

Apron Management

Airside Operational Instruction 05

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AOI 05 Owner - Head of Fire & Airfield Operations



1. AIRCRAFT PUSHBACK PROCEDURES

1.1 a. Central Apron.

- Pushback plans are located at Appendix 1 of this section.
- Stand directory is located in Appendix A of this section.
- Stands 20-22 and 24-25 are self-manoeuvring.
- Stand 31 is self-manoeuvring for aircraft up to JS41 dimensions

b. East Apron

- Pushback plans are located at Appendix 2 of this section.
- Stand directory is located in Appendix A of this section.
- Before operators are able to pushback code 'E' aircraft, EMA Airfield Operations are to safeguard the area to the rear of stand 73 – 75.
- Stand 70R is self-manoeuvring.

c. West Apron

- Pushback plans are located at Appendix 3 of this section.
- Stand directory is located in Appendix A of this section.
- Stands 99 and 100 may push to face east or west on Bravo taxiway or push into Juliet taxilane to face north.

1.2 ATC Procedures

- a. All aircraft must have ATC permission before starting any pushback. This can be obtained on frequency 124.00mhz (tower) or 121.9 MHz (ground). Once the movement has started, all aircraft are under the guidance of ATC and therefore must comply with ATC instructions. Speech communication should be maintained between the aircraft flight deck and the pushback crew so that any ATC instruction during pushback can be acted upon promptly.
- b. Occasionally the procedures may have to be modified due to work on the aircraft movement area or for operational reasons. Operators should be aware that NOTAM and/or Operational Advice Notice publish such temporary conditions. In order that safe operation may be assured, it is essential that flight and pushback crews are kept briefed on these published procedures. This is the responsibility of the operator.
- c. Aircraft may, at the discretion of the ATC Controller be requested to be pushed from stands 09 through 14 onto stands 20 through 25. This procedure will only be undertaken if the controller has visual contact with the north side of the Central Apron and can see that the procedure will not have an adverse effect on aircraft safety nor cause interference with other ramp operations.
- d. Aircraft pushing back to face west on stands 9 thru 14 do not now require a full pushback into Romeo. Pushbacks from the afore-mentioned stands should now, upon completion enable the nose wheel of the aircraft to be positioned on the stand

23 lead-in arrow, the tow bar should only be disconnected once in this location (see appendix 6). Aircraft on stands 9 thru 11 should push back and pull forward to achieve this. The positioning of the nose wheel on the stand 23 lead-in arrow is to prevent jet blast issues on stand 7.

1.3 Operating Procedure

- a. EMA does not seek to influence the detailed technical content of push-back procedures which are the clear responsibility of the airline or operator concerned, however the following general requirements are to be met:
 - i. Operators or airlines must ensure that they have comprehensive, written procedures for each aircraft type operated, for use by their crews for pushbacks.
 - ii. Operators must ensure that they have carried out a suitable and sufficient risk assessment of their pushback operation, and to ensure that all measures have been taken to control any potential risks.
 - iii. All ground crew must be trained in the use of the procedures and be certified as competent by a suitably qualified instructor.
 - iv. Operators should nominate a person in charge of the pushback operation.

1.4 Safety Procedures

- a. Aircraft must only pushback as directed by ATC and as illustrated in the pushback plans in Appendix 1, 2 and 3. Crews must not push aircraft into any area that is not the designated pushback area for that stand without prior permission of, and consultation with, EMA Airfield Operations. When any change or deviation from the standard procedure takes place, ATC and push-back crew are all to be thoroughly briefed by Airfield Operations of the agreed alternative procedure and details logged within the EMA Airfield Operations deviations database.
- b. Anti-collision and navigational lights must be switched on before aircraft movement
- c. Turboprop and jet engine aircraft may only start engines on stand with the prior permission of ATC. Permission to start jet engine aircraft on stands 4-7 (East side), 8-17 (Front) and 23 (North edge) will only be given if it can be assured that all precautions have been taken to ensure traffic safety on the apron roadway system.
- d. There are no parking restrictions on aircraft requiring an 'air start', however 'cross-bleeds' will not be allowed until the aircraft is on the taxiway.
- e. In order to ensure that no ground handling personnel, employed as part of a push back crew are exposed to unsafe levels of jet blast on the central west apron, ATC will only issue simultaneous push/start clearances from stands 40 and, either 44 or 45. During simultaneous pushback's, aircraft from stands 44 or 45 are to face north. Aircraft pushed from stand 40 are to push back onto the taxi lane facing north abeam stand 41 and then be pulled forward to abeam stand 40. If no simultaneous

push/start clearance is given for an aircraft from stand 44 or 45 then the push back / pull forward from stand 40 will be issued as push back (no pull forward required).

- f. If a change to pushback procedure occurs as a result of work in progress or other requirement, temporary instructions will be promulgated in an Ops Advice Notice.
- g. While the pilot is ultimately responsible for the safety of their aircraft, they cannot realistically satisfy himself that the area into which they are being pushed is safe without outside assistance, nor necessarily be aware of all the hazards their jetblast/propwash etc. may create. ATC will be aware of which stands are vacant of aircraft and where work is in progress and will ensure that conflicts do not occur between moving aircraft. They do not however have sufficient view of the apron to ensure that individual equipment, vehicles or personnel are clear of the stands especially at night or in poor visibility. It is therefore the responsibility of the pushback crew to ensure that the area immediately behind the aircraft is clear and that there is no risk of collision or potential jetblast/propwash problems. The pushback crew must ensure that the pilot is informed of any potential hazard to or from the aircraft and advise them to use minimum breakaway thrust where they can see that a blast hazard may exist.
- h. The stands at EMA are multi-use configuration therefore extra care must be used when pushback takes place.
- i. When pushback is complete, the tug and crew must return to the apron roadway via the shortest possible route. Reversing is to be kept to an absolute minimum.
- j. Crews pushing back from stands 4-5 (East side), 8-17 (Front) and 23 (North edge) must satisfy themselves, through the use of "Tail/Wing men", that no risk exists for conflict with vehicles or equipment using the apron roadway.
- k. The "Tail/Wing man" should be in a position to direct traffic on the apron roadway system as soon as the push back tug is attached to the aircraft and the aircraft doors are closed. The "Tail/Wing man" should allow traffic to continue to use the apron roadway system until the aircraft is ready to start its engines or to push back.
- l. Stands 21 and 24 are taxi-in, taxi-out, however restrictions apply, notably when stand 20 is occupied by B767-200W or stand 25 is occupied (by a B757). Departures for all B767-type aircraft from stand 20 are (due to taxiway Romeo code C limitations) restricted to push back onto taxiway Charlie abeam stand 10 to vacate via Quebec. Where any doubt exists as to the appropriate clearance, an assessment should be made by Airfield Ops to ascertain wingtip clearance prior to departure.
- n. Aircraft on stand 45 should push back to the bespoke area delineated by inverted T marking. Aircraft to then taxi forward onto the November taxiway centreline from this point. Pushback plan for stand 45 is included within the Central & Central West Aprons pushback plans (Appendix 1).

2. AIRCRAFT PARKING AND SAFETY PRACTICES

2.1 General

- a. It is a requirement at EMA that all aircraft/helicopters wishing to park on the aprons are marshalled onto stand.
- b. Marshalling of aircraft is to be carried out by the handling agent of the aircraft wishing to use the apron, or by EMA Airfield Operations personnel.
- c. Standard aircraft marshalling signals, as laid down in CAP393 Section 2 'Rules of the Air Regulations 2015 are to be used in all instances. By day any such signals shall be given by circular bats and at night by illuminated wands with a minimum luminosity of 30 candela.
- d. Only staff holding current EMA marshalling licence are allowed to carry out this function (personnel undergoing training are exempt providing they are accompanied by a qualified EMA marshalling licence holder).
- e. All stands are designed such that the marshaller should park the aircraft with the nose level with the taxi line 'T' bar. On certain stands, dedicated nose-wheel markings are available; these should only be used for the appropriate aircraft type
- f. In normal situations, marshallers must aim to ensure that they indicate to the aircraft to follow the markings painted on the apron so as to ensure that they maintain adequate safety clearances from fixed obstacles. This is a minimum 20% of aircraft wingspan.
- g. Before marshalling aircraft onto stands, marshallers must ensure that the parking area is free from Foreign Object Debris (FOD) and any obstructions such as pre-staged equipment. All service equipment should be a minimum of 4.5m from the 'T' and must not encroach into the stand area.
- h. Aircraft arriving on stand may require the marshaller to stand in or near to an apron road; as such the marshal could use their vehicle to assist in safeguarding the road if practical to do so, this is not a mandatory practice. To further protect the marshal and also to ensure there is no distraction to the flight crew, vehicles are not permitted to drive behind the marshal unless given permission by the marshal or in emergency situations.
- i. In the case of simultaneous arrivals onto 2 adjacent stands, disembarking passengers from the first arriving aircraft must be held until the second arriving aircraft is stationary on its allocated stand.
- j. For simultaneous arrival and departure from 2 adjacent stands, the departing aircraft is to be held until the arriving aircraft is stationary on stand.

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- k. In exceptional circumstances or for the maintenance of competency EMA reserves the right to marshal any aircraft onto stand. If this is the case the Operations Control Room will notify the handling agent or airline of this before arrival.
- 2.2 Maintenance Area Operations
- a. Aircraft parking in the maintenance area should be marshalled into position by a qualified marshaller holding a valid EMA Marshalling Licence. Wingtip obstacle clearance marshallers may be required to ensure clearances are maintained from other aircraft, buildings or temporary obstacles.
- b. Intermediate Taxi Holding Position's, located on the Mike taxiway at the intersection with Maintenance Area North and Maintenance Area South, are defined as Mike 4 and Mike 5 (see appendix B). Aircraft holding at either holding position should call EMA ATC for onward taxi clearance. Taxiway Mike south of Holding Point M3 is certified as Code C for public transport operations to abeam the turn into hangar 29. Surface markings, identified by Intermediate Taxi Holding Points, nominated as M4 and M5 are provided at this point to delineate the boundary between the 'Mike' taxiway and the Third Party Managed Area within the Maintenance Area
- c. Aircraft up to and including code C can taxi into the Maintenance Area North, via holding point M4. As per 2.2a all aircraft must be under positive marshall control and obstacle marshall/wing-walker(s) should be used as required.
- d. Code C aircraft departing from Maintenance Area North, should in all instances be towed up onto the Mike Taxiway, via holding point M4, subject to clearance from ATC. Engines can be started only when the aircraft is on the Mike taxiway facing north. Code B or below can self-manoevre up to holding point M4 with onward clearance from ATC.
- e. Code C aircraft can taxi to and from Maintenance Area South via holding point M5, (ATC onward clearance required from M5 for departing aircraft).
- f. Code D aircraft must be towed into the Maintenance Area from an apron stand, departing Code D aircraft should likewise, be towed to a nominated apron parking stand
- g. Aircraft pushed and parked on the maintenance area fingers should in all instances be towed on to the Mike taxiway to face north, before engine start/departure. Aircraft parking on the fingers without a tow bar and capable of turning to park (limited to light GA) are permitted to self-manoevre off.
- h. Aircraft parking on the washbay permitted to self-manoevre off (twin engine only, up to Gulfstream 5) should in the first instance be marshalled on (facing east), turned south, and then turned to park facing west. This manoeuvre removes potential jet blast issues from the maintenance area gate.

- i. Aircraft parking at the south end of hangar 35 should, in the first instance be marshalled to the most southerly end of the Mike taxiway, turned to face west then turned north and east through 180° and park facing east. This manoeuvre removes potential jet blast issues from hangar 35.
- j. Maintenance area parking arrangements are detailed in Appendix B.

2.3 West apron remote aircraft parking stands

- a. Four aircraft parking areas, capable of accommodating aircraft up to AN-124 dimensions are situated on the eastern side of taxilane Juliet on the west apron. They are designated as Stands 200 to 203 (from north to south) and are **non-**operational stands to be used for parking purposes only.
- b. As per standard practice, the Operations Control Room will allocate each stand on a request / as required basis.
- c. The following operational requirements should be adhered to when using stands 200 to 203.
 - All aircraft must be towed-on and towed-off these stands.
 - Engine shutdown and start should take place on the Juliet taxilane only.
 - No engine runs or engine start/shutdowns should take place whilst the aircraft is on stands 200-203 as this may result in blast damage to cars parked in Long Stay 4 car park and issues for any vehicles using the central/west apron link road.
 - No refuelling to take place on stands 200-203.
 - No cargo unloading/loading to take place on stands 200-203.
 - *Minor* aircraft line maintenance can be performed on stands 200-203.
 - If stand 200 is to be used for an AN124, B747-8F or A380 then stands 98 and 120 must be clear when the aircraft is being towed on/off stand 200.
- d. Taxilane Juliet is code D; any aircraft with a wingspan greater than 52m being towed along this taxilane must have wingmen on each wingtip.
- e. Aircraft accessing stands 125L&R on the west apron taxi in along the uncontrolled crossing, during these manoeuvres any vehicles using the crossing should remain behind the painted STOP sign (south of the Head of Stand equipment park). On departure, the crossing should be manned at the STOP mark to prevent vehicles trying to cross and also to eliminate any blast issues.

2.4 Isolated Aircraft Parking Position

EASA CS-ADR-DSN.F.370 defines the isolated parking position as an area suitable for the parking of an aircraft which is known or suspected to be the subject of unlawful interference, or for other reasons needs isolation from normal aerodrome activities.

“A designated parking area has been identified in the event of unlawful interference with aircraft (for example aircraft hijack). Details of this area are contained in the Aerodrome Emergency Plan”.

2.5 Follow Me Vehicles

- a. When Low Visibility operations/procedures are in force (below 300m only), all aircraft entering the central, central-west or east apron will be subject to a “follow me” vehicle. EMA will provide this service. The marshaller will take responsibility for the final positioning of the aircraft once it enters the stand area.

2.6 Special precautions for stands accessed/egressed through the rear of stand road

- a. When aircraft are parked onto stands 8–17, the marshaller will ensure that all vehicles are sufficiently clear for the aircraft to proceed onto stand.
- b. A minimum 7.5m wingtip to obstacle clearance must be maintained between the manoeuvring aircraft and stationary vehicles on the rear of stand road.

2.7 Approaching a Parked Aircraft

Marshalls are to ensure that no personnel or vehicles approach an aircraft which has just arrived onto stand until the anti-collision lights have gone out, it has been chocked and the engines have run down.

Note: It is possible that until suitable passenger steps have been located on the aircraft, the aircraft emergency escape slides may still be activated.

2.8 Equipment Parking

Dedicated on stand equipment parking is provided on each of the aprons at EMA.

Specific arrangements apply to the parking of equipment on the east apron at stand numbers 75, 76, 77 and 78. Additional equipment parking, within areas denoted by dashed white lines on these stands is available. These areas should only be used when there are no aircraft present and should be cleared prior to the arrival of an aircraft. No pre-staging of equipment in these areas is permissible.

Equipment should not be parked within any cross hatched area

Appendix A – Central & Central West Apron Stand Directory

CENTRAL & CENTRAL WEST APRONS

A321neo = A321neo & A320neo with Sharklets
B737-800SW = B737-800 with Scimitar winglets

Stand No.	MAX. WIDTH (m)	MAX. LENGTH (m)	LARGEST TYPES	COMMENTS /REMARKS
4	38.00	38.08	EMB-195	Nose-In / Push-Back
5	36.00	39.47	B737-800SW ; B737-MAX8	Nose-In / Push-Back
6	36.00	39.47	B737-800SW ; B737-MAX8	Nose-In / Push-Back
7	36.00	39.47	B737-800SW ; B737-MAX8	Nose-In / Push-Back
8	36.00	44.51	A321neo ; B737-800SW ; B737-MAX8	Nose-In / Push-Back
9	36.00	39.47	B737-800SW ; B737-MAX8	Nose-In / Push-Back
10	36.00	39.47	B737-800SW ; B737-MAX8	Nose-In / Push-Back
11	36.00	39.47	B737-800SW ; B737-MAX8	Nose-In / Push-Back
12L	28.42	32.94	DHC-8-Q400	Nose-In / Push-Back ; use in conjunction with stand 14L
12R	36.00	39.47	B737-800SW ; B737-MAX8	Nose-In / Push-Back ; use in conjunction with stand 14R
14L	50.90	54.94	B767-300W	Nose-In / Push-Back ; use in conjunction with stand 12L
14R	41.10	47.90	B757-200W	Nose-In / Push-Back ; use in conjunction with stand 12R
15	41.10	47.90	B757-200W	Nose-In / Push-Back
16	41.10	47.90	B757-200W	Nose-In / Push-Back
17	36.00	44.51	A321neo ; B737-800SW ; B737-MAX8	Nose-In / Push-Back
20	50.90	54.94	B767-300W	Nose-In / Push-back ; not to be used if 21, 22 or 23 in use
21	36.00	52.00	A321neo ; B737-800SW ; B737-MAX8	Taxi-in / Taxi-out ; not to be used if 20 in use
22	36.00	52.00	A321neo ; B737-800SW ; B737-MAX8	Taxi-in / Taxi-out ; not to be used if 20, 23 or 25 in use
23	36.00	52.00	A321neo ; B737-800SW ; B737-MAX8	Nose-in / Push-back ; not to be used 20, 22 or 25 in use
24	36.00	52.00	A321neo ; B737-800SW ; B737-MAX8	Taxi-in / Taxi-out ; not to be used if 25 in use
25	41.10	47.90	B757-200W	Taxi-in / Taxi-out ; not to be used if 22, 23 or 24 in use
30	35.80	45.06	A321 ; B737-800W ; MD-80	Nose-In / Push-Back
Stand 30 Nose T		(Length 37.58m to 45.06m)		A321 ; B717-200 ; B727-100/200 ; B737-800W ; B737-900 ; MD80/81/82/83 ; MD87 - pull front of nose to T
Stand 30 A320NW		(Length 33.81m to 37.57m)		A320 ; B146-300 ; B737-400 ; B737-700W ; CRJ-900 ; DHC-8-400 ; Fk-100 ; YAK42 - use nosewheel mark for nosewheel
Stand 30 A319NW		(Length up to 33.80m)		A319 ; AT-42/72 ; B146-100/200 ; B737-300/500/600 ; HS748 ; CRJ-700 ; DHC-8-100 ; EMB-135/145 - use nosewheel T for nosewheel
31	23.60	32.50	CRJ700 ; EMB145 ; J541	Nose-In / Push-Back ; Up to J541 can self-manoeuvre if held-back on J541NW T and minimal breakaway power used
32	35.80	39.50	B737-800W	Nose-In / Push-Back
33	35.80	39.50	B737-800W	Nose-In / Push-Back
40	35.80	39.50	B737-800W	Nose-In / Push-Back ; Not to be used if stand 42 in use
41	35.80	44.51	B737-800W ; A321neo	Nose-In / Push-Back ; Not to be used if stand 42 in use
42	60.93	63.73	B777-200 ; B787-800 ; A330-340-300	Nose-In / Push-Back ; Not to be used if 40 or 41 in use
43	35.80	44.51	B737-800W ; A321neo	Nose-In / Push-Back
44	35.80	44.51	B737-800W ; A321neo	Nose-In / Push-Back
45	35.80	44.51	B737-800W ; (A321)	Nose-In / Push-Back ; Suitable for A321 but pushback may be difficult. Use pushback T for B737-800W ideal positioning.

Appendix A – East Apron Stand Directory

EAST APRON			
Stand No.	MAX. WIDTH (m)	MAX. LENGTH (m)	LARGEST TYPES
Oct-17			
			COMMENTS / REMARKS
70R	22.81	21.58	SH380
70	31.23	33.40	B737-300 ; BAe ATP ; HS748
70L	41.10	47.32	B757-200W ; B737-800W ; A321
71 +	31.23	33.40	B737-300 ; BAe ATP ; HS748
72	41.10	47.32	B757-200W ; B737-800W ; A321
73 @	28.90	33.40	B737-300
73L	38.06	47.32	B757-200 ; B737-800W ; A321
74 @	47.57	54.94	B767-300
74L	38.06	47.32	B757-200 ; B737-800W ; A321
75R	29.20	36.40	B737-400 ; AN-26 ; Fk50 ; F27
75	47.57	54.94	B767-300
76R	29.20	36.40	B737-400 ; AN-26 ; Fk50 ; F27
76	47.57	54.94	B767-300
76L	29.20	36.40	B737-400 ; AN-26 ; Fk50 ; F27
77R	29.20	36.40	B737-400 ; AN-26 ; Fk50 ; F27
77	47.57	54.94	B767-300
77L	52.00	61.40	MD11 ; C17 ; DC10 ; B767-400
78R	29.20	36.40	B737-400 ; AN-26 ; Fk50 ; F27
78	47.57	54.94	B767-300
78X	41.10	47.32	B757-200W ; B737-800W ; A321
78L	29.20	36.40	B737-400 ; AN-26 ; Fk50 ; F27
79	30.83	36.50	BAe ATP ; B737-400
80	30.83	36.50	BAe ATP ; B737-400
Stands 70 to 80 are all nose-in / push-back stands			
Notes:			
+ Stand 71 can be used for most Code D aircraft but this renders Stands 70R, 70, 70L, 72, 73 and 73L unuseable			
+ Stand 71 can be used for most Code E aircraft but this renders Stands 70R, 70, 70L, 72, 73 and 73L unuseable and downgrades 74, 74L and 75 to max 47.32m length			
@ Stand 73+74 combos - 73=737-300 then 74=767-200(300 (not W) but if 74=757-200W then 73 can increase to 737-400			
Stand Usage Combinations:			
	70R/70+71+73+74/74L	(733+ATP+734+763)	77+78 (763+763)
	70L+72+74/74L	(752W+752W+763)	77R+78R+78L (734+734+734)
	70R/70+71+73L+74L	(733+ATP+752+752)	77L+78X (MD11+757W)
	70L+73L+74L	(752W+752+752)	
	71WIDE+74/74L	(744+762/752)	
Not to be used if Stand 71 used for a wide-bodied (Code D/E) aircraft			

Appendix A – West Apron Stand Directory

Stand No.	MAX. WIDTH (m)	MAX. LENGTH (m)	LARGEST TYPES	Comments/Remarks	Adjacency Rules
98	73.30	70.70	AN124 ; B747-400	Nose-in / Push-Back	Not to be used if 98, 120 or 121 in use
99	38.06	57.40	B757-200 (not B757-200W)	Nose-in / Push-Back	Not to be used if 98 or 100 in use
100	29.50	57.40	B737-400	Nose-in / Push-Back	Not to be used if 99 in use ; use in conjunction with 98
101	64.80	63.73	B777-200 ; MD11 ; A330-300	Nose-in / Push-Back	
102	50.90	54.94	B767-300W	Nose-in / Push-Back	
103	50.90	54.94	B767-300W	Nose-in / Push-Back	
104	44.85	54.94	A300-600	Nose-in / Push-Back	
105	44.85	54.94	A300-600	Nose-in / Push-Back	
106	41.10	54.94	B757-200W ; C130 ; AN12	Nose-in / Push-Back	Not to be used if 107 in use
107 **	73.30	80.40	AN124 ; B747-8F	Nose-in / Push-Back	Not to be used if 106 or 108 in use
108	41.10	54.94	B757-200W ; C130 ; AN12	Nose-in / Push-Back	Not to be used if 107 or 109(747) in use
109(757)	73.30	77.00	B757-200W ; C130 ; AN12	Nose-in / Push-Back	
109(747)	73.30	77.00	AN124 ; B747-8F	Nose-in / Push-Back	
110	41.10	54.94	B757-200W ; C130 ; AN12	Nose-in / Push-Back	Not to be used if 108 or 110 in use
111	73.30	77.00	B757-200W ; C130 ; AN12	Nose-in / Push-Back	Not to be used if 109(747) or 111 in use
112	41.10	54.94	AN124 ; B747-8F	Nose-in / Push-Back	Not to be used if 110 or 112 in use
114	44.85	54.94	B757-200W ; C130 ; AN12	Nose-in / Push-Back	Not to be used if 111 in use
120	50.90	54.94	A300-600	Nose-in / Push-Back	
121	50.90	54.94	B767-300W	Nose-in / Push-Back	Not to be used if 98 in use
122	30.63	36.40	ATP ; B737-400	Nose-in / Push-Back	Not to be used if 98 or 122 in use
123	30.63	36.40	ATP ; B737-400	Nose-in / Push-Back	Not to be used if 121 in use
124	28.89	36.40	B737-400	Nose-in / Push-Back	
125	41.10	47.33	B757-200W	Nose-in / Push-Back	Head of stand equipment area reduces in size if used by B757-200W
125L	15.08	20.00	Ce406 ; PA31	Taxi-in / Taxi-out	
125R	19.78	21.50	EMB120 ; SF340 ; METROLINER	Taxi-in / Taxi-out	
200	79.75	72.73	A380 ; AN124 ; B747-8F ; B747-400	Remote parking only	Access for Code F aircraft (A380/AN124/B748F) not allowed if 98 and 120 occupied
201	64.95	70.70	B747-400 ; A340-600 ; B777-300	Remote parking only	
202L	36.00	39.47	B737-800SW ; B737-MAX8	Remote parking only	Not to be used if 202 in use
202	51.76	54.94	C17 ; B767-300W ; A300-600	Remote parking only	Not to be used if 202L or 202R in use
202R	31.23	36.40	B737-400 ; ATP	Remote parking only	Not to be used if 202 or 203 in use
203	51.76	54.94	C17 ; B767-300W ; A300-600	Remote parking only	Not to be used if 202R or 203R in use
203R	36.00	39.47	B737-800SW ; B737-MAX8	Remote parking only	Not to be used if 203 in use
Notes:					
107 **	88.40	84.00	AN-225 ; A380	Nose-in / Push-Back	Not to be used if 106 or 108 in use. 105 & 109 downgrade to B757-200W max.
200	-	-	A380/AN124/B747-400	-	Stands 98 & 120 empty ; Wingtip clearance walkers required Port and Starboard
201	-	-	B747-400	-	Wingtip clearance walkers required Port and Starboard
Combos:					
99+120+121	-	-	B757-200+B767-300W+B767-300W		
98+100+122	-	-	AN124+B737-400+ATP/B737-400		
107+109+111	-	-	3 x AN124 / B747-8F		
106+108+109+110+112	-	-	5 x B757-200W		

Stands 200 to 202L - capacities and nosewheel positions

Dec-17

Stand 200			Stand 201			Stand 202			Stand 202L		
Max Span 80m			Max Span 65m			Max Span 52m			Max Span 32.36m		
Max Wheeltrack 14.1m			Max Wheeltrack 12.65m			Max Wheeltrack 11.25m			Max Wheeltrack - unlimited		
Aircraft	Nosewheel Mark		Aircraft	Nosewheel Mark		Aircraft	Nosewheel Mark		Aircraft	Nosewheel Mark	
A380-800	A388		B747-400	B744NW		C17	C17NW		BAe ATP	ATP	
AN124	A124NW		B777-200F	B744NW		B767-300W	B763NW		B737-300	B733/734	
B747-8	A388		A340-600	C17NW		IL-76	A306NW		B737-400	B733/734	
B747-400	B744NW		A340-500	B744NW		VC-10-ALL	B763NW		AN-72/-74	B733/734	
B777-200F	A124NW		A340-300	B744NW		A400M	A306NW		AN-26/-32	ATP	
A340-600	A388		A340-200	B744NW		A300-600	A306NW		B737-500	B733/734	
A340-500	B744NW		A330-300	B744NW		C130 / LOH	A306NW		Global Express	B733/734	
A340-300	A124NW		A330-200	B744NW		B757-200W	A306NW		Gulfstream5/6	B733/734	
A340-200	A124NW		B747-200/300	B744NW					DHC-8-Q400	B733/734	
A330-300	A124NW		B787-800	B744NW					ATR-42/-72	B733/734	
A330-200	A124NW		MD-11	B744NW					BAe 146-300	B733/734	
B747-200/300	B744NW		C17	C17NW					RJ100	B733/734	
B787-800	A124NW		B767-300W	B763NW							
MD-11	A124NW		IL-76	B744NW							
C17	C17NW		DC-10-ALL	B744NW							
B767-300W	B763NW		L1011-ALL	B744NW							
IL-76	A124NW		VC-10-ALL	B744NW							
DC-10-ALL	A124NW		A400M	B744NW							
L1011-ALL	A124NW		A300-600	A306NW							
VC-10-ALL	A124NW		C130 / LOH	B744NW							
A400M	A124NW		B757-200W	B744NW							
A300-600	A306NW										
C130 / LOH	A124NW										
B757-200W	A124NW										

Notes:

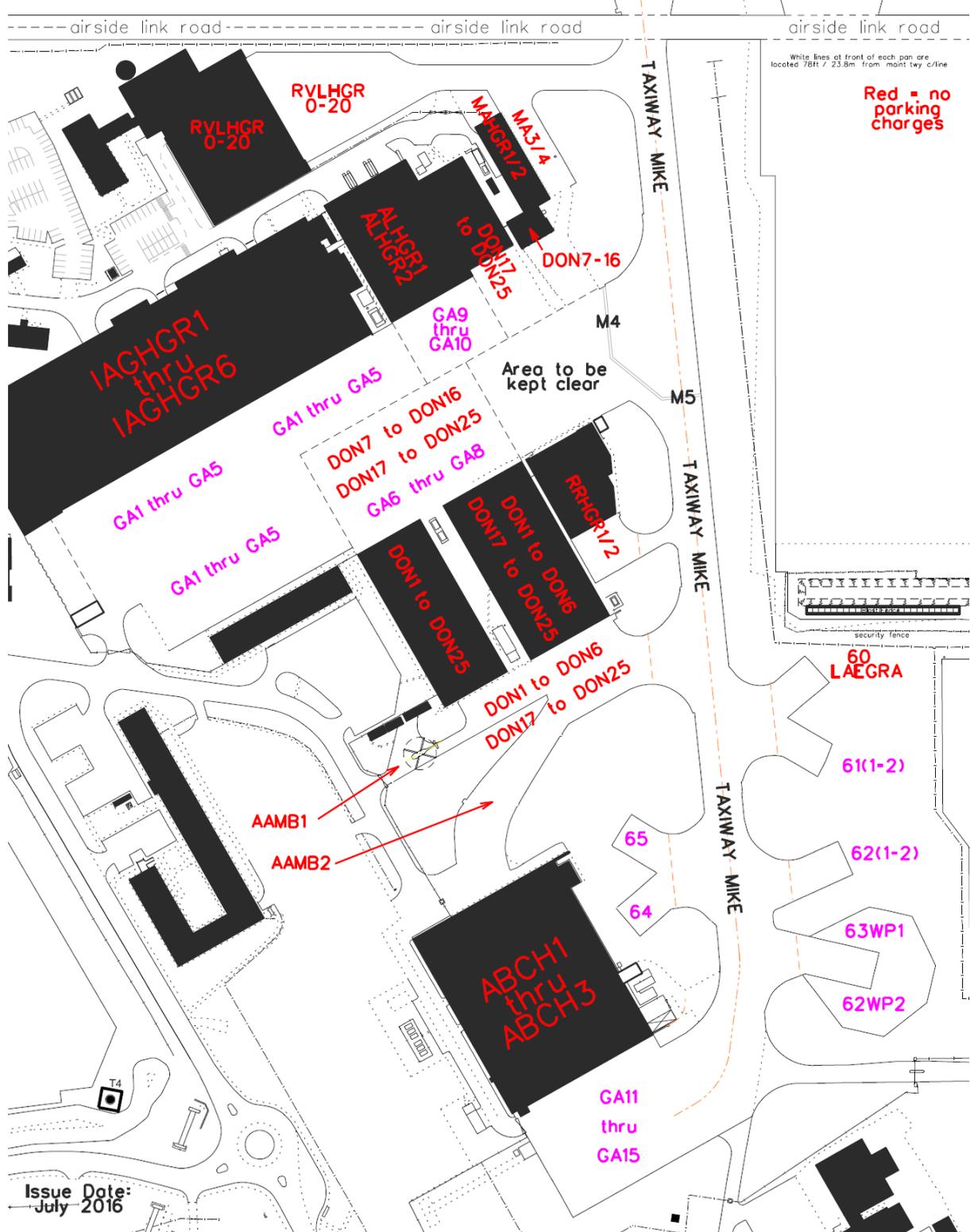
Stand 200 - A380/AN124/B747-8 - stands 98 & 120 must be clear when manoeuvring on to / off stand 200
 Stand 201 - B747-400/B777-200F/A340 - wingmen must be used when manoeuvring on to / off stand 201

Dec-17

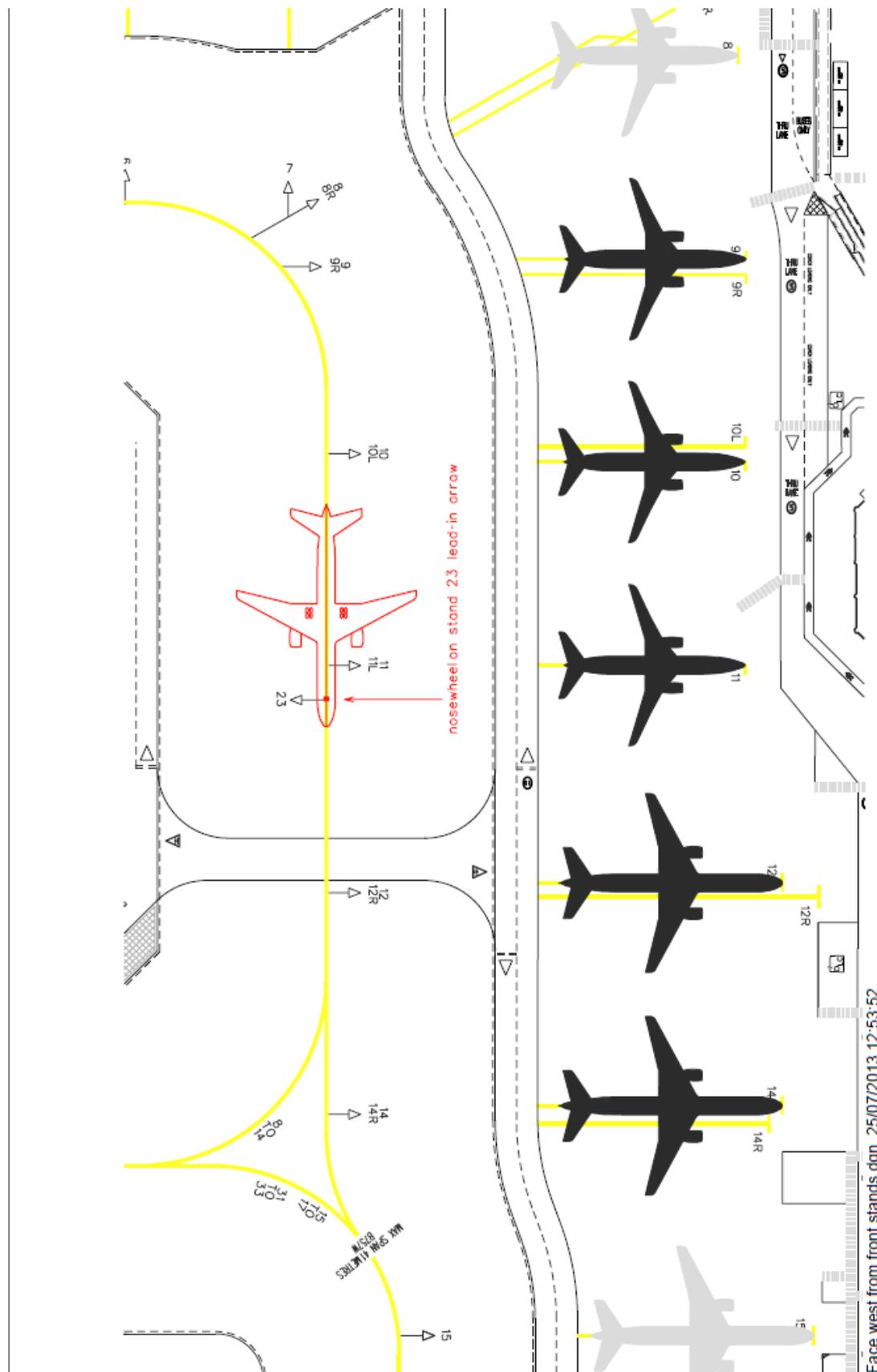
**Stands 202R to 203R
capacities and nosewheel positions**

Stand 202R		Stand 203		Stand 203R	
Max Span 32.36m		Max Span 52m		Max Span 32.36m	
Max Wheeltrack - unlimited		Max Wheeltrack 11.25m		Max Wheeltrack - unlimited	
Aircraft	Nosewheel Mark	Aircraft	Nosewheel Mark	Aircraft	Nosewheel Mark
BAe ATP	ATP	C17	C17NW	BAe ATP	ATP
B737-300	B733/734	B767-300W	B763NW	B737-300	B733/734
B737-400	B733/734	IL-76	A306NW	B737-400	B733/734
AN-72/-74	B733/734	VC-10-ALL	B763NW	AN-72/-74	B733/734
AN-26/-32	ATP	A400M	A306NW	AN-26/-32	ATP
B737-500	B733/734	A300-600	A306NW	B737-500	B733/734
Global Express	B733/734	C130 / LOH	A306NW	Global Express	B733/734
Gulfstream5/6	B733/734	B757-200W	A306NW	Gulfstream5/6	B733/734
DHC-8-Q400	B733/734			DHC-8-Q400	B733/734
ATR-42/-72	B733/734			ATR-42/-72	B733/734
BAe 146-300	B733/734			BAe 146-300	B733/734
RJ100	B733/734			RJ100	B733/734

Appendix B - Maintenance Area - Parking Arrangements



Appendix C: Tug release point, stands 9 - 14



3. MARSHALLING LICENCES

3.1 The marshalling licence is evidence that the holder has undergone a formal course of instruction on marshalling aircraft and has subsequently demonstrated their knowledge of the requirements in a written and practical examination. The EMA Marshalling Licence entitles the holder to marshal aircraft at EMA. It does not entitle the holder to any right of access or any other privileges.

3.2 The Permit

- a. The permit is valid for a period not exceeding 3 years.
- b. The permit remains the property of EMA and must be surrendered in the following circumstances:
 - i. On demand by the Airport.
 - ii. Immediately if the holder loses their EMA Airside Driving Licence.
 - iii. When a change of employer occurs at the airport. (If commencement of new employment is within one calendar month the licence will be updated, if longer the licence is revoked).
 - iv. When the holder ceases to be employed at the airport.
 - v. On demand as a penalty for an offence/series of offences.
 - vi. If the holders ID card is lost or revoked.

3.3 Administration

The scheme is administered by EMA Audit & Compliance department, who provide the following services in support of the scheme:

- i. Training for EMA and tenant company personnel.
- ii. Issue of the permit and supporting documentation

Any requests to book 8 or more persons on to a single scheduled course will require a non-refundable deposit of 50% of the training cost per attendee. Any operator who would like to request a bespoke course outside of the published timetable, or to book a place on a course should email training@eastmidlandsairport.com to obtain a quotation and availability.

3.4 Competency

Upon successful completion of marshalling training (including written and practical examinations), no less than '20' supervised marshalling of aircraft onto stand should be undertaken. A record of each successful marshal shall be documented on the Marshalling Competency Record (as per Annex 3A). The completed document should be signed off by an authorised company marshaller and returned to the EMA Training Team no later than 3 months after training.

3.5 Safety Regulation

Penalty points may be awarded against those marshalling non-compliances listed in AOI 14 'Airside Safety Regulation Scheme'. Any non-compliance observed by the control room (on CCTV), should be notified to the duty Airfield Operations Supervisor immediately.

4.1 Chocks

- a. It is the responsibility of the Handling Agent (HA) to ensure that chocks are provided and that the aircraft is chocked. It is the HA's responsibility to ensure that no person or vehicle approaches or disembarks the aircraft until the aircraft is fully chocked. The HA must ensure that an adequate and sufficient supply of chocks is available at all times.
- b. Individual operators should have procedures in place relating to the chocking of aircraft, with consideration given to the prevailing (and forecasted) weather conditions.
- c. On departure chocks should remain in place until a manned tug and tow bar are secured to the aircraft for push-back.

4.2 Use of Traffic Cones

- a. Traffic cones can be used effectively on the ramp to mark the extremities of aircraft and so assist in preventing collisions between vehicles and aircraft. It should however be remembered that cones are designed with road traffic in mind and not the blast which may be experienced from the jets of a taxiing aircraft. Cones may be used in the circumstances detailed above only, in accordance with the following criteria:
 - i. All road traffic cones used on the movement area are to comply with the following standards:
 - BS EN 13422:2004+A1:2009 (Portable road traffic signs – cones and cylinders).
 - Cones weighted in accordance with manufacturer's recommendations.
 - Cones maintained to ensure compliance with the above standard.
 - ii. BS EN 13422:2004+A1:2009 sets design standards to which manufacturers work. It requires for example the mass to weight minima, the reflectivity etc. Specifically, a 1 metre high cone must weigh at least 5.5Kg, a 600mm cone must weigh at least 2.7Kg. The weight must be either integral or in the shape of a slip-on ring of high density rubber. It follows that if the cones purchased comply with the relevant standards and are maintained as bought they will meet the Airport's requirements.

5. AIRCRAFT ENGINE GROUND RUNNING AND THE USE OF APU'S/GPU'S

5.1 EMA is responsible for ensuring the safe ground running of aircraft engines on the aerodrome and the control of blast, fumes and ground noise. Due to the environmental impact of engine ground running, particularly at night, it must be strictly controlled with the number of ground running operations kept to an absolute minimum.

5.2 An engine ground run is defined as any engine start-up not followed immediately by the departure of the aircraft concerned. A high-powered engine ground run is defined as any engine ground run which exceeds low or idle power.

5.3 Approval

-
- a. Approval for an engine ground run at any time must be obtained in advance from the Control Room on 01332 852973. The following information must be provided when seeking approval to carry out an engine run:
 - i. Operator Details
 - Airline
 - Aircraft type and registration
 - Contact name and telephone number
 - Number of persons on board
 - ii. Engine Ground Run Parameters
 - Requested location for engine run
 - Planned engine run start time
 - Expected duration
 - Level of engine power to be used
 - Duration at high power (if applicable)
 - Number of engines to be run simultaneously
 - iii. Operational Requirements
 - Type of maintenance check
 - Why the engine run is required
 - Flight number and planned aircraft departure time (if applicable)
 - b. The above details will be recorded by the Operations Control Room on an “engine run” database, and each application will, following successful submission of all details, generate a unique EMA approval number. Air Traffic Control will be informed of each new approval. Database details appertaining to engine ground running will also be available to Terminal Management and the (MAG) Environment Department. Any variation to the details given must be the subject of a further approval/new approval number. Any run that is significantly different from the approval must be logged in both the ‘notes’ section of the engine run approval database and the ATC watch log.
 - c. Permission to start engines or to alter the power setting during an engine run must be obtained from ATC via Ground Movement Control (121.9000MHz VHF) or Tower Control (124.0000MHz VHF); the EMA approval number must also be quoted. Shutting down engines once the engine run is complete must also be reported to ATC.
 - d. ATC and Airfield Operations will monitor approved ground running operations. If the parameters contained in the approval detail are exceeded, the operation will be immediately terminated by the AOS through ATC.

5.4 Safety

- a. All personnel concerned with engine ground running must be fully conversant with the regulations, which must be complied with at all times. Aircraft shall be positioned such that noise and efflux are directed away from the most noise sensitive areas.
- b. During all ground running of engines, a listening watch must be maintained on the current operational ATC frequency, which will be either Ground Movement Control (121.9000MHz VHF) or Tower Control (124.0000MHz VHF), to ensure the prompt initiation of any emergency procedures.

- c. The aircraft anti-collision beacon(s) must be switched on before engines are started and must remain on for the duration of the ground run.
- d. The aircraft must be positioned so that the engine run efflux will not harm persons or cause damage to aircraft, buildings, installations, vehicles or equipment in the vicinity.
- e. The engineer in charge of the ground run must ensure that the aircraft wheels are safely chocked and that the aircraft cannot move under any circumstances.
- f. The engineer in charge must ensure that no person, vehicle or equipment are within the potential jet blast area behind the aircraft. That the ground is firm and free from loose tarmac, stones and other materials. That the area immediately in front of the engine intake(s) is clear. All equipment must be placed at a safe distance from the aircraft.
- g. When an engine run is carried out a trained person is to be in verbal contact with the flight deck at all times. They will communicate by the R/T or interphone with the flight deck to ensure that the engine(s) are shut down if persons or vehicles move into the danger area in front of, behind or in the vicinity of a live engine. For this purpose and if the RT or interphone link is unserviceable, hand signals by day and light signals by night may be used.

5.5 Engine Running Parameters

- a. Airfield Operations will select the most appropriate location for each engine run taking into account.
 - i. Surface wind
 - ii. Power settings to be used
 - iii. Noise in the immediate vicinity
 - iv. Duration of the run
 - v. Effect on local communities
- b. Engine ground runs will not be approved between 23:00 and 06:00 hour's local time unless the aircraft concerned is required for an EMA service departing at or before 07:00 hours local time, the same day.
- c. Engine ground runs for aircraft that have been undergoing planned maintenance and/or aircraft departing on positioning flights will not be approved between 23:00 and 06:00 (local time) under any circumstances.
- d. Requests for engine ground runs between 23:00 and 06:00 (local time), where the aircraft is being operated for a third party, must be accompanied by a verbal request from a senior manager of the third-party company who must confirm that the aircraft (by registration) is needed for a departure before 07:00 (local time), the same day.
- e. The exact position of the engine run will be issued according to the prevailing weather conditions and will be confirmed by the AOS when the authorisation number is issued.

5.6 Central and Central-West Aprons

- a. On the Central and Central West Aprons' engine ground runs will be limited to check-starts and idling power. For checks requiring the use of greater power settings a move to a suitable location will be required.
- b. Ground runs will not be permitted on any stand that has an apron road running behind it. A move to a suitable location will be required.
- c. Ground running must not take place when passengers are being embarked/disembarked on any adjacent or opposite stands.

5.7 West Apron

- a. On West Apron stands, engine ground runs will be limited to check-starts and idling power only.
- b. High power engine runs on the West Apron taxiways are, subject to prevailing wind conditions, only to be carried out:
 - i. Facing west on the Bravo taxiway with the nose of the aircraft abeam stand 105.
 - ii. Facing east on the Bravo taxiway with the nose of the aircraft at holding point Bravo.
 - iii. Facing south on the Juliet taxi lane with the nose of the aircraft abeam stand 124.
 - iv. Facing north on the Juliet taxi lane with the nose of the aircraft at holding point Juliet.

Note: Engine ground running on 'Juliet taxi lane restricted to maximum code D aircraft. Runs facing north need to be aware of the uncontrolled crossing at the southern end of the taxi lane, aircraft to be positioned to prevent jet blast issues in this area.

5.8 East Apron

- a. On the East Apron stands, engine ground runs will be limited to check-starts and idling power only. High power engine runs on the East Apron (Delta) taxiway is subject to prevailing wind conditions, only to be carried out:
 - i. Facing west on the Delta taxiway with the nose abeam the Uniform centreline.
 - ii. Facing East on the Delta taxiway with the nose abeam stand 79.

5.9 Maintenance Area

- a. In the Maintenance Area engine ground runs for aircraft powered by jet engines and propeller aircraft with a Maximum Take Off Weight (MTOW) exceeding 6,000 Kgs will be limited to check-starts and idling power. For checks requiring the use of greater power settings a move to a suitable location (as detailed in paragraphs 5.7 and 5.8) will be required.
- b. High power engine runs are permitted for turbo-prop and piston aircraft only with an MTOW up to but not exceeding 6000 kgs (Cessna 406 being the largest aircraft type).

- c. All high-power runs will only be permissible on Finger 60.

5.10 Environmental Considerations

- a. The criteria for selecting the location for the engine run should be to minimise the environmental impact of the run while protecting the safe operation of the airport.
- b. Wind can exacerbate noise if it is blowing in the direction of the surrounding communities. Unfortunately, the strength of the wind may preclude the ideal position being used. Whenever possible, however, the position should be selected taking the wind into account thus:
 - i. Wind 360 – 060 do not use east apron
 - ii. Wind 060 – 120 use either east or west apron
 - iii. Wind 120 – 150 do not use east apron
 - iv. Wind 150 – 240 do not use west apron
 - v. Wind 240 – 270 do not use east apron
 - vi. Wind 270 – 310 use either east or west apron
 - vii. Wind 310 – 360 do not use west apron

5.11 Auxiliary Power Unit (APU)

- a. Aircraft APU's generate high levels of noise and significant fumes which can cause disturbance to those on nearby aprons or in buildings and residential areas. The noise of an APU may mask the noise of an approaching vehicle, thus endangering staff.
- b. Airlines and handlers are to ensure that APU's are used for no more than 5 minutes after arrival on stand and no more than 30 minutes before planned departure. Wherever possible they are not to be used whilst passengers are embarking or disembarking.
- c. APU's are not to be used as a substitute for Ground Power Units (GPU's).
- d. Inbound aircraft with unserviceable APU's and /or requiring an "air start" on departure will not be restricted in terms of parking stands. However, on any stand that adjoins a rear of stand road single engine starts should be used, with second engine start / cross-bleed on the taxiway.

5.12 Ground Power Units (GPU)

- a. Constantly running GPU's can cause high noise levels on the apron, are an additional obstruction to free movements around a parked aircraft and if poorly maintained, may deposit oil spillage on the stand.

- b. When purchasing new GPU's operators should take account of the manufacturers noise attenuation standard, 85 dBA at 4m is the maximum level permitted. Lower working noise levels should be encouraged in the selection process.
- c. Operators are to ensure that when GPU's are in use, the connection cable between the GPU and the aircraft is routed, so that as far as is reasonably practicable, it does not cause a trip hazard.
- d. Operators are to ensure that GPU's will be maintained so that they do not present a safety/environmental hazard i.e. emissions, and all cabling is adequately shielded.

5.13 Line Maintenance

- a. To meet the demands of increasing air transport movements and to achieve optimum usage of prime stands i.e. those nearest to the terminal, the priority for stand usage is given to arriving/departing aircraft.
- b. When maintenance is undertaken on an aircraft on any apron, which could inhibit its removal from stand, the flexibility for allocating that particular stand to an arriving/departing aircraft is reduced. To avoid this, no such line maintenance (as described) is to be started without the prior permission of Airfield Operations Supervisor on 07880 787543.
- c. Any Line Engineer undertaking jacking activity on an 'asphalt covered' aircraft stand should, prior to commencing work contact the Airfield Operations Supervisor (07880 787543). An assessment will be made as to whether the aircraft should be moved to a 'concrete' stand or if work may continue in the current location and a spreader plate be used under the jack of the aircraft. Spreader plates may be applied as separate equipment if they are not an integral feature of the jack system itself.

6. FOREIGN OBJECTS ON THE APRON AND THE REMOVAL OF HAZARDS

6.1 FOD Policy Statement:

Foreign Object Debris (FOD) is any object, material or liquid which could cause damage to an aircraft. FOD represents one of the most serious avoidable hazards to aircraft on the ground. Airport activity generates a great deal of waste material and debris which if not controlled can exist freely on aircraft movement areas, and is therefore a very challenging risk to control. East Midlands Airport will reduce the FOD risk by operating a surface sweeping regime and educating airside users about the hazards of FOD, EMA will provide facilities for the collection and disposal of FOD and actively enforce the FOD Control Policy. FOD generated through maintenance and larger 'project' works will be managed in accordance with EMA 'Management of Contractors' processes.

- 6.2 EMA is responsible for taking adequate measures to ensure the safety of aircraft, vehicles and persons using the aprons. A fundamental element of the safety effort is to maintain the aprons in a clean condition and free from obstructions.
- 6.3 FOD is regularly deposited on the Movement Area and it is essential that all airport personnel understand the danger to flight safety that such objects represent. They may be ingested into aircraft engines causing damage leading to engine failure, which is especially critical if it occurs in flight, particularly during the take-off phase. At best, such damage leads

directly to premature engine removal and replacement. In addition, damage can occur to tyres and undercarriages, control systems and other parts of the airframe. All such damage could lead to in-flight failures and inevitably requires expensive repairs to be made. All foreign objects are a threat to aircraft safety.

- 6.4 The list of FOD items most frequently found on the apron is long and includes plastic and paper bags/sheets, rags, empty oil and hydraulic fluid cans, empty soft drink cans or bottles, nuts and bolts, tools and equipment, luggage wheels and tags, burst ballast bags, broken wooden items and miscellaneous rubbish.
- 6.5 Under the provisions of the Air Navigation Order, it is an offence to deposit or leave any item of FOD on any part of the Movement Area. It is the direct responsibility of airlines, handling agents, fuelling companies, cleaning companies, catering companies, engineering operatives/contractors and all other users of the aerodrome to ensure that it is maintained in as safe and clean a condition as possible and that all FOD is removed as soon as it is found. All those working on the apron must exercise great care, particularly those working on aircraft, to ensure that no FOD is left behind from their operation.
- 6.6 Before proceeding from one airport area to another, via a route crossing the Movement Area, all vehicles must be carefully inspected to ensure that anything that is carried in or on the vehicle is secure. All doors and tail/side boards are to be closed and securely locked, and no parts of the vehicle or trailer are loose or likely to become detached.
- 6.7 The requirement for the provision of waste skips, in and immediately adjacent to airside areas should be closely managed and only 'fully enclosed or covered' skips should be used.
- 6.8 Removal of Apron Hazards
- a. The parking or abandonment of unserviceable ground equipment or vehicles, contractor's materials and miscellaneous objects on the aprons, constitutes a safety hazard and contributes to apron congestion.
 - b. If unserviceable equipment, vehicles, contractor's materials or other miscellaneous objects (hereinafter referred to as 'the object') are found to be creating an obstruction or hazard they will be issued with a 'notification of non-compliance' by Airfield Operations.
 - c. If an offending object is considered to be an immediate hazard, arrangements should be made, as a priority, for its removal.

7. AIRSIDE DRINKING WATER FACILITIES

- 7.1 Airside drinking water is provided and intended for use by all personnel working airside including cargo and non-airside based operators.

Water stations are located:

- North of the East 2 security gatehouse.
- Amenities block, adjacent to the Fire Station gym.
- Base of ATC tower, adjacent to the potable water point
- East of the East 1 Gatehouse

7.2 Protocols of use:

- An **empty** plastic water container will be required for personnel wishing to use the facility.
- The drinking water facility will be operated by a pushdown button (to prevent unnecessary wastage of water). Please ensure that water is not left to run excessively.
- Foreign Object Debris (FOD) bins are provided at each facility to ensure all staff dispose of unwanted bottles in a responsible manner.
- In the interest of hygiene, please do not drink directly from the tap.
- The facilities will be subjected to routine purity checks and de-chlorination to ensure Health and Safety compliance.
- If you notice a leak please report it immediately to the Operations Control Room on 01332 852973.