AVIATION ISSUES

ATLAS PARK DEVELOPMENT

John Twigg BA (Hons) T&CP, MRTPI (retd.)
Aviation Planning Consultant

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1. Introduction.

The site lies to the north-east of Manchester Airport, approximately 1,200m from the north eastern end of the westernmost runway (Runway 1). At its closest point, the nearest proposed building is approx. 140m west of the extended runway centre-line, with aircraft both landing and taking-off along this path.

Due to this proximity, a wide range of potential aviation impacts have been considered in the design of the scheme. This report summarises that work and provides the legislative and policy context for the detailed technical expert reports that form part of the application.

2. Aerodrome Safeguarding

This is the regime which ensures the safe operation of the UK's airports and airspace and protects those operations from being adversely affected by new development.

3. Legislation and Policy.

Civil aviation is a major global industry, hence much of its regulation stems from international action.

ICAO (International Civil Aviation Organisation) is a UN Agency which sets international standards for all aspects of civil aviation. The CAA (Civil Aviation Authority) is the Government's technical adviser and responsible for delivering the UK's international obligations through the licencing and regulation of the UK's airports and airlines.

Certain civil aerodromes, due to their importance to the national air transport system, are officially safeguarded to ensure that their safe operation is not compromised by new developments. Manchester is such an airport. This safeguarding is a statutory requirement on airport operators under ICAO and CAA Regulations and UK law. All new development is monitored through the planning system, with the airport operator being a statutory consultee.

ODPM/DfT Circular 01/2003 '*Safeguarding of Aerodromes, Technical Sites & Military Explosives Storage Areas Direction*'[1] directs local planning authorities to consult the relevant airport operator in accordance with the height related zones shown on the official Safeguarding Map produced by the CAA. The application site lies within the safeguarded area.

CAA publication '*CAP 738: Safeguarding of Aerodromes*'[2] contains detailed technical advice on the wide range of impacts which might arise from a development. Advice Notes to planning authorities and developers are also produced by CAST (Combined Aerodrome Safeguarding

[1] https://www.gov.uk/government/publications/safeguarding-aerodromes-technical-sites-and-military-explosives-storage-areas

[2] https://www.caa.co.uk/data-and-publications/publications/documents/content/cap-738/

Team)[3], which is a cross Government and industry body, and by Manchester Airport as airport operator[4].

The Manchester Core Strategy (2012) '*Policy 'DM2 – Aerodrome Safeguarding*' states that any development that would affect the operational integrity or safety of Manchester Airport or Manchester Radar will not be permitted.

4. Runway Operations.

Manchester has two parallel runways. Aircraft land and take-off into the wind. Thus each runway is capable of handling aircraft heading in either direction. The runways are named according to the compass heading (minus the last digit) of the aircraft's movement. So aircraft landing from the north-east (over Stockport) and taking-off to the south west (towards Knutsford) use Runway 24 Left or Right depending whether its Runway 1 or 2. Aircraft landing from the south west (over Knutsford) and taking-off to the north east (towards Stockport) use Runway 05 Left or Right depending whether its Runway 1 or 2.

As the prevailing wind at Manchester is from the west, this results in approx. 75-80% of Manchester's operations being westerly (Runway 24) and 20-25% easterly (Runway 05). The figures vary year by year and seasonally.

Runway 1 is used for both westerly and easterly operations. For operational and environmental reasons, Runway 2 is generally only used for westerly take-offs and easterly landings. The only exceptions are if Runway 1 is closed or in an emergency.

5. Potential Impacts.

From the guidance above, a wide range of factors need to be considered under the Safeguarding regime. The principal potential impacts in this case are set out in Table 1 below.

[3] https://www.caa.co.uk/commercial-industry/aerodromes/safeguarding/cast-publications/

[4] https://www.manchesterairport.co.uk/community/living-near-the-airport/aerodrome-safeguarding/

Table 1.

SAFEGUARDING ASSESSMENTS	
TOPIC	**PURPOSE**
Obstacle Limitation Surfaces (OLS)	To provide zones of protected airspace to be kept free of obstacles.
Instrument Flight Procedures (IFP)	Similar to OLS in ensuring the absence of obstacles and to protect the integrity and safe operation of aircraft navigation systems.
Communication, Navigation and Surveillance Systems (CNS)	To protect the safe and efficient operation of ground based systems from interference or obstruction.
Lighting	To avoid any lighting which might cause a distraction or confusion to pilots and air traffic controllers, especially in poor visibility.
Wildlife Hazard Management	Birds are a potential major hazard to aircraft and one of the biggest risks at UK airports. Strict controls are needed to control feeding and roosting sites, the flight lines of birds and management of habitats.
Building Induced Turbulence	Ensuring that new developments will not create any building induced turbulence or wind-shear that has the potential to affect aircraft taking-off or landing.
Reflective Materials	Metallic or reflective materials, for instance PV arrays, cladding and large areas of glass, can cause radar reflections and/or glint and glare which can affect aircrew and Air Traffic Control (ATC).
Cranes and Construction Equipment	Cranes and other construction equipment can affect the safe operation of the airport and breach the obstacle height limits.
Construction Management Plan	Measures designed to protect aircraft and the airport from the effect of construction activity e.g. earth moving, dust, light, waste.
Public Safety Zones	Areas at both ends of a runway where development is restricted to limit the number of people exposed to the risk of an aircraft accident.

6. Process

Given the range of potential impacts, Aviva Investors have followed best practice and sought early advice from the airport operator - Manchester Airports Group (MAG). The airport's chargeable pre-application process was commissioned in May 2025. As a result, a list of impact assessments, and their scope, was agreed. Experts with extensive relevant experience in each topic were appointed. A very collaborative approach has been followed throughout a lengthy and very detailed pre-application process to ensure that any adverse impacts were identified and mitigated. This has led to a strong iterative process, with the technical assessments being shared with MAG, feedback received and the design team tasked with designing a scheme which avoided or mitigated the identified risks. This became a strong influence on scheme design and led to a number of changes to the draft site layout, siting, design, height and appearance of the buildings.

The details of those technical assessments are included in the pack of documents which accompany the application. Of necessity, the reports are often complex, highly technical and detailed.

A large measure of agreement was reached with MAG, both on the results of the technical assessments and the measures incorporated into the design of the submitted scheme. A small number of topics require the submission of final details and agreement with MAG and the City Council. These can be covered by the imposition of the usual type of planning conditions. The position reached with MAG was shared with the City Council in the pre-app consultation process with that authority.

7. Impact Assessment.

This section summarises the conclusions of the technical assessments for the topics listed in Table 1. The detailed reports are included in the application pack.

a. Obstacle Limitation Surface (OLS).

As part of the pre-application service, MAG carried out the assessment using the site layout, existing and proposed ground levels and building heights provided by Aviva Investors. The assessment involves specialist software to check the development against the range of complex 3D geometric surfaces which surround the airport's runways and are designed to create zones of clear airspace. Details of these surfaces are specified by ICAO.

The most critical surface is that related to the Type A chart for Runway 05L (i.e. take-offs from Runway 1 to the north-east towards Stockport). This zone affects the eastern part of the site with a height limit of 85m AMSL[5] and is shown on the plan at Appendix 1. This required the design of Unit 4 to be amended. The building heights of Units 2, 3 and 4 are now all below the 85m AMSL threshold. The remaining units on the site are all below the relevant thresholds.

Conclusion – MAG confirm that there is no breach of the OLS.

[5] AMSL - Above Mean Sea Level is the standard datum used for UK airports.

b. Instrument Flight Procedures (IFP)

This requires a similar assessment to OLS but for a wider and different range of protected surfaces. The CAA specify that this assessment can only be carried out by a designated UK Approved Procedure Design Organisation (APDO). This is the organisation responsible for the design and maintenance of the IFP precision flight paths for the specific airport. In Manchester's case, this is NATS (National Air Traffic Services)[6].

In June 2026 NATS were commissioned to carry out the assessment, at Aviva Investors expense. Unfortunately, NATS do not commit to a timetable for such work, only a 6 month window. MAG understand why Aviva Investors wish to submit the application while still waiting for the NATS report, albeit at their own risk. It is accepted that, until NATS respond, MAG will be likely to submit a 'Holding Objection' to the City Council.

c. Communication, Navigation and Surveillance Systems (CNS)

MAG, in consultation with NATS, have agreed that the proposed development does not pose a risk to the range of specialised equipment that supports the safe and efficient operation of the runways. No further technical work is required.

Conclusion - MAG agree, no adverse impact.

d. Lighting

A lighting strategy has been adopted which incorporates the technical guidance in CAST (Combined Aerodrome Safeguarding Team) Advice Note 2[7] published by the CAA (April 2024). In particular, all lighting is designed to be cut-off at the horizontal, with no upward spill, avoid glare or dazzle and with columns designed to be lower than the height limits imposed by the OLS surfaces.

A draft of the detailed lighting scheme and specification was submitted to MAG as part of the pre-app process.

Conclusion - Scheme complies with best practice.

e. Wildlife Hazard Management

This was identified by MAG as one of the key risk topics. Birdstrike Management Ltd (BML) were appointed at an early stage. They are a specialist independent company that delivers research, consultancy and advisory services to airports, airlines, regulators and developers in relation to the prevention of bird and other wildlife strikes to aircraft. They have extensive experience and are regarded as one of the leading specialists in this field. BML has advised on, and authored, many of the guidance documents and aviation standards.

[6] NATS - National Air Traffic Services. A public-private partnership which is the leading provider of air traffic control services in the UK.

[7] https://www.caa.co.uk/media/cjxn2a3r/cast-advice-note-2-lighting-near-aerodromes-apr-24.pdf

Their draft Wildlife Hazard Management Plan (WHMP), dated September 2025, was shared with MAG. In the light of their comments, an updated version was submitted (March 2026). This contains more detailed advice on design measures to avoid nesting opportunities in the roof areas.

The WHMP has been shared across the design and project team so that the necessary mitigation measures can be incorporated. This affects drainage (no open water bodies are proposed), landscaping, ecology (habitat and species specifications), unit design and Construction Management Plan. It is expected that planning conditions will be imposed on any permission relating to implementation of, and compliance with, the WHMP in both the construction and operational phases.

Conclusion - MAG acceptance of the WHMP. Risks can be satisfactorily mitigated through planning conditions.

f. Building Induced Turbulence

This was also initially flagged by MAG as one of their key areas of concern due to the proximity of the buildings to a critical part of the flightpath for aircraft landing and taking-off. NOVA Fluid Mechanics were appointed at an early stage. NOVA are widely recognised as among the foremost experts on this topic for their expertise and extensive experience in the UK and internationally.

The scope for the technical assessment of the scheme was agreed with MAG at the outset. It was agreed that the 'gold standard' methodology would be used with a 1:500 scale model of the scheme tested in a wind tunnel, along with the internationally accepted criteria for assessing impact. A draft of the study report was shared with MAG in September 2025. Following their internal review, additional information was sought on any potential impact on the airborne weather radar systems fitted to modern aircraft. This led to further research and an updated report was issued in March 2026.

This complex and detailed technical work showed that the development will have no practical impact on operations along the flight path for Runways 05L and 23R. NOVA have confirmed that the assessment conclusions remain valid in respect of the scheme as submitted.

Conclusion – MAG accept the report's findings and agree no adverse impact.

g. Reflective Materials

This is the third of the three principal issues for which MAG required detailed modelling and technical assessment. The purpose of the assessment is to establish whether 'glint and glare' from the development might pose a hazard in views from the air traffic control tower at the airport or the flightpath of aircraft in the vicinity.

Pager Power were appointed at an early stage. The company have extensive experience and have carried out similar work at a large number of UK and European airports. They are widely recognised as experts in the field. Specialist computer software is used alongside long standing international assessment criteria and methodology.

The assessment considered the possible impact of glint and glare from the solar PV panels, the roofing material, the external façades of the units and car parking areas. As a result, a number of changes were made to the draft scheme layout and design. These relate to the exact orientation and azimuth of the proposed units and the design of the roof structures. These were changed from the traditional industrial unit sloping roof to a 'saw tooth' roof design where visible rooftop areas on each unit have the same azimuthal angle. This is explained in further detail in the accompanying Technical Report (February 2026).

The assessment concludes:

- No impacts to pilots or Air Traffic Control (ATC) personnel due to the proposed unit façades, roofs and rooftop solar panels are predicted as no solar reflections are geometrically possible.
- No impacts to the ATC personnel due to the onsite car parking areas are predicted, because views of the cars from the ATC Tower are not predicted to be possible.
- No significant impacts to pilots on approach to or departing the airport due to the onsite car parking areas are predicted, given the fact that the cars would not be large, flat reflectors that could cause intense effects, particularly compared to the existing car parks that are much larger and haven't caused any safety concerns. The proposed development will also have landscaping and trees planted around the parking areas to provide further mitigation, whilst being mindful of bird strike requirements.

Pager Power have confirmed that the assessment conclusions remain valid in respect of the scheme as submitted.

Conclusion – MAG accept the report's findings and agree no adverse impact.

h. Cranes and Construction Equipment

Even temporary structures can pose an obstacle to aircraft operations. There is detailed guidance available to developers from CAST (Advice Note 4)[8], the CAA (CAP 1096)[9] and the relevant British Standard[10]. In general, any crane over 10m high within a 6km radius of an aerodrome has to be notified via the CAA and approval obtained from the relevant airport operator.

Initial discussions with MAG have identified the constraints that might apply to this site and a crane strategy has been developed accordingly. The structural design of units (particularly Units 2, 3 and 4) has been modified to minimise the need for external crane lifts. This will be further developed if the scheme proceeds and the necessary notification and approval procedures will be followed.

Conclusion - Scheme will comply with best practice.

[8] https://www.caa.co.uk/media/ytolzbjr/cast-advice-note-4-cranes-other-construction-issues-apr-24.pdf

[9] https://www.caa.co.uk/data-and-publications/publications/documents/content/cap1096/

[10] British Standard Code of Practice for the Safe Use of Cranes, BS 7121: Part 1

i. Construction Management Plan

The various assessments described above require mitigation measures to be taken throughout the construction process. Standard practice is to deal with this through a Construction Management Plan. The principal hazards to be managed relate to temporary structures (e.g. cranes – see above), lighting, dust and smoke and any activity which might provide feeding or roosting opportunities for birds (e.g. waste, temporary storage, standing water, earth moving). Guidance on this topic is provided in CAST Advice Note 4 (see above) and in the Wildlife Hazard Management Plan (see above).

Although the detailed measures will only be known if the development goes ahead, an initial Construction Management Strategy has been developed in consultation with a contractor and is submitted as part of this application. The Strategy emphasises the importance of measures to avoid any adverse impacts on aircraft or airport operations. This has been shared with MAG as part of the pre-app process.

Conclusion - MAG have no objections to the Strategy. A detailed CMP will be required.

j. Public Safety Zones

These extend out in a triangular shape, along the extended runway centre-line, for up to 1,500m from the runway ends. A plan showing the relevant part of the PSZ is included at Appendix 2. This shows that the application site is to the west, and well clear, of the PSZ for Runway 05-24.

Conclusion - No objection on PSZ grounds.

8. Previous Application

In 2023 an application[11] was submitted for a similar type of development, covering not only the current application site but also the open Green Belt land to the east. One of the three Reasons for Refusal related to aviation issues:

3) The applicant has failed to demonstrate that the proposals would not affect the operational integrity or safety of Manchester Airport due to its scale, height, appearance, and layout pursuant to policy DM2 of the Core Strategy.

At the time of determination, MAG had issued a Holding Objection to the City Council. While there had been consultation and engagement with MAG, a number of technical issues had not been satisfactorily resolved. The principal concern was the lack of a full assessment of turbulence and wind shear. The glint & glare assessment also required further work and more detail was needed for the Wildlife Hazard Management Plan. In the absence of these matters being resolved, and in the light of other substantive planning objections (Green Belt and impact on the area), the application was refused.

This Summary report, and the various Technical reports, explain the steps that have been taken to overcome the concerns raised by MAG. The scheme is now on a smaller site and with a different layout and design. The lengthy and iterative pre-app process has enabled MAG

[11] 135952/FO/2023

to now confirm that it is satisfied with the technical assessments, particularly for the three topics that led to the refusal – wind shear, glint & glare and wildlife hazards.

9. Overall Conclusions.

The site lies in a sensitive location in relation to the flightpaths for aircraft landing and taking-off from Manchester Airport. As a result, in May 2025, Aviva Investors sought early engagement with MAG as the airport operator. A list of potential impacts was agreed and suitably qualified experts, with extensive experience, were appointed and agreed with MAG. Methodologies and assessment criteria were agreed. A collaborative and iterative process was followed throughout the lengthy study period. In turn, the results of this process were fed in to the designers of the scheme so that the necessary amendments and mitigation measures could be incorporated from the outset.

This has led to a large measure of agreement with MAG, with no objections raised in respect of any topic. There are however, certain matters of detail which will require submission and approval from MAG if permission is granted. This, and the amended scheme layout and design, has satisfactorily overcome Reason for Refusal No. 3 of the previous application.

Table 2 below summarises the conclusions of the assessments.

Table 2

SAFEGUARDING ASSESSMENTS		
TOPIC	**CONCLUSIONS**	**MITIGATION**
Obstacle Limitation Surface (OLS)	No breach of the OLS	None required.
Instrument Flight Procedures (IFP)	Assessment pending	Assessment pending
Communication, Navigation and Surveillance Systems (CNS)	No adverse impact	None required.
Lighting	Best practice followed	Implement and monitor the approved design.
Wildlife Hazard Management	Current WHMP acceptable	Implement and monitor the agreed Management Plan.
Building Induced Turbulence	No adverse impact	None required.
Reflective Materials	No adverse impact	None required.
Cranes and Construction Equipment	Constraints identified and measures to be specified.	Crane permits required.
Construction Management Plan	Strategic CMP produced which follows best practice.	Detailed CMP to be submitted, agreed and implemented.
Public Safety Zones	No intrusion	None required.

The scheme is considered acceptable in respect of aviation impacts. The approach that has been followed has enabled a comprehensive assessment to be made of the potential range of impacts which might adversely affect the safe and efficient operation of Manchester Airport. Aviva Investors believe that this holistic and iterative approach to safeguarding is consistent with the best practice that developers should follow to assess and mitigate the risks to aviation from new development.

Disclaimer:
Subject to survey.

Notes:

0 10 20 30 40 50
SCALE 1:1000 @ A1

N

KEY

- Site Boundary
  (839,505 ft² / 77,990 m² / 19.27 acres / 7.79 ha)
- OLS catchment area - 85M ASML
- OLS catchment area - 92M ASML
- OLS catchment area - 96M ASML

Unit 1
90,485ft²
Columns: 7

Unit 2
24,560ft²
Columns: 4

Unit 3
19,800ft²

Unit 4
57,100ft²
Columns: 6

Unit 5
50,095ft²
Columns: 5

Unit 6
70,395ft²
Columns: 6

Unit 7
64,390ft²
Columns: 6

70.50°
360-70.5=
289.5°

64.00°
360-64.0=
296.0°

72.00°
360-72.0=
288.0°

61.5°
360-61.5=
298.5°

Pasture Field Road
Pond
Atlantic House
Simon House
Cycle Way
Shelters
Layby
Lake of Poets
Siyal Road

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C	Key and Hatch Updated	17.07.26	CM	HA
B	Minor Updates	10.07.26	CM	HA
A	First Issue	28.05.26	CM	HA

Suitability Code:
SKETCH

Client:
AVIVA INVESTORS

hale
ARCHITECTURE | DESIGN MANAGEMENT
22c Leathermarket Street, London, SE1 3HP

Project:
Atlas Business Park
Manchester

Drawing Title:
Proposed Site Layout Overlay
OLS Catchment Constraints Plan

Project No: 20071
Scale @ A1 / A3: 1:1000 / 1:2000
Drawing No: 20071-HAL-SK2012
Revision: C

Disclaimer:
Subject to survey.

Notes:

0 10 20 30 40 50
SCALE 1:1000 @ A1

N

KEY

Site Boundary
(848,127 ft² / 78,793 m² / 19.46 acres / 7.87 ha)

Manchester Controlled Zone
End of runway located at:
Point A: X (Easting): 383060 Y (Northing): 385087
Point B: X (Easting): 383015 Y (Northing): 385145

Oakworth Place
Simonsway
Pasture Field Road
Styal Road
Public Safety Zone
Atlantic House
Simon House
Cycle Way
Shelters
Lane of Poles
Unit 1 89,292ft²
Unit 2 24,673ft²
Unit 3 20,779ft²
Unit 4 57,408ft²
Unit 5 49,953ft²
Unit 6 70,405ft²
Unit 7 64,395ft²
50m
35m
32.4m
22.1m
30m
46m
40m
47m
66.2m
67.3m
67.2m
67.7m
68.9m

P01	First Issue	28.07.26	CM	HA
Rev:	Notes:	Date:	Dwn:	Iss:

Suitability Code:
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Client:
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22c Leathermarket Street, London, SE1 3HP

Project:
Atlas Business Park
Manchester

Drawing Title:
Proposed Site Layout
Public Safety Zone

Project No:	Scale @ A1 / A3
20071	1:1000 / 1:2000

Drawing No:	Revision:
20071-HAL-SK1700	P01