0. Version Control

Date	Amendment	Page(s)	New Version
27/03/26	Wildlife Hazard Management Plan changed into ASI 038 Wildlife Hazard Management – layout amended	All	0.1
02/04/26	Version control table added	1	0.2
10/04/26	Document published	All	1.0

1. Introduction & Policy

The requirements to manage bird strike risk are set out in UK Regulation 139/2014. CAP 772 'Bird Strike Risk Management' provides guidance for complying with these requirements. Manchester Airport will ensure there are active control of wildlife hazards on the airfield, together with a long-term, multi-agency approach to managing the off-airport bird hazard environment. Bird activity and bird strike data will be actively monitored as a key safety performance indicator.

2. Wildlife Hazard Management Plan

2.1 Aerodrome Safeguarding

As part of the statutory requirement, Manchester Airport is consulted about all developments within a 13km radius. Each application is assessed by MAGs Aerodrome Safeguarding Team to determine whether the development has the potential to increase the risk of bird strikes through the creation of new bird flight lines. Airfield Operations use Bird Strike Management Limited and Aviaire Wildlife Hazard Management Consultants to compile detailed information on all potential bird attractants and roosting areas within 13km of the Airport.

2.2 Habitat Management

Manchester Airport complies with the CAP 772 recommendation to maintain a long grass policy and thereby deter bird activity. This aims to ensure that grass height is maintained between 220mm and 300mm all year round.

To ensure that growth remains healthy and weed free, a comprehensive planned programme for grass maintenance is produced each year. Manchester Airport Engineering Operations produces the programme which in turn is implemented by the Airfield Senior Engineering Manager with the assistance of the Airfield Operations Duty Manager.

Part of this programme includes grass quality improvement. This is achieved using insecticides, pesticides, and herbicides during the early and late seasons.

3. Bird Control Systems

3.1 Routine Methods

Birds are dispersed by various methods recommended in CAP 772. The Airfield Operations Team have the following dispersal methods available

- Digital Distress Calls
- Culling
- Arm Scares
- Man presence
- Vehicle lights (nighttime dispersal)
- Laser
- 9MM 380 Revolver – Blank Firing Pistol
- Primetake Flare Pistol
- Shotguns

3.2 Culling

Persistent birds which present an unacceptable risk may be culled using a variety of techniques.

In compliance with the Wildlife and Countryside Act 1981, the killing of wild birds or the taking or destroying of their nests and eggs shall be limited to the minimum number necessary to preserve air safety, in accordance with the Class 12 Licence issued by Natural England. No birds shall be killed or taken, and no nests or eggs taken or destroyed by any method prohibited by section 5 of the Wildlife and Countryside Act 1981, without obtaining a specific licence from Natural England. Manchester Airport has been issued a Class 12 licence. Additional licences for the Common Buzzard and Curlew have also been issued to Manchester Airport by Natural England.

Records of all birds, nests and eggs destroyed are maintained by Airfield Operations and submitted to Natural England on an annual basis.

3.3 Aerodrome Notices & Warning Signage

Notices are posted advising the public of the dangers of leaving unwanted food in areas that may affect airport operations. Daily inspections of the airport hotel and aviation viewing park are undertaken from an airside vantage point.

3.4 Racing Pigeons

Airfield operations have access to a yearly ring list as promulgated via the internet by the Royal Pigeon Racing Association (http://www.rpra.org). Any information gleaned about bird activity near Manchester Airport is to be recorded. This may include pigeon release points and destinations. These details will be forwarded to personnel directly involved in Wildlife Control duties, so they can remain vigilant for increased activity. The presence of Racing Pigeons is detailed in Manchester Airports Aeronautical Information Publication.

4. Roles & Responsibilities

4.1 Airfield Operations Manager (AOM)

The **Airfield Operations Manager (AOM)** is responsible for:

- Ensuring adequate resources are available for the provision of wildlife control,
- Ensuring bird activity audits are undertaken within a 13km radius of the airfield,
- Producing management information statistics and implementing remedial action where necessary,
- Researching modern technologies and working practices,
- Issuing Local Operating Procedures to promulgate changes in procedure, management information and guidance to Airfield Operations personnel,
- Applying for special licences to obtain permission for bird culling or nest removal,
- Ensuring that wildlife control operations comply with the Wildlife & Countryside Act 1981 and local operating procedures,
- Co-ordinating liaison with support agencies such as RSPCA, RSPB, DEFRA and GMP in relation to specific wildlife control operational issues when applicable.

4.2 Airfield Operations Leads (AOLs)

The **Airfield Operations Leads (AOL)** are responsible for:

- The daily management of wildlife control operations,
- Ensuring 24hr operational adherence to licenses obtained from Natural England, and other regulatory bodies,
- Promulgating aerodrome information associated with bird hazards via NOTAM/ATIS and essential aerodrome information,
- Ensuring adherence to safety management and operating procedures by Airfield Operations personnel,
- Regularly providing updates and notices to the Airfield Operations team as to trends and wildlife hazards on the airfield,
- Investigating elevated risk bird strike events,
- Monitor the airfield grasslands and highlighting areas of concern to the asset support team.

4.3 Airfield Safety & Compliance Officers (ASCOs)

Airfield Safety & Compliance Officers (ASCO) are responsible for:

- Acting as a 'Wildlife Control Officer' when rostered on for these duties,
- Completing a 'self-briefing' exercise prior to commencing duties to familiarise themselves with the airfield operational status and current wildlife hazard issues,

- Conducting regular inspections of the aerodrome throughout the day and night, to detect and then to disperse any wildlife concentrations using the relevant dispersal equipment and techniques,
- Conducting regular inspections of runways and surrounding areas for wildlife activity,
- Reporting all wildlife strikes (confirmed and unconfirmed) through the ECCAIRS22 reporting portal,
- Monitoring possible new roosting or loafing areas and recording this information,
- Ensuring oncoming colleagues are fully briefed and conversant with predominant areas of activity,
- Monitoring activity outside but near the airfield. E.g., viewing and recreational areas, catering ramps, farmland, etc,
- Dispatching wildlife if required as an act of mercy,
- Culling wildlife to preserve air safety,
- Informing Air Traffic Control and the Airfield Operations Leads of any significant bird activity,
- Warning pilots through Air Traffic Control whenever a potential hazard cannot be countered immediately or without an actual hazard arising (All information as to the position, concentration and movement of birds is classed, for ATC purposes, as essential aerodrome information),
- Reporting any newly found bird nests to the Asset Support Team,
- Monitoring areas of WIP particularly work involving excavation of earth,
- Dealing with bird strikes events near the runways,
- Continuously updating the Wildlife App with new sightings or bird strikes,
- Maintaining a knowledge of local Aerodrome Ornithology, bird behaviour and habitat.

4.4 Airfield Safety & Compliance Officers - Trainers (ASCOTs)

The **Airfield Safety & Compliance Officers – Trainers (ASCOT)** are responsible for:

- Ensuring Airfield Operations personnel are trained, competent and conversant with their responsibilities under ASI 038 Wildlife Hazard Management,
- The delivery of the annual wildlife validation training courses to all Airfield Safety & Compliance Officers.

4.5 Senior Engineer (Airfield)

The Senior Engineer (Airfield) is responsible for:

- Assisting Airfield Operations with the programming of grass maintenance and habitat management, reducing and removing any wildlife attractants,
- Ensuring that areas around aerodrome signs, edge lighting, reflective markers, etc are cut to maintain visibility.

5. Staffing Procedures

To achieve a consistent and qualitative approach to Aerodrome Wildlife Control, the following procedures, are to be followed unless otherwise directed by the AOM, AODM or AOL.

5.1 Day/Nighttime Operations

Notwithstanding the requirement to respond to emergency situations, Airfield Safety and Compliance Officers engaged in wildlife control duties will not be expected to undertake other duties, i.e., marshalling, supervising, escorting contractors, surface inspections etc. during the hours of daylight, dawn, and dusk. During the hours of darkness, active runways will be checked for the presence of bird/wildlife at regular intervals, and dispersal actions taken as needed.

5.2 Low Visibility Operations

To protect runway operations during periods of reduced visibility, stringent restrictions are placed regarding the movement of vehicles on the manoeuvring area. Whilst airfield operations will continue to deploy personnel to undertake bird hazard control duties during periods of low visibility operations, the frequency and extent of patrols will be somewhat reduced because of these restrictions and the need to protect the Localiser Sensitive Areas. Such patrols are likely to be restricted to the north side of Runway 05L/23R, unless Runway 23L is operational for departures (i.e., LVP Cloud as per ASI15).

6. Bird strikes

When a bird strike is observed, reported by a pilot, or a carcass found during a runway inspection, the following procedure is to be followed:

- Recover the bird remains adhering to local operations procedures,
- Inform ATC & AOL,
- Attempt to identify the likely aircraft if a bird strike has not been reported,
- Inform the RSPB or British Racing Pigeon Association if the carcass carries any identification (e.g., a leg ring),
- Record the bird strike (even when no carcass is found) using the Wildlife App,
- Photographs should be taken of the bird strike remains as evidence and uploaded to the bird strike report in the Wildlife app,
- Following identification, should the remains be kept for DNA purposes the sample is to be kept in the freezer located at the Airside Operations Centre. If the remains are not required for identification, they should be disposed of in the CAT 1 compactors,
- Airfield Safety and Compliance Officers will report all bird strikes to the EU Aviation safety reporting system using the internet-based reporting system, accessible via the ECCAIRS2 reporting portal.

7. Wildlife Hazard Control Records

Comprehensive records assist with development of the Wildlife Hazard Control Programme; they also demonstrate the integrity of existing wildlife control mechanisms. The following details will be recorded the points below are an example of the information gathered through the wildlife control database:

- Name of Duty Bird Controller,
- Details of areas patrolled and inspected,
- Bird activity observed and dispersed
- Habitat issues,
- Bird strike events,
- Dispersal methods used,
- Birds culled, and nest or eggs removed.

Bird strike data is reported at least monthly to the Aviation Safety Board (ASB).

8. Health and Safety

8.1 Airfield Driving

Wildlife control duties require drivers to monitor birds and wildlife activity whilst operating on and near aircraft, runways, and taxiways. Drivers must maintain an elevated level of situational awareness when operating on the airfield and monitor the appropriate ATC frequency. All data entries must be made whilst the vehicle is stationary.

8.2 Firearms: Licenced and qualified personnel

The use of firearms and ammunition require strict adherence with local operating procedures.

8.3 Handling Birds and Carrion

The risk posed by carcasses, not least the possibility of infection by Avian Flu, as an example, requires that all personnel observe procedures for using PPE, cleanliness and health and safety procedures.

Wildlife Control Personnel will comply with local operating procedures concerning the safe handling of carcasses.

9. Firearms and Ammunition

9.1 Permitted Users

Only designated staff, that are certificated as 'trained & competent' are permitted to use any type of firearm. All users must have a licence to use firearms issued by their local police force. Staff engaged in Wildlife Control Operations must complete an approved Firearms Safety Awareness Course before using Firearms and Ammunition and must hold the relevant licence as issued by the relevant local authority police force.

Local operating procedures also dictate the procedure for operating and using any firearm on the airfield.

9.2 Firearms & Ammunition Stock

Airfield Operations possess several firearms for the sole use of discharging wildlife hazard management duties at Manchester Airport.

All firearms and ammunition are stored in a dedicated facility in secured police authority approved storage safes and cabinets, at the airside operations centre.

10. Training

All personnel engaged in undertaking, supervising, or managing wildlife control duties are required to undertake a formal classroom 'Wildlife Control' training module to include the following elements: -

- Aerodrome Ornithology,
- Dispersal Techniques,
- Habitat Management,
- Bird strike Hazard,
- AirShot Services Limited training course related to firearms operations & safety procedures,
- Shotgun license holders must attend AirShot Services Limited advanced shotgun course before using shotguns on airfield.

This training is currently provided by external providers, MJ Airport Associates, AirShot Services and Bird Strike Management Limited.

11. Maintenance of Competency (MoC)

All personnel engaged in undertaking wildlife control duties are required to maintain competency in all aspects of wildlife control: -

Personnel engaged in wildlife control will be assessed on an annual basis against a checklist of competencies. Assessments will be undertaken in the workplace by ASCOTs. Should the assessment reveal any shortfalls in competence, further training or guidance will be organised by the respective ASCOT. This may involve further local vocational training, or refresher training at reduced intervals.

12. Risk Assessment Methodology

Airfield Operations undertake two formal risk assessment matrix of the bird hazard risk at Manchester Airport with an in-depth bowtie annually. There are two elements to the risk assessment process: -

a) on-airfield hazards
b) off-airfield hazards

Hazards are assessed using data obtained from observations recorded by the Airfield Safety and Compliance Officers. Each species of bird observed is categorised as RED (Action required to reduce hazard); AMBER (Continue to monitor and consider further action) and GREEN (No action required, minimal or no risk). The level of risk is determined by calculating the total number of observations, bird strike history, the size and mass of the bird and its ability to flock. The purpose of the risk assessment process is to ensure that known hazards are clearly identified and prioritised and that control efforts can be clearly focussed on the species of birds which pose the greatest risk to aircraft operations.

Remedial action can take many forms including, changes to habitat and infrastructure, more stringent control methods and collaborative working with estate owners, tenants, and farmers to reduce feeding sources and attractants.

13. Airfield Grassland Management – Operational Policy Statement

13.1 Introduction

Due to the risk that birds present to aircraft, a primary concern at all airports is to limit the number of birds present on airside grasslands. To do this successfully, it is necessary to make the airfield as unattractive as possible by reducing the sources of food, shelter, and water to a minimum.

This document sets out how Manchester Airport will seek to achieve this objective by the adoption of a comprehensive, effective, and structured grassland management regime.

13.2 Regulatory Guidelines

The CAA fully recognise the hazards that birds present to aircraft and as a result they have developed guidance to aerodrome operators on how to reduce this risk. This guidance is contained in CAP 772 'Bird Strike Risk Management for Aerodromes'.

Section 2.6 of CAP772 states that.

"The most effective habitat control measure that can be applied on an aerodrome is the management of the grassed areas".

Short grass provides security for smaller birds as it enables them to spot predators more easily and earlier. It also increases populations of invertebrate animals on which many bird species rely for food. Conversely, longer grass (typically above 400 mm) that falls over because it cannot support itself also has the potential to attract birds.

However, grass that is maintained at a height of 220-300mm as per CAP772, makes it more difficult for birds to locate prey at or below the surface, reduces the security effect and lessens populations of invertebrate food sources. If maintained at this height, bird numbers on the aerodrome can be reduced significantly. This method of grass management is often referred to as a 'long grass policy'

In addition to the length of the grass, CAP772 also advises aerodrome operators to control the growth of weeds in the airfield grassland areas. Even moderate weed infestation – which might not seriously harm the grass - attracts birds such as Pigeons who feed on them.

13.3 Existing Grassland Areas – Management Regime

13.3.1 General

MAs Engineering Operations team will endeavour to ensure that the airside grassland areas are maintained in accordance with the guidelines and recommendations contained in CAP772 and advice obtained from specialist consultants that the company might choose to employ. To achieve this objective, the following must be provided.

- Appropriate conditions for optimum grass growth,
- Correct species of grass and the elimination of weeds attractive to birds,
- The satisfactory completion of reinstatement works and the prohibition if vehicular access that will damage the sward,
- An appropriate maintenance regime,
- Liaison between relevant parties (e.g., Ex Engineering Operations, Airfield Operations & Contractors),
- The provision of adequate resources,

Although the principal guidelines and recommendations contained in this document should be adhered to as far as possible, it is recognized that the growth of grass and weeds is significantly affected by climatic conditions. Hence, the maintenance regime also needs to be flexible enough so that changes in grass condition - which may occur over a short time scale - can be reacted to and managed in a prompt manner.

13.3.2 Airside Grassland Areas

To aid the grassland management regime, the airfield grassland has been split up into 117 separate defined areas. Please refer to current airfield grassland map.

By splitting the grassed areas into specified sections, not only is Manchester Airport better able to target specific treatments to certain areas, but more detailed information regarding where grass management operations are taking place can be provided to both Airfield Operations, ATC, and other interested parties.

13.3.3 Annual Grassland Survey

To obtain an independent overview of the effectiveness of Manchester Airports grassland management regime, around April each year a survey shall be undertaken by suitably qualified and experienced personnel to assess the condition of the airfield grass areas. The Airfield Senior Engineering Manager shall instruct and arrange for the survey to be completed by the appropriate appointed contractor.

This survey shall assess as many of the 117 grassland areas as practicable within the restrictions that the normal operation of the airport permits.

The scope of the survey should include for.

- An examination of the grass sward within each section with notes taken of the major grass species and whether there was any major weed infestation,
- Taking soil profiles (using a BME Turf Profiler) to establish the fiber (thatch) accumulation, root development and soil type. Any evidence of compaction, poor drainage and the presence of grass diseases should be noted,
- Selective testing of selected soil samples (for pH and soil nutrient analysis),

- Invertebrate / pest count and identification,
- Recommendations for fertilizer, herbicide / pesticide application or other treatment (i.e., bottoming out) for each section surveyed,

The findings of the survey and any recommendations are to be contained in a suitable report. This report shall be used as the basis for determining the priorities for the forthcoming growing season in terms of weed/insect control, re-seeding, bottoming out etc.

13.3.4 Ongoing Surveys

From time to time during the growing season, the Airfield Senior Engineer and the Airfield Operations Duty Manager shall undertake a survey of as many of the grassland areas as can be accessed within the restrictions that the normal operation of the airport permits. The purpose of these surveys will be to.

- Ascertain the effectiveness, or otherwise, of that year's grassland management plan,
- Agree any changes to the agreed management regime that may be needed considering the survey (i.e., due to unexpected or heavy weed growth in one or more areas).

13.3.5 Grass Cutting

Depending on the prevailing conditions and growth of grass, Manchester Airport will aim to carry out the first topping cut in early to late April when most of grasses have produced flowering heads. Most grasses produce flowering stems taller than 200 mm; therefore, it will probably be necessary to allow initially the grass to grow to that height or slightly taller.

Topping cuts shall be completed thereafter with a rotary mower set to give a cut between the recommended 220-300 mm in height. Topping cuts will usually be required throughout the growing season, i.e., until late September/early October. These dates will, of course, again be dependent on prevailing weather conditions and rate of grass growth.

13.3.6 'Bottoming Out', Soil Improvement and Re-Seeding

These activities will only be undertaken if recommended in the annual survey.

13.3.7 Weed Control

To control the types of weeds that act as a bird attractant (i.e., dock, thistle, vetch, clover, ragwort etc.), suitable selective hherbicides should be applied during Mid-March to late May to those areas where such weeds have been reported as being present in significant numbers. Further treatments may be required if circumstances dictate.

Attention should be given to the edges of paved areas, along linear features such as fence lines and French drains, around wigwags etc.

Due to the propensity for weeds to flourish in the granular material, arrangements shall be made to treat the arrester bed at the end of runway 05L at least twice per year (Area 158). In this area, it is recommended that a total weed killer such as Glyphosate or similar approved substance be used.

13.3.8 ILS Glide Path/Localiser Critical Area

In accordance with the recommendations made in CAP772, the height of the grass in the ILS Glide path and Localizer Critical Areas shall be maintained at a height not exceeding 100 mm; subject to availability to carry out maintenance activities in the critical areas.

13.3.9 Signs and Visual Aids

The height of the grass should be maintained so that it does not obstruct the display of an aeronautical ground light, sign, or other type of visual aid.

13.3.10 Re-instatement of 105m 'Burn Line'

The 105m 'Burn-line' will be reinstated as and when required.

13.3.11 Grassland Management Regime: Indicative Programme

To a great degree, all grassland management regimes are dependent on the weather conditions. Not only do these influences how rapidly, or otherwise, grass grows, but they also affect when and if certain management activities can be undertaken (i.e., weed killing, mowing etc.).

Hence, because of this, it is not possible to develop a wholly prescriptive management plan. However, an indicative programme based on experience from previous years has been developed and this is attached as Appendix A.

Although the indicative programme details all the activities / treatments that may be needed each year (i.e., pest control, bottoming out etc), it should be noted that this does not necessarily mean that these will be undertaken, either in part or at all. Rather, the need to do them will be influenced by the results and recommendations of the Annual Report. The decision as to which treatments are needed, where and when will be agreed at the pre-season briefing meeting and included in the Grassland Management Plan.

13.4 Reinstatement of Grassland Areas

13.4.1 General

The establishment of grass by seed is best achieved in the UK between March and October. Work should be avoided when ground conditions are wet, particularly when heavy equipment is to be used as this will result in loss of soil structure.

Grass seed will not germinate in temperatures below 7 degrees or in prolonged dry spells. Hence, sowing operations should be avoided during such periods.

Seed must be stored in original, sealed bags; seed in open bags should be discarded. In addition, any seed used on the airfield should be 'fresh' (not stored for longer than two growing seasons).

13.4.2 Seed Mix

At Manchester Airport, an airport approved seed mix should be used for any airside reinstatement work: This mix is available from Sherriff Amenity.

13.4.3 Seed Bed Preparation

The proposed area to be seeded should be free of annual and perennial weeds, all rubbish, rough grass, rubble, and stones larger than 20mm.

Whenever possible, existing airfield topsoil shall be used. However, if soil is to be imported it should be in accordance with the requirements of BS3882 2007, screened and picked free of stones larger than 20mm. A sample of the soil shall be provided for the Airfield Senior Engineer approval prior to spreading. The minimum depth of spread should be 150mm.

Prior to seeding the ground should be cultivated using disks and a power harrow to a full depth and, where directed, treated using a Cambridge Roller. The Contractor shall pay due regard to the season and weather conditions before sowing grass seed and shall take all reasonable measures to promote its growth, including, if necessary, watering prior to sowing.

A post emergence granular fertiliser shall be applied as appropriate.

Sowing is to be carried out in transverse directions using a calibrated mechanical broadcaster, the rate of application being 300kg/ha (150kg/ha in each direction). Where machine distribution is impractical the seed shall be sown by hand. The seed shall be covered by hand raking, or by seed harrow and care should be taken not to disturb the seed bed.

13.4.4 Areas Subject to Jet Blast

Areas that will not be subject to any jet blast shall be treated as detailed in Section 4.3 above. Areas that are subject to jet-blast shall be treated as specified below.

Low Blast Areas - In those areas where protection against low levels of blast erosion is required, once the seed has been sown and raked into the soil, all areas shall be rolled and then sprayed with bitumen emulsion grade K1-60 at 1.8litres/sqm (K1-40 at 2.7litres/sqm).

High Blast Areas **-** In those areas that are subject to high levels of jet blast, steps should be taken to ensure that passing traffic does not erode the soiled surface. Such methods may include the use of suitable polyethylene polymer grids such as 'Tensar Mat' or similar

approved. However, the contractor shall ensure that any materials used to protect the soiled areas from jet-blast erosion are securely fixed to the surrounding area, so they do not present a FOD hazard.

The contractor should provide details of the proposed protection method to the Airfield Senior Engineer 5 working days before its planned installation. Installation of the protection measures shall only precede with Airfield Senior Engineer written approval.

13.4.5 Treatment of Damaged Areas

Areas in which the existing growth has been damaged / rutted by the action of vehicles shall be reinstated at the contractor's expense by blade grading with a suitable grader to remove all dips, furrows etc. and seeded as described previously. Blade grading shall be carried out as many times as necessary. The area must be approved before any further operations are put in hand.

The repaired area shall be protected as described above.

13.4.6 Aftercare: Responsibility

In normal circumstances, following the completion of the works the contractor would be responsible for the aftercare of all reinstated areas for a period of 12 months.

However, the type of works needed to ensure that reinstated areas become fully established and weed-free is somewhat specialist in nature and are not normally undertaken by the larger contractors Manchester Airport employs to undertake major airfield works.

In addition, the various restrictions that are placed on both individuals and companies working airside can make it problematical – and therefore relatively expensive - for large contractors to employ specialist horticultural sub-contractors to undertake grassland aftercare works, particularly when the reinstated areas are relatively small.

Given these factors, allied to the fact that Manchester Airports Asset Engineering Unit undertakes all airside grassland management operations – and is therefore expert in such works - suggests that the most sensible option would be for Manchester Airports Asset Engineering Unit to undertake all aftercare operations (i.e., all activities following the sowing of the seed and installation of any protection measures) on instruction by the Airfield Senior Engineer.

Prior to Manchester Airport taking on the aftercare responsibility for any reinstated area, the site shall be inspected by the Airfield Senior Engineer. Any remedial works that are identified because of this inspection shall be recorded on the approved pro-forma – which is attached as Appendix A – and a copy forward to the main contractor. They shall undertake the necessary corrective works as soon as is reasonably practical and advise the Airfield Senior Engineer accordingly. If the area has been reinstated to the required standard, a completion certificate will be issued to the contractor - attached as Appendix B - and Manchester Airport will take on the ongoing management and maintenance from that date.

13.4.7 Aftercare: Procedure

Should it become apparent that the grass seed has failed to germinate in some areas; these bare patches shall be prepared and re-seeded as soon as possible. However, in doing so, due regard shall be made of the time of year as germination will not take place during prolonged periods of wintry weather.

The first cut should normally be taken when the grass has reached 100mm in length. This should reduce the length of the grass to around 50mm in length. A second cut should be taken when the grass has reached 150mm in length and this should reduce the height of the grass to around 100mm. Once it has been established that the grass sward has fully established, the grass should be cut in accordance with the practice and procedures outlined in Section 3.6 above.

In relation to those areas in which physical measures have been taken to mitigate the impact of jet blast, the two cuts must be undertaken by strimming only. Once the grass has become fully established, the protection measures should be removed.

Prior to the second cut, undesirable weeds such as Dock, Thistle, Ragwort etc should be treated with a suitable selective weed killer or spot treated with Glyphosate. Once die back has occurred, the weeds should be removed.

During dry periods, arrangements should be made to have the reinstated areas thoroughly watered on a regular basis.

13.4.8 Cleanliness

Care shall be taken throughout the re-grading, soiling, seeding and maintenance operations to avoid carrying soil or arising onto the pavements used by aircraft.

13. 5 Liaison with ATC & Airfield Operations

13.5.1 Airfield Operations

The contractor will be required to advise the AODM of any planned grassland management works at the shift co-ordination meeting. Grassland management works in areas not under the direct control of ATC can be undertaken by AMU staff on their own lookout.

13.5.2 ATC

If grassland management works need to be carried out either within the runway strip or ILS Glide path/Localiser Critical areas, prior notification of this should be provided to the AODM/ATC Watch Manager by the Engineering Team Manager at the shift co-ordination meeting.

Mowing / spraying operations can only be done in critical areas when:

a) The reciprocal runway is in use (this is the preferred option), or,
b) VOR/RNAV approaches are used (this is not preferable but nevertheless an option).

Cutting in these areas therefore needs to be coordinated by the AODM through the operational coordination meetings at 07:30/19:30 daily. The AODM will need to account for any ILS testing and the requirement to radiate for tests through coordination with NATS.

It should be further noted that access to the 23R Localiser Critical area requires security presence at CG16. This again can be coordinated at the 07:30/19:30 briefing.

As with any other operation in areas under the direct control of ATC, operatives who wish to undertake grassland management works within such areas should first seek and then gain permission to do so prior to them entering that area.

13.6 Operations during LVPs

No grassland management operations shall take place whilst LVPs are in force.

13.7 Records and Documentation

Manchester Airports Asset Engineering Operations team will maintain records of all grassland management activities. As stated earlier, each area of airside grass has been given a unique reference number in line with the Airfield Grass Map. All treatments / operations that are carried out on each area must be recorded by the operator, for example:

- Date of work,
- Area treated,
- Nature of operation,
- Rates of herbicide, pesticide, fertiliser used,
- Name of operator and any comments.

The standard pro-forms that are to be used to record the airfield grassland management activities are enclosed as Appendix B.

Such records will be invaluable for analysing the success of each treatment and the overall management regime. In addition, so that reinstatement can be adequately covered. The records should be extended to include work carried out by contractors.

All records shall be retained for a minimum of three years.

13.8 Performance Management/Reporting

Manchester Airports Asset Engineering Operations team will undertake regular monitoring of their grassland management operations to ensure that all areas are treated in accordance with the specified schedule to the required standards. These may include on-site inspections/audits to gauge the effectiveness of the management regime.

13.9 Training

Manchester Airports Asset Engineering Operations team shall be responsible for providing appropriate training to personnel employed in grassland management duties, including the operation of vehicles, plant and use of herbicides/pesticides.

13.10 Policy/Management Regime – Review Period

The policy statement and management regime set out in the preceding paragraphs will be reviewed every three years or whenever there is.

i) A notable change in the condition of a large area of airfield grass,
ii) A significant increase in the occurrence of birds on any part of the airfield,
iii) Changes to legislation, CAA guidance or Manchester Airport procedures,
iv) Major airside works/developments that affect a significant part or all the existing management regime.

Appendix A

AIRFIELD GRASSLAND MANAGEMENT REGIME
REINSTATEMENT OF GRASSED AREAS – DEFECT IDENTIFICATION SCHEDULE

Grass Area No	Location	Description of Defect

Signed …… **MA Senior Engineering Manager**

Date ……..

Appendix B

AIRFIELD GRASSLAND MANAGEMENT REGIME

REINSTATEMENT OF GRASSED AREAS – COMPLETION CERTIFICATE

I can confirm that the following areas have been reinstated to the satisfaction of MA and the responsibility for their aftercare now lies with MA.

Grass Area No	Location	Signed	Date

Details of location/frequency

Area	Frequency	Distance of Work from Runway Centreline	Works Party	Weather Minima Applicable	Conditions
Delta Crossing point (Emirate's route) (Areas 26 A+B 28 A+B 49 A+B 48 A+B)	Weekly (Fridays) ATC to confirm time 1-hour prior	105 metres up to the pavement edge	Vehicles and plant	Sufficient to enable ATC to see the activity from the VCR	1. May operate between aircraft movements under positive clearance from Air Controller 2. Vehicles to display hi-intensity obstacle lights 3- Any active incursion sensors to be edited out
23R Localiser Critical Area (173)	1st & 3rd week of the month during the grass cutting season	Runway End Safety Areas 05L, 23L, 23R, aircraft landing over works (undershoot area) Full access available in 05L operation	Vehicles and plant	Sufficient to enable ATC to see the activity from the VCR	1. May operate off-pavement during aircraft movements with permission from Air Controller 2. Vehicles to display hi-intensity obstacle lights 3- Localiser to be isolated before entry
23R Glidepath Critical Area (Area 142)	1st & 3rd week of the month during the grass cutting season	105 metres up to the pavement edge	Vehicles and plant	Sufficient to enable ATC to see the activity from the VCR	1. May operate between aircraft movements under positive clearance from Air Controller 2. Vehicles to display hi-intensity obstacle lights. 3- Glidepath to be isolated before entry
05L Glidepath Critical Area (Area 157)	2nd 4th week of the month during the grass cutting season	105 metres up to the pavement edge	Vehicles and plant	Sufficient to enable ATC to see the activity from the VCR	1. May operate between aircraft movements under positive clearance from Air Controller 2. Vehicles to display hi-intensity obstacle lights 3- Glidepath to be isolated before entry
05L Localiser Critical Area (Area 139)	1st & 3rd week of the month during the grass cutting season	Runway End Safety Areas 05L, 23L, 23R, aircraft landing over works (undershoot area) Access available in 23R operation in-between movements	Vehicles and plant	Sufficient to enable ATC to see the activity from the VCR	1. May operate off-pavement during aircraft movements with permission from Air Controller 2. Vehicles to display hi-intensity obstacle lights 3- Localiser to be isolated before entry

Area	Frequency	Distance of Work from Runway Centreline	Works Party	Weather Minima Applicable	Conditions
05R Glidepath Critical Area (Area 172)	2nd 4th week of the month during the grass cutting season within the Runway 2 daily closure	105 metres up to the pavement edge Full access available in Runway 2 daily closure	Vehicles and plant	Sufficient to enable ATC to see the activity from the VCR	1. May operate between aircraft movements under positive clearance from Air Controller 2. Vehicles to display hi-intensity obstacle lights. 3- Glidepath to be isolated before entry
Grass areas less than 105	2 weeklies during the grass cutting season	More than 105 metres from runway centreline	Vehicles and plant	Airfield Safeguards	May operate 'free-ranging' with GMC