

## **GREATER CAMBRIDGE LOCAL PLAN**

### **DUXFORD AVTECH - CALL FOR SITES**

### **GONVILLE AND CAIUS COLLEGE (UNIVERSITY OF CAMBRIDGE)**

### **DUXFORD AVTECH “SUPPLEMENTARY REPORT 2”**

#### **Background**

In March 2019 Gonville & Caius College ('Caius') responded to the Joint Councils "Call for Sites" for the new Greater Cambridge Local Plan.

Caius proposed its land at Duxford (east of the M11) for a strategically important sustainable live and work mixed use development. Caius masterplan proposals involved circa 110,000 sqm of office and hangar space for aviation businesses, to meet the growing needs of the General Aviation and urban air mobility sectors specialising in sustainable forms of aviation ('Duxford Avtech'), and an extension to Duxford Village.

Duxford AvTech is planned to be a cluster of companies in the General Aviation and urban/advanced air mobility sectors that specialise in sustainable and carbon friendly forms of affordable aviation: an aviation centre of excellence. The aim is to support UK General Aviation as a leading player in the global aviation market to bring forward new concepts by sharing ideas, technology and skills.

The Duxford Village extension comprises 800 new homes with associated social infrastructure, a green network linking Whittlesford Parkway with IWM Duxford, with a new 40 ha country park. A number of the homes will be made available to people working at Duxford Avtech.

In November 2019 Caius submitted a "Supplementary" report to the Call for Sites exercise. This set out additional evidence for Duxford AvTech and reported on feedback from IWM Duxford, industry players, academia and Government. All were and remain enthusiastic supporters of the Duxford AvTech concept. No major changes were made to the indicative masterplan. The supplementary report also set out information on overall delivery.

In February 2020 Caius responded to the Joint Councils "First Conversation - Issues and Options".

We are now submitting this further “Supplementary 2” report to update the Joint Councils on our proposals and to propose some changes to our original Call for Sites submission. This report covers:

- changing circumstances since we submitted our Call for Sites proposal
- aviation centre of excellence: strong industry, Government and education support
- Caius and IWM’s new Duxford AvTech proposals
- proposed planning strategy
- benefits of amended call for sites strategy

## **Changing circumstances**

Caius and IWM Duxford have enjoyed a close working relationship for many years. IWM Duxford is located on what was originally Caius land, land immediately west and south of IWM Duxford is owned by Caius, and the IWM flight paths are over Caius land both west and east of the M11.

Two fundamental changes have taken place since the Caius original Call for Sites Duxford proposals. These have led to Caius and IWM Duxford to now work jointly on a two phase approach for Duxford AvTech.

1. As set out in more detail below, aviation industry response to our proposed aviation centre of excellence (Duxford Avtech) has been encouraging and our first business has relocated to IWM Duxford (Faradair <https://www.faradair.com/>). In view of the adoption timescale for the new Greater Cambridge Local Plan, we are exploring ways to bring forward the Duxford Avtech project to meet industry demand, as there is commercial urgency for UK to support businesses involved in general aviation and urban/advanced air mobility.

We are therefore exploring ways to bring forward development now on IWM land (currently consented for a Large Objects Store and Conservation workshop) and adjoining College land (the “Cabbage Patch” site). We still propose to develop College land east of the M11 for Duxford Avtech in order to achieve sufficient scale for the overall project, along with linked homes to expand Duxford Village, as set out in our ‘Call for Sites’ submission.

2. The Covid 19 Pandemic has had a major adverse impact on IWM Duxford’s traditional business model – based as it is on heritage/conservation and its exhibitions and heritage flying events. IWM Duxford has reviewed its business model with its sponsoring department (DCMS) and has concluded that in order to survive and have a sustainable economic future, it needs to increase commercial income

streams at IWM Duxford, where occupiers are complementary to the core activity as an air museum of international renown.

There is strong interest from aviation businesses to take space at IWM Duxford and a need for IWM Duxford to increase and secure its income streams so that it can implement its masterplan proposals, including construction of the Large Objects Store/Conservation workshop which has financially not been possible to date.

### **Aviation Centre of Excellence: industry, Government and education support**

Our focus has been **urban air mobility** (UAM), which refers to urban transportation systems that move people and goods by air. These transportation systems have developed in response to traffic congestion.

Air vehicles are under development for UAM: for small passenger loads on a 'taxi' model or personal use, together with movement of goods. In the concept phase some urban air mobility aircraft have Vertical Take Off and Land (VTOL) capabilities and are designed to take off and land vertically in a relatively small area to avoid the need of a runway. Some use a very short take-off and landing approach. A key aspect is low carbon: most designs are electric or hybrid. Some are based on an aeroplane format and some use multiple rotors which minimizes noise (due to rotational speed) while provides multiple system failure backup.

The sector is now evolving into **advanced air mobility** (AAM), which is focused on flight which minimises carbon and noise pollution: which is easier to achieve using aeroplanes rather than helicopters. It also covers aviation and aerial technology sectors which harness systems and materials improvements for a wide range of industries.

We are in contact with UK business who are leading the field including:

- **Faradair:** 18 seat hybrid-electric commuter aircraft - (Bio Electric Hybrid Aircraft BEHA). Faradair have been courted by foreign investors, but are keen to stay in the UK: they have recently relocated to offices at IWM Duxford and require R&D space (2,000 sq m) and in due course manufacturing facilities' (20,000 sq m)
- **Flimax** – developing an electric 4-6 seat aircraft – early stage design
- **Ocean Aircraft:** Ocean 12 and Ocean 18 commercial seaplanes
- **EcoLiner:** 9 and 19 seat zero emissions commuter aircraft

- **VRCO:** a start-up in UAM sector
- **Samad Aerospace :** developing hybrid electric VTOL business aircraft: looking for permanent base
- **AMRD:** developing the “Silene” UAM vehicle
- **Neoptera** – another UAM, developing a highly innovative concept.
- **Vertical Aerospace:** UAM start-up; looking for permanent base
- **Hybrid Air Vehicles:** Developing 21st century airships; looking for permanent base
- **Autonomous Flight** Y6S multicopter: unmanned vehicle; looking for permanent base

There is much work going into other general aviation industries which will also ease congestion on the ground, reduce carbon footprint and improve efficiency. These include:

- Artificial Intelligence (AI) for unmanned flying vehicles (e.g. **Blue Bear Systems**)
- Drones for security (e.g. **Blighter Systems**)
- Navigation and communications (e.g. **Inmarsat**)

Work is well advanced in Cambridge on how to move goods by drone, led by **Amazon** and supported by the University. Drone technology can be used for many purposes and one Cambridge company has developed a product to accurately predict fruit crops from drone photos (**Outfield Technologies**) who are interesting in locating at Duxford.

We also anticipate attracting support industries to Duxford and examples include:

- Specialist Materials (e.g. **Hexcel** and **Huntsman**, based at Duxford)
- Training (e.g. **VA Airline Training**, based at Cambridge Airport, which is to close)
- Engineering, painting, IT and admin support
- Staff amenities i.e. shops, places to eat, gym etc

We have received strong support and encouragement from Government including:

- **All Party Parliamentary Group on General Aviation**
- **Department of Transport**
- **BEIS**
- **Civil Aviation Authority**
- **General Aviation Awareness Council**

We are in discussions for linked education opportunities with the University of Cambridge (Department of Engineering) and other Higher and Further Education organisations.

## **Caius and IWM's new Duxford AvTech proposals**

Caius and IWM Duxford combined vision for Duxford AvTech at Duxford comprises the following two phase approach.

**Duxford AvTech1 (West)** – IWM Duxford and Caius have agreed to jointly promote the IWM Land Warfare Hall site (already consented for a Large Objects Store and Conservation workshop for IWM use), with the College's adjoining "Cabbage Patch" site. This provides a total air side area of over 11 ha. As demonstrated by Faradair (and advanced discussions with other potential occupiers), runway access is important for some Avtech businesses.

This combined area will be comprehensively planned but developed in stages. Stage 1 will be the Land Warfare Hall site to include a combination of the IWM's Large Objects Store needs and as well as commercial aviation space. Stage 2 will be the "Cabbage Patch". Initial masterplanning suggests this combined Duxford AvTech 1 area could accommodate in total circa 40,000 sqm (i.e. including the 10,000 sqm already consented on the Land Warfare Hall site).

This project will be delivered by a planned joint venture between Caius and IWM, possibly in partnership with an experienced development company.

**Duxford AvTech 2 (East)** – building on the critical mass established at AvTech 1, Caius will promote the development of circa 70,000 sqm of Avtech innovation space on its land east of the M11 and south of the A505. This is a reduction of the 110,000 sqm set out in the original Call for Sites submission, to take account of the complementary space at AvTech1 space.

This will include the original "Call for Sites" proposal for sustainable extension of Duxford Village for 800 new homes, associated social infrastructure, green links from Whittlesford Parkway to IWM Duxford and a new 40 ha Country park.

In summary the overall Duxford Avtech proposals still envisage circa 110,000 sq m in aggregate, but this is now spread across both Avtech 1 ( 40,000 sq m) and Avtech 2 ( 70,000 sq m) sites.

A new indicative masterplan is attached which outlines the AvTech 1 and Avtech 2 proposals.

## Proposed planning strategy

The adopted South Cambridge Local Plan (2018) at Policy E/7 (and accompanying site allocation 54) treats IWM as “...*special case as a museum which is a major tourist / visitor attraction, educational and commercial facility*”.

The adopted Policy and site allocation therefore acknowledge commercial uses can be part of IWM Duxford's offer, alongside its core heritage attractions.

Planning permission was granted in 2018 on the IWM Land Warfare Hall site for the construction of a Large Objects Store (LOS) and conservation workshop – providing circa 10,000 sq m. This requirement flows from IWM Duxford's original 2016 masterplan, and still forms a key requirement, although on review IWM Duxford has concluded that the requirement is now likely to be smaller.

Local Plan Policy E/7 IWM Duxford also set out that “...*any proposals involving the use of the estate and its facilities for museum uses or non-museum uses must be complementary to the character, vitality and sustainability of the site as a branch of the Imperial War Museum.*”

The need for complementary uses is a fundamental consideration for IWM Duxford. Whilst IWM Duxford requires additional commercial income streams, it is clear these cannot compromise IWM Duxford's remit and core activity as a branch of the Imperial War Museum.

In that context IWM Duxford will carefully assess each potential commercial occupier's needs and potential impacts to ensure they do not compromise IWM Duxford's core activity – most particularly in terms of museum and flying activity. Where planning permission is required for changes to the IWM Duxford estate, applications will set out the complementary nature of the uses proposed and details in respect of any increases in flying noise or traffic generation.

The IWM masterplan envisages development at the east and west ends of the airfield, which has been accepted by Historic England in the context of the overall site status as a Conservation Area. Caius and IWM Duxford recognise that the Cabbage Patch land is not covered by the IWM Duxford Local Plan site allocation. In this context the following planning strategy is proposed:

- It is likely a new planning permission will be needed for the Land Warfare Hall site for the LOS/Conservation workshop and Duxford Avtech 1 proposals;

- IWM Duxford and Caius will commence Pre- Application meetings with the joint councils planning team in late 2020/early 2021 for a new detailed application for the Land Warfare Hall site at IWM Duxford. This will include a smaller Large Objects Store and Conservation workshop space, alongside new Duxford AvTech commercial uses. The total floor areas currently envisaged would be in the same order as the consented scheme, i.e. 10,000 sqm. As previously envisaged the new building will be phased: the first phase is likely to be of the order of 5,000 sq m and will not involve demolition of the Land Warfare building;
- The new detailed application for the Land Warfare Hall site would be accompanied with a masterplan including the adjoining “Cabbage Patch” site to demonstrate the comprehensive nature of the Duxford AvTech 1 proposals. The masterplan would be for information and not determination setting out key parameters for the LPA’s comment;
- IWM Duxford and Caius will commence pre- application meetings with the joint councils planning team alongside or shortly after the Land Warfare Hall site pre - apps, for an outline planning application for the Cabbage Patch site for Duxford AvTech uses. This would be based on the above masterplan and comments received by the LPA;
- In respect of Duxford Avtech 2, Caius remains committed to promoting this (and the extension of Duxford Village for 800 new homes) through the emerging Greater Cambridge Local Plan;
- Given the complementary and linked nature of Duxford Avtech 1 and Duxford Avtech 2, Caius and IWM Duxford consider that whilst it is intended to make planning applications for Avtech 1 before adoption of the new Greater Cambridge Local Plan, there is merit in promoting Duxford AvTech 1 as part of the overall Duxford Avtech site allocation through the Greater Cambridge Local Plan - in this way the combined benefit and impacts can be seen as the Local Plan emerges.

## **Benefits of amended Call for Sites submission**

The amended Call for Sites submission (Duxford AvTech 1 and Duxford Avtech 2) has a number of benefits over the original proposal. These include:

- Subject to planning permission the ability to accommodate the first major Duxford AvTech R&D and manufacturing facilities (Faradair) at IWM Duxford in new accommodation by 2022/2023;

- Delivery of the IWM LOS/conservation workshop space by 2022/2023 – funded through a planned JV between Caius and IWM Duxford and income streams from commercial occupiers;
- The new Land Warfare Hall site application would in many respects be similar to the consented LOS scheme for the site in terms of landscape, heritage, trees, ecology, impact on green belt, neighbours, flood, drainage;
- A new detailed application would demonstrate the complementary nature of the IWM and commercial uses, as well as any impacts on flying noise and traffic generation;
- Subject to planning permission, further stages of Duxford Avtech development could be delivered on the Cabbage Patch site by Caius and IWM Duxford by say 2023/2024 – i.e. significantly before the adoption of the new Greater Cambridge Local Plan, which is set out in the LDS (July 2020) for examination in either Autumn 2023 or Spring 2024 and adoption thereafter;
- By “fast forwarding” Duxford Avtech 1 to 2022/2023 start on site, this will in turn help create the Cambridge/Duxford Avtech brand and build critical mass in a fast growing international sector – rather than having to wait post adoption of the new Joint Local Plan;
- On this basis Duxford Avtech 1 (Land Warfare Hall site and Cabbage Patch) could be up and running a number of years before Duxford Avtech 2 (assuming Duxford Avtech 2 is an allocated site in, and an application is determined post adoption of the new Greater Cambridge Local Plan);
- An earlier start at AvTech 1 would not only stimulate demand for Avtech 2, but also help “kick start” the Duxford Village extension proposals which would provide housing for a number of Avtech workers, affordable housing, and additional social infrastructure;
- By “splitting” Duxford Avtech (Duxford AvTech 1 – circa 40,000 sqm and Duxford Avtech 2 – circa 70,000 sqm) on the A505 west and east of the M11, traffic impacts will be “levelled out”;
- Density of development on Duxford Avtech 2 along the A505 will be reduced, further enhancing green corridors, biodiversity, landscape and visual lines to Duxford Village;
- Caius and IWM Duxford will enter into a joint venture agreement and in turn select a development partner(s) that would provide a long term economic sustainable future for IWM at Duxford – delivering new jobs, added GVA, carbon reduction/climate change friendly business sectors – in accordance with national and emerging local plans; and
- Caius can provide initial development finance that IWM lacks – and which has inhibited the Large Objects store/conversation workshop from being built to date.



# New Indicative Masterplan

