front of the aircraft nose, leaving sufficient space to enable the flight crew to clearly see the vehicle. This vehicle position is the required visual method of communication with the aircraft Commander and will prevent the aircraft being inadvertently moved forward during the de-icing process. The de-icing Pad Control vehicle shall remain stationary in front of the aircraft nose throughout the de-icing process and will only vacate the remote de-icing pad when all de-icing rigs and personnel have vacated the taxiway area.

- 9.5 Only when the flight crew have confirmed that the 'aircraft is prepared for spraying' shall the de-icing process commence.
- 9.6 Only when the de-icing Pad Controllers vehicle is in position in front of the aircraft nose, with the parking brake set, shall the de-icing Pad Controller communicate to each de-icing rig via UHF radio to pull forward and position itself adjacent to the leading edge of the aircrafts port and starboard wings.
- 9.7 Before leaving the marked Safe Zone area, each de-icing rig crew will position the MEWP to ensure that the lower surface of the basket floor is elevated to a height to provide 1.5 metres clearance from the upper surface of the aircraft engine. This shall be the minimum height position for the MEWP whilst engaged in de-icing activities on the remote de-icing pad. Only when the de-icing rig re-enters the Safe Zone may the MEWP basket then be lowered below this minimum height position. This MEWP position also provides for a good 360° view whilst the de-icing rig is manoeuvring. Whilst the basket is in the elevated position the de-icing rig speed limiter will also automatically engage
- 9.8 The route taken into the de-icing pad by each de-icing rig will always be the same route to exit the pad.
- 9.9 Each de-icing rig will manoeuvre and position adjacent to the aircraft airframe strictly in accordance with the 'STOP POSITIONS FOR OPEN BASKET DE-ICING RIGS' diagram, which may be found within the Appendices of this Process.
- 9.10 The de-icing Pad Controller shall advise the aircraft Commander that the de-icing process will now commence.
- 9.11 The aircraft shall be de-iced/anti-iced in accordance with Menzies Aviation Company Procedures and all supplementary instruction provided by the de-icing Pad Controller.
- 9.12 The de-icing Pad Controller will maintain a constant listening watch on ATC MANCHESTER GROUND Frequency 121.855 MHz, as well as the dedicated de-icing frequency 135.005 MHz. UHF radio communication between the de-icing Pad Controller and the de-icing rigs shall be maintained throughout the de-icing process, albeit whilst the de-icing is in progress the radio communication with each de-icing rig will be minimal.
- 9.13 Each de-icing rig engaged in remote de-icing processes is fitted with a mounted anemometer instrument, linked to a digital display mounted within the de-icing rig drivers cab and visible to the de-icing rig driver at all times. The purpose of the fitted anemometer is to provide additional reference for the de-icing rig driver to ensure that the de-icing rig remains outside of the main engine efflux. The maximum permissible velocity reading on the anemometer display shall be no more than 20 metres/second, which is equal to 45mph or 72kph.
- 9.14 If the de-icing Pad Controller loses clear VHF communications with the Flight Crew, a call to ATC MANCHESTER GROUND on frequency 121.855 MHz will request that remote de-icing is suspended, until such time that VHF communications with the aircraft are re-established. In all cases two UHF and two





B4

B5

IDLE

BREAKAWAY

RED AND WHITES AT 2M SPACINGS

51m Code F Taxiway Strip

Barrier

STOP DE-ICE

STOP STANDBY

STOP STANDBY

STOP DE-ICE

29.1m

38.0m

20.0m

25.0m

4.0m

6.5m

20.0m

4.0m

11.0m

4.0m

6.5m

4.0m

4.0m

6.5m

51.0m

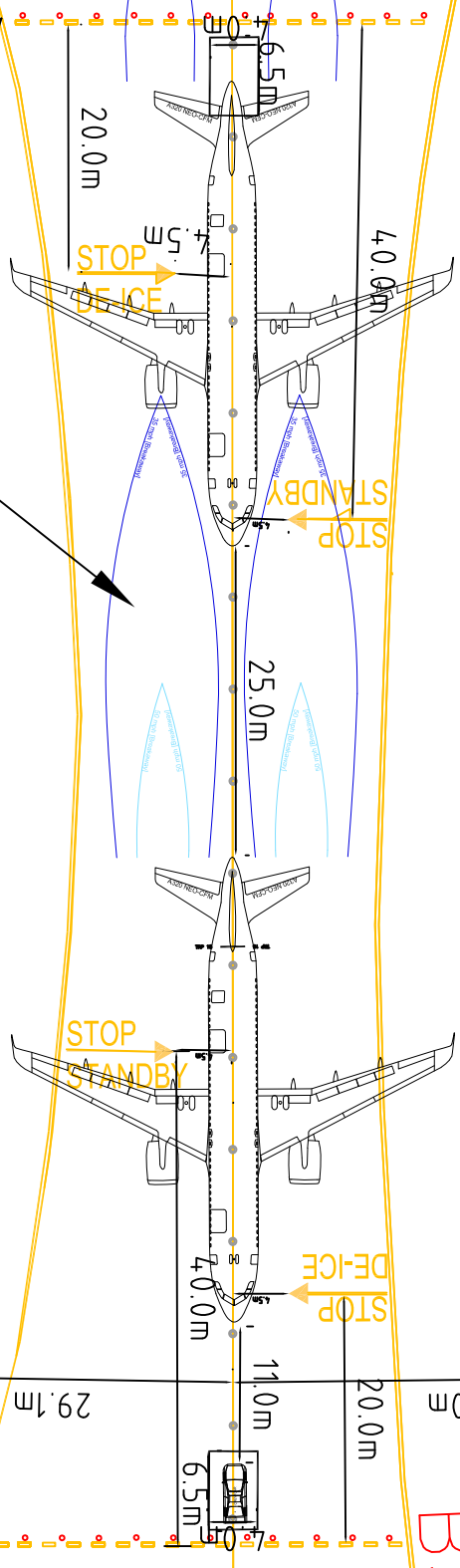
75.5m

18.0m

51.0m

sign

sign

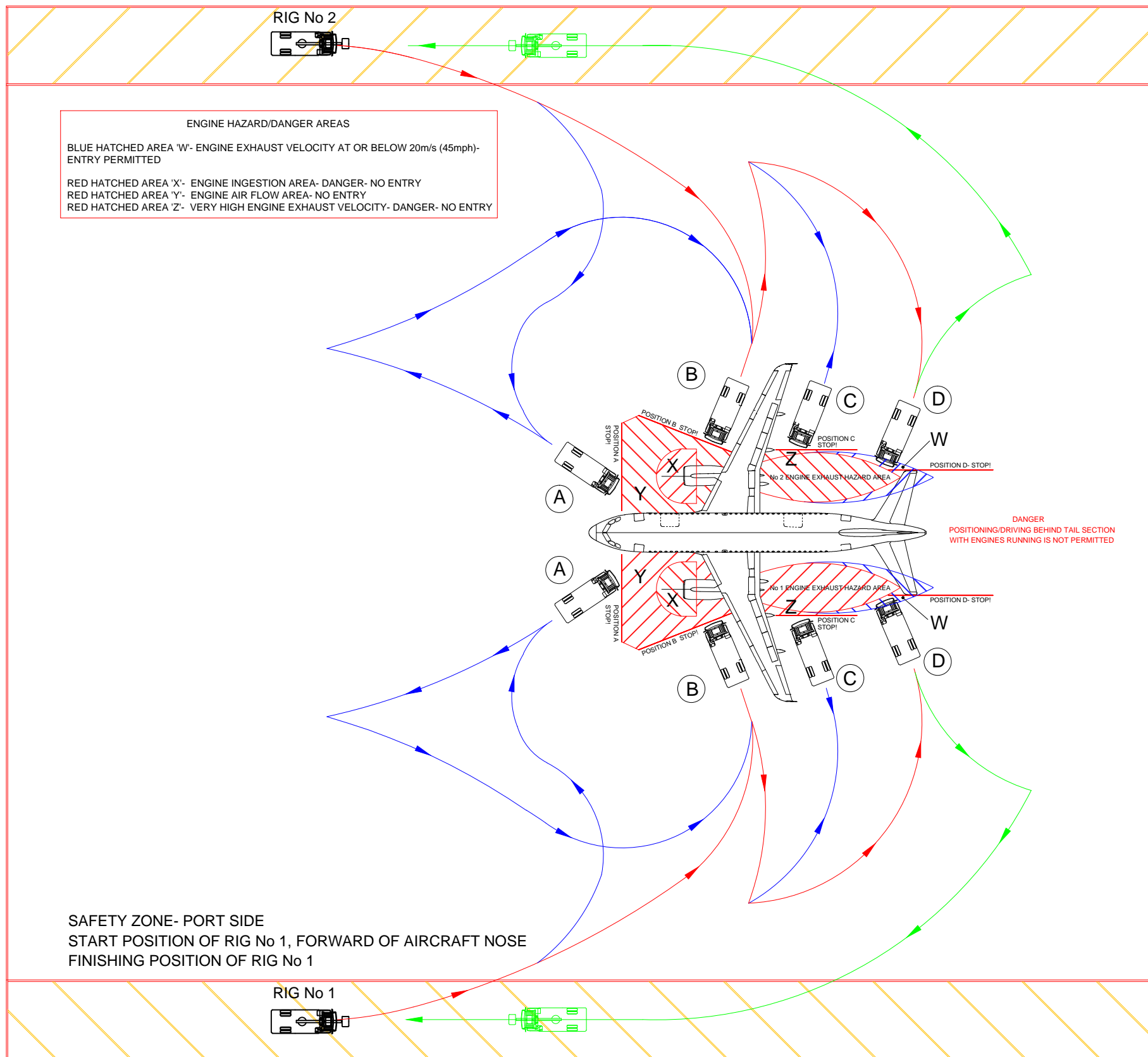




VERSION 3- 3/3/16

SAFETY ZONE- STARBOARD SIDE  
 START POSITION OF RIG No 2, FORWARD OF AIRCRAFT NOSE  
 FINISHING POSITION OF RIG No 2

- APPROACH ROUTE FROM SAFE ZONE TO DE-ICE MAIN WINGS AND TAIL SECTION
- APPROACH ROUTE FROM SAFE ZONE TO DE-ICE FORWARD / REAR SECTION OF FUSELAGE
- EXIT ROUTE FROM PAD TO SAFE ZONE



D



POSITION D- STOP! BEFORE OR WHEN MOST FORWARD CORNER OF CAB IS LEVEL WITH TIP OF HORIZONTAL STABILISER. DO NOT DRIVE RIG FORWARD OF THIS POINT. CAGE MUST BE ELEVATED ABOVE THE WINDOW LINE TO STAY CLEAR OF ENGINE EXHAUST

C



POSITION C- STOP! BEFORE FRONT OF CAB IS LEVEL WITH FAIRING OUTBOARD OF ENGINE. DO NOT DRIVE PAST THIS POINT. CAGE MUST BE ELEVATED ABOVE THE WINDOW LINE TO STAY CLEAR OF THE ENGINE EXHAUST

B



POSITION B- STOP SHORT! OF OUTBOARD ENGINE COWLING. CAGE TO BE ELEVATED ABOVE WINDOW LINE DO NOT SLEW OVER ENGINE PYLON/COWLING

A



POSITION A- STOP! WHEN MOST FORWARD CORNER OF CAB IS LEVEL WITH SIDE FLIGHT DECK WINDOW. DO NOT DRIVE PAST THIS POINT. CAGE MUST BE ELEVATED ABOVE THE HEIGHT OF THE FUSELAGE

PAD DE-ICING CODE C AIRCRAFT WITH ENGINES AT IDLE  
 STOP POSITIONS FOR DE-ICING RIGS

## Remote Engines Running Deicing/Anti-icing

### VHF Communications Protocol

Deicing Controller	Aircraft Commander
<b>On Aircraft arrival at the Remote Deicing Pad.</b>	
	“Menzies Deicing - <i>Aircraft Registration</i> ”
“ <i>Aircraft Registration</i> , Set parking-brakes, confirm aircraft is ready for treatment, inform special requests”	
	“Brakes set, aircraft prepared for spraying, ... (any special requests e.g. frost patches on top of wing, snow on fuselage, anti-ice with Type IV fluid, anti-ice wings, tail and fin only etc.)”
We begin treatment now and observe ... (special request given, like “snow on fuselage”, etc.). I will call you back when ready	
<b>ONLY AFTER EQUIPMENT IS CLEARED FROM AIRCRAFT AND ALL CHECKS ARE MADE:</b>	
“ <i>Aircraft Registration</i> , Menzies Deicing”	
	“Menzies Deicing, <i>Aircraft Registration</i> – Go ahead”
“Deicing/anti-icing completed, Anti-icing Code is ..... Contact ground for taxi clearance”	
	De-icing/anti-icing completed, anti-icing code is .....
“Contact MANCHESTER GROUND on 135.005 MHz”	

The **ANTI-ICING CODE** consists of:


1) Fluid type. 2) Concentration (Type IV only). 3) Local time (hh:mm) at the beginning of the final deicing/anti-icing step. 4) The date (dd/mm/yyyy). 5) Complete name (“brand name”) of anti-icing fluid (Type IV only), 6) The statement “post de-icing/anti-icing check completed, rigs clear of pad”

Example:

Type IV 75% 13:35 (20 DEC 2018) Kilfrost ABC-S Plus  
 “Post de-icing/anti-icing check completed, all equipment is clear of pad”

***A trained and qualified person shall confirm that both the treatment was performed symmetrically and that all frozen contamination has been removed.***



<b>ORIGINATOR:-</b> (PRINT NAME)	<b>C WILD</b>	<b>CONFIRMED &amp; APPROVED BY:-</b> (PRINT NAME)	<b>E Yates</b>
<b>ROLE:-</b>	<b>HEAD OF AIRSIDE OPERATIONS</b>	<b>ROLE:-</b>	<b>Airfield Technical Planner</b>
<b>SIGNATURE:-</b>		<b>SIGNATURE:-</b>	