

# Aerodrome Works

## Airside Operational Instruction 04

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AOI Owner – Developments and Safeguarding



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## 1. MANAGEMENT OF CONTRACTORS

- 1.1 East Midlands Airport (EMA) has a system in place for contractor management to ensure all works carried out by contractors is completed efficiently, safely, in accordance with sound environmental practice and in compliance with all statutory legislation and codes of practice.
- 1.2 Whether it be a new development or a maintenance project, airside works in progress will be managed such as to minimise the operational impacts but with a bias toward the highest levels of safety which may reasonably be expected. This will be achieved through a partnership approach with the contractor, through good design, risk assessment, a permit to work system, and active monitoring of safety performance. East Midlands Airport will aim to be an industry leader and to demonstrate 'best practice' in the safety management of airside development work.
- 1.3 In order to bring Contractors to work in any area managed by East Midlands Airport, including but not limited to the baggage dock, maintenance areas, stands, equipment parking areas, aprons or roads, either the tenant or the contractor needs to be registered as an approved contractor. The system neither supersedes nor negates the requirements of any legislation.
- 1.4 The aims of the system are to ensure:
- a. That a safe working environment is always maintained for the Contractor, staff, passengers, tenants and concessionaires.
  - b. That all relevant managers are aware of works being undertaken.
  - c. That operational disruption is minimised.
  - d. That there is a full and accurate record of works undertaken at EMA.
- 1.5 Any work to be carried out that could affect the operation of East Midlands Airport needs to have a job registration and permits to work, where applicable. Failure to produce any of these documents on request will result in the work being stopped.
- 1.6 Full details of the EMA Management of Contractors Scheme (MOC) for internal staff can be found on MAGBook , external tenant companies / contractors are to request a copy of the latest MOC via their EMA sponsor.

## 2. CHANGES TO AERODROME INFRASTRUCTURE

### Introduction

- 2.1 In addition to the "infrastructure and operational" changes required, the CAA requires that the additional following changes are subject to prior approval:
- i. Constructions affecting sightlines from VCR
  - ii. Developments on the movement area. (e.g. new aprons)
  - iii. Developments which might impact on the movement area. (e.g. New or extensions to terminal or piers).
- 2.2 The regulation also requires aerodrome operators to include documentation to support the application of a change to infrastructure. Civil Aviation Publication (CAP) 791 'Procedures for changes to aerodrome infrastructure', in particular Part 2 provides a means to meet this requirement. There is a requirement to complete Part 3 to conclude the process.

2.3 The EMA Aerodrome Manual, Part B 'Management of Change' describes the parameters for aerodrome developments that require prior approval from the CAA. These developments will follow the submission process detailed below. The aim of this procedure is to ensure that at all times the requirements, procedures and safety cases follow applicable regulatory requirements.

#### 2.4 Supplementary Documentation

Regulatory documentation to consider relating to 'changes to aerodrome infrastructure'

- a. ICAO Annex 10
- b. ICAO Annex 14
- c. ICAO Doc 8168 - Ops/611 Volume 2
- d. UK Reg (EU) No. 139/2014
- e. CAA Certification Specification for Aerodrome Design
- f. CAP 393 - Air Navigation, The Order and Regulations
- g. CAP 493 - MATS Pt 1
- h. CAP 637 - Visual Aids Handbook
- i. CAP 642 - Airside Safety Management
- j. CAP 728 – Management of Safety
- k. CAP 772 – Birdstrike Risk Management for Aerodromes
- l. CAP 760 – Hazard Identification and Safety Cases.

#### 2.5 Airside Development – Classification

2.5.1 Airside developments can be categorised as either 'Major' or 'Minor' projects and are classified dependent on the scale of and /or the type of work involved, the requirement for CAA approval (pre-works) and the results of any operational impact assessment.

2.5.2 Major projects will include large, high value civil engineering, building, mechanical or electrical projects, for example, the construction of a new apron, terminal building, installation of a new ILS, or a system upgrade to CAT I, II or III or runway major rehabilitations and infrastructure change.

2.5.3 A minor project may involve small scale civil engineering, building, decorative, mechanical or electrical works primarily associated with maintenance tasks and minor alterations / additions. Examples of such are a small-scale pavement repair, small airside building construction / installations, or other works which requires closure or restriction in use of any airside facility such as a stand, passenger walkway or an apron roadway.

#### 2.6 Project Planning and Preparation

2.6.1 Projects require extensive planning, and the following areas need to be covered. However, the following list is neither mandatory nor exhaustive and these elements may not be available or fully developed at the planning stage.

- Aeronautical Ground Lighting;
- Aerodrome Manual Amendments;
- ATC Operations & Engineering Temporary ATC Procedures during Development;
- ATC line-of-sight requirements;
- Bird Hazard implications;

- Building induced turbulence;
- Changes to existing aerodrome operating procedures;
- Changes to magnetic field density as a result of development;
- Emergency procedures;
- Environmental impact;
- Instrument Approach and Departure Procedures and Minima;
- Project Safety Management Procedures (outline);
- Proposed Timescale;
- Revised Low Visibility Procedures;
- Removal of Special Conditions / DAAD's;
- Revised runway incursion prevention measures;
- Signage;
- Site access plan

2.6.2 Hazard analysis and risk assessment will identify potential hazards and associated risks surrounding the proposed change. EMA processes contained within the Change Management Manual will ensure the change is assessed through safety assurance documentation (see Aerodrome Manual Part B) and is fully integrated into the EMA safety management system.

2.6.3 The level of detail required will be commensurate with the size and complexity of the project as well as to the hazards and change presented.

## 2.7 Project Submission Process

2.7.1 CAP 791 'Procedures for changes to aerodrome infrastructure' provides details to assist aerodromes meet the obligations of their Aerodrome Certification 'Organisation Requirements' process (smaller projects may submit Parts 1 and 2 together). As detailed in para. 1.2 there is no 'part 3' equivalent under the existing regulations, therefore there is no longer a requirement to complete Part 3 of the submission process detailed in CAP 791 in order to conclude the process:

Part 1: Compliance

Part 2: Control

### 2.7.2 Compliance (Part 1)

a. Each development proposal shall be accompanied by documentation that provides clear evidence that it conforms to the Aerodrome Certification Basis (and any applicable CAP) requirements and will include:

- Project overview
- Notification form
- Compliance matrix (to demonstrate project meets licensing requirements)
- Scaled drawings

- b. Form SRG 2011 should be used for submission and is available online at the CAA website / airports and licences / infrastructure and public safety zones / changes to CAA certified aerodromes.
- c. CAA will confirm whether or not compliance has been achieved. Should any changes to the proposed design or build be made the modified information should also be notified.

### 2.7.3 Control (Part 2)

- a. Following completion and acceptance of the development design, safety assurance documentation will be developed to demonstrate the safe management of the project. This document will contain details on how construction work's and operational procedures will be managed in order to maintain safe aerodrome operations during the project and should include:
  - a. Work Schedule.
  - b. Method of Working, inc. FOD control (i.e. closed / covered skips in airside areas)
  - c. Site Safeguarding and Marking.
  - d. Site Access.
  - e. Airfield Operating Procedures During Work.
  - f. Night Work Details and Procedures
  - g. Weather Minima.
  - h. Low Visibility Procedures (LVPs).
  - i. Emergency Procedures.
  - j. Day & Night Start Work Procedures.
  - k. Day & Night Procedures for the Control of Work.
  - l. Day & Night Procedures on Completion of Work.
  - m. Promulgation of Information - Including NOTAM Action.
  - n. Points of Contact - Aerodrome and Contractor.
  - o. Arrangements for Contractor EMA Management Liaison Meetings/Briefings.
  - p. Plans of Site and Diagrams of Work.

2.6.3 A Safety Assurance Document with hazards and risk methodology described in section 2 and 3 of this document should be undertaken and submitted to the CAA Development Officer as within Part 2.

2.6.4 Works should only commence upon the satisfactory approval from the CAA Aerodrome Development Team in respect of the submitted 'Operational Requirement and Safety Statement' and 'Work in Progress' based Hazard Appraisal and Risk Assessment.

## 3. AERODROME WORKS

- 3.1 To conduct development or maintenance work airside, the contractor must have a Permit to Work Airfield Operations (C55) attached to the Job Registration. Full details of how to obtain a Job Registration are contained within the EMA Management of Contractors document, which is available internally on MAGBook. External tenant companies / contractors should request a copy of the latest MOC via their EMA sponsor.
- 3.2 Prior to commencing any developments or maintenance works airside, and in position of an approved Job Registration and C55, the contractor must report to the Airfield Operations accommodation for a documented Airfield Works briefing.

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- 3.3 Developments not requiring prior approval will be assessed as per EMA Change Management Manual requirements and as detailed in the Aerodrome Manual Part B and will be notified to the CAA.
- 3.4 Minor works and maintenance schemes may be managed locally, but are subject to the same consultation processes outlined in Operational planning section 5.
- 3.5 Major projects (as described in 2.5.2) will be managed and procured through a MAG Project Team, with relevant stakeholders.
- 3.6 Any external organisation, (tenant, service partner, contractor etc) or East Midlands Airport (EMA) / MAG internal department wishing to carry out any works on the aprons or airfield areas must inform the airport company in the first instance so that the project may be properly co-ordinated. All proposals to EMA should be submitted, as detailed in 'Operational planning' in a timely fashion.
- 3.7 All airside development and maintenance work require prior consultation so that the aerodrome safety and regulatory requirements can be assessed and managed.
- 3.8 Airside development works will be managed through the procedures defined within the following 'project' phases:
- a. Planning.
  - b. Controlling.
  - c. Procedures associated with operations.
  - d. Procedural review.
- 3.9 Prior to the commencement of a project, sufficient details should be provided to Developments and Safeguarding Department which demonstrate full compliance with the Certification Regulations.
- 3.10 Cranes & Tall Equipment  
Procedures for the use of cranes at the airport are contained in AOI 16 'Aerodrome Safeguarding'.
- 3.11 Obstruction Markers & Lights
- Temporary obstruction markers should be displayed wherever any portion of a taxiway or apron is declared unfit for the movement of aircraft.
- At night and in poor visibility, unserviceability lights (glims) should be used.
- Temporary obstruction markers (marker boards) will be used which will comply with the requirements of CS ADR-DSN.R.870 'Unserviceable Areas'.
- 3.12 Hot Works
- If the development or maintenance works involve hot works, a 'Hot Works Permit' must be attached to the Job Registration. The Control Room must be notified prior to and on completion of the 'Hot Works'.

#### 4. MAINTENANCE PROJECTS

- 4.1 Short term, minor maintenance works such as painting, planned periodic replacements (lighting), refinements or small repairs to the aerodrome infrastructure which can be completed in a short timescale and with limited disruption do not require prior approval from the CAA.
- 4.2 Major, longer term projects (weeks/months) which may involve many key stakeholders, and which may disrupt or have significant impacts on operations (runway rehabilitation, taxiway reconstruction or replacement of aeronautical ground lighting may require prior approval and the process detailed in section 3.6 should be followed.
- 4.3 In certain circumstances the Inspector may conclude that the project qualifies for the 'prior approval' submission process, in such cases procedures as detailed previously in this chapter should be followed.

#### 5. POST WORK INSPECTIONS

- 5.1 On completion of any airside works, an additional inspection is required to be conducted by the Airfield Operations Department. To arrange an inspection, prior to leaving the site, please contact the Airfield Operations Duty Manager.
- 5.3 Post work inspections must be completed before the area is returned to operation.

#### 6 AIRSIDE INNOVATION TRIALS

Aerodrome innovation trials must be appropriately controlled and assessed by EMA to ensure suitable hazard analysis is undertaken, and that existing systems, procedures, equipment, and regulatory compliance requirements are not adversely affected.

Aerodrome innovation trials within any airside may take place to test real world elements prior to committed implementation as standard procedure or process following from close monitoring of the trial and continuous feedback. Internal and external aerodrome innovation trials cannot take place until approved by the EMA Developments and Safeguarding department. Depending on the nature of the trial, a full CAA CAP 791 notification of change request will be completed.

All parties must consult: [ops.safety@eastmidlandsairport.com](mailto:ops.safety@eastmidlandsairport.com) prior to any aerodrome innovation trial taking place. Safety Assurance Documentation may be deemed appropriate depending on the level of the requested trial.

Aerodrome Innovation Trials that may require full approval by EMA Safeguarding are the following non-exhaustive list:

- All-electric aircraft
- Autonomous vehicle trials
- Digital or remote VCR / Apron Control towers
- Autonomous aircraft pushback operations
- Hydrogen-powered aircraft or vehicles
- Automated bird scaring systems
- Automated security surveillance equipment

- Artificial Intelligence (AI) systems that may affect existing operating procedures or impact the operational movement area
- Holographic surface marking projection

As technology continues to evolve, if you are unsure whether a proposed innovation, system, trial, or equipment may affect safeguarding, operational safety, or regulatory compliance requirements, please contact EMA Safeguarding via the email address provided above.