



OPERATIONAL SAFETY INSTRUCTION

Version B Issued 30/05/2022

Aerodrome Development and Maintenance

Issued By Airside Operations Co-ordinator Ref BRS-OSI-AW-003

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

1. INTRODUCTION

It is essential that aerodrome development and maintenance is planned, phased and managed so as not to have an adverse effect on the safe day-to-day operation of aircraft, aids to navigation (radar, ILS etc) or airside users.

As a result of this, physical changes and development or maintenance of aerodrome facilities are closely monitored by the airside operational teams and the CAA.

All projects (including maintenance) involving physical changes both airside and landside must be processed through the airport’s Project Management Office (PMO) who will ensure that relevant departments are identified as stakeholders. Airside Operations must be a stakeholder for all external airside maintenance, changes and developments, and any landside development or works that could have an impact on aircraft operations or systems both during construction (creation of FOD, use of tall construction equipment etc) and/or by the final design on completion.

Further guidance is provided within section 2 and within OSI-AW-001 to assess which activities fall under the requirements of this OSI – it can be assumed that if a work permit is required, the requirements of this OSI are applicable to the activity.

It is the responsibility of anyone planning airside work to seek out advice and guidance on the applicable procedures, processes, and approvals.

It should be noted that the processes of Town and Country Planning law are outside the terms of reference of the CAA and EASA. Planning issues must therefore be channelled through the appropriate local planning authority, normally co-ordinated between the Planning Manager and the Airside Operations Coordinator.

This OSI should be read in conjunction with OSI-AW-001 Airside Work Permits, OSI-AW-002 Cranes and Tall Equipment, and OSI-AW-004 On Aerodrome Development Safeguarding.

2. INITIAL STAKEHOLDER ASSESSMENT AND COORDINATION

Factors to be considered by the PMO or individual Project Managers in assessing projects to determine if airside operations are a stakeholder will include but are not limited to:

- Location – all airside external projects will require Airside Operations as a stakeholder
- Use of cranes or tall equipment during construction
- Use of explosives
- Landscaping and wildlife attractants
- Likelihood of FOD creation and vicinity to airside boundaries
- Potential for glint and glare affecting aircraft or Air Traffic Control
- Nav aid technical or physical safeguarded zones
- Obstacle Limitation Surfaces (OLS)
- ATC line of sight
- Electronic interference with radio and nav aid systems
- Management of waste and surface water drainage

Where any doubt exists over whether a proposed change, maintenance activity or development will impact on aircraft operations or systems, the Airfield Technical and Compliance Manager (ATCoM) should be consulted.

Where the PMO identifies that Airside Operations will be a project stakeholder, relevant information will be passed to the Airside Operations Coordinator (AOC) for an initial assessment and review using the Airside Operations Change Control procedure. An Operational Liaison (OL) will be nominated from within the Airside Operations team. The OL will become an embedded member of the project team and should be fully involved by the PM in all stages of the project design, planning and implementation.

A project review meeting between the designated Project Manager (PM) and the nominated Operational Liaison should then be arranged at the earliest opportunity.

It is essential that the following activities are completed, and items discussed at the initial project review meeting, although it is accepted that not all items below will have been fully determined.

- Application of BRS-P-AOPS-004 Change Control
- Design review at option stages to allow operational matters to influence final design and construction methodology
- Identification of third-party stakeholders (ATC, GHAs, FBO etc)
- Scope, standards, and specification requirements
- Temporary operating procedures
- Access and egress from site
- Removal of assets (stands, nav aids, AGL etc) from service and return to service

- Time to be allowed in programme for consultation with airside business partners
- Time to be allowed in programme for regulatory (CAP791) preparation, consultation and approvals
- Budget allowances for operational and regulatory matters
- Operational acceptance into use criteria

Additional follow up meetings should be arranged by the PM either independently or in conjunction with the ATCoM or OL to liaise with all identified stakeholders, the wider operational teams, both internal and external (ATC, Ground Handling Agents (GHA) and as dictated by the complexity and risk associated with individual projects.

This ongoing consultation process is designed to ensure that all critical items are identified at the earliest stages, and risks removed or mitigated to acceptable level as the project design develops.

Sufficient time must be allowed within project programmes to facilitate appropriate consultation with additional stakeholders and the regulator. For major projects there are also fees attributable to the engagement of the CAA that must be allowed for within project budgets and approvals.

CAP 791 Chapter 7 and BRS-P-AOPS-004 Change Control Procedure provides details on the required level of CAA monitoring and approval processes. The level of interaction with and approval from the regulator will depend on the nature, scale and risk associated with each individual element of the project.

The Change Control procedure sets out how the CAA needs to be consulted on the project and where additional approvals are required.

3. ONGOING CONSULTATION AND APPROVAL PROCESSES

3.1. Projects requiring CAA approval

For Projects identified as requiring CAA approval, CAP 791 will be applicable. Within CAP 791, projects can be classified as 'minor' or 'major' projects depending on factors such as:

- Extent of changes required to aerodrome operations resulting from the new facility
- Number of changes required to the Aerodrome Manual
- Whether the development would create a new non-conformance that would require detailed evaluation
- The level of internal CAA liaison required (Air Traffic Services, Flight Operations, Airspace/Instrument Flight Procedures)
- The complexity of the development
- The number of site visits required
- The impact on aerodrome operations during implementation (level of disruption to normal operations)

For both major and minor projects, the airside operations team will work with the Development or Engineering PM produce a 'CAP791' document consisting of two parts.

Part One is an assessment of compliance with aerodrome regulations and must include:

- A detailed overview of the proposed change
- Supporting documentation (e.g. Safety Assurance Documentation or change assessment)
- Compliance matrix (to demonstrate that the project design meets regulatory requirements) and
- Scaled drawings, where applicable.

Part Two is an assessment of the control and risk mitigations associated with the design, construction, and operation of the development. This must include section covering:

- A clear statement of the supervision structure for the safety management and monitoring of works, including contact details of key duty personnel concerned, for both project and aerodrome management. This should include clear responsibilities, including the person with overall accountability for the development
- Impact on or changes to Airfield Operating Procedures during the development, including contingencies such as low visibility procedures
- Arrangements for monitoring compliance and liaison meetings/briefings between the aerodrome management and the contractors
- Appropriate plans and diagrams relating to the project and its implementation
- Methods of control and monitoring of contractors
- Day and night start, control and completion of work procedures
- Communications procedures between the aerodrome operating units (e.g. ATC, Airfield Operations) and construction teams

The Part Two submission should assess, refer to and consider the impacts of items such as:

- Emergency procedures
- Methods of working
- Plans of site and diagrams of works
- Site access plan
- Site safeguarding and marking
- Weather minima that will affect the works, particularly the impact of LVPs
- The general layout of the aerodrome including airside access points
- The location and limits of works areas
- The specific security access points to be used and the location and marking of the access routes to be used to reach airside sites
- Methods of control and access for works sites within the Apron and Manoeuvring Area including arrangements for crossing taxiways and runways (if applicable)

- The methods and equipment to be used for protecting, marking and lighting the boundaries of works sites and for protecting normal aerodrome operations in the vicinity of the site. Also the requirement to control site lighting to prevent distraction of aircraft crews, drivers and ATC
- The strict timing for the setting up of work sites, the start of work, daily permitted working hours at the site and procedures to be followed for starting and stopping work
- Aerodrome emergency procedures, including response times during periods of WIP, should not be compromised. This extends to ensuring compensatory arrangements are in place to cover depletions of fire main or fire hydrants when the fire main has been deactivated due to work in progress
- Vehicle and equipment requirements, operating rules and the requirements for staff discipline
- Calculating and communicating amended runway declared distances
- Maintaining appropriate pavement friction characteristics
- Information on special safety requirements for aircraft operations in the vicinity of works and the methods of control available on the Manoeuvring Area, including radio telecommunication procedures if appropriate
- Arrangements for the special control of 'hot works'
- Requirements for the operation of cranes and other tall structures
- Arrangements for the receipt and movement of heavy or bulky loads Requirements for vehicle and area cleanliness, also the implications of Foreign Object Debris (FOD) and loose material hazards for aircraft operations
- Arrangements for the disposal of waste
- Information on the safety implications for the site and staff of special aircraft hazards including blast, vibration, fumes and noise
- Information on the effects of strong winds at the aerodrome
- Site safety, including personnel protection
- Rules and guidance on control of work in progress is given in AMCs and GM to ADR.OPS.B.070 and CAP 168 "Licensing of Aerodromes", Appendix 2F. Further guidance material on the planning and management of a runway rehabilitation programme is provided in CAP 781 "Runway Rehabilitation"
- Aerodrome operators should ensure that all stakeholders are notified of aerodrome projects in a timely manner. These communications should continue through the project and may include Safety Instructions, Aerodrome Information Circulars, NOTAMs or other local procedures.

Significantly more involvement from the regulator is required for projects classified as 'major' by the CAA, these projects may include such things as:

- Runway extension or change to declared distances
- Runway or taxiway resurfacing or other maintenance
- THR relocation
- AGL changes associated with new or additional operations
- New buildings or structures with significant impact

- NAVAID changes, upgrades, or installations
- Taxiway or holding point developments
- Apron developments
- Any development that materially affects the basis upon which the Aerodrome Certificate has been issued

3.2. Final Sign-Off and Approval

Once the CAP 791 has been submitted the CAA will review and (after any amendments have been agreed) approve the works to commence.

No physical works may start on site until full approval from the regulator has been confirmed.

The CAP791 submission forms part of the regulatory approval for the project it is therefore essential that all design principles, control methods, risk mitigation and arrangements included in the 791 are reflected in the tender and contract documents and are rigorously applied and monitored for compliance throughout the construction and implementation phases. The method and person(s) responsible for the monitoring of compliance should be identified within the CAP 791 itself.

Any deviation from the actions contained within the CAP 791 required on site must first be approved by the ATCoM and may require further communication with and approval from the CAA prior to implementation.

3.3. Projects not requiring CAA approval

For projects not requiring CAA approval a similar process to that required by CAP 791 should be followed.

Information gathered at the initial project review meeting and any subsequent project planning and/or stakeholder meetings should be prepared into a detailed set of constraints, specifications and drawings for submission to the contractor or team who will be carrying out the works.

These should address all the potential risks, issues and arrangements for mitigation that would be covered under a part 2 CAP 791 submission. The extent of these documents will depend on the complexity, nature and risk associated with each individual project.

Project Managers should then work with contractors and teams expected to complete the works to ensure the requirements set out in these constraints documents are included in the Risk Assessments and Method Statements (RAMS) required by both the Engineering and Airside Work Permit application procedures with support from ATCoM and / or the OL as required.

Ultimately these RAMS will be submitted and approved as part of the OSI-AW-001 Airside Work Permit process.

4. SHORT NOTICE / EMERGENCY WORK

There are inevitably times when immediate or short notice action is required to rectify issues having an immediate impact on safety or operations.

Any works or projects that occur leaving less than three working days' notice to plan would be classified as short notice.

In these instances, the following actions should be taken:

If necessary, contact Airside Operations on 07712 792235 immediately. The Operations Officer will act to make safe any risk area and to liaise with ATC and ADM to hold traffic or route traffic around risk areas.

Contact Airside Operations personnel for support in the short notice planning of work:

Airfield Technical and Compliance Manager 07795486679

Airside Operations and Safety Manager 07384834885

If none of the above can be contacted and there is an immediate ongoing safety or operational concern, the ADM should be contacted for additional support and escalation.

An Airside Operations team member from the above list will be nominated to work with the PM to plan, communicate and implement the short notice works, working to their specific procedures in AOPS-007 Management of Airside Works.-

5. WORK ON THE RUNWAY

When completing any work on the runway, Bristol Airport will not reduce runway length. All intrusive runway maintenance works will take place under a planned formal closure and will be planned according to the requirements set out in sections 2 and 3 of this OSI.

Work on the runway is carefully planned to meet regulatory requirements and shall be managed according to BRS-P-AOPS-007 Management of Airside Works, while meeting the requirements of AMC2 ADR.OPS.B.070. Runway closure and opening procedures are detailed in BRS-P-AOPS-017 Suspension or Closure of Runway Operations. During major intrusive maintenance, all centreline markings shall be re-installed prior to returning the runway to an operational state. This will be formalised within specific runway works procedures (Airside Works Notification).

Non-intrusive/regular runway maintenance, such as light fitting changes or line marking, shall be managed dynamically according to traffic levels, and shall be completed by Bristol Airport staff. A closure may be implemented depending on the level of the work required. This may be subject to an Airside Work Permit if the nature of the works meets the criteria specified in BRS-OSI-AW-001 Airside Work Permits.

5.6. GENERAL ENQUIRIES

Any enquiries should be addressed to the ATCoM on 07795486679.