

				Manchester Airport Airside Works (Development Maintenance & Remedial)		Risk Rating	High – Reviewed Annually
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1 Management of Airside Works – The Starting Point

All airside works must be co-ordinated through Manchester Airports Group processes. This applies not only to major construction projects but also to minor works, maintenance, fixed installations, and remedial works including painting and branding of structures.

Any external organisation, (tenant, service partner, contractor etc) or MAG internal department wishing to carry out any such works on the aprons or airfield areas must have an issued Project Authorisation and all relevant permits in place and inform MAG Capital Delivery so that the project may be properly co-ordinated. The processes required to assure all safety and legal requirements are met may be lengthy and multi-faceted, depending on the nature and scope of the task.

No one department has jurisdiction over all these aspects and so it is vital that the Permit to Work team & MAG Capital Delivery are contacted in the first instance, so that the correct process and consultation can be mapped from the outset.

Airside development projects will be managed and procured through MAG Capital Delivery, who will appoint a Project Manager. A project team will be formed, which must include representation from Airfield Safety & Compliance (Airfield Planning).

Minor routine works and maintenance schemes may be managed internally through the Asset Management Operations Manager but are subject to the same consultation processes outlined in paragraph 2 below.

The requirements of this Instruction are also contained or referred to in another document, published by MAG Capital Delivery, titled 'General Requirements for Contractors working at Manchester Airport'

2 Operational Planning and Approval Requirements

The MAG Project Manager must inform the Airfield Planning Team of the proposed works or development well in advance in order that the due process may be followed. The details of the works must be logged using the online change management system.

The forum for bringing new projects to the attention of Airfield Planning is the bi-weekly Airfield Works Coordination Meeting. Project Managers should attend the meeting and present new business prior to a project reaching Gateway 2, as defined by the MAG Capital Delivery Project Delivery System.

Once a new project has been presented at the meeting, the Airfield Planning Team will begin the process of allocating appropriate resources and carrying out the required planning tasks, commensurate with the scale of the project. A flow chart showing the works planning process and required notification periods can be found at the end of this Instruction.

Where the project management role has been contracted out, the contractor must ensure such consultation takes place. However, MAG Capital Delivery is ultimately accountable for the safe management of these processes – safety accountability under the Aerodrome Certificate may not be delegated to contractors. Failure to properly consult may result in works being undertaken without authorisation and in violation of the Aerodrome Certificate. Under the auspices of the MA Control of Works Enforcement Policy, unauthorised works are liable to immediate cessation by Airfield Operations personnel until the due consultation, planning and approvals are in place.

All airside development and maintenance work require prior consultation so that the aerodrome safety and regulatory requirements can be assessed and managed.

The Airfield Planning Team are responsible for the operational planning and notification of all airside development works. It is a requirement of UK CAA, that Manchester Airport Group must consult CAA SARG before commencing any development which may change the aerodrome facilities and obtain the necessary approvals.

The principles set out in guidance material CAP 791 should be followed and Safety Assurance Documentation produced. The Head of Aerodrome Compliance will advise project teams of the likely planning and approval timescales in order that these can be programmed.

The scope of the consultation and planning will be commensurate with the nature and scale of the project. The works planning and approval process is included at 2.1 below.

The period of notice required will similarly be dependent upon the scope and **operational** impact of the works, and the availability of Airfield Planning resources to undertake the necessary work. The Head of Aerodrome Compliance maintains an agreement with the CAA Aerodrome Inspector for Manchester as to the level of consultation required in respect of specific airside works. This agreement may be reviewed from time to time.

2.1 Airside Works Planning and Approval

Airfield Planning will ensure that the following actions and issues are covered:

- Compliance with aerodrome certification requirements
- Compliance with MA operational policy and specifications
- Assessment and management of operational safety risks
- Continuity of operations
- Minimum disruption
- Stakeholder liaison (airfield operations-related only)
- Production of Safety Assurance Documentation for CAA approval
- Promulgation of Information

NB: Any required liaison with the Manchester Airport Health & Safety team to cover project issues specifically related to the health and safety of personnel or members of the public is the responsibility of the Project Manager.

2.2 Major New Developments

Examples of major new developments could be:

- Construction of a new taxiway.

- A new building with an airside frontage, such as a terminal pier.
- Construction of new apron areas.
- Comprehensive changes to airfield wayfinding and associated infrastructure.

The above list is not exhaustive but is indicative of what is considered to be a major new development and will require substantial operational planning. The Head of Aerodrome Compliance will provide representation at works planning meetings and will invite representation from NATS as considered appropriate.

Sufficient design data and works methodology must be provided by the project team in order that the Works Planning Checklist can be completed, and the necessary safety and operational assessments can be made by Airfield Planning. Design and operating philosophy cannot be approved until all necessary assessments and consultations have been completed.

Timescales for such consultation and approvals will vary according to the scope of the project, however it should be expected that a minimum of 10 months will be required. Airfield Planning will co-ordinate the appropriate level of Development Risk Assessment (DRA) and will feed the results back to the project team. Changes to design and methodology may be required because of the DRA. Safety Assurance Documentation will be produced, this will comprise of an Operational Advice Note, DRA records, and, where the scope of the works requires, an Operational Requirement and Safety Statement.

Design of any new infrastructure to form part of the certificated aerodrome must be signed off by the Head of Aerodrome Compliance prior to start of construction and will be subject to an approval for change from the Competent National Authority (CAA SARG).

Once the design and methodology has been approved, and DRA completed, the project can proceed to construction and implementation in accordance with the notification programme. Minimum notification periods apply with respect to NATS and promulgations via UK AIP; Paragraph 3 provides further information.

2.3 Major Maintenance

Examples of major maintenance projects could be:

- Runway resurfacing/ rehabilitation.
- Large scale reconstruction of an existing taxiway or apron pavement.

Major maintenance works require significant operational planning and will follow the same principles as for major new developments. The scope and level of consultation will also be largely the same.

As with major new developments, the timescales for consultation and approval for major maintenance work will vary according to the scope of the project. A minimum of 8 months should be expected.

Some major maintenance projects may require notification to the Competent National Authority (CAA SARG) or, if deemed necessary due to the scope of work, an approval for change.

2.4 Small/Medium Scale Developments & Minor/Routine Maintenance

Examples of small/medium scale projects or minor/ routine maintenance could be;

- Limited scale pavement reconstruction and repair.
- Repair/maintenance/ replacement of equipment such as airbridges, aircraft navigation aids, Fixed Electrical Ground Power units, building façades, external passenger gate doors, airside boundary fences, aircraft fuel hydrants.
- Maintenance/ upgrade of electrical systems serving airfield infrastructure and aircraft navigation aids.
- Other work which requires closure or restriction in use of an airside facility such as an aircraft stand or a roadway.

The scope and level of consultation required for small/medium scale developments will be smaller, although the operational planning principles employed for major projects still apply. CAA SARG will not normally be consulted via a formal development meeting and the level of consultation will be determined by the Head of Aerodrome Compliance or an Airfield Technical Planner. Circa 1-2 months will be required for the consultation and approval process, dependant on the scope of work.

Minor works may also be the subject of an Operational Advice Notice, or where deemed appropriate, a Minor Works Brief. It should be borne in mind that some projects that may be small scale in terms of the actual works activity taking place, works duration, or the working space required, could have significant operational impact depending on the location of works, any permanent or temporary operational changes they cause and whether they result in required changes to established procedures and/or publications.

2.5 Tall Equipment

Works involving the use of tall equipment are of particular concern. Tall equipment can represent hazardous obstacles to aircraft on or in the vicinity of the airport. Planning and notification is essential, and a separate permit system is in operation. Procedures for the use of tall equipment at the airport are contained in EGCC-I-AOPS-007 – ASI 007 Aerodrome Safeguarding.

3 Promulgation of Information

Prior to the start of an airfield works project, Airfield Planning will issue notifications which will include one or more of the following:

- UK Aeronautical Information Package (AIP) permanent amendment or Supplement (public domain)
- NOTAM (public domain)
- Operational Advice Notice (airport subscribers)
- Minor Works Brief (bespoke audience of key stakeholders)
- ATIS broadcast (public domain)

Certain airfield works schemes may also require promulgation of information by NATS Manchester in the form of:

- Temporary Operating Instruction (TOI)
- Supplementary Instruction (SI)

Within the overall Operations Planning and Approval process, for which the outline timescales are described in paragraphs 2.2 to 2.4, in order to provide an effective notice period to operational personnel and airside users prior to the start of an airfield works

project, sufficient time will need to be dedicated to the composition and publication of the above notifications. Consideration will be given to the notice periods required by the UK AIP (up to 90 days) and NATS Manchester (up to 30 days dependent on the scale of planning and approval required).

To allow sufficient time for the Airfield Technical Planner to produce the required documentation, Project Managers must ensure that Airfield Planning are in receipt of all requested information a minimum of four working weeks in advance of a project start date. There may be slight variations of the required timescales at the discretion of the Airfield Technical Planner. In any event, as part of the overall airside works planning process, the required timescales for document publication will be communicated to the Project Manager, and it must be borne in mind that notification and publication timescales will be increased considerably should there be a need to publish/amend information contained within the UK AIP and/or for NATS Manchester to promulgate a TOI or SI.

4 Permits to work

In addition to the over-riding MAG work permit scheme, all airside development works require the issue of an Airfield Operations Works Permit. Permits will be authorised by the Airfield Operation Duty Manager. To complete the permit authorisation the AODM will require copies of safety assurance documentation produced by Airfield Safety & Compliance for major / minor planned works.

Airfield Operations works permits will not be issued without the required accompanying documentation being available on the MAG Permit to Work system.

5 Routine Maintenance Works

Routine maintenance work covers surface markings, signage, lighting, strip surfaces and grass cutting.

The routine nature of many maintenance functions can lead to complacency and consequent incidents and occurrences. It is of paramount importance that the planning, promulgation and execution of such works is detailed and carried out in a manner which attends meticulously to all relevant airside procedures.

Some of the maintenance and repair tasks can be accomplished during aircraft operations. Other tasks can only be undertaken when the area is closed to aircraft activity or when aircraft activity is light e.g. at night or during the winter season.

Work may be carried out within an active runway strip in accordance with the relevant policy. However planned maintenance of the runways will be undertaken wherever possible during a runway closure. In the case of Runway 05R / 23L this can largely be achieved during the daily published closure periods. In the case of Runway 05L / 23R, specific night closure programmes are planned each year to undertake routine maintenance such as surface friction monitoring, rubber removal, painting, surface repairs, etc.

5.1 Procedure and Permits for Routine Works

Regular, routine airfield maintenance work will be carried out in accordance with the local operating procedures produced by the relevant section manager. Generic, open-ended Airfield Operations Works Permits will be issued for such works, thereby eliminating the requirement to issue permits on each occasion.

6 Works within Runway Strips

An Airfield Operations Works Permit must approve all works within runway strips. Works which are of a regular, on-going routine nature (e.g., grass-cutting) may have a 'standing' approval and will not require the issue of a permit on each occasion. All other works require the issue of a time specific permit. Permits are issued by the AODM, who will in turn notify the ATC Watch Manager of approved work.

NB: Possession of a permit does not constitute an ATC clearance.

Table 1 - Works carried out on foot with handheld tools only

Area	UHF Channel	ATC clearance required	Weather minima	Other conditions
Grass areas within CGA up to edge of runway shoulder	5 (Rwy 05L/23R) 3(Rwy 05R/23L)	Positive	LVP alert	Grass areas only
Grass areas within LSA up to edge of CGA (burn line)	1(Rwy 05L/23R North) 3 (Rwy 05L/23R South/Rwy 05R/23L)	Free-ranging	LVP alert	Prior notification to AODM/ATC. Listening watch to be maintained with Tower frequency. Further information at paragraph 6.3.
On runway pavement inc. shoulder	5 (Rwy 05L/23R) 3 (Rwy 05R/23L)	Positive	LVP alert	Between a/c movements
Paved links outside LSA	1 (n/side) 3 (s/side)	Positive	Nil	ATC co-ordination required
On paved links within LSA up to edge of shoulder	5 (Rwy 05L/23R) 3 (Rwy 05R/23L)	Positive	Visible from tower and >LVP alert	Stopbar OFF. Frangible barrier placed at boundary of works. No closer than edge of shoulder. ATC coordination required

Table 2 – Works carried out with vehicles/plant

Area	UHF position	ATC clearance required	Weather minima	Other conditions

Within CGA up to edge of runway shoulder	5 (Rwy 05L/23R) 3 (Rwy 05R/23L)	Positive	Visible from VCR and >LVP alert	Between movements
Within LSA up to edge of CGA	5 (Rwy 05L/23R) 3 (Rwy 05R/23L)	Positive	Visible from VCR, and >LVP alert	ATC coordination required
On runway shoulder	5 (Rwy 05L/23R) 3 (Rwy 05R/23L)	Positive	>LVP alert	Ops suspended
Paved links outside LSA	1 (n/side) 3 (s/side)	Positive	>LVP alert	Prior notice to ATC. Infringes taxiway strip.

Definitions:

- Instrument Strip (IS) 140m each side of centreline – not marked out on ground.
- Localiser Sensitive Area (LSA) 137m each side of centreline (Rwy 05L/23R holding points / Rwy 05R/23L CAT III holding points).
- Cleared & Graded Area (CGA) 105m each side of centreline (Burn Line).
- Obstacle Free Zone (OFZ) 70m each side of centreline – not marked.
- Visual Strip (VS) 75m each side of centreline –not marked.

6.1 Accountabilities

When works are taking place under positive clearance, ATC are responsible for ensuring the safety of aircraft and personnel.

In these cases, the runway is 'occupied' and ATC will give a positive clearance for vehicles/personnel to pull back for aircraft movements. Works parties may be required to move at short notice, as instructed by ATC.

When works are taking place without positive ATC clearance responsibility for aircraft and personal safety lies with the person(s) carrying out the works, on the basis that:

- A policy is in place, agreed between MA and NATS.
- Prior permission must be obtained from the relevant Tower Controller to enter the 'strip'
- The terms of the Airside Works Permit have been accepted by signature of the person or their employer.
- The understanding that work within runway strips has associated hazards and when operating without positive ATC clearance, the person(s) themselves must determine when it is safe to remain within the strip

6.2 Grass Cutting Operations

All drivers of vehicles engaged in grass cutting operations are to listen out on the following frequencies.

- Channel 1 – Northside grass areas outside CGA (105m burn line) and taxiways.
- Channel 5 – Runway 05L-23R and adjacent grass areas inside CGA (105m burn line).
- Channel 3 – Runway 05R-23L, southside grass areas inside and outside CGA (105m burn line) and other southside taxiways

Prior to commencement of work, the ATC Watch Manager (ATC WM) is to be notified of the grass areas to be cut. The ATC WM is to be informed when grass cutting activity has ceased. All grass cutting activity is to cease when visibility falls to 800m RVR or the cloud ceiling falls to 300ft. *NB: Sweeping may be required following grass cutting operations.*

6.2.1 Grass Cutting inside runway CGA (105m burn line)

Runway 05L-23R – Grass cutting will normally take place at night between 23:00 and 05:00 local. Outside of these hours, grass cutting is to be coordinated between the AODM and ATC WM.

Runway 05R-23L – Grass cutting is to take place during the routing daily runway closure hours.

6.3 Works activities within ILS Critical/ Restricted Areas

Entry into ILS Critical/ Restricted Areas is to be specifically pre-noted to and authorised by the ATC WM. Vehicles/ personnel must not enter a Critical/Restricted Area without also requesting permission via radiotelephony from the appropriate controller.

7 Emergency Work in Progress

Occasions may arise whereby a failure of a Taxiway or Runway Surface requires immediate action in order to make the area safe for operations.

In this case, the AODM is to liaise directly with the ATC Watch Manager and Undertake a Joint HAZOPS, Level 3 ('Green Strip' procedure).

The headings in the HAZOPS Level 3 act as an aide memoir for both parties to ensure that nothing is overlooked.

8 Sign-off and approval process for airfield reconfiguration work

Examples of airfield reconfiguration work could be.

- Alteration to apron/stand/airside road layout.
- Realignment of a taxiway.
- Change of use of an existing airside area.

Airfield reconfiguration work will be subject to prior approval from MA Airfield Safety & Compliance (Airfield Planning). Dependant on the scale of reconfiguration, such work may be undertaken entirely 'in house', and, if required, a third-party Designer may also be appointed to cover aspects such as civil and utilities work. In any case final authority to

approve reconfiguration layout designs rests with MA Airfield Safety & Compliance (Airfield Planning).

9 SUSPENSION OF WORK

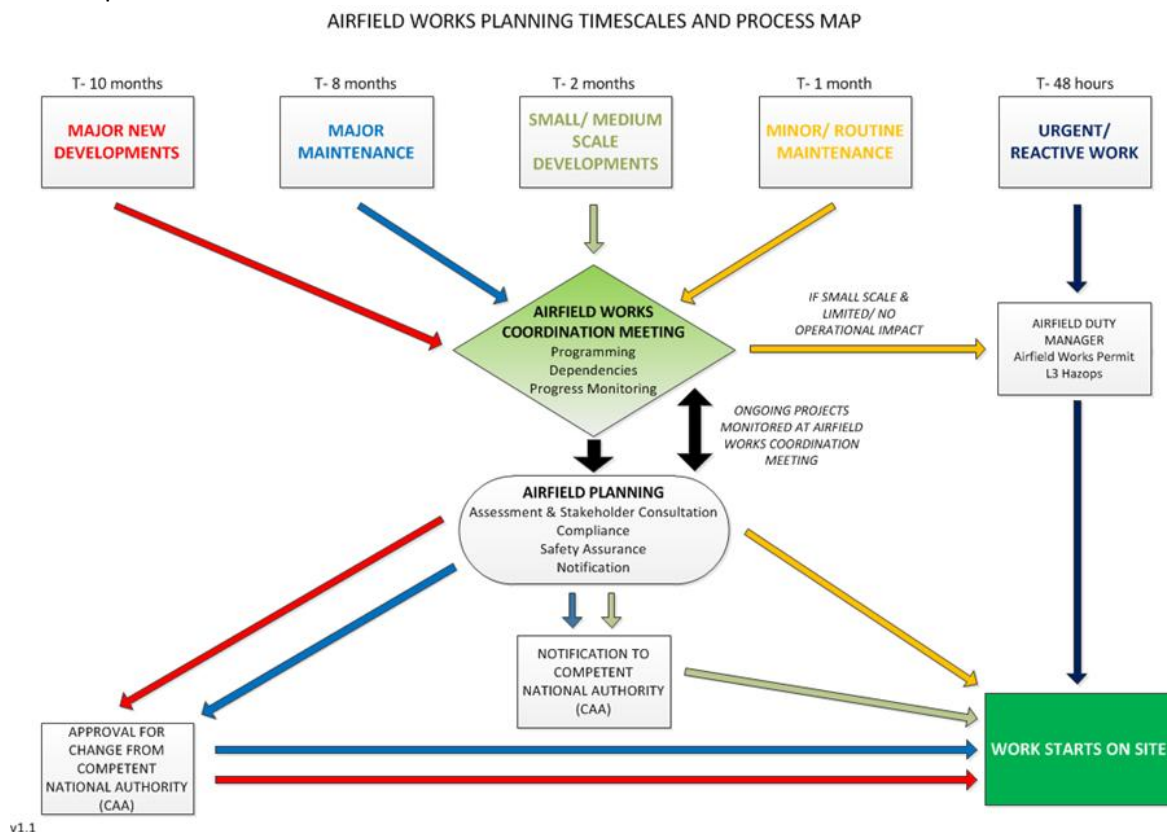
Airfield Operations may suspend any work on the Airfield at any time. This may be due to poor weather, an incident, lack of authorisation, or because of poor working practice which is deemed a safety hazard to operations.

Any member of staff who is concerned about the safety aspects of any works is to contact the AODM immediately on 0161 489 **3331**.

As with work across the wider airport site, airside work may be suspended if ongoing activities/ practices are found to be in contravention of the MA Control of Works Enforcement Policy.

10 Airfield works planning timescales

The below process map can be used as a quick reference tool to aid Project Managers and inform other project stakeholders or end-users of the required timescales for Airfield Safety & Compliance to carry out the necessary consultation and approval process.



It should be noted that failure to provide the required timescales may result in Airfield Safety & Compliance (Airfield Planning) requesting a project start date to be delayed or refusal of permission for airside works to commence.

11 Considerations for project managers

Consult Airfield Safety & Compliance prior to agreeing programme dates and works methodologies with contractors. Involvement of Airfield Safety & Compliance (Airfield Planning) at an early stage of a project is highly important to ensure that incorrect assumptions are not made regarding matters such as site access, permitted working times, work site demarcation and operational implications/restrictions; incorrect assumptions may result in unnecessary project delays and/or unforeseen expenditure as a project progresses through Capital Delivery gateways.

Acquisition of security passes and works permits, arrangement of airside escorts and liaison with MAG Health & Safety personnel is the responsibility of the MAGCD Project Manager.

New projects will only be accepted by Airfield Planning, if presented at the fortnightly Airfield Works Coordination meetings.

If in doubt about the level of involvement required from Airfield Planning for a particular airside works project, it is always better to check.

12 Hot Works

Hot works are not permitted without an issued Hot Work Permit.

Definition

"Hot works" refers to activities or operations that involve the use of open flames, sparks, or any equipment that produces heat and can potentially ignite flammable materials or gases. These activities typically include welding, cutting, grinding, soldering, brazing, or the use of blow torches. Due to the inherent fire risk associated with these operations.

All hot works must be approved in accordance with the Permit to Work process. Contractors should consider if they can complete the hot works off-site; if not, they must specify the reasons in their RAMS and detail all control measures they will put in place, such as fire watch and how the alarm will be raised, etc.

External

Hot works planned to be undertaken outside. RAMS must consider risks such as dry grass, stored items, and potential distractions to others, including pedestrians and vehicle movements.

Internal

A separate and fully issued Fire Safety System Isolation permit(FSSI) must be in place prior to works commencing. All Detector heads must be identified and isolated by Terminal Engineering; any assistance required will be provided via the Permit to Work team.

The use of dust caps to isolate detector heads is not permitted. Anyone found covering detectors will have their pass removed and will be asked to leave the site.

Note

The use of oxyacetylene is not permitted on site. However, if it is the only option, written permission must be obtained from the Asset Management Director and the MAN Fire Safety team.