

1 Introduction and commitment

PQ VENTURES PLP are currently redeveloping an area north of Manchester Airport (Map 1) and are responsible for the preparation and implementation of a Bird Hazard Management Plan. The plan is to be submitted to Manchester Airport Group for review and approval via the MAG Project Manager. The approved plan will also be submitted to the planning authority as part of the response to the planning conditions for the development of the car park. The planning approval reference is 131453/FO/2021/Vacant Land To The North Of Longstone Road Manchester M22 5LB



Map 1: showing redline boundary of area to be developed.

The Bird Hazard Management Plan (BHMP) recognises the dynamic risks involved with both a developing and/or redundant areas of a site and addresses the potential risk of bird strike to aircraft using Manchester Airport as a result of the relevant works being undertaken. The BHMP outlines the proposals that will put in place measures that will encourage vigilance amongst the workforce to help limit bird interest to an agreed acceptable level. The plan also requires a nominated member of staff to undertake daily checks of bird numbers and an additional weekly visit by an ecologist to confirm that the implemented measures are working and that bird numbers are at an acceptable level. Though rigid in its tolerance to peak numbers, the plan recognises the dynamic nature of bird activity and allows the flexibility to implement, remove, or enhance measures to deal with potential changes. Non-compliance of the plan is also addressed. All contractors will be made aware of this document and integrate it into their environmental, health and safety, site safety documents etc.



Photograph 1: looking north over development site.



Photograph 2: looking west across development site.

2 Description of planned works

The proposed development is within one and a half kilometres from the northern end of the main runway (Runway 1). The planned works involve the 'Erection of 4 no. industrial units with ancillary office space (B8 use), with associated landscaping, car parking, bin and cycle stores'.

It is a relatively small area at just less than 1 acre and limited in its habitat variety. The site is predominantly grass and tall herbage that has been recently strimmed for maintenance purposes. The boundary on three sides contains mature trees with two-storey units and residential dwellings on neighbouring properties.

Prior to this condition being discharged there will be maintenance works such as litter removal and strimming of vegetation only to keep the area tidy for both cosmetic reasons and to deter anti-social behaviour.

The works unavoidably involve breaking ground and the potential of the incidental creation of temporary water features, both of which could attract additional birds to the area. The activities that could create these attractors to birds are:

- Reduced level excavations to remove existing vegetation, required to create the new car park area, with the exposure of fresh ground with associated invertebrate food sources readily identifiable by birds and the creation of small ponds and puddles associated with the removal of vegetation which will attract birds in terms of both potential food, water and bathing.
- Deeper localised excavations associated with the construction of the associated drainage and ducting for services to the new car park area and units, again exposing ground and potential food sources.
- Presence of spoil, including potential food sources, from all the above excavations and use of spoil in landscaped mounds in the proposed mitigation area.
- Disturbance of ground associated with trafficking of plant and wagons with the potential to expose food sources and created ruts that could result in puddles/ponded areas.
- The presence of construction personnel in the area with the associated potential of uncontrolled food waste or other materials that could prove attractions to birds.

3 Bird strike hazards to aircraft

It is acknowledged that bird strikes to aircraft can cause engine failure, damage to windscreens damage to landing gear or other crucial aircraft systems and thereby lead to an aircraft crashing or having to carry out an emergency landing with the potential for multiple fatalities to passengers, crew and to others at ground level. Costs and risks associated with non-catastrophic damage can also be considerable, with estimates of bird strike related damage and associated delays and disruption to airline operations estimated as approx. \$1.2 billion per year worldwide.

The presence of birds within the controlled airspace around the airport can also lead to significant delays and disruption to airport operations associated with implementation of additional measures to manage and control the presence of these birds.

Aspects of the planned works as detailed in section 2 above have the potential to attract additional birds to the area. Effective and robust management of this to prevent any increase in the bird strike risk associated with any aspect of the works is acknowledged to be crucial. Briefing of the required control measures to all site personnel is essential and failure to comply with this plan by any individual that results in a potential risk to aviation is a criminal offence and this will be explained to all personnel involved in the project.

4 Objectives and targets

The principal objective is the effective control of numbers of birds on the construction site. It is understood that Manchester Airport consider that the following numbers would represent reasonable targets for maximum numbers for the most hazardous species:

Species	Upper limit of acceptable numbers visible on site
Gulls	10
Ducks	2
Pigeons	20
Starlings	30
Corvids (crows, rooks etc)	20

Performance against these targets is to be monitored, recorded and reported throughout relevant elements of the works as detailed in section 8 below.

Failures to keep below these targets are to be reported and managed as detailed in section 9 below.

Any instance of significantly exceeding these targets are to be reported immediately in accordance with section 9 below. In such a case, there must be no attempt to scare the birds off site due to the possibility of them then flying into the flight path of aircraft.

5 Control measures

5.1 Control of the area of ground broken and exposed at any given time.

Extent of broken ground associated with general movement of wagons and plant will be minimised by the initial construction of a stoned-up haul road within the area of the new car park construction and use of the existing external haul road into the southern end of the existing car park. The road will be constructed in stages,

minimising the length open at any given time and on completion it will provide a sound running surface minimising any need for wagons to travel on open ground.

For the reduced level dig, P.P.Connor's Site Manager will programme works on a detailed basis daily to ensure that extent of ground exposed is carefully monitored. The construction methods, type of earth moving equipment and availability and deployment of the covering materials will be detailed in a risk assessment and method statement (RAMS) for this work which will also include all the relevant requirements of the bird hazard management plan. If site managers change then the duty and obligations contained in this document are transferred to the new site manager until the landscaping has been completed

For the localised deeper excavations associated with ducting and drainage, lengths of ground opened up will be controlled and planned by the Site Manager to minimise open areas at any given time. Unsuitable/surplus spoil will be loaded into wagons and removed from site on a frequent basis. Suitable spoil for backfilling the excavations will be kept on a controlled basis adjacent to the works and excavations backfilled and the ground reinstated promptly. The construction methods and control measures will be detailed in the RAMS for this work which will also include all the relevant requirements of the bird hazard management plan.

5.2 Prevention of ponding/pooling

The possibility of ponding and creation of localised puddles on the exposed ground is considered a minimal risk as it is a small site that slopes towards a small brook on the north-eastern boundary. Any long-term pooling will be dealt with by filling in ruts and depressions with stone.

5.3 Bird deterrents

Where the ground is exposed for more than 24 hours, pins with flickering tape to be installed at 10m intervals across the exposed area at the end of the shift. Installation to be recorded on the bird spotting log and Site Manager to take a record photograph. Pins to be removed at the start of the shift where they are within live working areas and re-fixed at the end of the shift.

If the ground is to be exposed for more than four days, orange plastic security mesh fencing, 1m high, to be installed, fixed into the ground by road pins across the exposed area. Fencing to be set up in a chevron or zig-zag pattern, with the distance between lengths of fencing to be no more than 20m. Site Manager to ensure that the fencing is securely fixed by the pins and that the fencing is sufficiently slack between the pins that it will vibrate and move in the wind.

5.4 Control of other potential attractions for birds

All food waste to be placed in bins with lids within the welfare cabins. No eating or drinking allowed on site except within the welfare facilities. Plastic bags and general waste to be placed in a skip with a lid within the welfare/compound area. Site rules will confirm the above. The Site Manager will ensure that the required bins are provided and that they are secured and emptied on a regular basis and that a good

standard of housekeeping is maintained at all times. Welfare facilities will be cleaned on a regular and frequent basis.

6 Communication

All requirements of this plan will be incorporated into the Construction Phase Plan (CPP) and into RAMS for each work activity. This plan will also form a separate appendix to the CPP. These measures will ensure that the requirements of the Bird Hazard Management Plan are:

- Included with the CPP that is issued to all sub-contractors.
- Included in the formal and documented site induction training provided to all personnel, including all sub-contractors, site visitors and explained to visiting wagon/delivery drivers.
- Included in Site Rules, developed and managed in accordance with the CPP, which are also included in the site induction and displayed in the welfare facilities.
- Briefed to all site personnel in the form of a documented and signed tool box talk, including details of their specific and legal responsibilities.
- Included in the documented morning briefing record for each work day on site and signed by all personnel on site.
- Included in RAMS for each work activity on site, including being reflected in relevant sub-contractor's RAMS. All RAMS are also specifically briefed to personnel and signed by each individual to confirm this.

In accordance with the company H&S Policy and the CPP, personnel are encouraged to provide feedback and comment on any aspect of health and safety and this communication will also be taken into account in terms of reviewing and improving control measures as necessary.

Any requirements to amend the Bird Hazard Management Plan will be communicated to a suitable experienced ecologist and any necessary approvals obtained for the revised plan prior to issuing, communicating and implemented it on site. Any associated amendments to the CPP or RAMS will be made on a controlled basis in accordance with the CPP and briefed to personnel on site and issued formally to sub-contractors.

7 Site behaviour management

Specific behaviours are required as follows:

- No eating or drinking anywhere on site other than within the welfare facilities.
- Placing all food waste in the food waste bin within the welfare facilities.
- No littering anywhere within the site, all litter to be placed in the lidded skip.
- Compliance with the RAMS in relation to movement and control of spoil, placing bird deterrent measures and reporting any bird numbers that exceed the upper target numbers.
- No bird scaring on site.

- Reporting any concerns or potential non-conformance or shortcomings of the plan to the site Manager without delay.

As detailed above, all site personnel and any visitors will be briefed on requirements and responsibilities via the following routes:

- Induction training
- Display and explanation of site rules
- Briefing and signing of relevant RAMS
- Tool box talk on all aspects of the Bird Hazard Management Plan, including responsibility under criminal law for compliance with the plan.

8 Monitoring and measurement of performance

Site Manager will appoint and brief a responsible employee to carry out bird monitoring. The bird monitor will be briefed on how to recognise and count birds on site and will carry this out every two hours during the working day, recording the number of the target species, as listed in section 4 above, on a bird monitoring record sheet which will be maintained in the welfare facilities. Any exceedance will be reported immediately to the Site Manager in accordance with section 9 below.

Compliance with the Bird Hazard Management Plan will be monitored, measured and recorded as part of the overall monitoring and measurement of health and safety on site, which includes:

- Continual monitoring by the Site Manager, resolving and recording any issues in the site diary.
- The initial setting up of flickering tape for short term deterrence and plastic mesh fencing for longer term open areas will be recorded on the bird monitoring record sheet by the bird monitor.
- Daily start and end of shift checks recorded on the standard company Site Safety Check Sheet will include documented checks of installed bird deterrents
- The Site Manager shall monitor progress with the work to ensure open areas are minimised in accordance with section 5.1 above.
- Formal weekly monitoring of health and safety on site, which will be recorded on the company standard monitoring form amended to include documented checks of bird hazard controls.
- Formal audits of health and safety carried out by company H&S Advisor or Contracts Manager and recorded on the company standard audit form, which will also be amended to specifically include bird hazard control measures. NB These audits include compliance with the company management and documentation requirements and will confirm adequacy of control measures, completeness of required records as well as performance on site.
- Ad hoc comments on adequacy of measures and compliance with the plan will be recorded by the Site Manager in the site diary.

- All monitoring and audit reports will be copied to the Contracts Manager to ensure all issues resolved and any underlying issues identified and resolved in accordance with section 9 below.

9 Management of non-conformance

9.1 Presence of a significant number of birds on site

To be reported immediately by the Bird Monitor as part of the two hourly monitoring, or by any other site personnel who identify potentially excessive numbers, to the Site Manager. The Site Manager is then to report this to the nominated ecologist who will attend site and advise how to proceed. The Site Manager will liaise with the ecologist and organise any assistance as required to resolve the situation.

No attempt is to be made by site personnel to scare the birds off the site, as this could lead to birds flying into the path of aircraft.

Any such incident is to be recorded on the company non-conformance form and investigated by the H&S Advisor and/or Contracts Manager and corrective and preventive measures agreed with the ecologist and implemented and checked to be effective.

9.2 Receipt of a formal complaint by MAG/Local Authority or others in relation to the management of the bird hazard

Any complaint associated with the management of bird hazards will be recorded on the company non-conformance form in accordance with the company QMS and investigated by the H&S Advisor and/or Contracts Manager and corrective and preventive measures agreed with MAG/Local Authority and implemented and checked to be effective.

If the complaint is not considered to be valid, it will be referred in writing to a suitable and independent bird strike specialist, accepted by MAG/Local Authority as a valid authority, for them to investigate. The company will comply in full with the findings of their investigation.

9.3 Adverse findings from audit or monitoring activities

Adverse findings will be dealt with as detailed in the company QMS and Health and Safety Policy. Agreed actions to rectify defects/non-conformances will be detailed on the monitoring form by the Site Manager (for weekly safety monitoring) and on the audit form (for management audits) and copied to the named persons to ensure that they are completed. Rectified defects will be inspected and signed off by the Site Manager to confirm completion. The contracts Manager will review all completed reports and liaise with the Site Manager to ensure that all actions are closed out and to identify and deal with any underlying issues.

9.4 Any other non-conformance in relation to implementation of this plan

Any other identified non-conformance or shortcoming to this plan will be notified to the Site Manager who will record it on a non-conformance form and ensure that it is investigated and rectified as above.