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Future Flight Challenge

Community Integration Local Planning Guidance Paper

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midlands aerospace alliance

LICHFIELDS

achieving thedifference

Contents

Introduction

Purpose

1.1 The purpose of this report is:

- in Part one – Current Planning Position, to provide an explanation of the current planning framework for drones and Advanced Air Mobility (AAM). The focus of this commentary is how drone and AAM use, and drone/AAM infrastructure, would be assessed under the current planning system.
- in Part two – Looking Forward Position, drawing on the conclusions of the current position research and outcomes from innovator questionnaires, provides a set of recommendations for the current UK planning system to address the policy and other limitations/gaps identified.

Context and application

1.2 Midlands Aerospace Alliance has been commissioned by the Community Integration Working Group (CIWG) and funded by UKRI Future Flight Challenge, to prepare a Community Integration Local Planning Guidance Paper. Midlands Aerospace Alliance has commissioned Lichfields to prepare the 'Current Position' and 'Looking Forward Position' papers on the UK planning framework and provide support for the workshops/meetings and Achieving the Difference to provide project management, process design, process delivery, meeting/workshop/ questionnaire design, facilitation and templates, consolidation of analysis and report production.

1.3 The UKRI Future Flight Challenge, delivered by Innovate UK and the Economic and Social Research Council, is a £300 million programme co-funded by industry and the UK government to help build the ecosystem needed to accelerate the introduction of advance air mobility, drones, and zero-emission regional aircraft in the UK. Working with industry, academia, government and regulators, and stakeholders across the country, the Future Flight Challenge is transforming how we connect people, transport goods and deliver services in a sustainable way that delivers socio-economic benefits across the UK.

1.4 The purpose of the wider Guidance Paper is to inform the drone and advanced air mobility industry on:

- How to make use of existing local planning frameworks, tools and policies necessary for the integration and operation of drones and AAM vehicles – on the ground and in the air, as well as the associated physical infrastructure needed (i.e. vertiports).
- To identify gaps in the current planning frameworks, tools and policies with recommendations of amendments and/or additions required for drone and AAM integration.

1.5 The Guidance Paper comprises two parts: Part one, Current Planning Position, which considers the current planning framework for drones and AAM; and Part two, Looking Forward Position, which draws on the conclusions of the Current Planning Position and then a set of recommendations for the current UK planning system to address the policy and other limitations/gaps identified. The latter includes the likes of the need for revised or new planning policy (national and/or local); follow on topic-specific research; and planning guidance for decision makers and drone and AAM providers to assist the pre-application engagement and application processes.

1.6 Following preparation of Part one, Current Planning Position, an information gathering exercise was undertaken using an online survey to seek comment from drone and AAM providers. A summary of the survey results is included in Appendix 3. Outcomes of this informed the preparation of Part two, Looking Forward Position. Following this, two online LPA workshops, shared findings with a number of Local Planning Authorities (LPAs). Views expressed relating to the planning system were consistent with those of the drone and AAM innovators. Therefore, the LPA comments did not inform the preparation of Part two, Looking Forward Position beyond the comments of the drone and AAM providers. The comments and questions of LPAs are summarised in Appendix 3. Ultimately, findings have been shared with the UKRI Future Flight Challenge.

Limitations and assumptions

1.7 This paper provides an overview of the (land use and aviation) planning system in the UK. It is not intended as a comprehensive summary of that system. We necessarily focus on the plan-making and decision-taking aspects considered to be of most relevance to the purpose of the CIWG Local Planning Guidance Paper, and for the purpose of Part one, Current Planning Position.

1.8 Drawing on Lichfield's knowledge of the sector, and the anticipated nature and scale of each development proposal likely to come forward on the ground, this report assumes that proposals will be assessed under the local planning route, as these would not be projects of national significance.

Standard terms and acronyms

1.9 BSI has developed a set of AAM standard terms in its 'BSI Future Flight System Vocabulary (August 2023 Version 1, BSI Flex 1903 v1.0 2003-08), which have been applied to this report.

1.10 BSI standard terms most applicable to this report include:

advanced air mobility (AAM): *next generation of air transport systems intended for both urban air mobility and regional air mobility solutions utilizing electric/ hybrid powered aircraft within an integrated digital infrastructure. AAM envisions the use of autonomous or semi-autonomous flight capabilities.*

aerodrome: *defined area (including any buildings, installations, and equipment) on land or water or on a fixed, fixed offshore or floating structure intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.*

droneport: *a subset of vertiport dedicated to only servicing UAS operations (also referred to as a vertihub).*

regional air mobility (RAM): *air transportation aircraft with ranges of 100km to 300 km and a passenger capacity less than or equal to 19 passengers.*

urban air mobility (UAM): *transportation of passengers at ranges of less than 100 km, mainly in urban environments, utilizing VTOL capable aircraft.*

uncrewed aircraft system (UAS): *aircraft and its associated elements which are operated with no pilot on board* (referred to as drones for the purposes of this report)

vertical take-off and landing (VTOL) aircraft: *heavier-than-air aircraft capable of vertical take-off and vertical landing, which depends principally on more than two distributed propulsion units for lift during the take-off and landing phase of flight. VTOL that utilise electric/hybrid propulsion systems are referred to as eVTOL.*

vertiport: *aerodrome intended to be used for the arrival, departure, and ground movement of vertical take-off and landing (VTOL) aircraft.*

vertiport infrastructure: *typically includes a landing pad/s, passenger and cargo facilities, charging and/or refuelling stations for electric/hybrid propulsion systems, integration of uncrewed aircraft systems traffic management (UTM) related infrastructure and accessibly to ground transportation. Vertiports can be either at ground level or on top of structures (elevated vertiports). A significant differentiator between heliports and vertiports is the design of the obstacle free volume associated with the arrival/departure phase of flight. Vertiport design is tailored to VTOL aircraft and as such may exclude the use of helicopters due to differences in performance characteristics and the ability to comply with the vertiport's obstacle free volume design.*

1.11 For the purposes of this report, and to align with UKRI Future Flight Challenge terminology, it is assumed that AAM relates to manned aircraft, whereas drones (uncrewed aircraft systems (UAS)) relate to unmanned aircraft.

1.12 The BSI standard terms and acronyms do not make a distinction between purpose of flight or type of activities undertaken, with the exception that AAM (UAM and RAM) would entail the carriage of passengers and in particular RAM would entail air transportation. This is in contrast to existing definitions for 'traditional aviation' (i.e., not AAM), which comprises a classification of types of aviation (e.g.,

commercial, air transport, general aviation). This classification is defined in Statutory Instrument, guided by aviation regulators such as International Civil Aviation Organization (ICAO), European Union Aviation Safety Agency (EASA) and the Civil Aviation Authority (CAA). It is this classification that is often applied to Planning to define the nature of activity arising from a new use or development, and as such whether planning permission is required and if it is, how it should be assessed.

Report structure

1.13 The structure of Part 1 – Current Planning Position, is as follows:

- **Section 2:** A brief, high-level, description of the UK planning system.
- **Section 3:** An explanation of when planning permission is typically required, and how this might apply to drone and AAM operations and infrastructure.
- **Section 4:** A review of the planning policy position for drones and AAM, both the national planning and aviation framework, and any local and regional planning policies.
- **Section 5:** An overview of other relevant considerations for proposals coming forward for drone and AAM operations and infrastructure.
- **Section 6:** Our observations of the limitations to the current planning framework for drone and AAM use and ground infrastructure.
- **Section 7:** Conclusions and next steps.

1.14 The structure of Part 2 – Looking Forward Position, is as follows:

- **Section 8:** Current Position Paper Outcomes
- **Section 9:** Looking Forward Paper Recommendations
- **Section 10:** Conclusions

Part 1 – Current Planning Position

2.0 Description of the UK planning system

2.1 The purpose of this section is to provide a brief, high-level, description of the UK planning system.

2.2 The origin of the planning system in operation today, throughout the UK, stems from the introduction of the Town and Country Planning Act (TCPA) in 1947. Four million new homes were needed in the aftermath of the Second World War. The Government responded by nationalising the development and use of land and creating a comprehensive planning system. These laws were fundamental in laying the foundations for the planning system that exists today.

2.3 Through Devolution, each of the four countries in the UK (England, Wales, Scotland and Northern Ireland) have their own planning system in place – albeit all are described as being a 'plan-led' system.

2.4 'Plan-led' means that planning policy is set out in formal Development Plans which describe what developments should and should not be permitted, how land should be protected (or not) and to seek to ensure that a balance between development and environmental protection occurs in the public interest. With some exceptions, the planning system only controls what happens on or with foundations in the ground.

2.5 There are three main parts of a plan-led system:

- Development Plans – a framework which set out how places should change and also sets out the policies used to make decisions about planning applications.
- Development Management - the process of deciding whether to grant or refuse an application for planning permission, allowing the 'right schemes' in the 'right places' at the 'right time'.
- Enforcement - the process that makes sure that development is carried out correctly and takes action when development happens without permission or when conditions have not been followed.

2.6 Each country's planning system is overseen by its relevant Secretary of State (SoS) or Minister(s), as appointed by Government or the devolved administration, and supported by the relevant civil service department. The department is responsible for formulating national policy and guidance covering the economic, social and environmental aspects of development, providing a framework for local planning policy.

2.7 In addition to the national planning policy and guidance, aviation has its own set of national planning policies, in which a local Development Plan (and any development proposals that come forward) would be assessed against, with respect to aviation matters. This set of aviation policies is in the process of reform to provide a strategic framework for the future of aviation, initially for the next 10 years.

2.8 The planning system is then primarily operated and delivered by local government. The Local Planning Authorities (LPAs) within local councils appoint planning officers to advise elected councillors and, in effect, manage the operation of much of the planning system by:

- preparing the local Development Plan and supplementary planning guidance for their administrative area. This will set out a vision for the area over the next 15-20 years, informed by an evidenced-based assessment of future development needs of the area. Local Plans address needs and opportunities in relation to housing, shopping, leisure, business, community facilities and other infrastructure;
- recommending or determining planning applications having regard to the Development Plan and any other material considerations; and
- carrying out enforcement against unauthorised development.

2.9 Statutory Instruments (Acts, Regulation, Orders) govern procedures, which need to cover a wide variety of issues and must be followed by local government. This means that development plan preparation and decision making ('development management') must be undertaken in a consistent and transparent manner, with opportunities for public consultation and engagement at every stage. Applications for planning permission must be determined in accordance with the development plan unless material considerations dictate otherwise. Clarity on application and interpretation may be provided by case law and definitions set out within Statutory Instruments and planning policy.

2.10 'Planning Permission' is required for specific development, including the use and operation on land that falls within the statutory definition of 'development'. If this definition is met, the developer (the 'Applicant') will need to seek planning permission by way of lodging an application to the LPA for the development site proposed.

2.11 Although the basic structures of the four countries' planning systems are similar, there are differences in the detail and in how each system works. Each country has its own:

- definitions on types of development that are permitted without the need for a planning application;

- classification of 'use classes' of land, where change of use within a class may be permitted; and
- an appeal system, which provides opportunity to challenge LPA decisions on applications.

2.12 Some applications are the subject of considerable pre-application ('Pre-app') engagement with an LPA, other statutory stakeholders and, in most circumstances, the public or local community (e.g. local residents and businesses). The purpose of Pre-app is to provide informal officer feedback on the acceptability of development in principle, to inform scheme design development and to determine the application scope etc., so as to shape emerging development and maximise the prospect of securing planning permission for an application.

2.13 An application for planning permission must include plans and drawings of the scheme, a Design and Access Statement and be accompanied by a number of associated assessment reports on the relevant planning considerations. The LPA decides on the scope and level of detail of the information that is required to validate an application, but this is normally advanced by the Applicant team and agreed as part of Pre-app discussions.

3.0 When is planning permission required?

3.1 This section explains when the need for planning permission is typically triggered, and how this might apply to drone and AAM operations and infrastructure.

3.2 Planning permission is required for specific types of development, including the use and operation on land that falls within the statutory definition of 'development'.

3.3 Broadly speaking, to ascertain whether planning permission is required, the following would need to be considered.

1 How the land is proposed to be used, and whether this is a change from the existing 'established' use.

2 Whether 'development' will occur to enable the proposed use.

3 If there are existing Permitted Development rights in place.

Definition of Development

3.4 Planning permission is required for the carrying out of any development of land. Planning legislation defines 'development' or 'new development', being:

'the carrying out of building, engineering, mining or other operations in, on, over or under land, or the making of any material change in the use of any buildings or other land.'

3.5 Building operations may include demolition, rebuilding, structural alternations of or additions to buildings, construction and operations normally undertaken by a person carrying on a business as a builder. The use class Order, which is explained further below, informs when a change of use would occur.

3.6 There are categories of work that do not amount to 'development', which are set out with planning legislation. Whilst there are some variances to this across the four countries, there is a common set of categories. This includes (but is not limited to):

- works that only affect the interior of the building.
- works that do not materially affect the external appearance of the building. Importantly, 'materially affect' has no statutory definition, but is linked to the significance of the change being made.
- a change in the primary use of land or buildings, where the before and after use falls within the same use class.

Use class classification

3.7 Each Country has its own use class system, set out within a planning Order (Use Classes Order) granted by Parliament. Appendix 2 provides a Guide to the Use Classes Order in England, as an example.

3.8 Each Order groups common uses of land and buildings into classes known as 'use classes'. The uses within each class are, for planning purposes, considered to be broadly similar to one another. The categories also give an indication of the types of use which may fall within each use class. It is possible for land to have a primary ('parent') use as well as uses that are ancillary to the parent use. Ancillary use refers to a use of land or buildings that is directly related to, subservient to, and supports the primary use of the land. It is often considered an integral part of the main use and contributes to its functionality. The ancillary use would need to be undertaken with the curtilage of the land tied to the primary use. It is possible to have more than one ancillary use tied to a primary use.

3.9 Aviation development, as a primary use, has historically been classified as 'Sui Generis' within the use class system - being uses which do not fall within a specified use class. However, this should be assessed in case-by-case basis.

3.10 Generally, planning permission would be required if a change to the primary use of the land is proposed. For example, planning permission would be required if it is proposed to change the land from a retail premises to residential premises, or an industrial site to a vertiport.

3.11 However, a change in the primary use of land or buildings is possible without the need for planning permission, if the before and after use falls within the same use class as this would not amount to 'development'.

3.12 It is also possible for there to be changes to ancillary uses, without the need for planning permission, providing the primary use remains the primary function and within the same use class. This, however, can be a subjective judgement, and will depend on the nature (i.e., scale, frequency, relationship) of the ancillary use in relation to the primary use. An example of this may be introducing the use of drones at a storage and distribution facility, to transport goods. Whilst it could be argued that the drone activity is ancillary to the primary storage and distribution use, consideration would need to be given to its scale and frequency – and as a result the potential for impact arising – to confirm that the use is indeed ancillary.

3.13 All land has an established use right. If a site is no longer in operation, but it can be demonstrated that the former use was never abandoned, it is possible to rely on this as an established use right and recommence the use – meaning planning permission would not be required. This may be relevant for drone and AAM providers considering sites that have historically had an aviation related (Sui Generis) use, and the use has not been abandoned. This would need to be considered on a case-by-case basis.

3.14 The Use Classes Orders undergo review from time to time, for example the England Order was last updated in 2021. The updates do seek to reflect the evolution of how land is used in practice (e.g., new uses/combinations coming forward). That said, with respect to drone and AAM operations and its associated infrastructure, the current Order does not anticipate this type of use as a primary use.

Permitted Development rights

3.15 Permitted development rights (PD rights) are rights to make certain changes to a building or land without the need to apply for planning permission i.e., development that is automatically deemed to have planning permission. These derive from a general planning permission granted by Parliament in the form of an Order (General Permitted Development Order (GPDO)), rather than from permission granted by the LPA.

3.16 Some instance, PD rights are more restricted in designated areas (e.g., conservation areas, a National Park, an Area of Outstanding Natural Beauty (AONB, Listed Buildings) and planning permission will be needed. Also, in some instances, PD rights can be removed by the LPA or SoS/Minister.

3.17 Each of the four countries have their own GPDO which, whilst there are some differences, they generally follow a similar structure.

3.18 PD rights apply to a broad range of uses, for example: dwellinghouses, caravan sites and recreational campsites, agricultural and forestry, development relating to roads, repairs to services, water and sewerage, renewable energy, power related development and communications. The extent of the rights differs from category to category.

28-day rule

3.19 Some PD rights are temporary, being in place for a limited period of time – this is called the 28-day rule. When applied to aviation, this rule allows flying activity, and associated temporary structures, to be carried out at a site without planning permission provided the activity does not exceed 28 days in a calendar year (and in some instances not more than 14 consecutive days). For example, having an airstrip in an open field which forms part of a residential property, provided the flying activity occurs within the curtilage of the property and does not exceed 28 days within a calendar year (and not more than 14 consecutive days).

Airports Permitted Development rights

3.20 Each of the GPDOs include PD rights specific to airports, enabling an airport to carry out certain types of works without the need for planning permission. For example, a new hangar, terminal extension and apron works. There are however limitations to this benefit and will only apply if certain criteria are met. In short, the PD rights only apply to 'traditional airports', being those that qualify as a

'relevant airport', where the works are carried out by a 'relevant airport operator', that sit within 'airport operational land', and is 'airport operational development' – all of which is defined by Statutory Instrument.

How might this apply to drones and AAM to establish whether planning permission is required?

3.21 To ascertain whether drone/AAM operations or infrastructure will require planning permission, it will be important to first establish a few planning-led facts about the proposals – which may include:

Proposed location

1 Where the site is located - are there any planning designations or constraints tied to the land (e.g., local plan policy, environmental designations, byelaws restricting overflying), what is the extent of the site (the 'redline boundary') and how big is the site?

2 What is the established use the of the land, what is the primary use and are there any obvious ancillary uses?

3 Does the site and its established use benefit from any PD rights?

Proposed use

4 What is the nature of the proposed use, its scale and frequency of operation, and who will be carrying out the activity?

5 What is the use class of the proposals, will it be primary or ancillary, and will the primary use have any ancillary uses?

6 Is the proposed use defined by Statutory Instruments (Acts, Regulation, Orders)

7 Will the proposed use be temporary in nature or permanent?

8 Could the proposed use benefit from PD rights?

9 What impacts (scale, frequency) are anticipated from the proposed use?

Proposed development

10 What works are proposed, and will this constitute 'development'?

11 Is the proposed developed defined by Statutory Instruments (Acts, Regulation, Orders)

12 Do any of the works not amount to 'development'?

13 What change to the existing land is being sought, is it a 'material change'?

14 What impacts (scale, frequency) are anticipated from the proposed development?

15 Who is seeking to bring forward the proposals?

16 Could the proposed development benefit from PD rights?

17 Will the proposed development be temporary or permanent?

Planning tools available to inform the process

3.22 The planning system is intended to be a system that is consistent, transparent and accessible to all - with opportunities for public consultation and engagement at every stage. However, the system is known for its complexities, there is no 'one size fits all' approach and each proposal coming forward would be assessed on its own planning merits.

3.23 It will be for the developer (the Applicant) to first formulate answers to the above, with the support of a Planning Adviser, usually as part of a professional design and development team.

3.24 Material/tools used to inform this process may include: review and interpretation of Statutory Instrument; case law; planning practice guidance; planning policy maps within Development Plans; evidence base assessments that have informed the drafting of planning policy, precedent set by other planning permissions; and land search tools such as LandStack and 'MAGIC' maps. MAGIC is a GIS system (England only) comprising environmental land data. The MAGIC has been developed in partnership with Natural England, Defra, Environment Agency, Historic England, Forestry Commission and Marine Management Organisation.

3.25 This process may be informed by pre-app with the LPA, to obtain informal officer feedback if there is agreement that planning permission is or is not required. If the latter, the LPA may suggest obtaining a 'certificate of lawfulness of existing use or development' (CLEUD) or 'certificate of lawfulness of proposed use or development' (CLOPUD) – which would confirm this position.

3.26 If it is understood that planning permission is required, the next step would be to submit a planning application to the LPA, who would then assess the scheme proposals against relevant planning policy before deciding whether to grant or refuse the application for planning permission.

3.27 Given the infancy of drone/AAM operations and development coming forward within the planning regime, it is noted that there is (unsurprisingly) currently very limited guidance material available to stakeholders (e.g. LPAs, drone/AAM providers, other members of the aviation community) to inform this exercise – giving rise to conflicting interpretation and application.

Engagement with relevant stakeholders

3.28 For any proposals coming forward for planning permission, the LPA will undertake a period of consultation where views on the proposed development can be expressed. There are four categories of LPA consultation:

- **Public consultation** – being neighbouring residents and community groups;
- **Statutory Consultees** – where there is a requirement set out in law to consult a specific body;
- **Consultation Direction** – which sets out further and specific statutory consultation requirements; and
- **Non-statutory consultees** – where there is a planning policy reasons to engage with a particular body (usually those likely to have an interest in the proposed development.

3.29 The list of relevant bodies will be considered on a case-by-case basis (some of which is at the LPAs discretion), to reflect the land to which the application relates (consenting jurisdiction as well as local environmental considerations) and the likely material planning considerations under review.

3.30 Example stakeholders may include (noting whilst some are England-specific examples, Wales, Scotland and Northern Ireland would also have an equivalent body):

Table 3.1 Example Consultation Stakeholders (table lists stakeholders in no particular order).

County Planning Authorities and other neighbouring LPAs	Greater London Authority	The Health and Safety Executive
Control of major-accident hazards competent authority (COMAH)	NHS England and the relevant clinical commissioning group	Natural England
The Historic Buildings and Monuments Commission for England	The relevant fire and rescue authority	The relevant police and crime commissioner
The relevant parish council	Designated Neighbourhood Forum	The Environment Agency
AONB Conservation Boards	Integrated Transport Authorities	The relevant Highways Authority, including Highways England

	(ITAs) and Passenger Transport Executives (PTEs)	
The Coal Authority	The relevant internal drainage board	Crown Estates Commission
The Canal & River Trust	United Kingdom Health Security Agency, an executive agency of the Department of Health and Social Care	Statutory undertakers for water and sewerage; electricity, oil and gas; and rail operators
Lead Local Flood Authority	The Forestry Commission	National Park Authorities
Historic England	Open Spaces Society	Campaign To Protect Rural England
British Horse Society	The Wildlife Trust	Ramblers Society
Sport England	Other Government departments/Secretary of State, such as Department for Business; Energy and Industrial Strategy; Department for Transport	Other Regional/Local Bodies: e.g., Local Enterprise Partnerships, local bird clubs, local drainage boards, Police, Chamber of Commerce, local Architectural, Archaeological and Local History Society
Civil Aviation Authority	NATS en-route	Ministry of Defence
Education Establishments	Resident Associations	Political persons – for example Councillors, ward councillors, Members of Parliament and from the wards within the area surrounding the site

4.0 Current Planning Policy Position

4.1 This section provides a review of the current planning policy position that could apply to drones and AAM operations and infrastructure, with consideration of both the national planning and aviation framework, and any local and regional planning policies.

4.2 The purpose of this section is to consider whether drone and AAM infrastructure and operations are currently contemplated in specific policies across the planning policy framework, by way of review of case study examples – to ascertain how the principle of drone and AAM infrastructure proposals would be assessed against planning policy considerations.

4.3 As described in Section 2 and 3 of this report, planning permission is required for specific 'development'. By seeking planning permission, the Applicant is required to submit a planning application to the LPA for consideration of the development site proposed. Planning Statutory Instruments require an application to be determined in accordance with the Development Plan policies, unless material consideration indicate otherwise.

4.4 A hierarchy of plans and policies form the planning policy framework. This begins at the local level, with the LPA local Development Plan and includes regionally and nationally set planning policies. Sector specific policies may also be identified as a material consideration. The aviation sector has its own suite of aviation policies that are applicable to the planning framework. Further commentary on this is provided below.

4.5 Development Plans typically set out strategic and non-strategic policies. Strategic polices establish an overall strategy for the pattern, scale and design of development in an area and the quantum of housing, employment and infrastructure required. Non-strategic policies support the strategic policies and relate to more detailed and site-specific matters including amenity, nature conservation, biodiversity, flooding, vehicle parking standards etc.

4.6 All plans when drafted need to be justified, with relevant and up-to-date evidence informing the Development Plan production process. Policies in local Development Plans should be reviewed and updated on a regular basis, for example in England, this should happen every five years.

4.7 The below sets out an example planning policy hierarchy, comprising national planning and aviation policy; the regional spatial strategy; and local planning policy. In practice, the set of policy applied to any drone or AAM proposals coming forward, would depend on where within the UK the proposals are to be located. These examples are considered representative of an existing framework with an established aviation and aviation related policy position.

1 National aviation policy

a Aviation Policy Framework 2013

b Jet Zero Strategy 2022

2 National planning policy

a National Planning Policy Framework (England) 2023

b Planning Practice Guidance (England) 2016 (last updated 2024)

3 Spatial Strategy (for London only)

a The London Plan 2021

4 Local Development Plans (examples)

a London Borough of Hillingdon

b London Borough of Bromley

c Cambridge City Council

4.8 From a national perspective, regardless of location across the UK, the same national aviation policy would apply to any aviation development coming forward.

4.9 Each of the four countries have their own national planning policy framework. This report has reviewed the national planning framework for England, as a case study, given the policy framework includes aviation specific policies.

4.10 The London Plan has been selected, as an example regional spatial strategy, given it has an existing policy on aviation, which has come about in response to Greater London's established network of aviation uses (e.g., Heathrow Airport, London Biggin Hill Airport, RAF Northolt, London City Airport and the London Heliport).

4.11 The local Development Plans selected represent local planning authority areas with an established aviation use within its boundary, and a known aviation policy position:

- Hillingdon: Heathrow Airport and RAF Northolt;
- Bromley: London Biggin Hill Airport; and
- Cambridge City Council: Cambridge Airport.

4.12 It is acknowledged that these aviation uses are examples of traditional aviation, and as such the corresponding planning policy will likely be cognisant of their 'traditional' nature – however, it is considered an appropriate 'test' as means to ascertain the current planning policy approach for aviation uses coming forward.

Case study examples

National Aviation Policy (relating to planning)

Aviation Policy Framework

4.13 The Aviation Policy Framework (APF) (2013) applies to the whole UK and is largely a 'Reserved Matter' that rests with the DfT and CAA. Reserved matters include safety regulation, economic regulation, aviation security, competition issues and international aspects of aviation policy (para. 5.2 and 5.23).

4.14 Land-use planning and airport surface access policies are devolved matters, and as such the APF sets out that, in preparing Development Plans, LPAs *"…are required to have regard to policies and advice issued by the Secretary of State. This includes the Aviation Policy Framework."* (para. 5.6).

4.15 The Aviation Policy Framework is therefore a material consideration in planning decisions in the context of drone/AAM infrastructure and operations. Whilst the APF does not

contain specific policies relating to this technology, the policy objectives are relevant, including:

1 A balanced approach to securing the benefits of aviation, whilst managing aviation's environmental impacts;

2 Supporting growth and benefits of aviation – including benefits relating to UK GDP, employment, imports and exports, skills development and tourism (paras. 1.4-1.19);

3 Tackling Climate Change – the objective is to ensure that the aviation sector makes a significant and cost-effective contribution towards reducing global emissions (para. 2.4);

4 Noise and other environmental impacts – the Government's overall policy on aviation noise is to limit and, where possible, reduce the number of people significantly affected by aircraft noise.

5 Working together – encouraging the aviation industry and local stakeholders to strengthen and streamline they way in which they work together.

Aviation Strategy

4.16 In 2018, the UK government commenced a review of its framework for aviation and the preparation of a new aviation strategy. The aim of the strategy is to achieve a 'safe, secure and sustainable aviation sector that meets the needs of consumers and a global, outward looking Britian'. The aviation strategy is supported by a series of consultations and documents. Those considered of most relevance to this paper include:

- Flightpath to the future: a strategic framework for the aviation sector (May 2022)
- Jet Zero strategy: delivering net zero aviation by 2050 (July 2022)

Flightpath to the Future: a strategic framework for the aviation sector

4.17 Flightpath to the Future is a strategic framework to support the Department for Transport's (DfT) vision for a modern innovate and efficient aviation sector over the next 10 years. It sets out a 10-point plan on how government and industry can work together to deliver a successful aviation sector in the future. The 10-point plan covers the following areas:

Enhancing global impact for sustainable recovery

1. Recover, learn lessons from the pandemic and sustainably grow the sector.
2. Enhance the UK's global aviation impact and leadership.
3. Support growth in airport capacity where it is justified, ensuring that capacity is used in a way that delivers for the UK.

Embracing innovation for a sustainable future

4. Put the sector on course to achieve jet zero by 2050.
5. Capture the potential of new technology and its uses.

Realising benefits for the UK

6. Unlock local benefits and level up.
7. Unleash the potential of the next generation of aviation professionals.
8. Make the UK the best place in the world for general aviation.

Delivering for users

9. Improve the consumer experience.
10. Retain our world-leading record on security and safety with a world-leading regulator.

4.18 With respect to the fifth point, and specific to drones and AAM, the framework confirms that government will set out a direction, working closely with industry and the regulator, to develop and publish a plan for the Future of Flight.

4.19 It is anticipated that this plan will set out steps that the Government and the regulator will take over the next three to five years to facilitate bringing these new air mobility services to market. A key component of the plan for Future of Flight will be to '*set out the next steps to create a modern and flexible regulatory framework…and the Government will work with the CAA to support innovation*

and ensure new technology can be integrated in a safe, secure and sustainable way' (p. 36).

4.20 This strategic framework confirms continued support for sustainable airport growth. The framework notes that government's existing policy frameworks on airport planning are considered to provide a robust and balanced framework for sustainable growth, and continue to have full effect as a material consideration in decision-taking on applications for planning permission for airport expansion.

Jet Zero Strategy

4.21 The Jet Zero Strategy (2022) sets out the Government's strategic framework for decarbonising UK aviation by 2050. The JSZ recognises the importance of zero emission aircraft and sets a strategic objective for zero emission routes connecting different parts of the UK by 2030 (p.43). It is also recognised that the adoption of novel new technologies will require the establishment of ground infrastructure at airports to handle new types of aircraft and fuel (para. 3.33). It makes specific reference to drones and AAM, noting:

'Maximising opportunities: The Jet Zero transition presents unique opportunities to create new jobs, industries and technologies across the entire sector and UK whilst also decarbonising air travel. It also complements our vision to be a world leader in innovative technology and its uses, such as drones and advanced air mobility' (para. 2.19).

4.22 Government state that its plans to capture the potential of these technologies will be set out in the forthcoming Future of Flight Plan.

4.23 Similar to the 'Flightpath to the Future: a strategic framework for the aviation sector', the Jet Zero Strategy confirms continued support of airport growth where it is justified, and that the existing policy frameworks for airport planning provide a robust and balanced framework for airports to grow sustainably, within a set of strict environmental criteria.

4.24 The Jet Zero Strategy also confirms that '*Government's existing planning policy*

frameworks, along with the Jet Zero Strategy and the Flightpath to the Future strategic

framework for aviation, have full effect and are material considerations in the statutory planning process for proposed airport development' (para 3.61).

4.25 The Jet Zero Strategy states the following policy position with respect to 'airport development' coming forward (which would be relevant to AAM proposals):

- *"It is vital that local communities and the wider public have confidence that the impacts of airport expansion have been properly considered. Applicants should therefore provide sufficient detail regarding the likely environmental and other effects of airport development to enable communities and planning*

decision-makers to give these impacts proper consideration. ***Applicants should engage with the relevant planning authority at an early stage of the planning process to agree an appropriate approach"*** (para 3.62); and

- *"Planning authorities and applicants should consider all relevant policy, guidance and other material considerations that may assist appraisal for airport development proposals and decision-making. Applicants should clearly set out their approach and findings in an accessible way that can be easily understood by the general public and decision-makers. The Government recognises the importance of a clear and consistent approach in relation to the assessment of a development's impacts in the process, and* ***will keep under review whether further guidance is needed to assist airport planning decision-making, with particular reference to environmental impacts"*** (para 3.63).

4.26 The Jet Zero Strategy does not expressly state whether these policies have been crafted using the lens of traditional aviation or whether they also contemplate new technology and its uses; much of the language suggests the former but there is also no rational reason why the policies would not apply to all 'airport development' – we consider, they do.

National Planning Policy

4.27 The National Planning Policy Framework (NPPF) (2023) sets out the Government's planning policies for England and how these should be applied. It expressly recognises that the purpose of planning is to contribute to the achievement of sustainable development

(para. 7) and establishes three overarching objectives; economic, social and environmental.

4.28 The NPPF is a material consideration in determining planning applications and the following would be considered relevant to the principle of drone/AAM infrastructure and operations:

Transport Policies

(a) Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised (para. 108 b).

(b) The environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains (para. 108 d).

Aviation Specific Policies

(c) Provide for any large-scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy (para. 110 e).

(d) Recognise the importance of maintaining a national network of general aviation airfields, and their need to adapt and change over time – taking into account their economic value in serving business, leisure, training and emergency service needs, and the Government's General Aviation Strategy (para. 110 f).

Supporting high quality communications

(e) Applications for electronic communications development (including applications for prior approval under the GPDO) should be supported by the necessary evidence to justify the proposed development. This should include: a) the outcome of consultations with organisations with an interest in the proposed development, in particular with the relevant body where a mast is to be installed near a school or college, or within a statutory safeguarding zone surrounding an aerodrome, technical site or military explosives storage area. (para.121 a).

Planning Practice Guidance

4.29 Planning Policy Guidance (PPG) provides guidance on the application of the NPPF, and it is intended that the two documents should be read together. It is web based with separate sections covering topics such as consultation and pre-decision matter, advice on key points to take into account on design, determining a planning application, use of planning conditions. It is regularly updated when guidance is updated or amended. None of the PPG is aviation specific.

The London Plan

4.30 The London Plan (2021) is the strategic plan for London, providing an integrated economic, environmental, transport and social policy framework for the development of the capital until 2041.

4.31 Drone and AAM infrastructure and operations are not explicitly contemplated in the London Plan, however its development is consistent with the policy rationale underpinning Policy T8 (Aviation) by:

1 Providing essential connectivity for passengers and freight, supporting vital trade, inward investment and tourism, generating prosperity, and providing and supporting significant numbers of jobs (para. 10.8.2).

2 Recognising local communities' concerns about aviation noise and pollution, using new technologies to deliver tangible reductions in noise exposure and pollutions, and engaging with communities on these effect (para. 10.8.2).

3 Making better use of existing airport capacity and not at the expense of London's environment or the health of its residents (para. 10.8.3).

4 Reduce transport emissions and improving air quality by incorporating air quality positive principles to minimise operational and construction impacts (para. 10.8.5).

5 Using surface transport networks able to accommodate the additional trips that would arise from the aviation infrastructure (para. 10.8.7).

6 Aviation greenhouse gas emissions must be aligned with the Mayor's carbon reduction strategies (para. 10.8.8).

The London Borough of Hillingdon

4.32 The relevant statutory Development Plan for LB Hillingdon comprises:

- Local Plan Part 1 – Strategic Policies (adopted 2012); and
- Local Plan Part 2 – Development Management Policies (adopted 2020).

4.33 Aviation planning policy in LB Hillingdon specifically relates to 'traditional' aviation matters connected with Heathrow Airport and its spatial extent (Local Plan Part 1, Policies E3 and T4). Underpinning the strategic polices, the Local Plan Part 2 (Development Management Polices) sets out detailed policy DMAV2 (Heathrow Airport) in support of development within the airport boundary, provided the following criteria are met:

1 The proposal relates directly to airport related use or development[1];

2 There is no detrimental impact to the safe and efficient operation of local and strategic transport networks;

3 They comply with Policy DMEI 14 (Air Quality);

4 There are no other significant adverse environmental impacts.

5 They comply with all other relevant policies of the Local Plan.

4.34 Whilst other aviation flight is not contemplated, particularly beyond the airport boundaries, other strategic policies in the Local Plan Part 1 provide a direction for

[1] Airport related uses or development is to be taken as any use or development that falls within the following: offices, air cargo, transit sheds, hire facilities, flight catering, freight forwarding and airport industry and warehousing and, is development in connection with the provision of services and activities relating to the movement or maintenance of aircraft or with embarking, disembarking, loading, discharge or transport of passengers, livestock or goods. It also includes the provision of services and facilities for any staff employed to provide these functions.

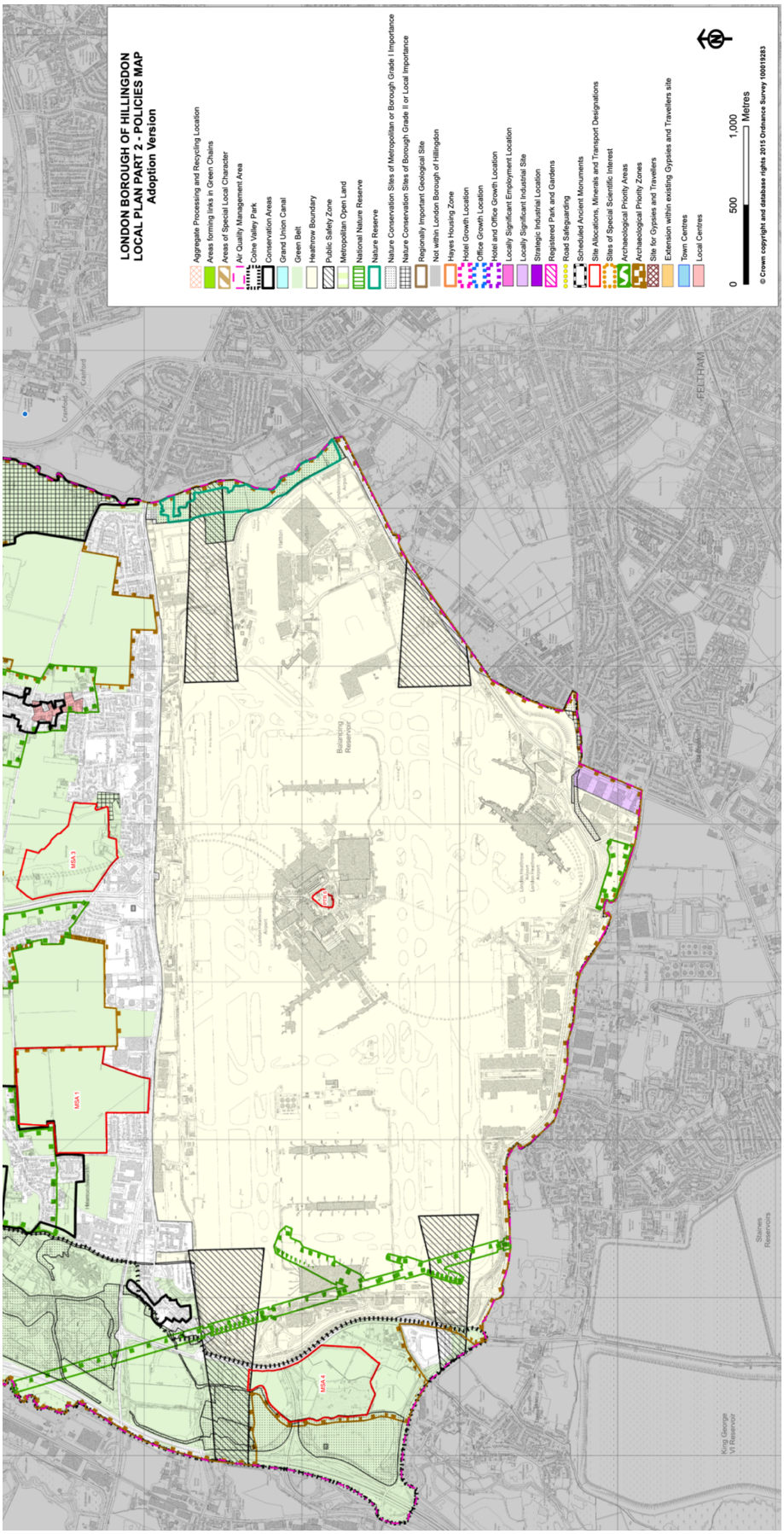
development in relation to the built environment (Policy BE1), climate change adaptation and mitigation (Policy EM1), air quality and noise (Policy EM8).

Similarly, necessary to manage aviation development, the more detailed policies in the Local Plan Part 2 require compliance with matters relating to Co2 emissions (Policy DMEI 2), air quality (Policy DEMI 14) and ensuring the safe operation of Heathrow (Policy DMAV 1).

Figure 4.1 Heathrow Airport Boundary (overleaf)

Source: London Borough of Hillingdon Local Plan polices map 2015[2].

[2] Full scale version: LONDON BOROUGH OF HILLINGDON LOCAL PLAN PART 2 - POLICIES MAP Adoption Version (2015): https://modgov.hillingdon.gov.uk/documents/s46876/Appendix%205%20-%20Revised%20Policies%20Map.pdf


LONDON BOROUGH OF HILLINGDON
LOCAL PLAN PART 2 - POLICIES MAP
Adoption Version
Aggregate Processing and Recycling Location
Areas forming links in Green Chains
Areas of Special Local Character
Air Quality Management Area
Colne Valley Park
Conservation Areas
Grand Union Canal
Green Belt
Heathrow Boundary
Public Safety Zone
Metropolitan Open Land
National Nature Reserve
Nature Reserve
Nature Conservation Sites of Metropolitan or Borough Grade I Importance
Nature Conservation Sites of Borough Grade II or Local Importance
Regionally Important Geological Site
Not within London Borough of Hillingdon
Hayes Housing Zone
Hotel Growth Location
Office Growth Location
Hotel and Office Growth Location
Locally Significant Employment Location
Locally Significant Industrial Site
Strategic Industrial Location
Registered Park and Gardens
Road Safeguarding
Scheduled Ancient Monuments
Site Allocations, Minerals and Transport Designations
Sites of Special Scientific Interest
Archaeological Priority Areas
Archaeological Priority Zones
Site for Gypsies and Travellers
Extension within existing Gypsies and Travellers site
Town Centres
Local Centres
0
500
1,000
Metres
© Crown copyright and database rights 2015 Ordnance Survey 100019283
FELTHAM
Bulanting Reservoir
Staines Reservoirs
King George VI Reservoir
MSA 1
MSA 3
MSA 4

London Borough of Bromley

4.36 Bromley's Local Plan is the statutory Development Plan for LB Bromley (adopted January 2019) and is used to determine planning applications in the Borough. Biggin Hill Airport is identified in the Local Plan as a Strategic Outer London Development Centre (SOLDC), being a priority area for economic growth (Policy 80).

4.37 The London Biggin Hill Airport SOLDC boundary is shown in Figure 4.1, with Policy 103 confirming support for "*the provision of associated business infrastructure and amenities, as an important sub-regional hub for aviation and related high-tech industry, to achieve economic growth whilst minimising adverse impacts on the environment and the amenity of surrounding communities*."

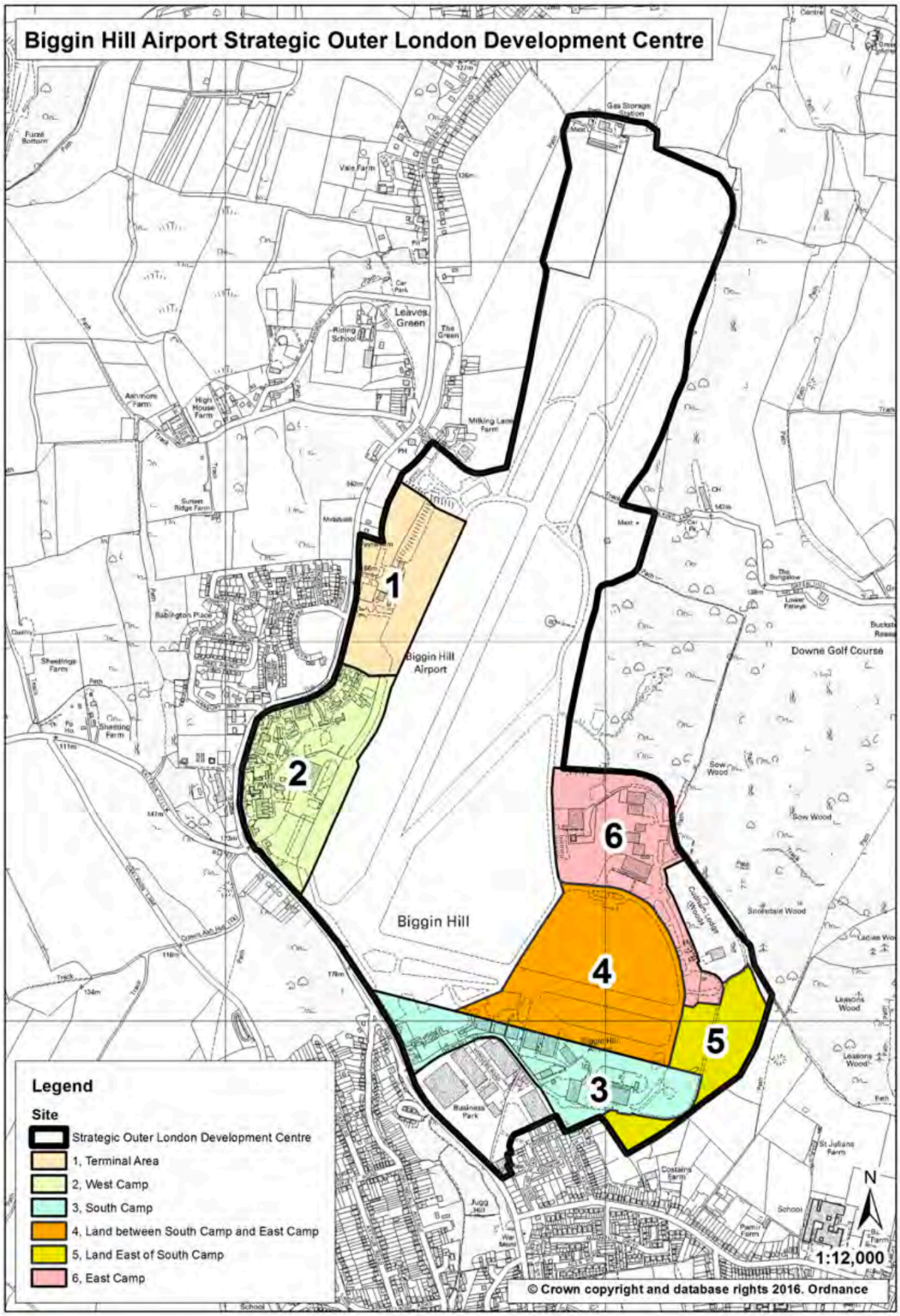
4.38 The SOLDC is divided into sub-areas (1-5), with the prevailing policy for each sub-area to safeguard for aviation-related employment generating uses. The land east of south-camp and east-camp sub-areas (Policy 107 and 108) in particular are not considered appropriate areas for non-aviation related development. More general policies in the plan exist specifically in relation to development at Biggin Hill – relating to airport public safety and noise.

4.39 Like Heathrow, other aviation flight and associated development is not complemented beyond the Biggin Hill airport boundaries in the Local Plan – only general policies applicable to all development proposals exist in regard to matters relating to highways (Policy 31 and 34), design (Policy 37), noise pollution (Policy 119), air quality (Policy 120) and Co2 reduction (Policy 124).

Figure 4.2 London Biggin Hill Airport SOLDC (overleaf).

Source: London Borough of Bromley Local Plan (2019)[3].

[3] Full scale version: page 196, London Borough of Bromley Local Plan (2019): https://www.bromley.gov.uk/downloads/file/51/bromley-local-plan


Biggin Hill Airport Strategic Outer London Development Centre
Leaves Green
Biggin Hill Airport
Biggin Hill
Downe Golf Course
1
2
3
4
5
6
Legend
Site
Strategic Outer London Development Centre
1, Terminal Area
2, West Camp
3, South Camp
4, Land between South Camp and East Camp
5, Land East of South Camp
6, East Camp
N
1:12,000
© Crown copyright and database rights 2016. Ordnance

Cambridge City Council

4.40 The Cambridge Local Plan (2018) is the principal development plan document guiding development in Cambridge. Policy 83 relates solely to matters at Cambridge Airport. The supporting text (para. 3.36) adds that development proposals at the airport would be assessed against their impact on noise, air quality, landscape, nature conservation, transport and public safety.

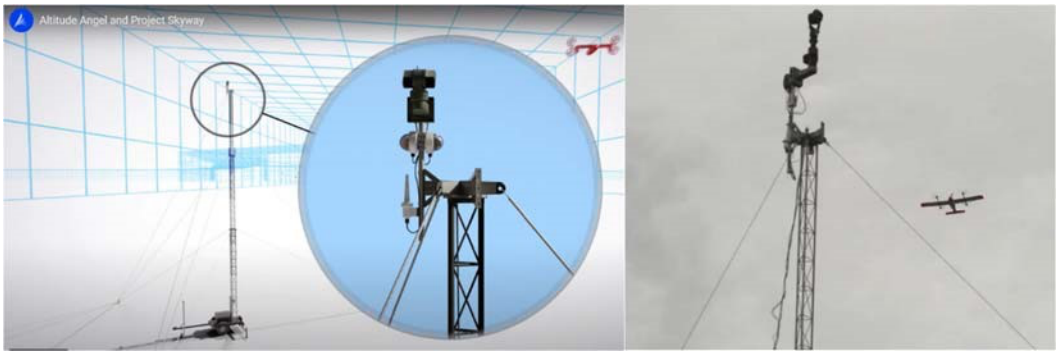
4.41 As an example, within the context of Cambridge City Council, it is noted that a drone superhighway, 'Project Skyway', is proposed for the region providing a commercial drone zone to facilitate Beyond Visual Line of Site (BVLOS) operations. The project seeks to connect airspace above Reading, Oxford, Milton Keynes, Cambridge, Coventry and Rugby[4]. Concept images suggest that the ground infrastructure required for highway operations includes tall telecommunication beacons, supported by extendable legs atop a metallic structure and secured to the ground by wire cables (Figure 4.1). It is noted that this is not the only example of such a solution, and there are others known throughout the UK (e.g., the Sustainable Aviation Test Environment (SATE) in Scotland). Reference has been made to Project Skyway within the context of proposals being brought forward within the policy case study of Cambridge City Council.

4.42 Such a development would likely need to satisfy the criteria of Policy 84 (Telecommunications) of the Cambridge Local Plan, including demonstrating there is no irremediable interference with other electrical equipment (including air traffic services) and visual impact is minimised. However, the supporting policy text recognises that new communication technologies are continually developing, and it is important the Council supports the growth of telecommunications systems while keeping the environmental impact to a minimum (para. 9.37).

4.43 Given the physical extent of such a highway, a cross boundary and aligned policy approach across the relevant LPAs would be of particular importance to ensure synchronised policy requirements in consideration of the necessary infrastructure so as to avoid compromise to the network.

[4] Berkshire: UK drone superhighway due to complete by 2024 (BBC News, November 2023): https://www.bbc.co.uk/news/ukengland-berkshire-67521014

Figure 4.3 UK Drone Superhighway Concept Ground Infrastructure



Source: Skyfarer (left); BBC News (right).

Summary

4.44 A hierarchy of plans and policies form the planning policy framework. This begins at the local level, with the LPA local Development Plan and includes regionally and nationally set planning policies. Aviation also has sector specific policies which are confirmed as material considerations, applicable to the planning framework. The exact set of policy applied to any drone or AAM proposals coming forward would depend on where within the UK the proposals are to be located.

4.45 It is evident, from the case studies reviewed, that drone and AAM technology (including its associated infrastructure and operational needs) has yet to be specifically and directly addressed within planning policy, at any level. The exception is the aviation planning policy framework, which does refer to drones and AAM.

4.46 Nevertheless, it is considered that the technology and type of transport infrastructure required generally fits with the overarching principles of national planning policy – particularly the purpose of planning to contribute to the achievement of sustainable development (e.g., NPPF, para. 7) and ensuring that opportunities from proposed transport infrastructure, and changing transport technologies, are realised (e.g., NPPF, para. 108b).

4.47 The rhetoric of delivering sustainable aviation development continues into London's spatial strategy policies, with a focus on providing connectivity, making better use of existing airport capacity but ensuring noise, air quality and greenhouse gas emission targets are not compromised – there are opportunities to facilitate wider 'additionality' benefits.

4.48 At a local level, drawing on the case studies in LB Hillingdon, LB Bromley and Cambridge, aviation planning policy specifically relates to the relevant airport in that locality, the extent of its boundaries, and in the context of 'traditional' aviation technology. Detailed nonstrategic policies would be applicable to all development proposals in respect of their other planning considerations (i.e. noise, air quality, Co2 reductions, accessibility, highways).

Commentary

4.49 Looking forward, noting that local Development Plans should be regularly reviewed and updated, and that this process is to be underpinned by a relevant and up to date evidence base, there is an opportunity to give consideration to drone and AAM infrastructure and operations coming forward and what this could mean for the planning of a particular local (LPA) area.

4.50 Within its aviation planning polices, government recognises the importance of a clear and consistent approach in relation to the assessment of a development's impacts in the process, and states that it will keep under review whether further guidance is needed to assist airport planning decision-making, with particular reference to environmental impacts. Aviation planning policy also notes that Applicants should engage with the relevant planning authority at an early stage of the planning process to agree an appropriate approach. These policies relate to 'airport development' coming forward, but the same principles will apply to drones and AAM infrastructure as they do for most forms of development.

5.0 Other Relevant Planning Considerations for Drone and AAM Proposals

5.1 The purpose of this section is to identify how the principle of drone and AAM infrastructure proposals would be assessed against other relevant planning considerations.

Interrelationship between planning and aviation regime

5.2 The legal basis for aviation use and aerodrome development is contained within both town planning and civil aviation regulation, policy and publications. There is some overlap in purpose between the two regimes; however, in practice they exist in parallel, resulting in a complex system which can give rise to uncertainty of application. Aerodrome Safeguarding and use of airspace will likely be central to discussions when considering implications one regime may have on the other.

Aerodrome Safeguarding

5.3 Safeguarding is a mechanism for aerodromes to ensure safe and efficient operations, that is the safety of an aerodrome's operation as well as the safety of people living and working nearby. It is deemed a national matter and cross-regulation issue – drawing on both the civil aviation and planning regimes.

5.4 Within the planning regime, aerodrome safeguarding becomes a consideration when a proposed development or a change in use comes forward in the form of a planning application or if prior approval is required to realise a PD right. In short, the test is to ensure that any new development or use can 'co-exist' with an existing aerodrome or aviation use, without impinging on safe and efficient operations. This includes consideration of whether multiple aerodromes and aviation uses, nearby to one another, can also co-exist. Certain existing aerodromes and aviation uses benefit from a Consultation Direction, meaning they hold a Statutory Consultee status, and the LPA must take its comments into consideration. This means, any new drone or AAM use or development coming forward, and if located within a safeguarding zone of an officially safeguarded aerodrome, will need to demonstrate that its use can co-exist with the officially safeguarded aerodrome.

5.5 Awareness of this safeguarding regime, by all stakeholders, is essential to ensure that it is being implemented as it should and meets the needs of all end users such as aerodrome operators and passengers, 3rd party developers, and local communities.

Use of airspace

5.6 The control and management of the use of airspace sits within the aviation regime, not the planning regime – and is regulated by the CAA. Whereas the planning system generally only controls what happens on the ground.

5.7 The CAA guidance on its airspace change process describes airspace as forming two main categories: controlled airspace and uncontrolled airspace.

Controlled airspace *is where air traffic control needs to have positive control over aircraft flying in that airspace to maintain safe separation between them. Controlled airspace is made up of a network of corridors linking aerodromes and control zones surrounding major airports.*

Uncontrolled airspace *is airspace where aircraft are able to fly freely without being constrained by instructions in routeing or by air traffic control, although they may request information or a service.*

5.8 Changes made to the design of UK airspace requires a formal Airspace Change Process, usually proposed by an aerodrome operator or provider of air navigation services (e.g., air traffic control) – who are referred to as the 'airspace change sponsor'. This process deals with the change in airspace design as well as any redistribution of air traffic. The air space change sponsor submits its proposals to the CAA for its consideration.

5.9 The airspace change process does not entail placing limits on volumes of air traffic using a piece of airspace at any point in time (subject to operational and safety considerations). Instead, the volume of air traffic using an aerodrome is a planning matter and can be addressed through use of planning conditions when a planning application comes forward to the LPA's consideration.

5.10 It is noted that the CAA is bringing forward a number of consultations in relation to air space change, as well as drone and AAM regulations and policy (e.g., CAP 1616, vertiport design, atypical air environments). These matters sit outside of the planning regime and would not, as such, be material planning considerations for any drone or AAM proposals coming forward.

EIA Development

5.11 Some development proposals are also subject to Environmental Impact Assessment (EIA), which is a tool used to assess whether a project is likely to have significant effects on the environment, to inform decision taking of an application. EIA Regulations set out types of development that fall within the category of 'EIA Development' and how an environmental assessment should be carried out.

Need for other Consents

5.12 Even if a planning application is not needed, other consent may be required under different statutory regimes. If planning permission is required, these matters may

also be involved with planning policy development and decision-taking. Examples include:

1 highways and movement

2 works to protected trees

3 advertisement consent

4 listed building consent

5 hazardous substances consent

6 environmental permits/licences

7 building regulations

8 airspace change procedure

6.0 Potential Limitations to the Current Planning Framework

6.1 This section sets out our observations of potential limitations to the current planning framework, including the planning policy position, for drone and AAM use and ground infrastructure – drawing on the commentary within sections 2 to 5 of this report. This commentary applies to all four countries in the UK.

1. Definitions and interpretations applied

6.2 Key to ascertaining whether planning permission is required, is to consider how the proposals (use and/or development) would be defined.

6.3 Whilst Planning does define traditional jet-engine aviation, it has yet to define this drone and AAM type of use and development.

6.4 Existing definitions for 'traditional aviation' (i.e., not drones or AAM) comprise a classification of aviation (e.g., commercial, air transport, general aviation). This classification is defined in Statutory Instrument, guided by aviation regulators such as ICAO, EASA and the UK CAA. It is this classification that is often applied to Planning to establish the nature of activity arising from a new use or development, and as such the impact that could result and how it should be assessed.

6.5 In contrast, the Future Flight sector has been developing its own a set of standard terms and acronyms, appropriate for this emerging technology. These definitions are not wholly aligned with traditional aviation definitions – in particular, the BSI definitions do not make a distinction between purpose of flight or type of activities undertaken, with the exception that AAM (UAM and RAM) would entail the carriage of passengers and in particular RAM would entail air transportation.

6.6 Clarity is required as to how drones and AAM might be defined by the planning regime going forward. Consideration should be given to whether either set of definitions are 'fit for purpose' – in Planning terms – to be able to describe the nature of activity arising from a new drone or AAM use or development, the impacts that could result and how it might then be assessed.

2. Policy gaps

6.7 Planning policy has yet to expressly contemplate this type of technology and its operational needs (both drones and AAM), which was made clear from our case study review of the current planning policy framework. This is, however, not an unusual position for Planning – there are many examples to draw upon of new development concepts or technologies coming forward that Planning had not anticipated (e.g., retail parks, data centres and mobile phone masts) that are now embedded within planning policy and decision making and how this has worked in practice.

6.8 'Traditional' aviation is typically located at the periphery of planning policy. How LPAs might consider this new technology (including its infrastructure) within urban environments is not yet established (albeit noting that some but not all proposals will be urban). We would expect LPAs to look to assess this new technology in a similar manner to

traditional aviation where these relate to 'airport development', on matters relating to noise, air quality, number of flights and highways. However, these and other considerations are likely to apply to drones, where these are proposed as an alternative form of transport leaving a distribution warehouse, say, or AAM seeking to collect / depart passengers to / from a city centre business district. The former example (AAM) may be capable as being regarded as an 'ancillary' to the principal use approved, like car parking and servicing.

6.9 It is noted that drones and AAM themselves will have different operational and infrastructure requirements, and as a result may benefit from having a separate policy position for each technology.

6.10 Planning Policy exists in a time-lag. If the inclusion of drone or AAM specific policies to be incorporated into an emerging local Development Plan was sought, this would need to be aligned with the timetabling of the local plan production process – which occurs circa every five years, or the timetabling of national policy which is undertaken on a more ad-hoc basis.

6.11 There is currently no planning guidance available to stakeholders (drone and AAM providers, LPAs) providing advice on how Planning might consider this new technology and nature of operations.

3. No precedent (use class, PD rights)

Use Class

6.12 We consider that drone and AAM operations and infrastructure, if deemed a 'primary use' would be considered to be a 'Sui Generis' use, similar to traditional aviation. It is also possible that drone and/or AAM operations and infrastructure could be brought forward as an ancillary use to a different primary land use. However, this is yet to be tested.

PD rights

6.13 It is unlikely that the GPDOs contemplated this type of development and use when PD rights were established. It may be possible to benefit from certain PD rights associated with other types of development, if brought forward as ancillary to the primary use. This would need to be assessed on a case-by-case basis.

6.14 As the GPDOs are currently written, drone or AAM infrastructure coming forward in their own right would not benefit from the Airports PD. However, it is considered that, if drone or AAM infrastructure was brought forward within the boundary of an existing 'relevant airport', it is possible that the works would

benefit from the Airports PD right. Again, this would need to be assessed on a case-by-case basis.

4. Need for a joined-up approach to policy development

6.15 There may be a need for drone and AAM infrastructure to cross LPA boundaries to deliver a network of infrastructure. A co-ordinated and joined up spatial policy approach between local authorities will be important to avoid inconsistencies in the development of planning policy and its application, as well as approach to decision taking. There is no guidance on how this might work in practice.

5. Aerodrome Safeguarding will apply

6.16 Awareness of the Aerodrome Safeguarding regime, by all stakeholders, is essential to ensure that it is being implemented as it should and meets the needs of all end users such as aerodrome operators and passengers, 3rd party developers, and local communities – this will also apply to drone and AAM providers. However, this requirement will only be triggered when a planning application comes forward or if prior approval is required to realise a PD right – meaning drone and AAM use could come forward (if permission is not required) without consideration of implications for other existing aviation uses.

6.17 Under the current system, drone or AAM infrastructure is unlikely to be recognised as an officially safeguarded aerodrome, to be able to benefit from the planning Consultation Direction – meaning once a drone or AAM facility is in operation, other neighbouring land uses could come forward without consideration of safety implications for the drone or AM facility.

6. Capping activity by planning condition

6.18 The volume of air traffic using an aerodrome remains a planning matter, usually addressed through use of planning conditions when a planning application comes forward for the LPA's consideration. Noting the comments made that LPAs may look towards assessing this new technology in a similar manner to 'traditional' aviation, consideration should be given to whether this (and the extent to which) would be appropriate for drones and AAM operations.

7. Planning and aviation controls

6.19 The legal basis for aviation use and aerodrome development is contained within both town planning and civil aviation regulation, policy and publications. There is some overlap in purpose between the two regimes; however, in practice they exist in parallel, resulting in a complex system which can give rise to uncertainty of application. With respect to the control and management of the use of airspace, this sits within the aviation regime, not the planning regime – and is regulated by the CAA. Whereas the planning system generally only controls what happens on

the ground. The responsibility of each regime (Planning and Aviation) should be made clear to all stakeholders.

Gap Analysis Summary

6.20 In anticipation of drone and AAM use and infrastructure coming forward, we identify a number of gaps in the current planning frameworks and tools.

6.21 Whilst Planning does define traditional jet-engine aviation, it has yet to define drone and AAM use and development. Separate to this, the Future Flight sector is developing its own definitions. Consideration should be given to whether either set of **definitions** are 'fit for purpose' – in Planning terms – to be able to describe the nature of activity arising from a new drone or AAM use or development, the impacts that could result and how it might then be assessed.

6.22 **Planning policy** has yet to contemplate this type of technology and its operational needs, which was made clear from our case study review of the current planning policy framework – whilst this is not unusual for Planning, consideration should be given to the success (or otherwise) of other new technologies which have previously come forward within the planning regime.

6.23 For cross-boundary matters, a co-ordinated and joined up spatial policy approach between local authorities (e.g. Places for People, the Greater Manchester Plan, for 9 combined authorities) will be important to avoid inconsistencies in the development of planning policy and its application, as well as approach to decision taking.

6.24 Planning Policy exists in a time-lag. Inclusion of drone or AAM related policy into the planning policy framework would need to be aligned with the timetabling of the Development Plan production process.

6.25 There is currently no **planning guidance** available to stakeholders (drone and AAM providers, LPAs) providing advice on how Planning might consider this new technology and nature of operations.

6.26 There is no precedent to draw upon to ascertain application of use class and whether drones or AAM could benefit from **PD rights**. It is considered unlikely that drones or AAM will benefit from the Airports PD right.

6.27 The **Aerodrome Safeguarding** procedure will only be triggered when a planning application comes forward or if prior approval is required to realise a PD right – meaning drone and AAM use could come forward (if permission is not required) without consideration of implications for other existing aviation uses. Once a drone or AAM facility is in operation, other neighbouring land uses could come forward without consideration of safety implications for the drone or AM facility, given this type of aviation use is currently not covered by the safeguarding mechanism.

6.28 **Planning** can only **control** what happens on the ground. The control and management of the use of airspace sits within the aviation regime, not the planning regime – and is regulated by the CAA. Whilst not strictly a gap within the current planning system, an understanding by the public and decision-takers of where one regime begins, and one ends is considered a gap within the planning system (i.e., what is and is not a material planning consideration).

6.29 The legal basis for aviation use and aerodrome development is contained within both town **planning and civil aviation regulation**, policy and publications. There is some overlap in purpose between the two regimes; however, in practice they exist in parallel, resulting in a complex system which can give rise to uncertainty of application. The responsibility of each regime should be made clear to all stakeholders.

6.30 The **planning considerations** for drone and AAM proposals coming forward will be different to traditional aviation (e.g., siting within an urban area and potential impacts arising – albeit noting that some but not all proposals will be urban). It is anticipated that LPAs will likely assess any proposals in a similar manner to traditional aviation, against the prevailing planning policy framework before them until new specific policy is formulated (based on our experiences of other new technologies coming forward within the planning system as well our discussions to date held with LPAs on drones and AAM proposals). Such new policy might provide the planning direction on the types of locations where drone and AAM development is to be encouraged and/or provide criteria-based policies for assessing individual development proposals against. This may include whether there is any planning justification for LPAs to seek to cap activity by planning conditions - in a similar manner to traditional aviation – and, if so, how to do so.

7.0 Conclusions and Next Steps

7.1 This Current Planning Position report provides an explanation of the current planning framework applicable to drone and Advanced Air Mobility (AAM) development. The focus of this commentary has been how drone and AAM use, and drone/AAM infrastructure, would be assessed under the current planning system. This includes:

- A brief, high-level, **description of the UK planning system**.
- An explanation of **when planning permission is typically required**, and how this might apply to drone and AAM operations and infrastructure.
- A review of the **planning policy position for drones and AAM**, both the national planning and aviation framework, and any local and regional planning policies. This considered whether drone and AAM infrastructure and operations are currently contemplated in specific policies across the planning policy framework, by way of review of case study examples – to ascertain how the principle of drone and AAM infrastructure proposals would be assessed against planning policy considerations (i.e., policy applied when planning permission is sought).
- An overview of **other relevant considerations** for proposals coming forward for drone and AAM operations and infrastructure – such as EIA Development, Aerodrome Safeguarding and when other consents may be required.

7.2 Planning permission is required for specific types of development, including the use and operation on land that falls within the statutory definition of 'development'. Broadly speaking, to ascertain whether planning permission is required, the following would need to be considered.

- How the land is proposed to be used, and whether this is a change from the existing 'established' use.
- Whether 'development' will occur to enable the proposed use.
- If there are existing Permitted Development rights in place.

7.3 To ascertain whether drone/AAM operations or infrastructure will require planning permission, an important first step will be to establish a few planning-led facts about the proposals – which are set out within the body of this report. If it is understood that planning permission is required, the next step would be to submit a planning application to the LPA, who would then assess the scheme proposals against relevant planning policy before deciding whether to grant or refuse the application for planning permission.

7.4 Given the infancy of drone/AAM operations and development coming forward within the planning regime, it is noted that there is (unsurprisingly) currently very

limited guidance material available to stakeholders (e.g. LPAs, drone/AAM providers, other members of the aviation community) to inform this exercise – giving rise to conflicting interpretation and application.

7.5 For any proposals coming forward for planning permission, the LPA will undertake a period of consultation where views on the proposed development can be expressed. The list of relevant bodies will be considered on a case-by-case basis (some of which is at the LPAs discretion), to reflect the land to which the application relates (consenting jurisdiction as well as local environmental considerations) and the likely material planning considerations under review. An example list of stakeholders is set out within the body of this report.

7.6 With respect to the policy position review, the following is noted:

- A hierarchy of plans and policies form the planning policy framework. This begins at the local level, with the LPA local Development Plan and includes regionally and nationally set planning policies. Aviation also has sector specific policies which are confirmed as material considerations, applicable to the planning framework. The exact set of policy applied to any drone or AAM proposals coming forward would depend on where within the UK the proposals are to be located.
- It is evident, from the case studies reviewed, that drone and AAM technology (including its associated infrastructure and operational needs) has yet to be specifically and directly addressed within planning policy, at any level. The exception is the aviation planning policy framework, which does refer to drones and AAM.
- Nevertheless, it is considered that the technology and type of transport infrastructure required generally fits with the overarching principles of national planning policy – particularly the purpose of planning to contribute to the achievement of sustainable development and ensuring that opportunities from proposed transport infrastructure, and changing transport technologies, are realised.
- Of those existing planning policies that address aviation development, polices themes relate to providing connectivity, making better use of existing airport capacity but ensuring noise, air quality and greenhouse gas emission targets are not compromised, and opportunities to facilitate wider 'additionality' benefits. Detailed non-strategic policies would be applicable to all development proposals in respect of their other planning considerations (i.e. noise, air quality, Co2 reductions, accessibility, highways).
- Looking forward, noting that local Development Plans should be regularly reviewed and updated, and that this process is to be underpinned by a relevant and up to date evidence base, there is an opportunity to give consideration to

drone and AAM infrastructure and operations coming forward and what this could mean for the planning of a particular local (LPA) area.

- Within its aviation planning polices, government recognises the importance of a clear and consistent approach in relation to the assessment of a development's impacts in the process, and states that it will keep under review whether further guidance is needed to assist airport planning decision-making, with particular reference to environmental impacts. Aviation planning policy also notes that Applicants should engage with the relevant planning authority at an early stage of the planning process to agree an appropriate approach. These policies relate to 'airport development' coming forward, but the same principles will apply to drones and AAM infrastructure as they do for most forms of development.

7.7 Drawing on the above, the report then sets out observations on the limitations to the current planning framework for drone and AAM use and ground infrastructure. These limitations, including some 'gaps', comprise:

1 **Conflicting definitions and interpretations applied**: Planning has yet to define drone and AAM use and development. Separate to this, the Future Flight sector is developing its own definitions. Consideration should be given to whether either set of definitions are 'fit for purpose' – in Planning terms – to be able to describe the nature of activity arising from a new drone or AAM use or development, the impacts that could result and how it might then be assessed.

2 **Current policy gaps and the evolution of planning policy exist in a time-lag**: Planning policy has yet to contemplate this type of technology and its operational needs, which was made clear from our case study review of the current planning policy framework – albeit this is not an unusual position for Planning when new development concepts emerge, as planning Policy exists in a time-lag. Inclusion of drone or AAM related policy into the planning policy framework would need to be aligned with the timetabling of the national, regional and local plan-making processes.

3 **Different approach required for the assessment of proposals**: The planning considerations for drone and AAM proposals coming forward will be different to traditional aviation (siting within an urban area and potential impacts arising – albeit noting that some but not all proposals will be urban). LPAs will presently assess drome and AAM developments against the same policy framework as traditional 'airport development', so there is a risk that LPAs will assess any proposals in a similar manner to traditional aviation and lead to similar outcomes, but we expect this to be unlikely so long as evidence is adduced to explain the concept and technology and on their very different environmental effects. Nonetheless, this may lead to LPAs seeking to cap activity by planning conditions, in a similar manner to traditional aviation.

4 **No planning guidance**: There is currently no planning guidance available to stakeholders (drone and AAM providers, LPAs) providing advice on how Planning might consider this new technology and nature of operations. For cross-boundary matters, a co-ordinated and joined up spatial policy approach between local authorities will be important to avoid inconsistencies in the development of planning policy and its application, as well as approach to decision taking.

5 **No Use Class or PD rights precedent**: There is no precedent to draw upon to ascertain application of use class and whether drones or AAM could benefit from PD right – be that as a primary or ancillary use. It is considered unlikely that drones or AAM will benefit from the Airports PD right.

6 **Two regulatory systems in operation:** Drone and AAM use and infrastructure will need to consider the legal basis of both town planning and civil aviation regulation, policy and publications. Whilst there is some overlap in purpose between the two regimes; however, in practice they exist in parallel, resulting in a complex system which can give rise to uncertainty of application. The responsibility of each regime should be made clear to all stakeholders.

7 **Whether (when) the Aerodrome Safeguarding mechanism applies:** The Aerodrome Safeguarding procedure will only be triggered when a planning application comes forward or if prior approval is required to realise a PD right – meaning drone and AAM use could come forward (if permission is not required) without consideration of implications for other existing aviation uses. Once a drone or AAM facility is in operation, other neighbouring land uses could come forward without consideration of safety implications for the drone or AM facility, given this type of aviation use is currently not covered by the safeguarding mechanism.

8 **Planning only controls what happens on the ground:** The control and management of the use of airspace sits within the aviation regime, not the planning regime – and is regulated by the CAA. Whereas the planning system generally only controls what happens on the ground.

7.8 Following this Current Planning Position report, an information gathering exercise was undertaken, seeking comment from drone and AAM providers on this report. Outcomes of this consultation informed the preparation of Part two – Looking Forward Position, which draws on the conclusions of this report and the consultation, to provide a set of recommendations for the current UK planning system to address in policymaking and other limitations/gaps identified. An information sharing exercise was undertaken, to relay findings with Local Planning Authorities, and then ultimately the UKRI Future Flight Challenge.

Part 2 – Looking Forward Position

8. Current Position Paper Outcomes

8.1. The Current Planning Position paper provided an explanation of the current planning framework applicable to drone and Advanced Air Mobility (AAM) development. This included:

1. A brief, high-level, description of the UK planning system.
2. An explanation of when planning permission is typically required, and how this might apply to drone and AAM operations and infrastructure.
3. A review of the planning policy position for drones and AAM, both the national planning and aviation framework, and any local and regional planning policies. This considered whether drone and AAM infrastructure and operations are currently contemplated in specific policies across the planning policy framework, by way of review of case study examples – to ascertain how the principle of drone and AAM infrastructure proposals would be assessed against planning policy considerations (i.e., policy applied when planning permission is sought).
4. An overview of other relevant considerations for proposals coming forward for drone and AAM operations and infrastructure – such as Environmental Impact Assessment (EIA) Development, Aerodrome Safeguarding and when other consents may be required.

8.2. Drawing on the above, the report then set out observations on the limitations to the current planning framework for drone and AAM use and ground infrastructure. These limitations, including some 'gaps', comprise:

1. Definitions and interpretations to be established for Planning purposes;
2. Planning policy is evolutionary – the current 'policy gaps' need addressing when national policies and Plans are reviewed, ideally top down;
3. Evidence on the need for and planning consequences, including benefits, of such development, to be provided to inform both planning policy formulation and LPA assessments of infrastructure development;
4. No planning guidance and in context of two regulatory systems in operation;
5. No Use Class or PD rights precedent; and
6. Whether (and when) the Aerodrome Safeguarding mechanism applies.

9. Looking Forward Paper Recommendations

9.1. Our recommendations for changes to better integrate drones and AAM within the current UK planning system have been grouped, by action, into three categories: (1) Review/Prepare; (2) Consultation/Engagement; and (3) Advocacy/Recommendations.

Table 9.1 Recommendations for Current UK Planning System.

Ref	Theme and Issue	Recommendation
1	**Definitions and interpretations to be established for Planning purposes.** Planning has yet to address and is therefore yet to define drone and AAM use and development. The Future Flight sector is developing its own definitions. Consideration should be given to whether the Future Flight set of definitions are 'fit for Planning purposes' – to be able to describe the nature of activity arising from a new drone or AAM use or development, before assessing the planning effects and how, if negative, such effects might be mitigated.	**Review/Prepare:** Consideration should be given to the extent of existing AAM/drone definitions (e.g., BSI, CAA and Project Shephard EASA) and established aviation definitions (in planning legislation and policy), to ascertain additional or revised definitions that are appropriate for the planning of drone/AAM infrastructure proposals coming forward in the planning system. Following review and engagement, establish a ***recommended expanded set of definitions to cover all aspects of the expanded aviation planning sector***. **Consultation/Engagement**: The above would be led by a suitably qualified and experienced Town Planner in the aviation sector, familiar with how these definitions will be applied in practice and potential implications that may arise, and ***developed in collaboration*** with (4) national governments, bodies representing LPAs (e.g., the Planning Officers Societies) and key parties representing the drone/AAM industry and its infrastructure development. **Advocacy/Recommendations**: ***Recommended expanded set of definitions submitted*** to UK government, and devolved administrations/governments

Ref	Theme and Issue	Recommendation
		where relevant for finalisation and inclusion in legislation, regulation, policy and guidance.
2	**Planning policy is evolutionary – the current policy gaps need addressing when national policies and Plans are reviewed, ideally top down.** Planning policy has yet to directly contemplate drones and AAM and its operational and infrastructure development needs, which was evident from our case study review of the current planning policy framework and its applicability. However, this is typical when new development and infrastructure concepts emerge, necessitating the Planning system to assess drone and AAM infrastructure developments against the suite of policies that do exist to assess and manage the social, economic and environmental effects of such development. National, regional and local plan-making processes need to be informed by Evidence on the need for and planning	**Review/Prepare**: Promote new and revised **national aviation planning policies** across the 4 countries in advance of and forming part of representations to the relevant government departments (e.g., DLUHC, DfT). Similarly, promote new and/or revised **strategic and local aviation planning policies,** as and when strategic development strategies and local plans are under review and seeking policy representations, focusing on areas where there is drones and AAM infrastructure development interest: including plan status, when opportunity to propose new or revised policy to address drones and AAM infrastructure development or operations arises – i.e. a live consultation document. Prepare an ***Evidenced-based advocacy or Vision Document*** as a tool to inform and influence planning policy encouraging, assessing and managing drone/AAM infrastructure development, including the market background, public benefits of drone/AAM proposals and how the sector will contribute to wider/strategic planning objectives. **Consultation/Engagement**: The above would be led by a suitable qualified and experienced Town Planner with knowledge of the aviation sector and ***developed in collaboration*** with the drone/AAM industry, LPAs and national planners and other stakeholders. Carry out a ***stakeholder mapping exercise***, to identify key stakeholders at both strategic and site levels who ought to be consulted on such policy development with and why; what this would entail and how it should be carried out, and when it should be carried out. This would then form a roadmap to

Ref	Theme and Issue	Recommendation
	consequences, including benefits, of such development.	carry forward for consultation on local plans (and planning applications). **Advocacy/Recommendations**: Advice to government and LPA bodies providing ***guidance on incorporating policy*** into the planning policy framework (which could be housed in a centralised place). ***Make representations***, on behalf of the drone/AAM sector to Government and LPAs as and when policy and Plan consultations come forward.
3	**Evidence on the need for and planning consequences, including benefits, of such development, to be provided to better inform LPA assessments.** The planning considerations for drones and AAM proposals coming forward will be different to traditional aviation (many sited within an urban area). LPAs will presently assess drone and AAM developments against the same policy framework as traditional 'airport development'(given this is the existing policy position) so there is a risk that LPAs may assess any proposals in a similar manner to traditional aviation and lead to similar outcomes	**Review/Prepare:** Prepare materials that identify the need, the operational and development requirements, and the social, economic and environmental planning effects of them, to ***promote both appropriate policy*** *drafting and the AAM/*drone infrastructure development *proposition*. Any planning application process will require a ***clearly justified and evidenced case for development***, and be appropriate for consultation purposes, i.e., a public facing document. Consideration of wider spatial and societal implications, and the relationship with other local plan policy matters will be required. It will therefore be important that the evolution of drone/AAM infrastructure and activity is cognisant of planning issues from the outset – both on-site, its wider surrounds and the national context. This may comprise an Economics Benefits Assessment and an assessment of the socio-economic footprint of the drones/AAM assets and their operation. This evidence should seek to include: • A positive relationship between new forms of aviation and business and employment growth at a local level;

Ref	Theme and Issue	Recommendation
	(e.g. cap activity to control noise impact by planning conditions) despite their different planning consequences. Evidence needs to be adduced in the policy and application context, to explain the concept, operational and development requirements, and on the very different, social, economic and environmental effects of such development, so that LPA Officers are better informed when making site and development-specific assessments.	• Use national policy in tandem with statutory provisions for aviation to secure the optimum planning framework; • Assessment of environmental effects as part of a balanced approach to sustainability, including socio-economics factors; and • A coalition of stakeholders for future growth and development. The ***Economics Benefits Assessment*** would demonstrate the economic case. This should capture the typical direct and indirect effect employment, spending and other metrics, drawing upon business data to make the connections between drone/AAM operators and local businesses. Supporting this should be consideration of the ***socio-economic footprint of the drones/AAM*** assets and its activities (the contribution the sector could/does make to the national and local economy), to quantify the benefits and impacts of corporate activities and operations. It is an essential part of measuring the value added by an organisation and can be applied in a number of contexts, including corporate social responsibility reporting, communicating wider value to stakeholders (investors, local councils, government). The ***environmental benefits of drones/AAM*** should also form part of making the case, particularly when drawing comparisons with other parts of the aviation sector and other mode of transport, including impacts on air quality, noise, amenity, biodiversity and carbon emissions. **Consultation/Engagement:** The above would be led by a suitable qualified and experienced Town Planner and Economist with knowledge of

Ref	Theme and Issue	Recommendation
		the aviation sector, ***developed in collaboration*** with the drone/AAM industry. **Advocacy/Recommendations:** Outcomes from the above topic-specific research should be ***presented to national government departments and LPA*** bodies at the various stages of promoting drone/AAM infrastructure development and its use – including when influencing policy development and when supporting the planning position at application stage when schemes come forward.
4	**No Planning guidance** As a consequence of no explicit policies for drone and AAM infrastructure developments, there is also currently no planning guidance available to stakeholders (drone and AAM providers, LPAs) on how Planning might consider this new technology and nature of operations. Drone and AAM use, and its infrastructure, will need to consider the legal basis of both town planning and civil aviation regulation, policy and publications. The two parallel regimes result in a complex system which can give rise to uncertainty of application.	**Review/Prepare:** Undertake a ***review of where planning guidance is required***. It is recommended that the above be carried out by a suitable qualified and experienced Town Planner with knowledge of the aviation sector. For cross-boundary matters, a co-ordinated and joined up spatial policy approach between local authorities will be important to avoid inconsistencies in the development of planning policy and its application, as well as approach to decision taking. **Consultation/Engagement**: The above would be led by suitable qualified and experienced Town Planner with knowledge of the aviation sector and ***developed in collaboration*** with the drone/AAM industry. **Advocacy/Recommendations:** Develop a set of recommended measures and ***present to government departments***, advocating that measures form the basis for new/updated planning guidance (e.g., PPG).

Ref	Theme and Issue	Recommendation
		This should include clarification of the responsibilities and **inter-relationship between aviation and land use planning**, as the former controls and manages the use of airspace (regulated by the CAA) and the latter controls the use and development of land 'on the ground', and above and beneath the ground. This should be led by a suitably qualified and experienced Town Planner, with expertise in aviation – developed in collaboration with the CAA (in its capacity as aviation regulator).
5	**Ancillary Use and PD Rights Legal Review** There is uncertainty when the use drones or AAM physically landing / taking off at primary uses (e.g. Class E offices or B8 warehouse) are capable of being treated as 'ancillary' to that primary use, until directly applicable legal precedent is established. Clarity on the circumstances when drones or AAM would benefit from the Airports PD right is desirable.	**Review/Prepare:** **Obtain Legal Opinion** on these two and related regulatory matters from a suitably qualified barrister (KC), with any consequential changes to PD regulations recommended as appropriate, following Briefing of Counsel by a suitably qualified and experience Town Planner. **Consultation/Engagement**: **Submit** an industry agreed legal opinion **to national government departments** to seek and inform planning guidance and, if necessary, to initiate appropriate regulatory changes in England, Scotland, Wales and NI.
6	**Whether (and when) the Aerodrome Safeguarding mechanism applies** The Aerodrome Safeguarding procedure will only be triggered when a planning application comes forward or if Prior Approval is required to realise a PD right. This means drone and AAM use	**Review/Prepare:** Prepare a paper on the ***implications for drones/AAM and the Aerodrome Safeguarding mechanism***. **Consultation/Engagement**: A suitable qualified and experienced Town Planner who is an aviation expert in the aerodrome safeguarding mechanism should lead this paper and ***developed it in collaboration*** with the drone/AAM industry and experts in technical disciplines such as airspace design and bird hazard management.

Ref	Theme and Issue	Recommendation
	could come forward (if permission is not required) without consideration of the implications for other existing aviation uses. Once a drone or AAM facility is in operation, other neighbouring land uses could come forward without consideration of safety implications for the drone or AAM facility, given this type of aviation use is currently not covered by the safeguarding mechanism.	**Advocacy/Recommendations:** Develop a set of recommended measures and ***present to national government departments and the CAA***, advocating that measures form the basis for new/updated planning policy and guidance on Aerodrome Safeguarding.

Source: Lichfields analysis.

10. Conclusions

10.1. The paper is to set out our recommendations for changes to the UK's planning system required for the integration of drones and AAM operations and development, including:

1. establishing a single set of Planning definitions;
2. revise and/or create new planning policies for encouraging, directing and managing such development, ideally top down from national, strategic to local level in Development Plans;
3. evidence on the need for and planning consequences, including benefits, of such infrastructure development, to be prepared and shared to inform policy formulation (above) and site and development-specific LPA assessments;
4. establish planning guidance to assist the interpretation of policy and to add clarity on the inter-relationship between aviation and land use planning;
5. obtain Legal Opinion on the circumstances when drones or AAM would benefit from the Airports PD right and, elsewhere, when capable of being an ancillary use; and
6. address Aerodrome Safeguarding measures.

Appendix 1 Example Planning Process (England)

A1.1 The **typical stages** of the Pre-application and Planning Application process for major development proposals (under the TCPA 1990) are explained below.

Pre-Application

LPA Pre-application advice

A1.2 To present and discuss a proposed development with an LPA Case Officer in the

Development Management team, other Planning and other LPA Officers where relevant (e.g. design, conservation, sustainability, transport), receive verbal and informal written pre-application feedback on the principles of a proposed development and what further measures are required to ensure that the proposal is found to be acceptable in planning terms (a fee will be charged for this engagement and varies depending on local authority and scale of the project).

A1.3 There is no statutory timescale within which a response is required; 2-4 months post pre-application submission is typical and varies according to individual LPA resources. Most major projects have two or three follow-up Pre-app stages undertaken in shorter 1-2 months' timeframes. An initial 'in-principle' or 'concept' pre-application at the outset provides a useful high-level steer of an LPA's informal view on a development proposal, prior to detailed considerations being assessed.

A1.4 A pre-application submission should be supported by an appropriate level of information necessary to positively explain and be sufficient to allow the LPA to provide an informed view.

A1.5 The value of pre-application engagement ultimately aids in the effectiveness of the planning system for all parties by improving the quality of the planning outcomes and the likelihood of approval.

A1.6 Statutory Consultees and Design Review Panel Pre-app

A1.7 To discuss a proposed development with a relevant Officer to seek advice relevant to that body's role (e.g. flood risk or ground contamination, heritage), or present to the local DRP, to receive verbal and informal written pre-application feedback on the relevant considerations pertaining to a proposed development and the further measures sought.

Public / Local Community Pre-application Engagement

A1.8 To engage with the community, to similarly seek local people's views on a site, its use, an emerging development proposal and the assessments of it, seeking views and comments from individual residents and businesses and community groups to

help shape design development and the planning application submission. Such engagement may include an in-person event and/or supported by an informative and interactive webpage.

Council Leadership / Planning Committee / Local Ward Councillor Pre-application

Engagement with elected representatives and members of the Council (i.e. the decision takers) in accordance with LPA protocols on councillor engagement, primarily at the pre-application stage but also close to Committee decision-taking, and often in liaison with the planning officers, to both inform, seek feedback, and establish likely political views on a proposal (NB. This can be informed by a political audit).

EIA Screening & Scoping Opinions

A1.9 Screening is required to determine whether a proposed project falls within the remit of EIA Development and whether it is likely to have a significant effect on the environment and therefore require an EIA. A reply to the request should be issued by the LPA within 21 days.

A1.10 Where it is determined an EIA is required, a scoping opinion request can be submitted to ascertain the extent of issues to be considered in the assessment and what information should be included. The LPA should provide a formal response within 5 weeks.

Planning Performance Agreement

A1.11 The scope, sequencing, and Officer time commitment to both pre-application engagement and Application processing is often best secured by entering into a PPA with an LPA, involving payment of associated fee for LPA Officer time. This is optional and not a requirement but does usually lead to a more responsive LPA planning service and shorter timescale; it has no bearing on the actual planning decision.

Application

Preparation and Submission of Application Drawings and Assessments

A1.12 Preparation of the scheme design plans and drawings, and the application and technical reports to address the relevant planning policy considerations and all pre-application feedback, including the community engagement.

A1.13 Submission of the application to an LPA occurs via the 'Planning Portal' who first decide whether an application is 'valid' (i.e. that all the reports required to determine the application have been submitted and the drawings meet the necessary specification requirements).

A1.14 There are planning application fees due to LPAs. These are set nationally by the Government, mostly calculated based on the site area (for outline applications) or the development floorspace proposed (for detailed applications).

Application Processing

A1.15 Once validated, a major application has a statutory determination period of 13 weeks, or 16 weeks if it is for EIA development. Typically, though, these are the minimum time periods with major applications taking between 4-8 months.

A1.16 The LPA will notify and consult statutory and non-statutory consultees, specialist internal officers (or consultants on its behalf) on the relevant technical matters (i.e. noise / design / transport) and local groups. The LPA will also notify those owners and occupies living or working close to an application site and publicise an Application proposal. Consultees and Interested Persons are requested to make comments within 21 days but can do so at any time up to application determination.

Decision making

A1.17 Planning Officers have the authority to determine applications under delegated powers, however most major applications and/or those which receive a number of public objections will be decided at planning committee, with the application determined by local councillors. The Planning Officer) will make a recommendation to the committee on the application, taking into account planning policies, consultation responses and public representations, providing their assessment of the merits of an application proposal.

Appendix 2 Guide to the Use Classes Order in England

Guide to the Use Classes Order in England (from 1 August 2021)

Following the coming into force of the Town and Country Planning (Use Classes) (Amendment) (England) Regulations 2020, and further amendments to the Town and Country Planning (General Permitted Development) (England) Order 2015, our updated two page guide to the Use Classes Order in England brings together all of the 2020 and 2021 changes.

This is intended as an initial reference guide only. Reference must be made to the Use Classes Order 1987 (as amended) and the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) for limitations (e.g. floorspace maxima), restrictions, conditions and details of any requirements for any application for determination as to whether the prior approval of the local planning authority will be required (which may include the prior approval of building operations). There have been numerous amendments to these Orders and reference to consolidated versions is recommended.

Use Class (see **Comparison with use classes prior to 1 September 2020** overleaf)	Permitted permanent change (Class of Schedule 2, Part 3)
Class B2 General industry Industrial process other than one falling within the uses described in Class E, sub-paragraph (g)	To B8 (PD Class I)
Class B8 Storage and distribution	To C3, subject to prior approval (PD Class P)
Class C1 Hotels Hotels, boarding and guest houses (where no significant element of care is provided)	To a state-funded school falling within Class F.1(a) (PD Class T) (and back to previous lawful use (PD Class U)
Class C2 Residential institutions Residential accommodation and care to people in need of care, residential schools, colleges or training centres, hospitals, nursing homes	To a state-funded school falling within Class F.1(a) (PD Class T) (and back to previous lawful use (PD Class U)
Class C2a Secure residential institutions Prisons, young offenders' institutions, detention centres, secure training centres etc.	To a state-funded school falling within Class F.1(a) (PD Class T) (and back to previous lawful use (PD Class U)
Class C3 Dwelling-houses Uses as a dwellinghouse (whether or not as main residence) by: (a) a single person or single household; (b) a single household of not more than 6 residents where care is provided; or (c) a single household of not more than 6 residents where no care is provided (other than a use within class C4)	To C4 (PD Class L)
Class C4 Houses in multiple occupation Use of a dwellinghouse by 3-6 residents as a 'house in multiple occupation'	To C3 (PD Class L)

Use Class (see **Comparison with use classes prior to 1 September 2020** overleaf)	Permitted permanent change (Class of Schedule 2, Part 3)
Class E Commercial, Business and Service Use, or part use, for all or any of the following purposes: a) Shop other than for the sale of hot food b) Food and drink which is mostly consumed on the premises c) the following kinds of services principally to visiting members of the public i. financial services ii. professional services (other than medical services) iii. any other services which it is appropriate to provide in a commercial, business or service locality d) Indoor sport and recreation (not swimming pools, ice rinks or motorised vehicles or firearms) e) Medical services not attached to the residence of the practitioner f) Non-residential creche, day centre or nursery g) i) office ii) the research and development of products or processes or iii) any industrial process, (which can be carried out in any residential area without causing detriment to the amenity of the area)	To C3, subject to prior approval (PD Class MA) To a mixed use for any purpose within Class E and as up to 2 flats, subject to prior approval (PD Class G) To a mixed use for any purpose within Class E and as up to 2 flats to a use for any purpose Class E (PD Class H) To a state-funded school falling within Class F.1(a) (PD Class T) (and back to previous lawful use (PD Class U)
Class F1 Learning and non-residential institutions Any use not including residential use – a) For the provision of education b) For the display of artwork (not for sale or hire) c) As a museum d) As a public library or public reading room e) As a public hall or exhibition hall f) For, or in connection with, public worship or religious instruction g) As a law court	Temporary changes of use only, see below
Class F2 Local Community Uses a) A shop of not more than 280 square metres, mostly selling essential goods, including food, where there is no other such facility within 1000 metre radius of the shop's location b) Community halls and meeting places c) Outdoor sport or recreation (not involving motorised vehicles or firearms) d) Swimming pool or ice skating rink	No permitted change

LICHFIELDS

Guide to the Use Classes Order in England (from 1 August 2021)

Use Class (see adjacent Comparison with use classes prior to 1 September 2020)	Permitted permanent change (Class of Schedule 2, Part 3)
Sui generis Uses which do not fall within the specified use classes above, including those specifically identified in Article 3(6) of The Town and Country Planning (Use Classes) Order 1987: (a) theatre, (b) amusement arcade or centre, or a funfair, (c) launderette, (d) petrol filling station, (e) sale or display for sale of motor vehicles, (f) taxi business or business for the hire of motor vehicles, (g) as a scrapyard, or a yard for the storage or distribution of minerals or the breaking of motor vehicles (h) for any work registrable under the Alkali, etc. Works Regulation Act 1906, (i) hostel, (j) waste disposal installation, (k) retail warehouse club, (l) nightclub, (m) casino, (n) betting office, (o) pay day loan shop, (p) public house, wine bar, or drinking establishment, (q) drinking establishment with expanded food provision, (r) hot food takeaway, (s) live music performance venue, (t) cinema, (u) concert hall, (v) bingo hall, (x) dance hall	Casino, betting office, pay day loan shop or hot food takeaway to Class E, subject to prior notification (PD Class A) Public house, wine bar, or drinking establishment to drinking establishment with expanded food provision - and vice versa (PD Class AA) Betting office, pay day loan shop to a mixed use for any purpose within Class E and as up to 2 flats, subject to prior approval (PD Class G) Betting office or pay day loan shop to a mixed use betting office or pay day loan shop and as up to 2 flats, subject to prior approval (PD Class G) Mixed use betting office or pay day loan shop and as up to 2 flats, to use for any purpose within Class E (PD Class H) Mixed use as a betting office or pay day loan shop and as up to 2 flats to a use as a betting office or pay day loan shop (PD Class H) Launderette; betting office, pay day loan shop, hot food takeaway or one of these uses in a mixed use with a dwellinghouse to dwellinghouse, subject to prior approval (PD Class M) Amusement centre or casino to C3, subject to prior approval (PD Class N)

Additional changes of use

Agriculture buildings	To C3 (dwelling houses), subject to prior approval (Part 3, Class Q) Flexible changes to B8, CI, E, subject to prior approval: new use is sui generis (Part 3, Class R) To a state-funded school, subject to prior approval (Part 3, Class S)
Temporary change of use	Any building in any Use Class and any land within its curtilage, except use class F.2, can be used as a state-funded school for up to 2 academic years (with limitations and conditions). (Part 4, Class C) Vacant use class CI, C2, C2A, or E land (with all buildings demolished) may be developed to provide temporary school buildings, and the land used as a state-funded school for up to 3 academic years, subject to prior approval, and with limitations and conditions, including that the building must be removed at the end of the third academic year. (Part 4, Class CA) Betting office, pay day loan shop, hot food takeaway or Class E to a flexible use falling within Class E, Class F.I(b) (display of art), Class F.I(c) museum, Class F.I(d) (public library or public reading room); or Class F.I(e) (public hall or exhibition hall), for up to three years continuous (Part 4, Class D) Restaurants and cafes, drinking establishments and drinking establishments with expanded food provision to temporarily provide takeaway food (Part 4, Class DA)

Where planning application made after 5 December, 1988, permitted development rights allow the use to be changed to another use granted permission at the same time for a period of ten years from the date of planning permission, unless consisting of a change of use to a betting office or pay day loan shop: GPDO (2015) Schedule 2 Part 3 Class V.

Comparison with Use Classes prior to 1 September 2020

Use	Use Class up to 31 August 2020	Use Class from 1 September 2020
Shop not more than 280sqm mostly selling essential goods, including food and at least 1km from another similar shop	A1	F.2
Shop	A1	E
Financial and professional services (not medical)	A2	E
Café or restaurant	A3	E
Pub or drinking establishment	A4	Sui generis
Take away	A5	Sui generis
Office other than a use within Class A2	B1a	E
Research and development of products or processes	B1b	E
For any industrial process (which can be carried out in any residential area without causing detriment to the amenity of the area)	B1c	E
Industrial	B2	B2
Storage or distribution	B8	B8

Use	Use Class up to 31 August 2020	Use Class from 1 September 2020
Hotels, boarding and guest houses	C1	C1
Residential institutions	C2	C2
Secure residential institutions	C2a	C2a
Dwelling houses	C3	C3
Use of a dwellinghouse by 3-6 residents as a 'house in multiple occupation'	C4	C4
Clinics, health centres, creches, day nurseries, day centre	D1	E
Schools, non-residential education and training centres, museums, public libraries, public halls, exhibition halls, places of worship, law courts	D1	F.1
Cinemas, concert halls, bingo halls and dance halls	D2	Sui generis
Gymnasiums, indoor recreations not involving motorised vehicles or firearms	D2	E
Hall or meeting place for the principal use of the local community	D2	F.2
Indoor or outdoor swimming baths, skating rinks, and outdoor sports or recreations not involving motorised vehicles or firearms	D2	F.2

Contact us

Birmingham
Jon Kirby
jon.kirby@lichfields.uk
0121 713 1530

Bristol
Andrew Cockett
andrew.cockett@lichfields.uk
0117 403 1980

Cardiff
John Cottrell
john.cottrell@lichfields.uk
029 2043 5886

Edinburgh
Nicola Woodward
nicola.woodward@lichfields.uk
0131 285 0670

Leeds
Justin Gartland
justin.gartland@lichfields.uk
0113 397 1397

London
Matthew Spry
matthew.spry@lichfields.uk
020 7812 3514

Manchester
Simon Pemberton
simon.pemberton@lichfields.uk
0161 837 6130

Newcastle
Jonathan Wallace
jonathan.wallace@lichfields.uk
0191 261 5685

Thames Valley
Daniel Lampard
daniel.lampard@lichfields.uk
0118 334 1920

Appendix 3 Summary of drone and AAM providers and Local Planning Authority comments and questions

Summary of drone and AAM providers survey

A3.1 Achieving the Difference designed and conducted and online survey with 20 innovators in the drone and AAM sector that could be expected to provide infrastructure that might be affected by the planning system. Achieving the Difference then analysed the results. The following summary of results was provided to Lichfields who used it to inform the preparation of Part two, Looking Forward Position.

Respondents

14 of 20 (70%) organisations invited to take part responded.

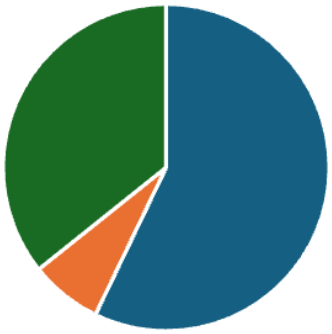
Organisation and position

Neuron Innovations Ltd	COO
Skyfarer	CEO
Skypointe	Director
Altitude Angel	Head of Delivery
SASIG	Policy Director
Inteliports	CEO
PilotAware Ltd	Business Development Director
ARPAS-UK	Chair
General Aviation Awareness Council	Vice - Chairman
Herotech8	Head of Business Development
Ferrovial	Managing Director
Skyports	Chief Regulatory Officer
UAvionix	Business Development Consultant
HexCam Ltd	Director

Primary interest

A fairly even mix of interest between drone and AAM was achieved.

Drone	8
AAM	1
Both	5



Where do they anticipate bringing forward proposals?

England	14
Wales	6
Scotland	6
Northern Ireland	3

...with England being the absolute priority, when more than one was chosen

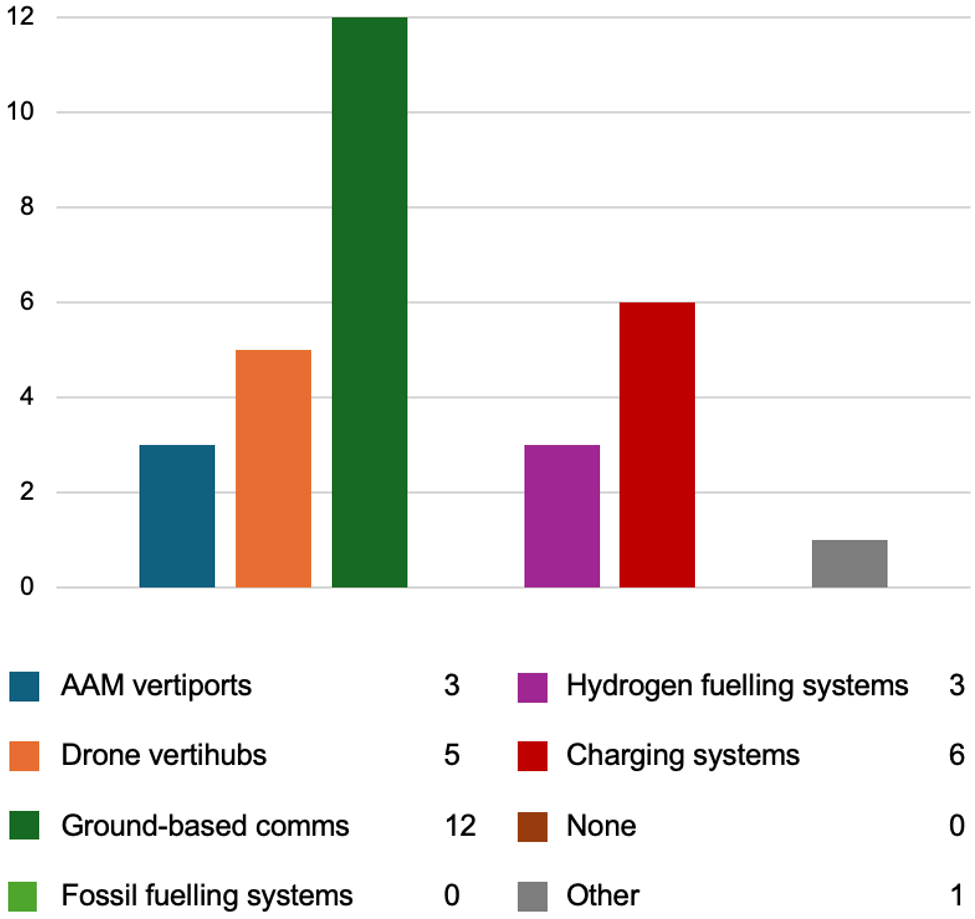
England	11
Wales	0
Scotland	0
Northern Ireland	0

Infrastructure

What types of drone and/or AAM infrastructure have you or do you expect to install?

In our sample, ground-based communications infrastructure was expected to be installed by 86% of respondents even though only half of our respondents are focussed on this product area.

43% expected to be installing charging systems, 36% drone vertihubs and 21% AAM vertiports.

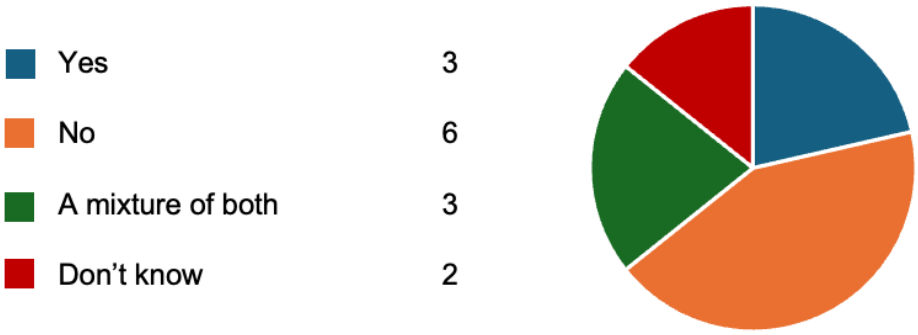


Infrastructure their proposals will be reliant upon.

Electrical power is the most relied upon infrastructure with 10 (71%) of our 14 respondents stating that they require it. This was followed by digital infrastructure (including internet, Satcom and GPS) (43%) and surface access such as roads (29%).

Development

The most popular response to "Do you believe that these will constitute 'development'?" was "No" (43%).



Of the six responding "No", five are providers of ground-based communications or sensing. One is a drone vertiport provider.

Of the three that responded "Yes", one is a drone vertihub provider and two are networks: SASIG (representing councils with airports) and GAAC (representing the GA airfields community).

Of the three that responded "A mixture of both", two are AAM vertiport providers and one a drone vertihub provider.

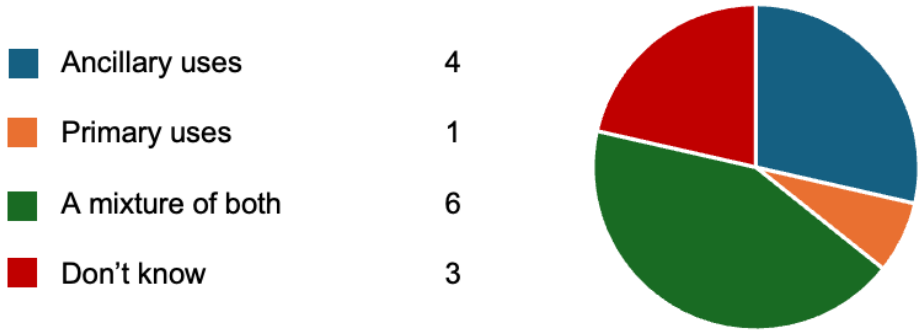
Use Classes

Primary vs Ancillary Use

29% of our respondents feel that their infrastructure will be considered ancillary use. These were all providers of ground-based communications or sensing.

Of the rest, 50% felt it would be primary or a mixture of both. This included all of three of our AAM vertiport providers.

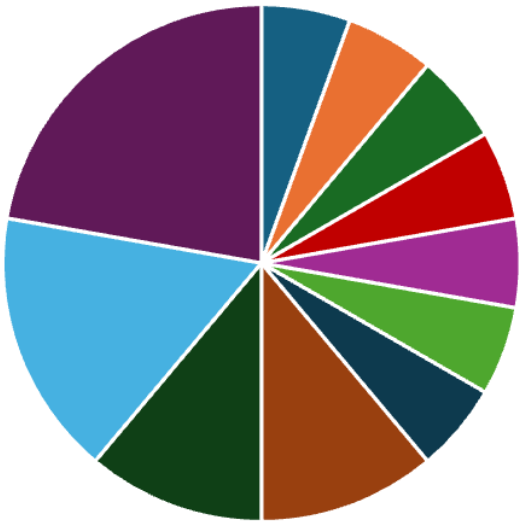
A significant proportion (21%) did not know.



Question 10 appears to have been issued with a typo. I believe it should have said "If you have experience of determination of *use classes*…" but instead said "…use cases…". As such, the responses are not considered of value.

Current Use

Terms used in responses suggest that respondents are not familiar with the Use Classes. Their responses are summarised in the chart with most of the providers of ground-based communications or sensing seeing it as not applicable. Other than this, a clear trend was not identified.



Brownfield	1	Education	1	Airfield	2
Suis Generis	1	Mixed	1	Agriculture	3
Industrial	1	Domestic	1	N/A	4
Unknown	1	Commercial	2		

Change of use

The majority (64%) felt that the use would not be changed. Only one respondent, a drone vertiport provider, felt it would.

Yes	1
No	9
Don't know	4

Those providing ground-based communications or sensing generally saw their equipment as being too small to invoke change of use with one specifically claiming it to be PD. Two respondents mentioned it being compatible with existing use. Beyond this, no common trends were identified. Full responses are available in the spreadsheet of responses provided.

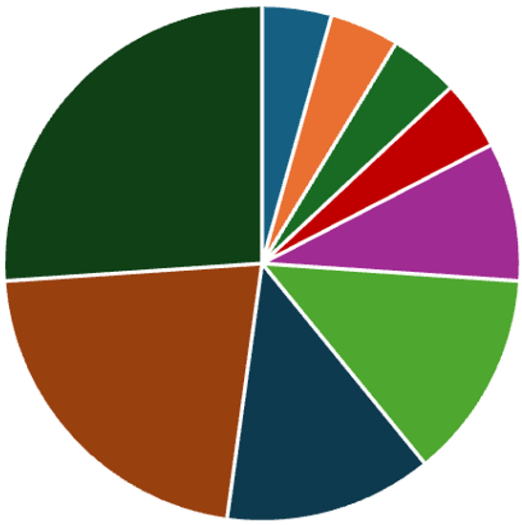
Scale and frequency of operations

Those concerned with AAM gave no specific data on scale or frequency.

Three respondents concerned with drones provided data in the following ranges

- ~12 flights per day
- <7-25kg aircraft
- Negligible infrastructure footprint (for sensors) – facility for 5-10 people
- On site activity: none – quarterly maintenance visit – office for 10 people

Impact



Societal benefits	1	Reduced carbon emissions	3
Privacy concerns	1	Little/Low/No impact	3
Improved air quality	1	Additional jobs	5
Economic benefit	1	Noise	6
Improved safety	2		

Noise was mentioned by six (43%) of respondents but most respondents claimed the impact would be low.

Three (21%) believe that the impact will be none or small.

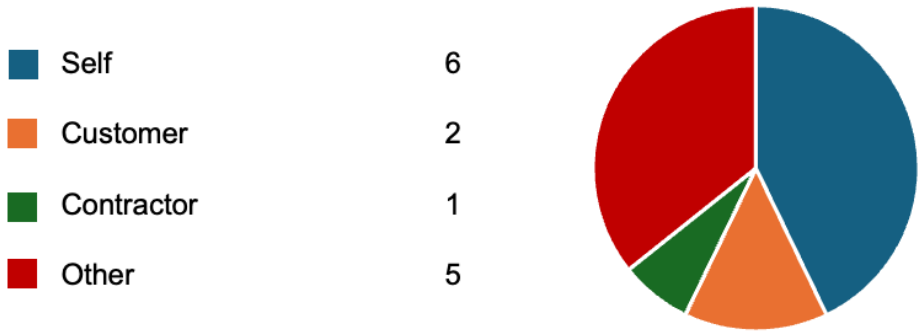
The most significant impacts were seen as

1. Noise slightly negative
2. Additional jobs positive
3. Reduced carbon emissions positive

4. Improved safety positive

There was no clear distinction in responses between those concerned with AAM and drones.

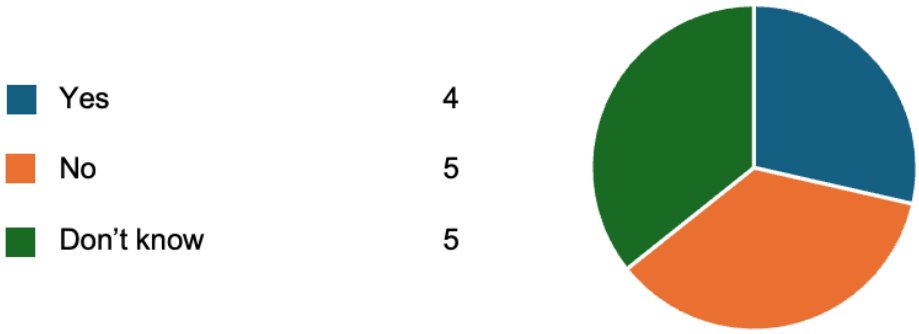
Who is/will be seeking to bring forward the proposals?



43% of respondents are/expect to be the applicant. Of those responding other, two said it would be self and customer with "local organisations" and "consultee" each appearing once. The remaining respondent does not expect to bring forward applications being a provider of ground sensors.

Will another entity then operate the site/activity?

There was a fairly even split between those saying the provider or others would operate the site and those not knowing.



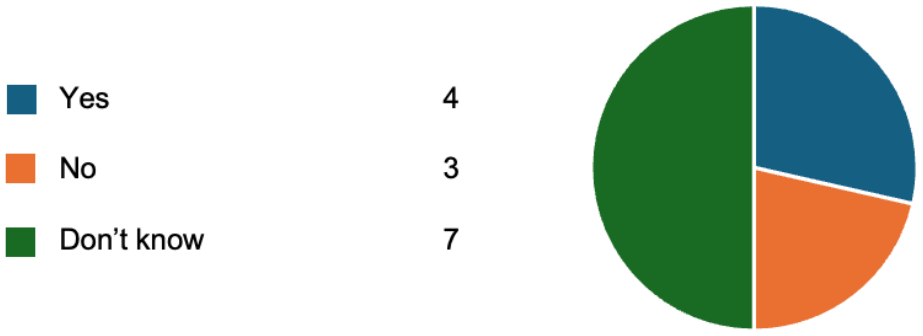
Permitted Development Rights

Four respondents expect their installations to benefit from PD rights. Of these, two are drone vertihub providers stating:

- "…primary use of the site could be industrial/storage or aviation based. Permitted development rights allow from some flexibility, but ultimately the exercise is largely governed by how we are perceived" and
- No development works are required to deploy our infrastructure.

One is a drone/AAM vertiport provider believes PD right will apply at an existing aerodrome. The other is a ground-based communications or sensing provider that believes planning permission is not required.

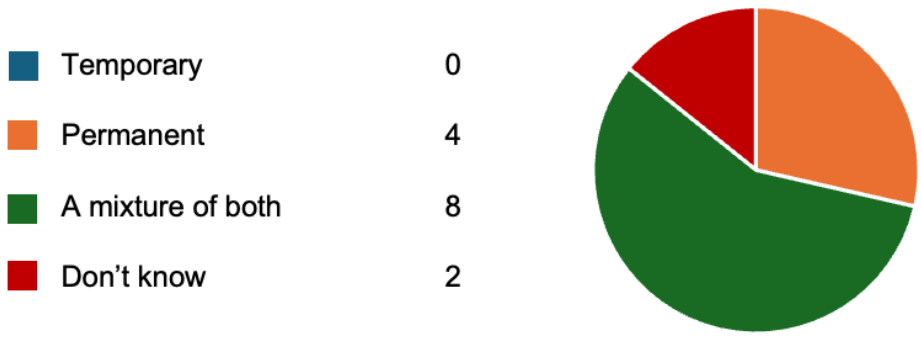
Of those that said they would not, one is concerned with drone vertihubs and the other two are ground-based communications or sensing providers. The latter believing that no application would be necessary.



I will leave it to the experts at Lichfield to decide if this implies some confusion between what constitutes development and PD rights.

Those that responded "Don't know" provided no reason.

Will the proposed development be temporary or permanent?

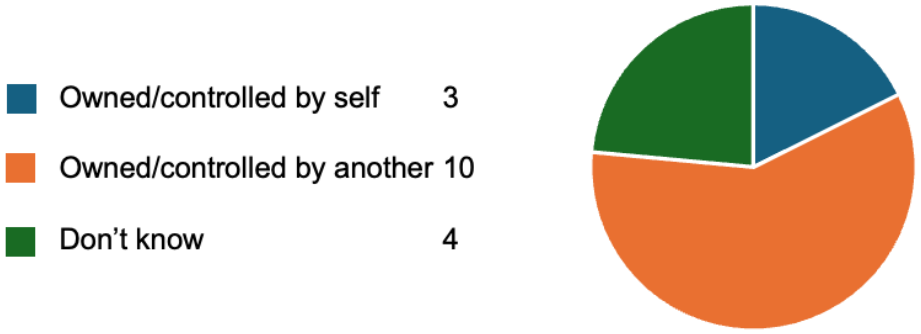


No respondents stated that their development would be temporary.

The majority (57%) felt it would be a mixture of both temporary and permanent.

Will proposals be brought forward on land that you own/control or on land owned/controlled by another party

71% of respondents said land is/will be owned by another party. Three (21%) expect to own it themselves with the balance responding "Don't know".



Planning System Experience

Not related to drone/AAM infrastructure

The majority (57%) said they had no or little experience.

Four (29%) claim experience through to approval.

One AAM vertiport provider has submitted an application via real estate experts and one has had discussions only to date. However, these both relate to vertiports and are not valid answers to the question.

Related to drone/AAM infrastructure

Only the Local Government Association's (LGA) Strategic Aviation Special Interest Group (SASIG) claims to have experience of the whole process.

One drone/AAM vertiport provider has experience pre-application engagement and submitting applications.

12 (85%) respondents claim no or little experience.

If you have any, please share practical experiences or describe situations related to the challenges or successes in developing drone/AAM infrastructure.

One success was shared of trialling drone ports.

One AAM vertiport provider cited "A lack of understanding amongst a range of stakeholders".

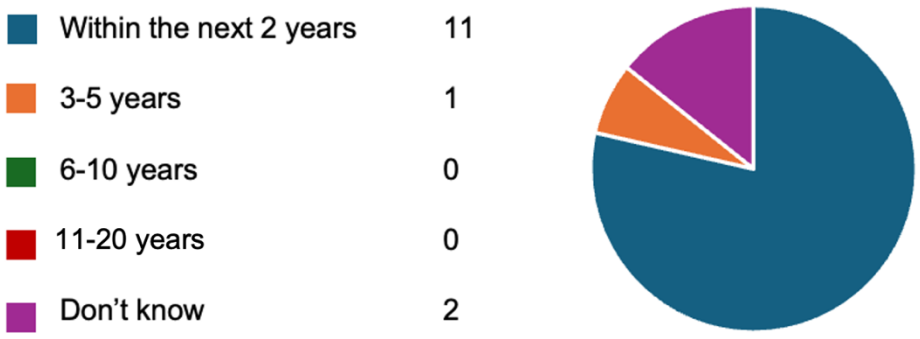
Anticipated Challenges

Those that do not expect to require planning permission did not provide a useful response. There was little consistency between useful responses so all are provided here.

Changing use of land and adding new access ways
Planning isn't the issue but digital resilience and connectivity of the data
Time for responses
Absence of guidance
We foresee confusion in the purpose and use of our drone ports combined with unclear direction from planning officers which will lead to the vetoing of projects not based on the impact to the local built environment but on outdated policy.
Development of proportionate regulation. Communication to all relevant parties Senior buy in and acceptance of change.
All the usual factors that appear in conventional planning situations relating to airfields but also addition concerns over safety, employment, and personal security (spy in the sky etc)
Resistance due to noise, safety, visual pollution, privacy and road congestion
Don't know. Hopefully none.

Required Timescales

Ten of the eleven drone vertihub and ground-based sensor providers and one AAM vertiport provider expect infrastructure to be required within two years.



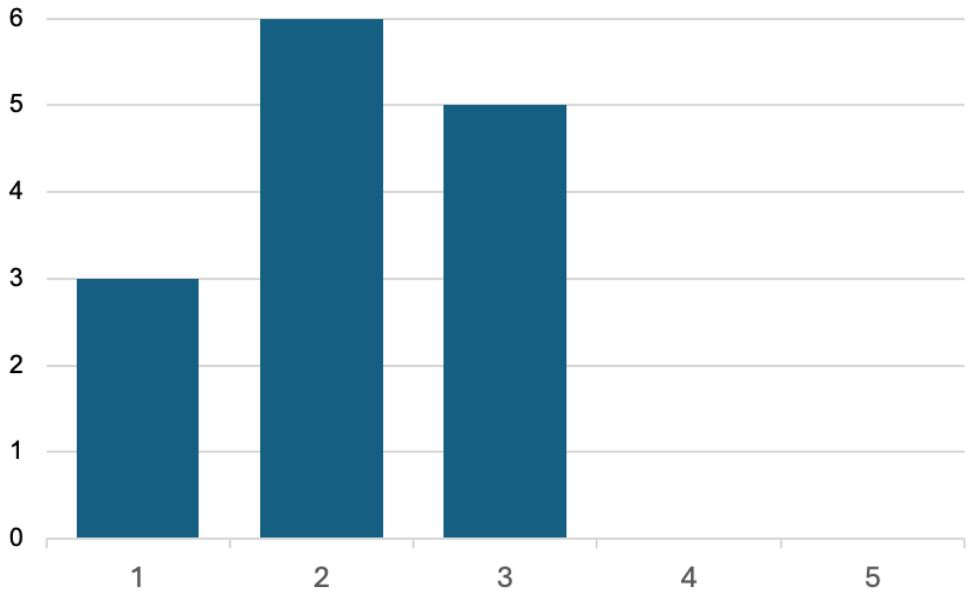
One AAM vertiport provider expects infrastructure to be required in 3-5 years.

The two "Don't know" responses are from one respondent concerned with AAM vertiports and a ground-based sensor provider.

Do you consider the current planning framework, policies and tools fit for purpose in relation to drone/AAM infrastructure?

No respondents answered four or five. Five being "Completely fit for purpose". The majority of responses (11, 78%) were in the range of 2-3 with three (21%) responding "Not at all fit for purpose".

The average response was 2.14 out of 5.



What changes are required to accommodate drone/AAM infrastructure in the current planning framework, policies and tools?

With the exception that many of the comments focus on engagement with stakeholders, there was little consensus, so all responses are provided giving a range of suggestions.

Suitable policy
Factoring in a specific use of land for AAM/drone activity - also factoring in societal benefit from use of technology
How do LAs permit take off and landing at any point in the UK, given that previous planning was airports - but not drones and can take off and land anywhere. From an ARPAS meeting this is a key problem, drone flight can take 10mins, LA planning up to 3-4 weeks.
Better engagement with local council to understand the realities of drone operations to allay privacy and noise fears
Guidance
The UAS sector is too new. With regards to drone missions (non-manned) there needs to be a distinction made. Policy that guides general aviation is not suitable for much smaller craft.
Sorry I have no knowledge of this.
Understanding of the opportunities
Strong legal and planning protection of flying sites to maintain the bases and networks to support the industry. The industry itself needs to speak with one voice, define Safety standards, Operating criteria and standards and evidence a robust approach to hacking and other forms of interference.
I cannot comment as I haven't engaged in the planning process. However, my assumption and after reading the current position report is that planning policy makers should be more actively engaged with the early adopters and infrastructure providers to better understand the near future requirements and nature of such infrastructure. In order to provide policy and regulation that enables this hugely beneficial innovation, whilst safeguarding existing infrastructure and people.

If it were made explicit or a guidance note issued explaining how current frameworks can be or should be interpreted would be beneficial as well as guidance on how to address within existing LPA's and future LPA's
More national guidance required for local planning authorities.
If local government wishes to support drone/AAM developments then they could greatly further the capabilities we are seeking to deliver by making available their buildings and locations as host sites for our communications and sensor equipment, and making it simple to attain permission and undertake installations.
Unknown

Any other comments

No other comments of value were provided.

Summary of LPA comments and questions

A3.2 Two online workshops designed to capture the views of planners were designed and conducted by Achieving the Difference with the support of Lichfields. Much of the conversation concerned questions of clarification and many comments related to airspace regulation which were deemed to be out of scope. Many of the questions and comments demonstrate importance of guidance and education of planners and support the recommendations of this report.

A3.3 Views expressed relating to the planning system were consistent with those of the drone and AAM innovators. Therefore, the LPA comments did not inform the preparation of Part two, Looking Forward Position beyond the comments of the drone and AAM providers.

A3.4 LPA comments and questions that were deemed to be in scope are captured by Achieving the Difference here. The comments made reflect the views/opinions of workshop attendees only. Quotes are shown in parenthesis.

- It was suggested that relevant topics are identified where this can be included in the National Planning Policy Framework or local plans.
- Currently, infrastructure delivery plans consider roads or railways and railway stations. The equivalent of this will be discussing drone and AAM hubs and flight corridors and how they integrate with existing transport infrastructure.
- Considering the different elements is like a jigsaw puzzle. Getting everyone to speak to each other will be key. LPAs are essential in this, as is the CAA, especially in cross-boundary projects.
- "..it's a chicken and the egg dilemma… because planning guidance usually responds to some kind of challenges and considerations. Most of the

challenges and considerations in this case are…" in the future… "so things either need to be simulated or from real-life case studies."

- "The perception of the public will play an important role." "A project that makes sense from an economic perspective, makes sense from an environmental perspective and is completely compliant with all the policies and design codes…" could be thwarted if the local population does not want it.
- Who is responsible for "…ensuring that development is carried out in accordance with planning conditions and then who is responsible for enforcement? Is it planners or is it people with a specialist aviation knowledge?"
- To get all this delivered, "…it's going to have to be central government down closely in conjunction with the LPAs. And my feeling is it will probably start rather than from the city's out. It will be starting from the remote, most remote places like Cornwall where they'll test bed it and that's already been review"
- The lead should probably come from DLUHC.
- Participants expressed enthusiasm for the Planning Guidance Report being published.
- Relating to Permitted Development," … how have existing trials been consented, if they have? e.g. TDA in transport between hospitals. Did land use apply too?"
- A "…concern is the potential push back on such proposals and, in particular, regarding safety, security and privacy."
- "…relating to permitted development rights, there is a sort of permitted development rights relating to upwards extensions for example, and some of those are not considered to be PD if within, I think, 3km of an urban aerodrome. So again, any anticipated push back from the development industry at all?"

Appendix 4 Abbreviations

AAM - Advanced Air Mobility

AONB - Area of Outstanding Natural Beauty

APF - Aviation Policy Framework

BSI - British Standards Institution

BVLOS - Beyond Visual Line of Site

CAA - Civil Aviation Authority

CAP - Civil Aviation Publication

CLEUD/CLOPUD - Certificate of lawfulness of proposed use or development

COMAH - Control of major-accident hazards competent authority

DfT - Department for Transport

EASA - European Union Aviation Safety Agency EIA - Environmental Impact Assessment eVTOL - Electric Vertical Take-off and Landing

FFC - Future Flight Challenge

GPDO - General Permitted Development Order

ICAO - International Civil Aviation Organization

ITA - Integrated Transport Authorities

LPA - Local Planning Authorities

MAA - Midlands Aerospace Alliance

NPPF - National Planning Policy Framework

PD - Permitted Development

PPG - Planning Policy Guidance

PTE - Passenger Transport Executives

RAM - Regional Air Mobility

SATE - Sustainable Aviation Test Environment

SOLDC - Strategic Outer London Development Centre

SoS - Secretary of State

TCPA - Town and Country Planning Act

UAS - Uncrewed Aircraft System

UKRI - UK Research and Innovation

UTM - Uncrewed Aircraft Systems Traffic Management

VTOL - Vertical Take-off and Landing

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Delivered by Innovate UK and ESRC

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The government's vision is for the UK to be a global hub for innovation by 2035.

Our mission in achieving that is to help companies to grow through their development and commercialisation of new products, processes and services, supported by an outstanding innovation ecosystem that is agile, inclusive and easy to navigate.

Contact us

Telephone: 01793 361000

Email: support@iuk.uki.org

Website: ukri.org/council/innovate-uk

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