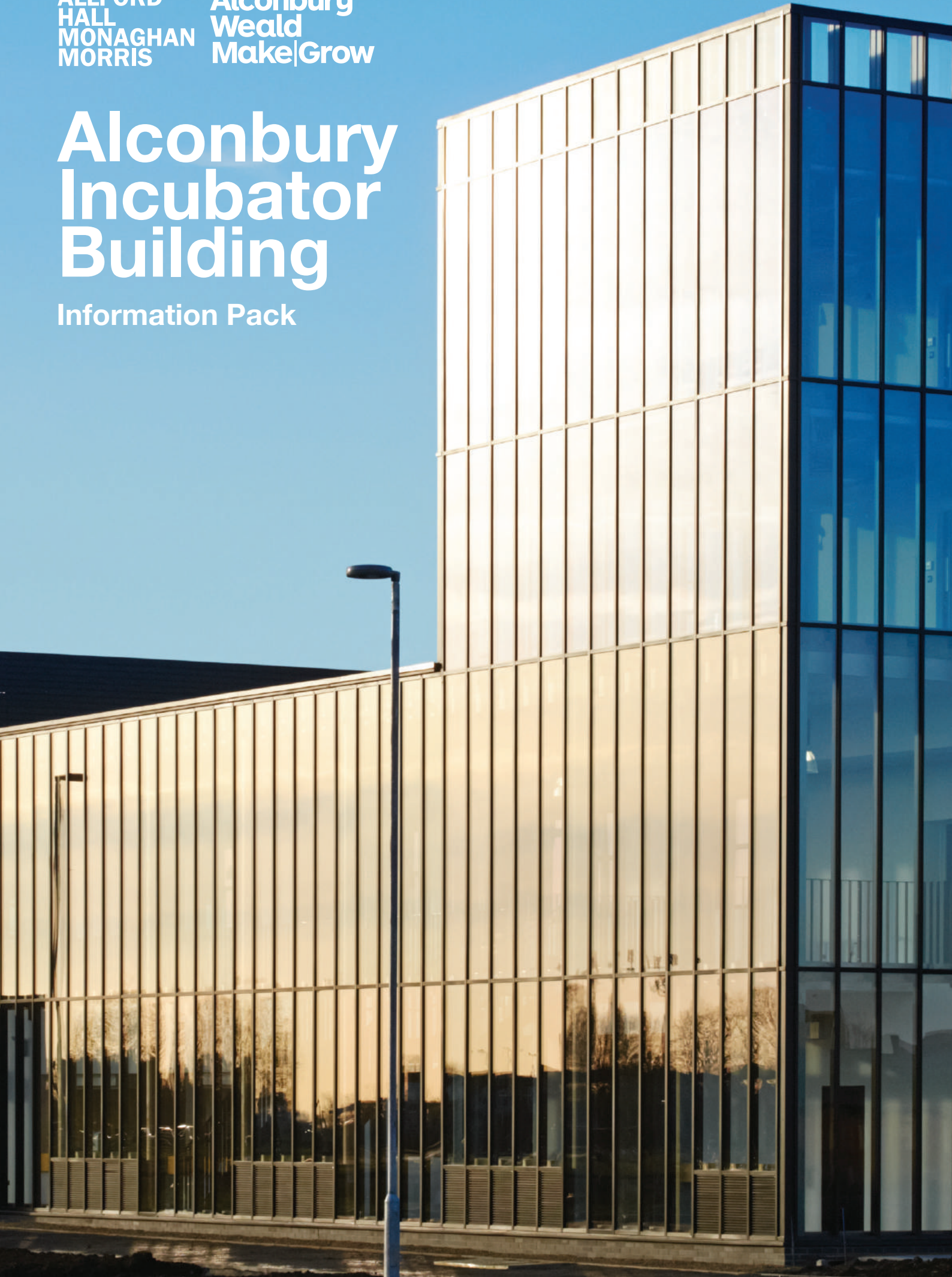


ALLFORD
HALL
MONAGHAN
MORRIS

Alconbury
Weald
Make|Grow

Alconbury Incubator Building

Information Pack



THE ALCONBURY INCUBATOR BUILDING

The Alconbury Incubator anchors a new Enterprise Campus to begin the development of a new community at Alconbury Weald near Huntingdon, 60 miles north of London.

A narrow and transparent two-storey volume runs parallel to the ex-airfield site's new boulevard and kicks up at its north-east corner to enclose a four-storey tower that both announces the building and offers a panoramic view across the emerging masterplan. Behind it sits a two-storey black box, larch-clad and punctuated by a grid of large openings that draw natural light in to the flexible working spaces contained within.

The work spaces, ranging from 380 to 3800 square feet, will accommodate local businesses for activities ranging from research development to production. Auxiliary spaces including a café, a marketing suite, meeting rooms, and break-out balconies are dotted around the glazed gallery to animate the building's public face and create opportunities for social exchange.

Sector	Office
Location	Huntingdon, Cambridgeshire
Address	Alconbury Enterprise Campus, Alconbury Weald, Huntingdon, Cambridgeshire, PE28 4WX
Client	Urban & Civic
Value	£2.5m
Start	November 2011
Completion	December 2013
Contract	JCT DB2011

Gross Internal	15,242 ft
Net Internal	9,139 ft

KEY DATES

November 2011:	AHMM appointed on Masterplan / Gatehouse / Incubator
August 2012:	Planning submitted
October 2012:	Planning granted
November 2012:	Out to tender
March 2013:	Start on site
December 2013:	Practical Completion

AHMM TEAM:

Simon Allford, Philip Turner, Jon Brent, Barry Cho, Ian Pollard, Jonathan Hall, Paul Monaghan, and Peter Morris





SITE: RAF ALCONBURY





THE HISTORY OF THE SITE

Located around 5 miles north of the market town of Huntingdon, RAF Alconbury was an occupied airbase from 1938 to 1995 under the control of the British and later, the American Air Forces. The base was used continuously for 57 years and planes provided support for the Second World War, the Cold War, and the Gulf War.

Numerous planes which flew from Alconbury, including Bristol Blenheims, Vickers Wellingtons, B-24 Liberator Bombers and the notorious Lockheed U-2 Spy planes.

The site was effectively closed by the Ministry of Defence in 1995 and the infrastructure material remains on the site; its hangars, control centres, bunkers and huts, reflect a complex and fascinating history.

Some of these are now designated heritage assets:

- Grade II Listed Watch Office + Operations Room
- 13 no Grade II* Listed U-2 Hardened Aircraft Shelter
- Grade II* Listed Avionics Building



Jet testing tunnel



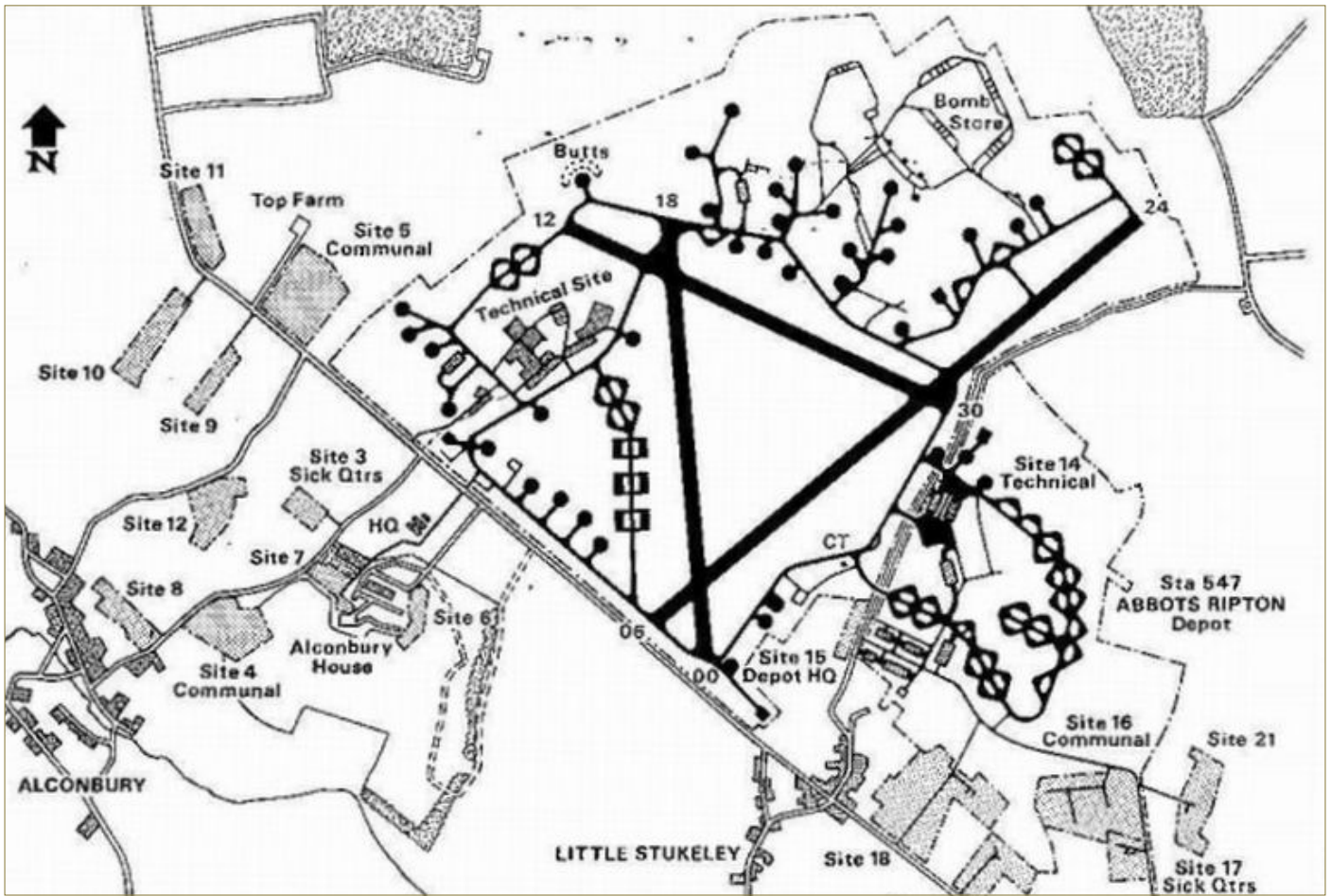
Watch tower



Grade II Listed Watch Office + Operations Room



Bomb dump shelters



World War II map of RAF Alconbury



B-24 Tornado Bomber



Vickers Wellington



B-24 Liberator



U-2 Spy Plane

THE SITE TODAY

Since the site's closure in 1995, it has largely fallen under temporary uses, and is currently occupied by a number of short term commercial tenants.

The site was purchased by Urban & Civic in 2009, but a small portion remains active, under the occupation of the United States Air Force, though without the use of the runway.

Urban & Civic are currently in the process of developing a masterplan for a mixed use site, with the remit of creating 8000 new jobs within a newly designated Enterprise Zone and 5000 new homes. U&C have inherited a number of short term commercial tenants, mostly storage and distribution companies.



Shipping containers on the runway



Storage of used portercabins



Temporary holding of newly imported vehicles



Recycling of plastics and pallets



View across the military landscape



Aerial view of the runway (photograph by Jason Hawkes)

THE FUTURE OF THE SITE

While the 1,400 acre is currently used for storage and logistics, Urban & Civic have a very different vision for its future - a unique and inspiring place to live, work and play:

- Bring skilled jobs and opportunities to the local area;
- Provide a range of homes set within attractive landscapes forming part of an active community;
- Ensure there is green open space for people and nature in keeping with the local area;
- Provide strong and fast connections with Huntingdon, Peterborough, Cambridge, London and beyond through enhanced road, rail, bus and cycle network..

Alconbury Enterprise Campus was granted Enterprise Zone status by the Government in 2011 and is supported by the Local Enterprise Partnership whose role it is to help drive economic growth.

The Campus offers a host of benefits:

- A 100% business rate discount, worth up to £275,000 over a five-year period, for businesses that move into an Enterprise Zone during the course of this Parliament.
- For at least 25 years, all business rates growth within the zone will be shared by the local authorities in the LEP area to support their economic priorities.
- Government and local authority help to develop radically simplified planning approaches in the zone, and Government support to deliver superfast broadband across the zone.

Proposed masterplan

0km 500m





INITIAL STUDIES: MASTERPLANNING + GATEHOUSES



Grade II* Listed Hardened Aircraft Shelter: Open door (photograph by Hufton & Crow)



GATEHOUSE DESIGN

A new gatehouse at each of the 3 site entrances was needed to secure and define entrances to site.

Construction at the edge of the site announces the emerging development and the function of the Gatehouses doubles as a welcoming face of a new Alconbury.

Taking inspiration from stacked volumes from the shipping containers stored on the runway, the Gatehouses varied in height, acting as wayfinders on the flat site.

The final design comprised two unitised, prefabricated porterkabins overlaid with black painted Scottish Larch. Large windows puncture the ground floor to allow vistas in both directions along the road.

A lantern tops the vertical stack, which illuminates the masterplan's strapline / motto; **Make | Grow**



Inspiration: on site shipping containers



Early proposal: Corten-clad main gatehouse



Early proposal: Corten-clad HCV gatehouse



Developing proposal: Timber clad HCV gatehouse



Developing proposal: Timber clad HCV gatehouse at night

GATEHOUSE INSTALLATION



Mobile crane onsite



Prefab modules delivered by lorry



Corner anchors secured to module



Remove module from lorry



Locate onto capped-off services



Second + third modules arrive by lorry



Repeat lifting operations



Weatherproof between modules



Clad in timber weatherboarding



Fitout and install lightbox glazing + signage



Make Grow

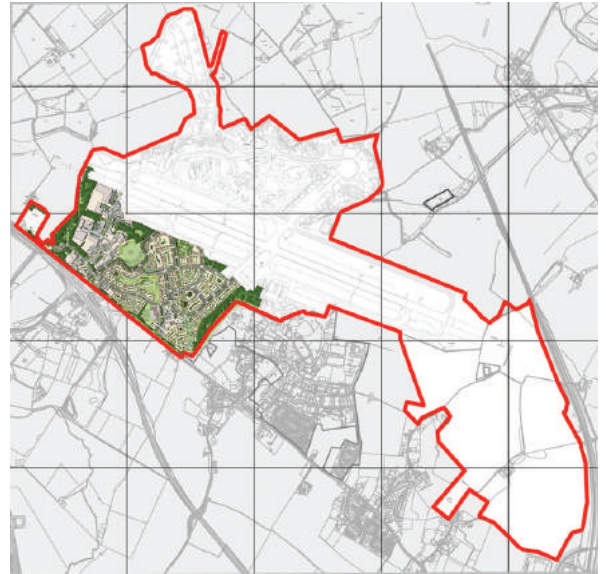
STOP

MASTERPLANNING

The wider masterplan for Alconbury Weald, by David Lock Associates, contained an outline design for the ambition of the clients.

The Phase 1 masterplan, located by the Ermine Street entrance of the site, is the focus of Urban & Civic's initial development at Alconbury.

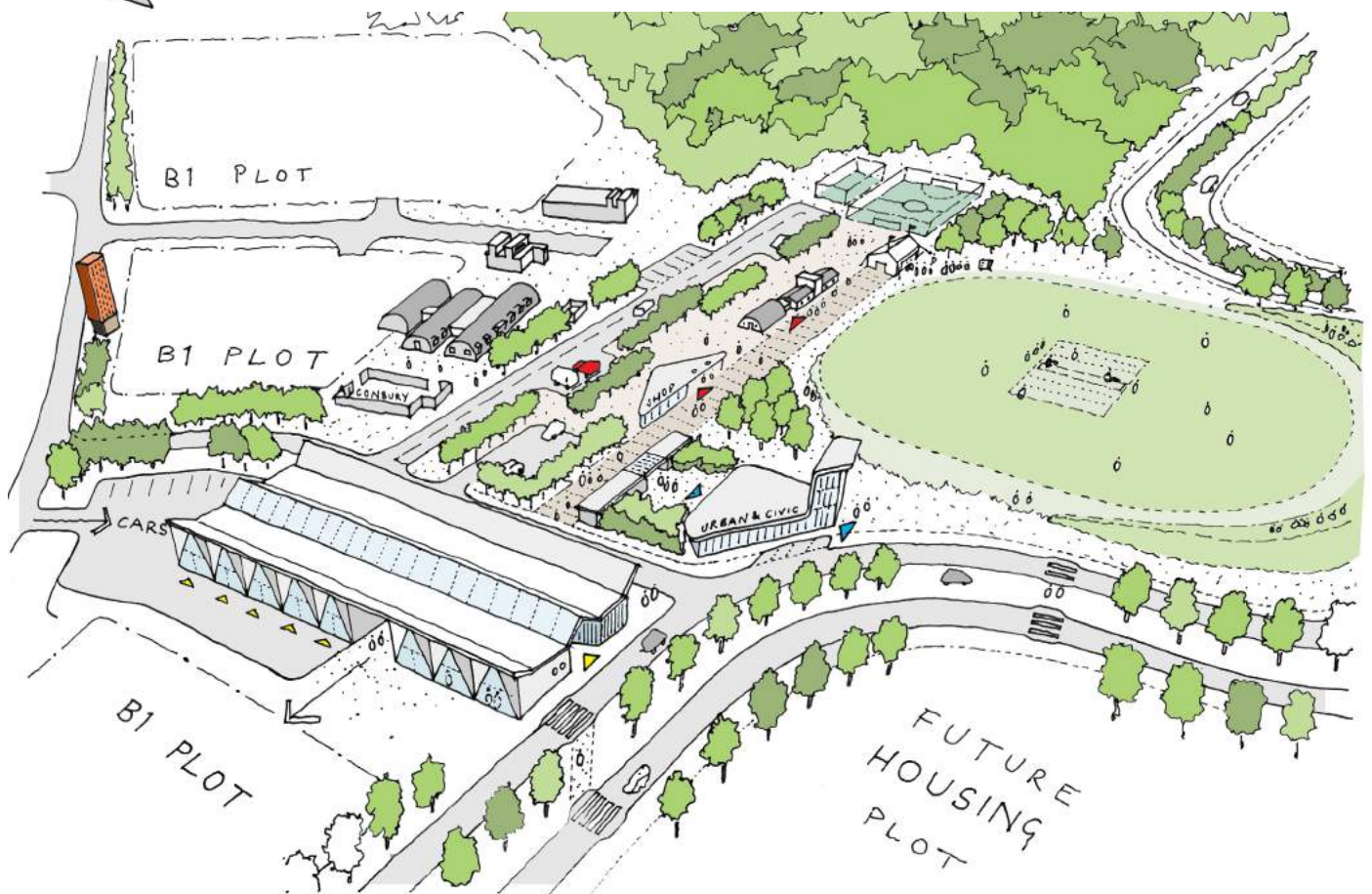
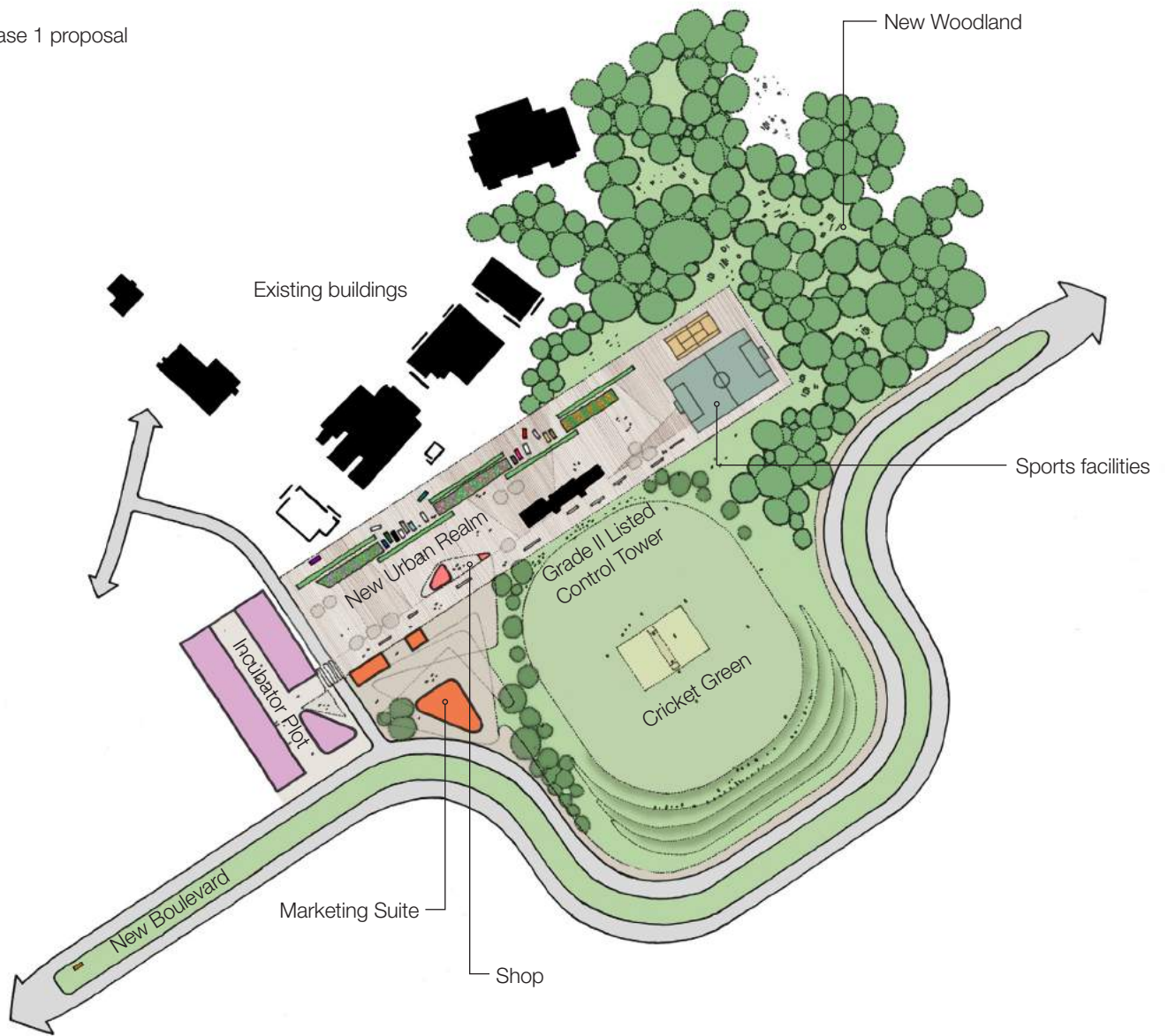
Studies were carried out for the most beneficial location of the Incubator Building considering its relationship with the emerging urban context.



Extent of Phase 1 Masterplan



Phase 1 Masterplan



INCUBATOR BUILDING





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THE ALCONBURY INCUBATOR BUILDING

BRIEF

Alconbury Weald masterplan offers a new community and a place for working, living, learning and leisure. The Incubator Building is the first new building in this huge site and as such, it is an appropriate statement of intent for the quality and ambition of future development in the Alconbury Enterprise Campus.

The Incubator Building meets an identified need within the Greater Cambridge and Greater Peterborough Local Enterprise Partnership (LEP) Area for start-up and grow-on business space.

The brief was to design a flexible workspace environment that would exceed traditional office standards and create an inspiring place to work. The Incubator has been designed to support new and small companies in the Alconbury Enterprise Campus as well as promote Alconbury Weald as a whole.

Urban&Civic is an ambitious developer committed to high-quality design, management and ability to make better places to live and work in. This commitment has influenced the design of the building meaning durable materials were used throughout.

Understanding that an attractive environment should secure good tenants, office spaces have a restrained architectural language and offer maximum flexibility.

THE CLIENT

Urban&Civic Limited, founded in 2009 by Nigel Hugill and Robin Butler, is a private equity backed developer dedicated to enabling and delivering strategic developments in key growth areas of the UK.

Nigel and Robin have a long, distinguished track record in urban and suburban development, having worked together for 20 years at Chelsfield and Lend Lease, they have been responsible for some of Britain's largest, most complex developments at White City and at Stratford City.

Working for Lend Lease, AHMM designed the Chobham Harris Academy, a new All-Ages school in the London 2012 Athletes Village. Prior to this, working with Chelsfield, AHMM designed Westminster Academy, shortlisted for the Stirling Prize in 2008.

The Incubator Building provides a new opportunity for AHMM and Urban & Civic to build on their combined experience of delivering contemporary architecture to signify and catalyse the process of change and re-development.

VALUE, COST + PROGRAMME

Cost Information <small>Building is not yet occupied</small>	Total	£/m2
Cost Information	£2,537,00	£1,794
Demolitions / External works	-	£194.00
Shell & Core	-	£1,444
Fit Out	-	£155.00
Operating costs	Unknown*	Unknown*
Base date of Costs	December 2012	

Total Gross	Total Net	Overall net to gross
15,242 ft ²	9,139 ft ²	60%
1,416 m ²	849 m ²	60%

Level	Offices		Meeting Rooms		Total Net Internal		Circulation / stairs		Other Non-Net		Total Gross Internal	
GF	376 m ²	4,047 ft ²	-	-	376 m ²	4,047 ft ²	223 m ²	2,240 ft ²	112 m ²	1,206 ft ²	711 m ²	7,653 ft ²
01	389 m ²	4,187 ft ²	-	-	389 m ²	4,187 ft ²	138 m ²	1,485 ft ²	39 m ²	420 ft ²	566 m ²	6,093 ft ²
02	-	-	42 m ²	452 ft ²	42 m ²	452 ft ²	13 m ²	140 ft ²	11 m ²	119 ft ²	66 m ²	710 ft ²
03	-	-	42 m ²	452 ft ²	42 m ²	452 ft ²	13 m ²	140 ft ²	11 m ²	119 ft ²	66 m ²	710 ft ²
Roof	-	-	-	-	-	-	-	-	7 m ²	75 ft ²	7 m ²	75 ft ²
Total	765 m²	8,234 ft²	84 m²	904 ft²	849 m²	9,139 ft²	387 ft²	4,166 ft²	180 m²	9,139 ft²	1,416 m²	15,242 ft²

TIMELINE

NOVEMBER 2011

AHMM appointed

FEBRUARY 2012

Design team formulated

OCTOBER 2012

Planning permission granted

NOVEMBER 2012

Out to tender

MARCH 2013

Contract awarded

APRIL 2013

Start on site

DECEMBER 2013

Practical completion



SITE

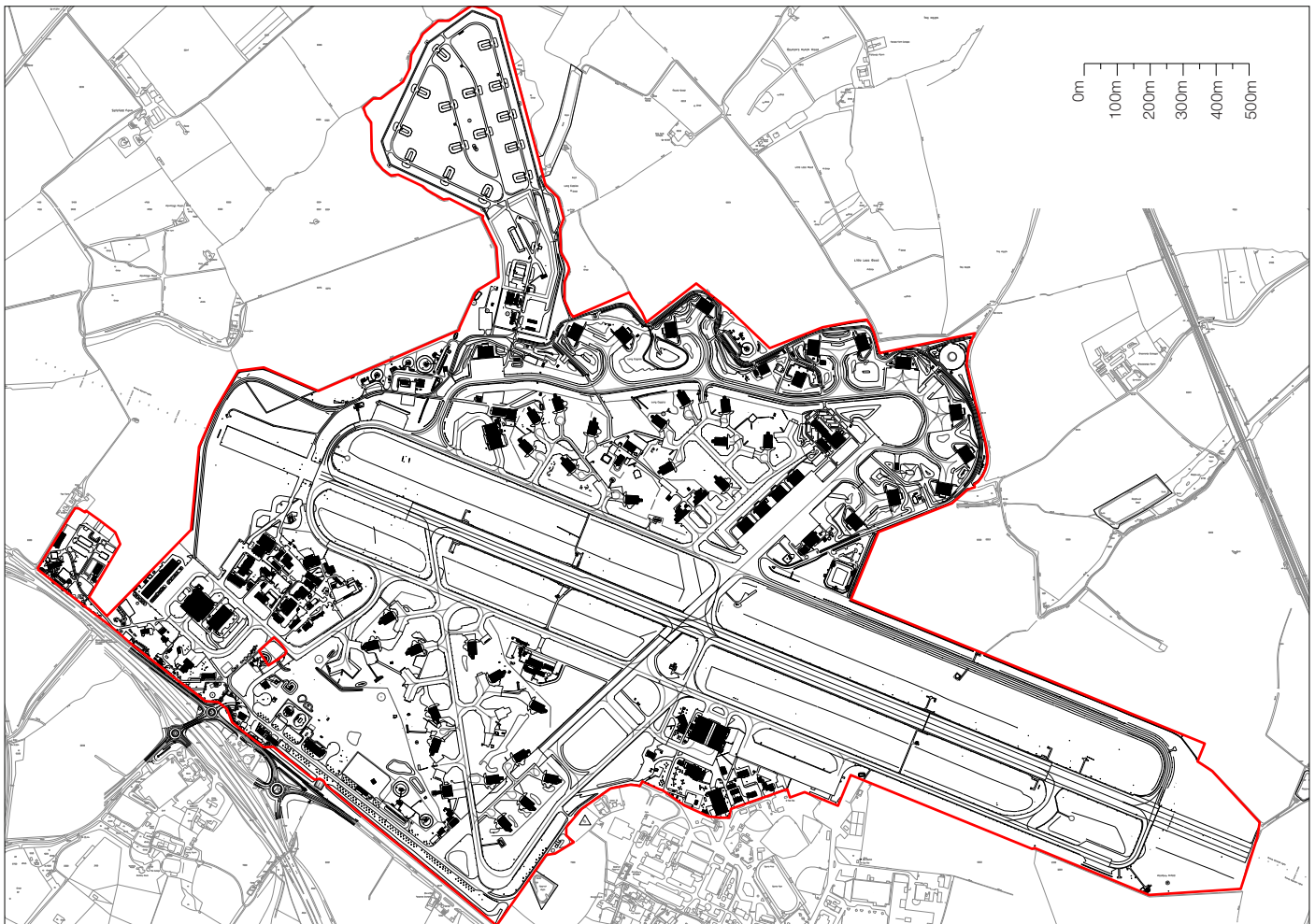
As a former airfield the site comprises previously developed land that at national, regional and local level is a priority for redevelopment. In the light of the recent designation as an Enterprise Zone, both the Government and the local authorities have recognised the strategic importance of the site and expressed their support for its redevelopment. Benefits include:

Benefits include:

- Backing by local and national Government
- Streamlined Planning process
- Business rate discounts worth up to £275,000 over five years
- Ultrafast broadband

The Incubator Building's identified site at the corner plot to the new boulevard maximises its impact within the developing masterplan. The colourful Lego-like shipping containers and robust aircraft hangars are just some of the retained characterful aspects of the aerodrome seen beyond the Incubator which instantly produces an attractive and unusual place for business. The building's slender linear form engages and maximises the street frontage as active circulation space to create a real sense of place.

The form of the Incubator building has been configured to sit comfortably amongst its neighbours; a predominantly low linear building of two storeys is comparable with the height of hangars to the north. The 15m tall tower at the northern end of the Incubator tips its cap to the adjacent Parachute Loft.



Masterplan site showing Incubator plot



Masterplan site showing incubator plot

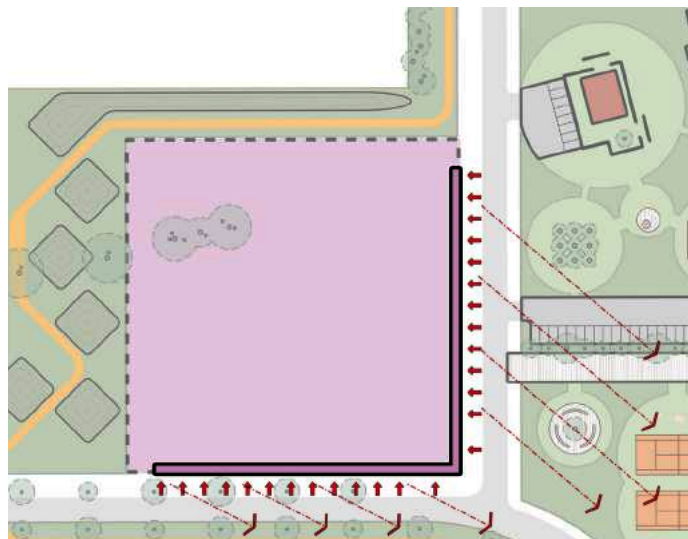


Aerial photograph showing Incubator plot

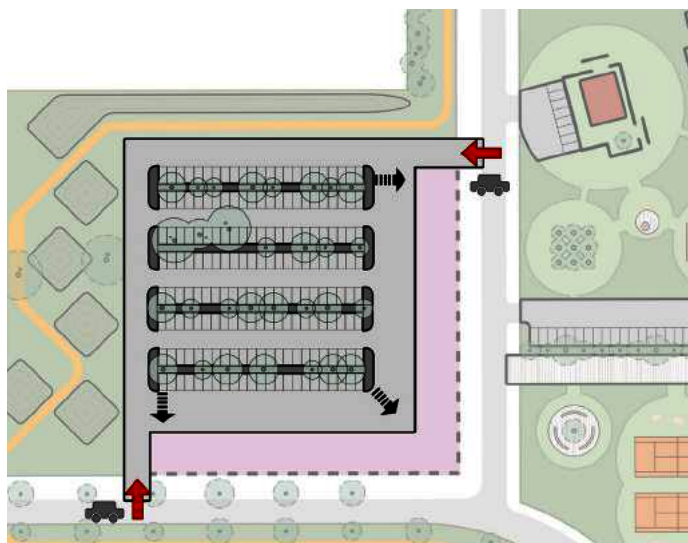
PLOT PLANNING



Plot defined in earlier masterplan study



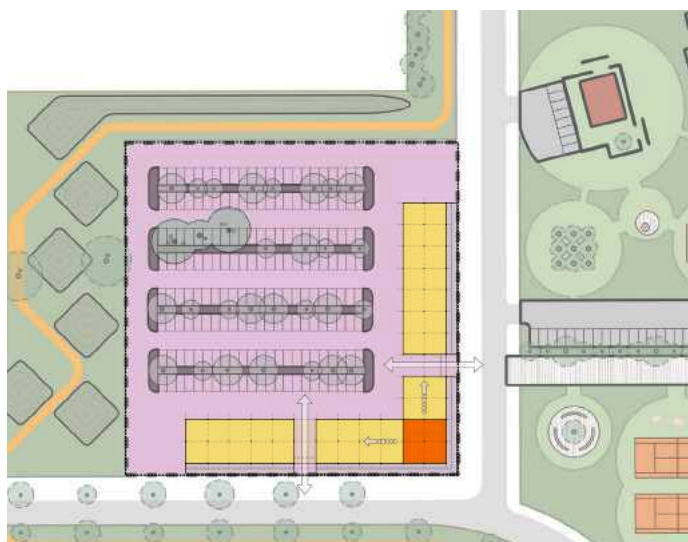
Inward looking active frontage + views out to cricket green



Parking and servicing requirements



Resultant 'L' shaped building with a tower at the corner



Circulation penetrations through the building



Office uses flexible on demand

EARLY SKETCHES



East view of the Incubator



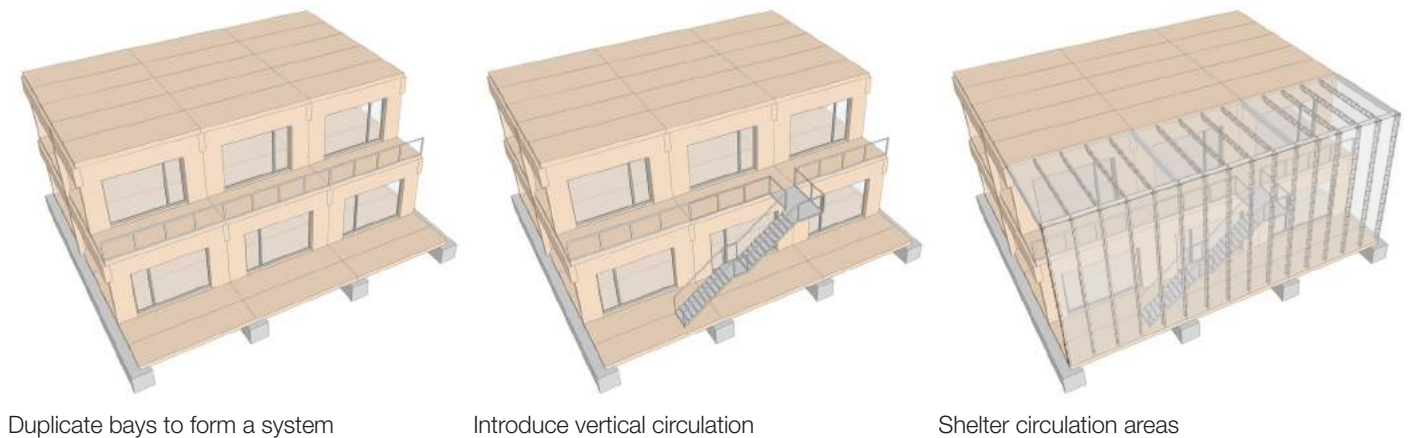
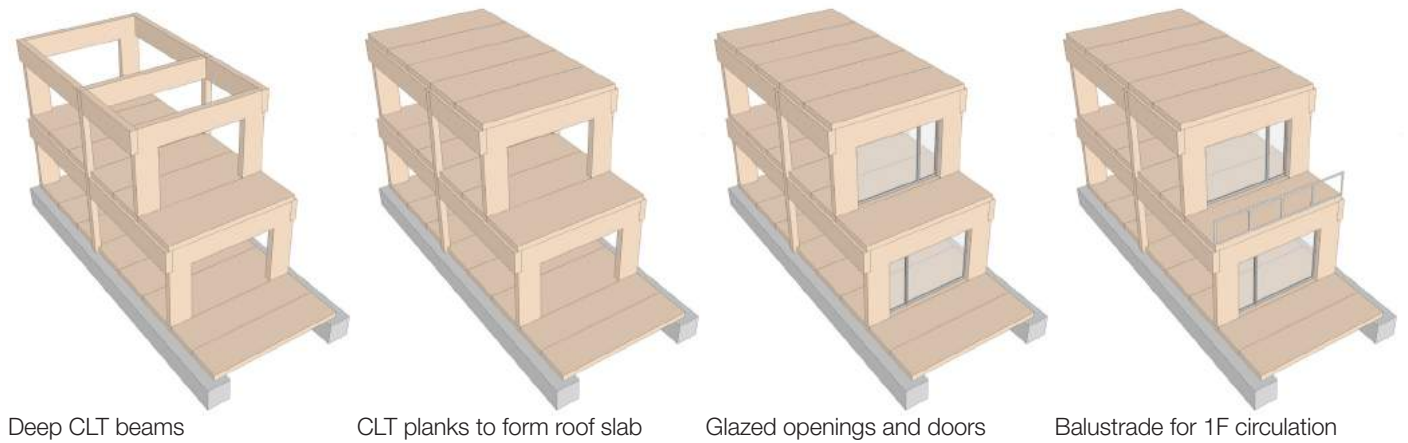
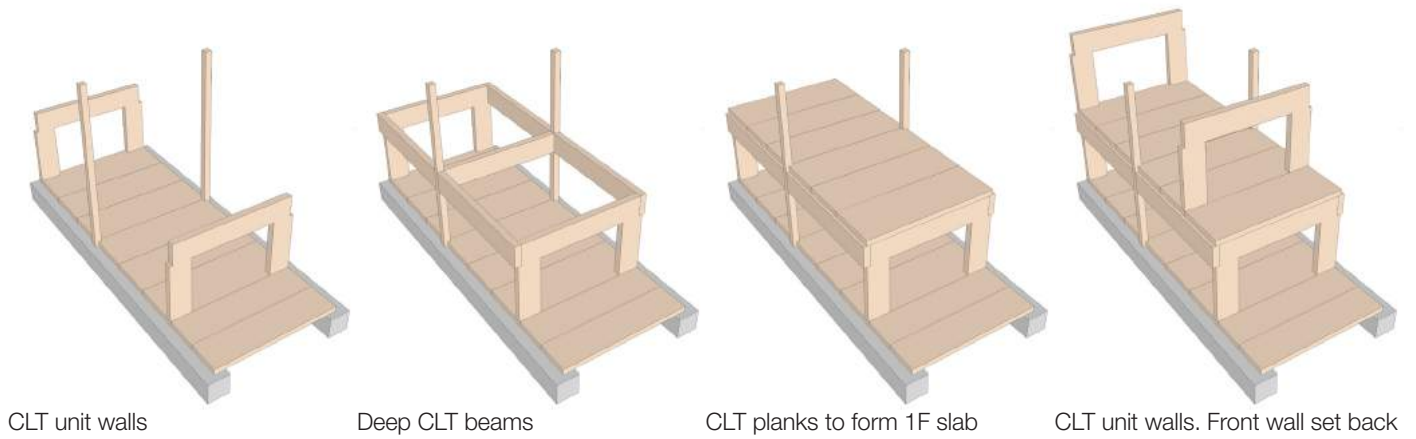
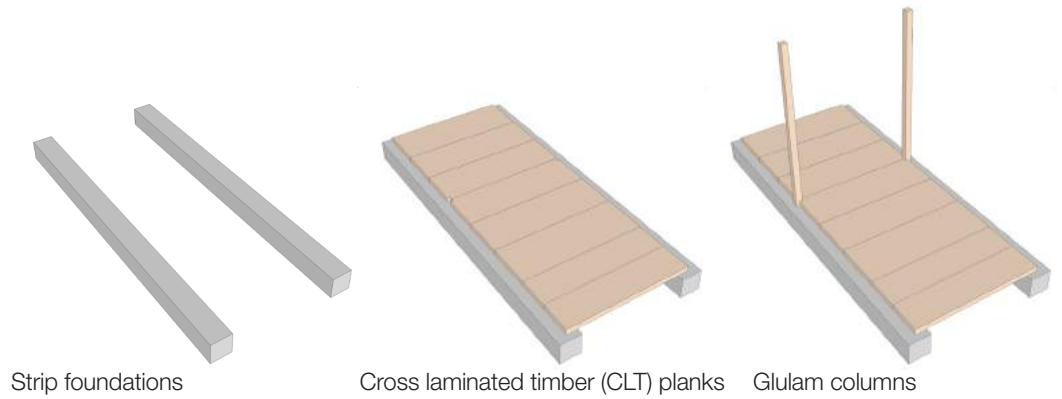
View of Tower and main gatehouse beyond



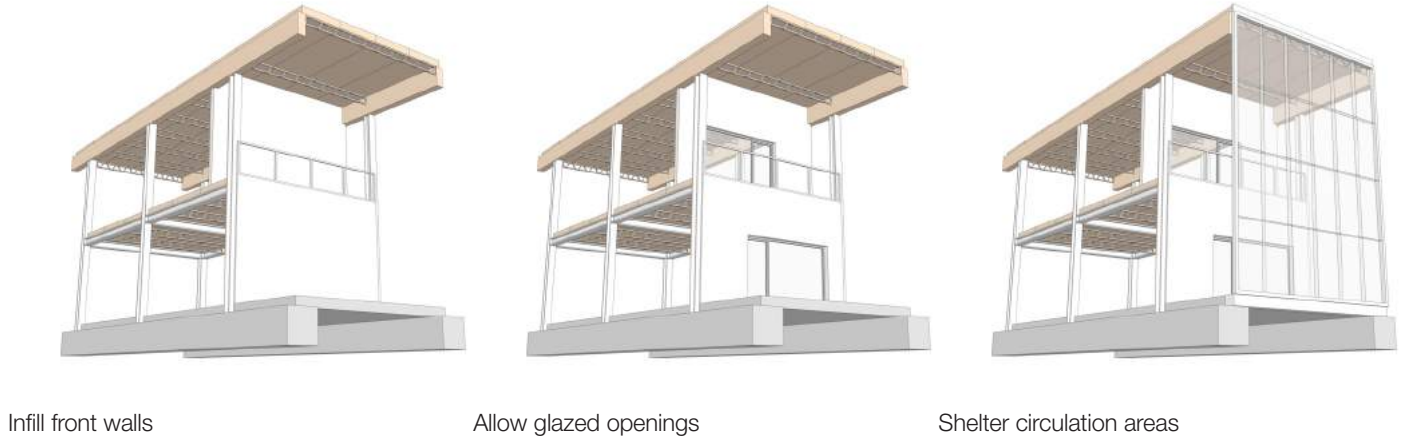
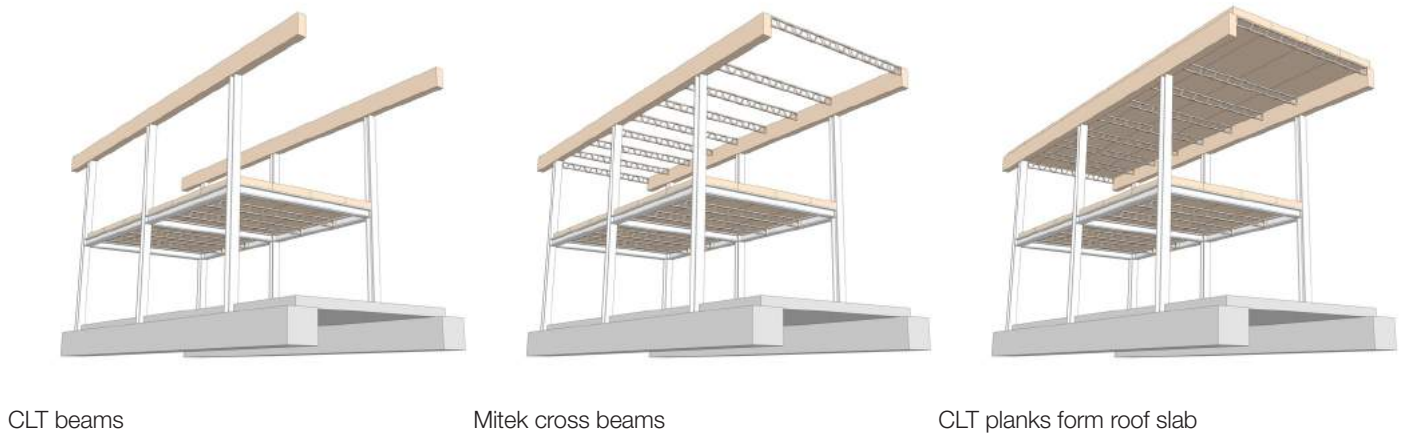
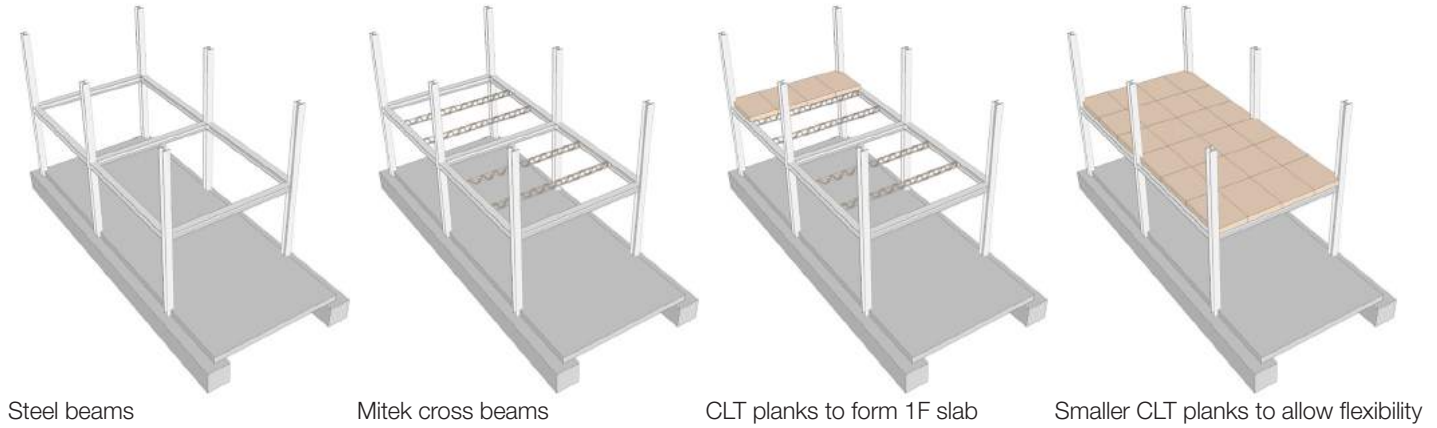
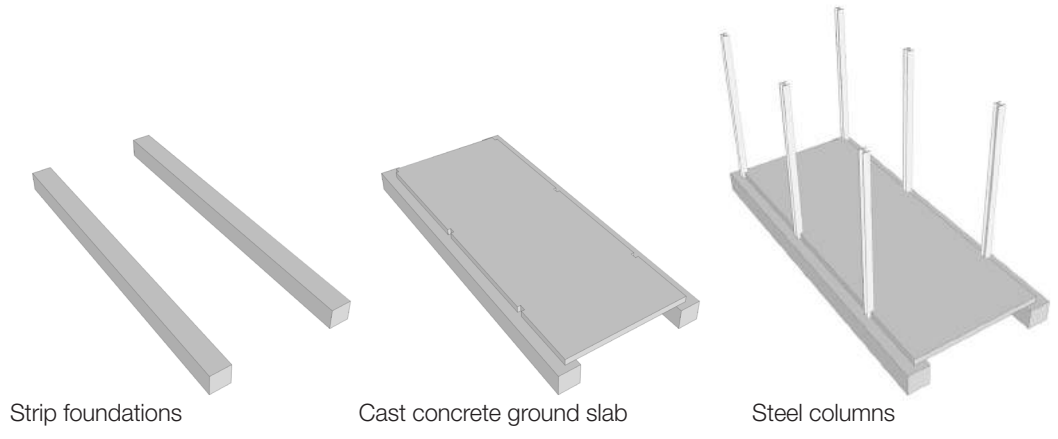
View from new boulevard

STRUCTURAL INVESTIGATIONS

GLULAM / CLT OPTION



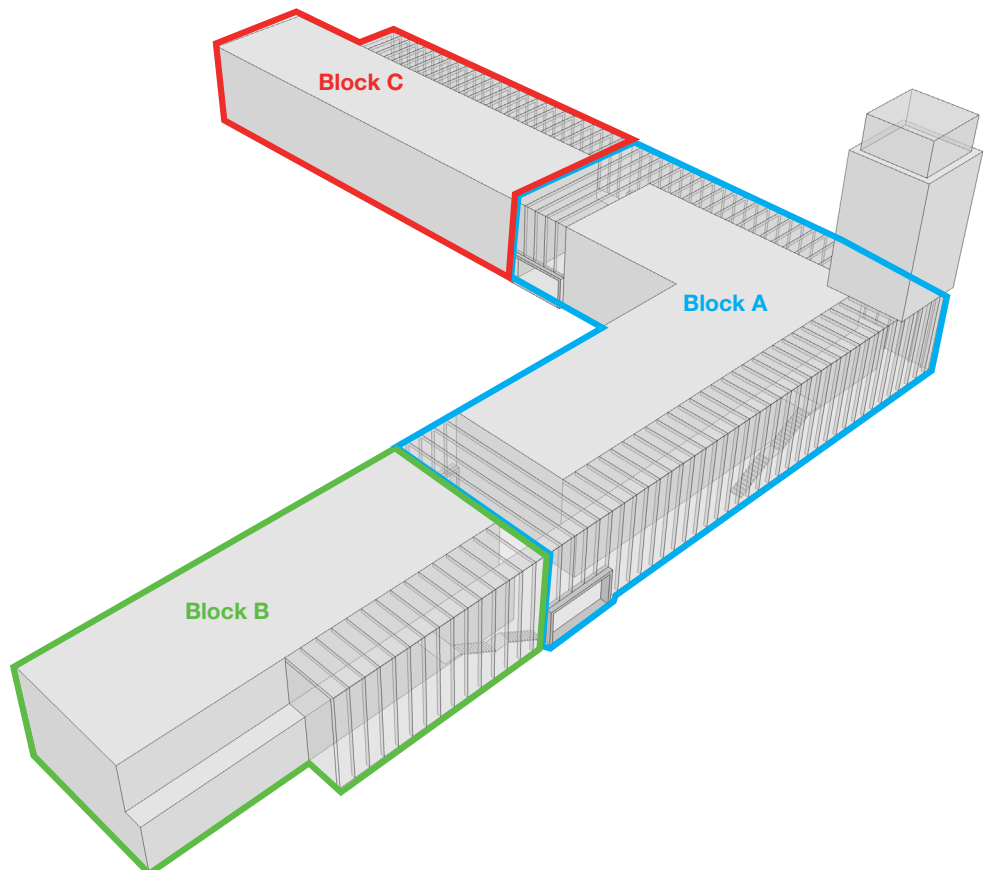
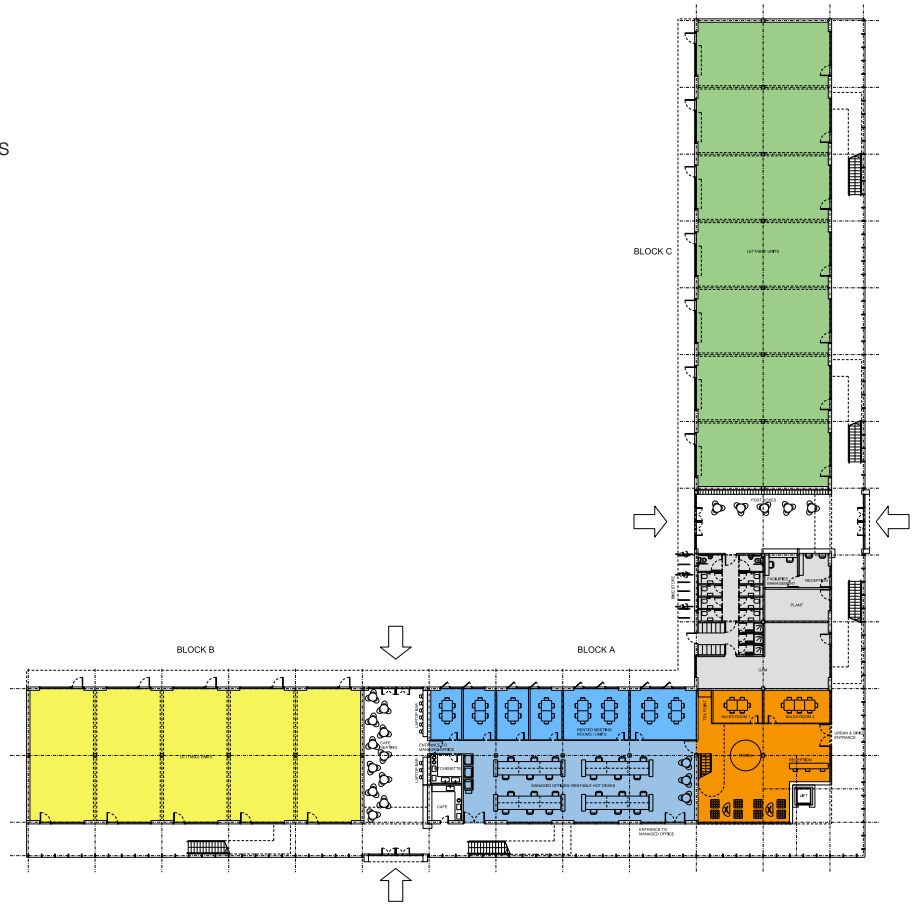
**CONCRETE / STEEL /
CLT / OPTION**



PHASING DIAGRAMS

Early L-shaped Plan

- Urban & Civic
- Lettable Units / Meeting Rooms
- Managed Office Space
- Lettable Office Units
- Lettable Office Units
- Facilities / Amenities



FORM + APPROPRIATENESS TO SITE

The site has a rich and layered history of small structures, buildings, taxiways and the shape of the runway will be preserved to help tell the story of Alconbury.

A key challenge was to design the Incubator so that it is architecturally characterful and suitable in size and scale for both the elements of historical context as well as the future of Alconbury Weald.

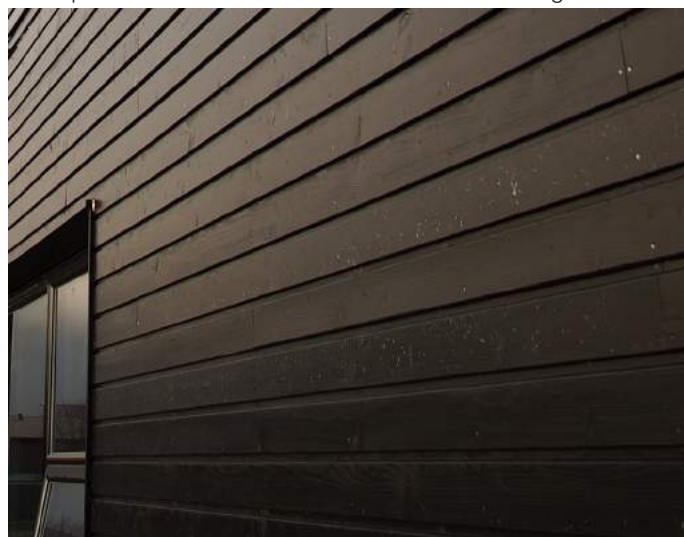
The black exterior embraces the solidity and simplicity of the context. By contrast, the lightweight glazed frontage is transparent and full of the convivial activity of the new Alconbury Weald. This glazed elevation encloses the shared spaces within the building, and has been carefully considered to encourage interaction between the public and tenants, providing the opportunity for informal meetings and chance encounters.



Aircraft Decontamination Building on site
(image courtesy of English Heritage Assets)



Black painted timber windmills common to Cambridgeshire



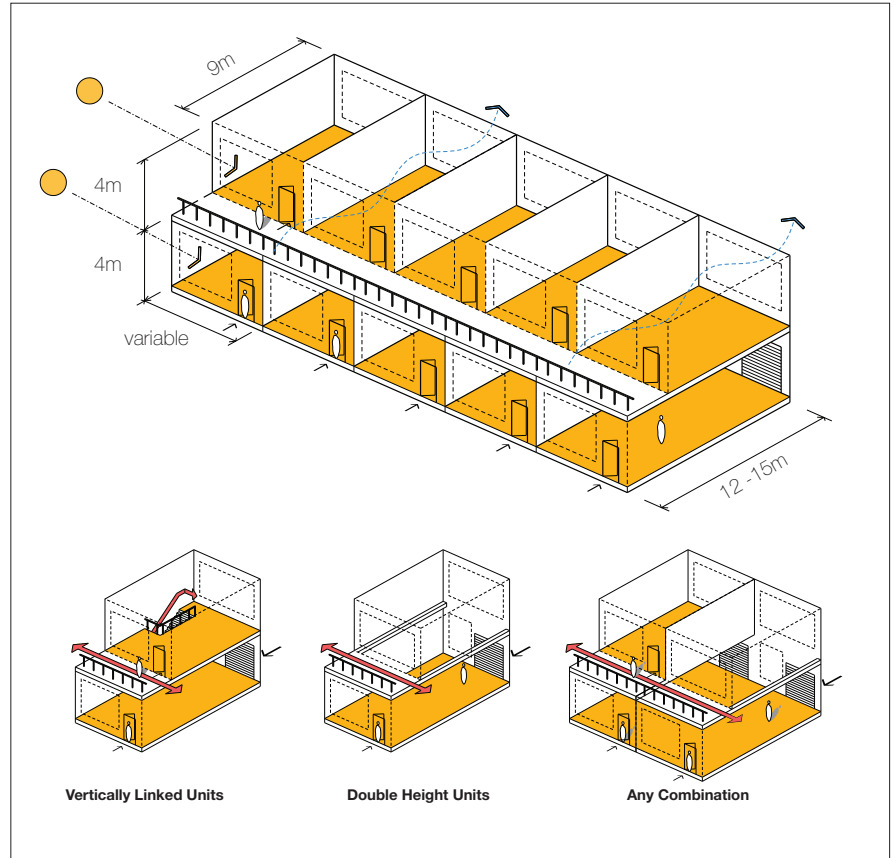
Black painted timber cladding to the Incubator Building

THE ACCOMMODATION

Office flexibility and the capacity to expand is inherent to the design of this multi-tenanted building. The building structure is a system of 6m wide bays and a typical section which provides lettable spaces, corridors as well as the glazed communal gallery. When linked, these bays provide a linear massing capable of being sub-divided, connected horizontally and/or vertically.

The in-situ concrete frame also has the advantage of high thermal mass which, in tandem with a mixed mode ventilation system and Part L-exceeding external envelope, can be utilised to cut the amount of energy required to keep the building cool. The exposed soffits take advantage of the thermal mass, which allows a generous 3.2m floor to ceiling height to office spaces.

Exposed services complement the honest and functional aesthetic of the building's construction as well as simplifying maintenance procedures and allowing the budget to focus on other spaces.



Flexibility diagram



As built concrete flat slab - Natural ventilation assisted by VRF units

STRUCTURE+SERVICES STUDY

Initial studies investigated the different frame options available: timber, steel and concrete, plus possible hybrids. Each has different cost, construction and aesthetic benefits and drawbacks.



Glulam and PCC - Natural Ventilation



Steel Frame and PCC - Air Handling Unit



Glulam and PCC - Air Handling Unit



Flat Slab Concrete - Air Handling Unit



Glulam and PCC - VRF Units



Glulam and PCC - PassiveHaus

MATERIALS + METHODS OF CONSTRUCTION

Frame

The building's primary structure is a concrete flat slab frame, chosen for its visual simplicity, low cost and stabilising thermal properties.

The slabs use a tailored prefabricated reinforcement system, BAMTEC, which can be rolled out on site, saving 35% of materials by comparison to a traditional build.

Gallery

A lightweight glulam frame supports the glazed gallery. The natural timber adds colour, rhythm and warmth to this shared space. Hidden joist hangers help reduce the visual noise and material palette.

Cladding

Black, vacuum-painted, factory-finished Scottish Larch is used as the rainscreen cladding around the concrete frame.

Finishes

Where possible, self-finished materials are selected to encourage a robust functional aesthetic. This also reduces the maintenance and refurbishment strategy.



Peri-deck system + BAMTEC reinforcement to flat slab structure (image by Jason Hawkes)

SERVICING STRATEGY

Simple Servicing

- Stack ventilated glazed gallery, controlled by automatic opening vents
- Assisted natural ventilation with openable windows controlled by users
- Heating and cooling through soffit mounted VRF units

Simple Passive Facade

- Maximum use of natural daylight through large windows
- Glazing where it counts i.e. above desk height
- Shading external windows where necessary

Tall ceilings

- Increased natural daylight penetration
- Improved temperature comfort levels
- Efficient and even distribution of artificial lighting
- Increased flexibility of use; volume provides for future market lead upgrades

Thermal Mass structure

- Exposed concrete for thermal mass and night-time cooling



SUSTAINABILITY

The driving ambition of the project is to achieve a BREEAM Very Good rating. While a new office building might usually target an Excellent rating, some of the BREEAM points (public transport, access to cash points etc) are more suited to building which enjoy a more established urban context.

Throughout the design development, numerous strategies for sustainable design were considered and the resultant effect was successful. The building achieved an A asset rating in the EPC certificate.

Transport

The Incubator Building emphasises the requirement to make use of sustainable transport – it allows for a phased delivery of 48 secure bicycle parking spaces and will eventually link to National Cycle Route 12 which passes to the south of the site. Three electric car charging points have also been provided.

Building Envelope and Thermal Stability

The overall envelope U-values are much lower than Part L minimum design values. Envelope efficiency has been improved with fewer cold bridges due to the use of glulam.

Natural Lighting and Ventilation

The large glazed gallery provides urban and social functions, including seating, eating, café, reception and breakout spaces. These areas ensure interaction with other building occupants and better daylight penetration into the office units. Solar gains to the glazed gallery, and therefore offices spaces, are minimised by the engineered stack ventilation system along the glazed gallery. Louvres below the curtain walling system and turrets in the timber soffit draw in fresh air and encourage stack ventilation to maintain ambient temperature.

Rainwater Harvesting

Rainwater is harvested and used for flushing WCs which incorporate water reducing low-volume cisterns. The external tap within the bin store is also supplied by rainwater harvesting.

Local Sourcing

Urban&Civic and AHMM are keen to source as much as possible from the UK in order to minimise transport carbon emissions and support British jobs. Notably, Scottish larch was chosen for the cladding material over its Siberian counterpart, and all furniture and fit-out equipment is both designed and manufactured entirely in the UK.

Future Flexibility

The design has considered how the Incubator Building can dovetail with future low carbon infrastructure that will become available during future phases of the wider Alconbury Weald project. This is an important requirement and will provide further reductions in CO² emissions from the building in the future.

Gross Floor Area: 1416 m ²	Treated Floor Area: 1016 m ²	
Annual energy demand and CO ₂ emissions for heating	11.25 kWh/m ²	5.82 kgCO ₂ /m ²
Annual energy demand and CO ₂ emissions for cooling	2.48 kWh/m ²	1.28 kgCO ₂ /m ²
Annual energy demand and CO ₂ emissions for electricity	19 kWh/m ²	9.83 kgCO ₂ /m ²
Total annual CO ₂ emissions / m ² treated floor area	32.72 kWh/m ²	16.92 kgCO ₂ /m ²
Airtightness test (average)	2.93 m ³ /hr/m ²	
EPC Rating	A (23)	
BREEAM Rating	Very Good (awaiting certificate)	

LANDSCAPING

The landscaping around the Incubator Building, designed by Roger Griffiths Associates, uses a planting strategy to help tie the site to the wider masterplan scheme.

Boxhedges and low canopy trees mask much of the carpark from sight without creating a sense of enclosure from within.

The lime trees along the main boulevard engage with the glazed gallery, providing leafy shade during summer and longer views throughout winter.



Erection of lime trees on the main boulevard (image courtesy of Urban + Civic)

FF+E: UK MANUFACTURING

The large majority of iconic, and often British designed, furniture pieces are often manufactured in Europe or Asia for economic reasons.

All office furniture and fittings specified for the Alconbury Incubator Building is manufactured in the UK.

Benefits of sourcing locally include:

- Saving transport carbon miles
- Local products supporting local jobs
- Local jobs preserving the economy
- Shorter lead times
- Better communication for custom orders



VISUALISATIONS: EXTERNAL



View from new boulevard



Front elevation

VISUALISATIONS: INTERNAL



View of glazed gallery from main entrance



View from 1F break out balcony

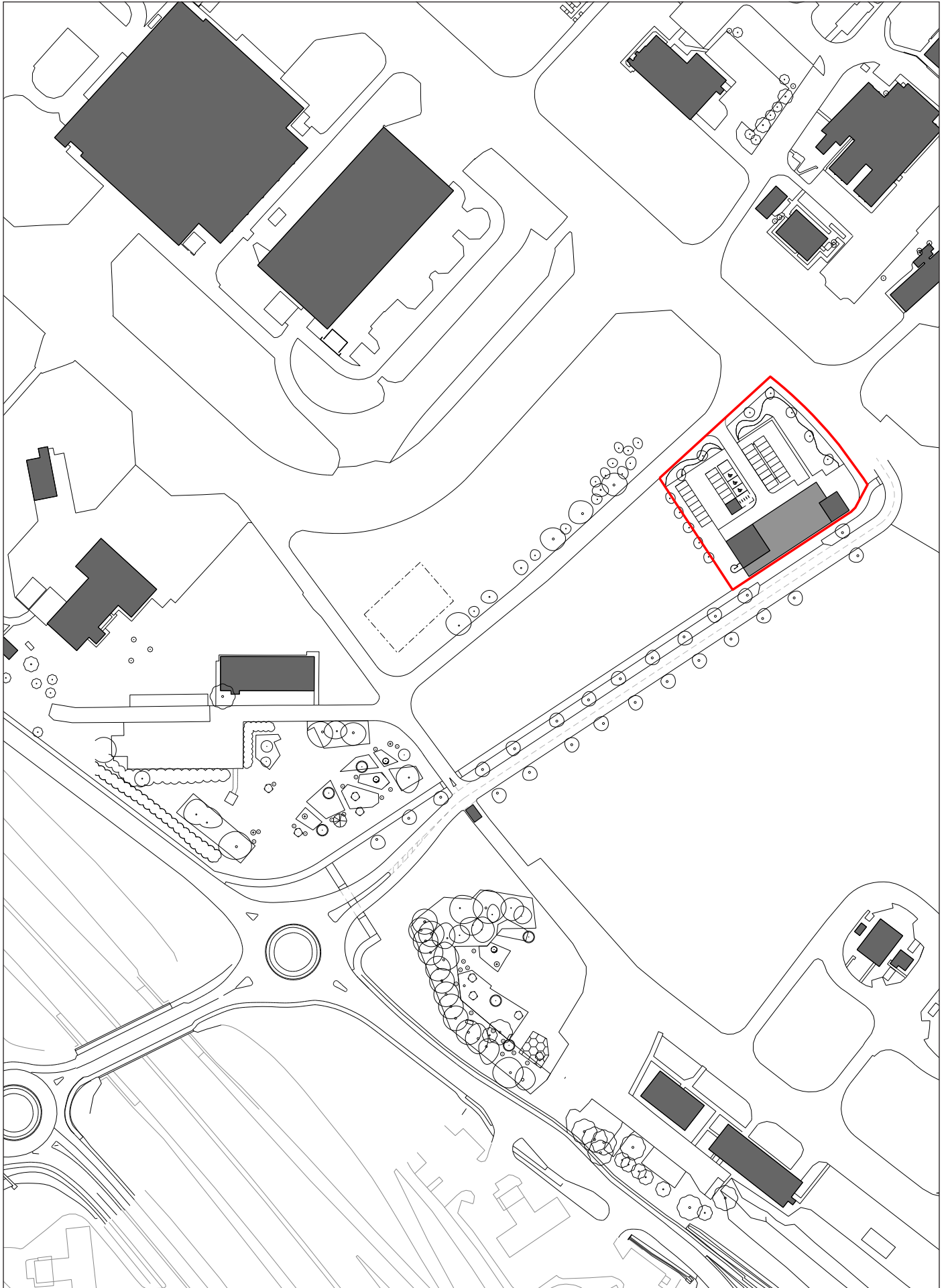


View along 1F corridor showing unit numbering

DRAWINGS

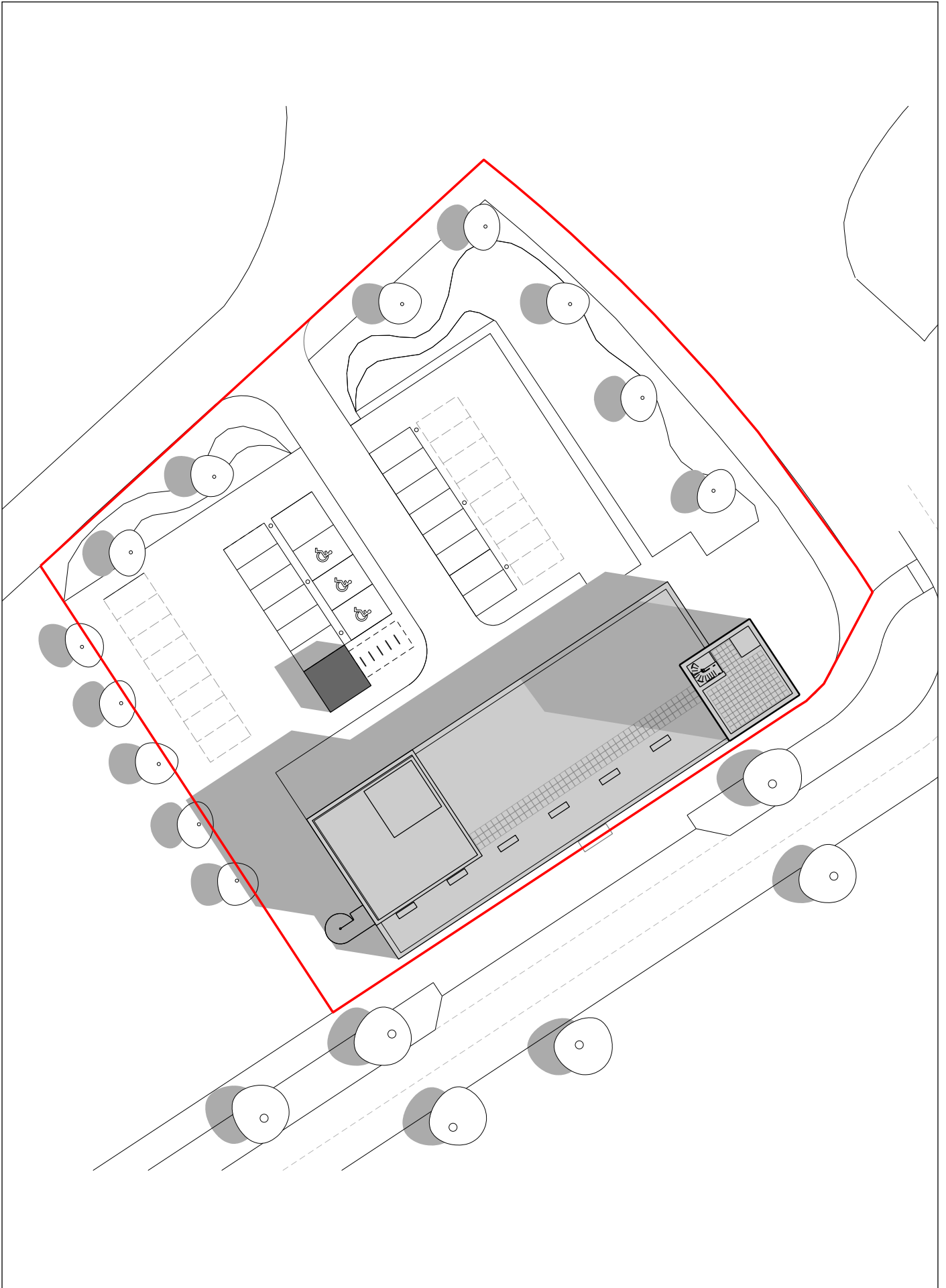


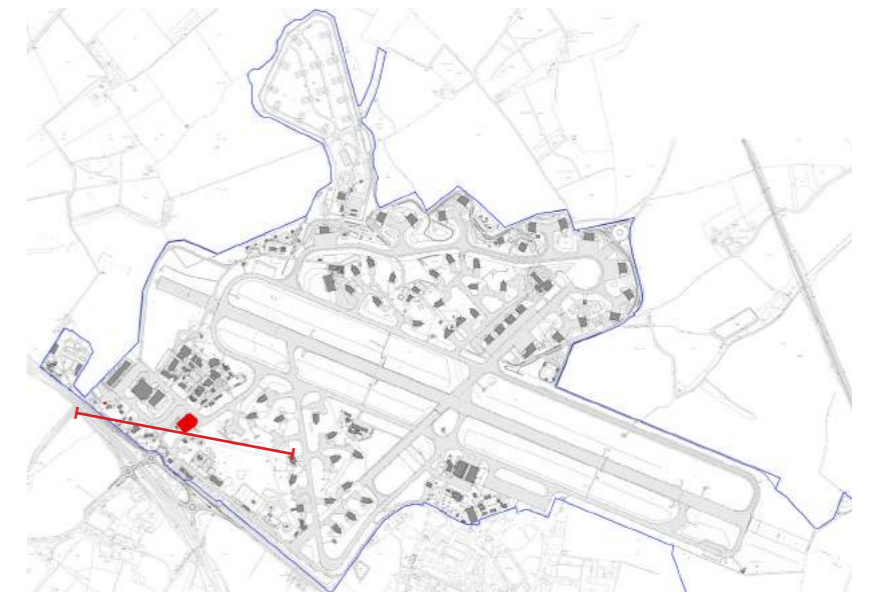
Site Plan 1:2000





Plot Plan 1:500





|——— Transport network: A14 & A1 ———|

 |——— HGV Entrance to Alconbury Weald ———|

 |——— Existing military infrastructure: Hangars and parachute drying tower ———|

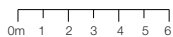
 |——— Incubator Building and new boulevard ———|

 |——— Existing military infrastructure: Nissen huts, control tower and hardened aircraft shelters ———|

 |——— Repuposed runway beyond: Storage of shipping containers and surplus vehicles ———|

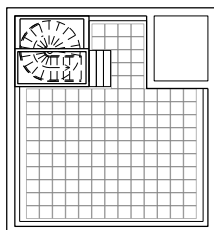
Site Section
 Scale 1:2000

DRAWINGS

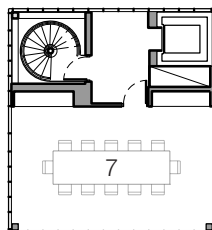


KEY

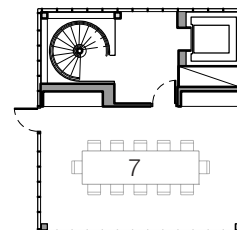
- 1 Reception
- 2 Cafe
- 3 WC / Shower
- 4 Plant Room
- 5 Lettable Office
- 6 Managed Office
- 7 Meeting Room
- 8 Breakout Space
- 9 Glazed Gallery
- 10 Marketing Suite



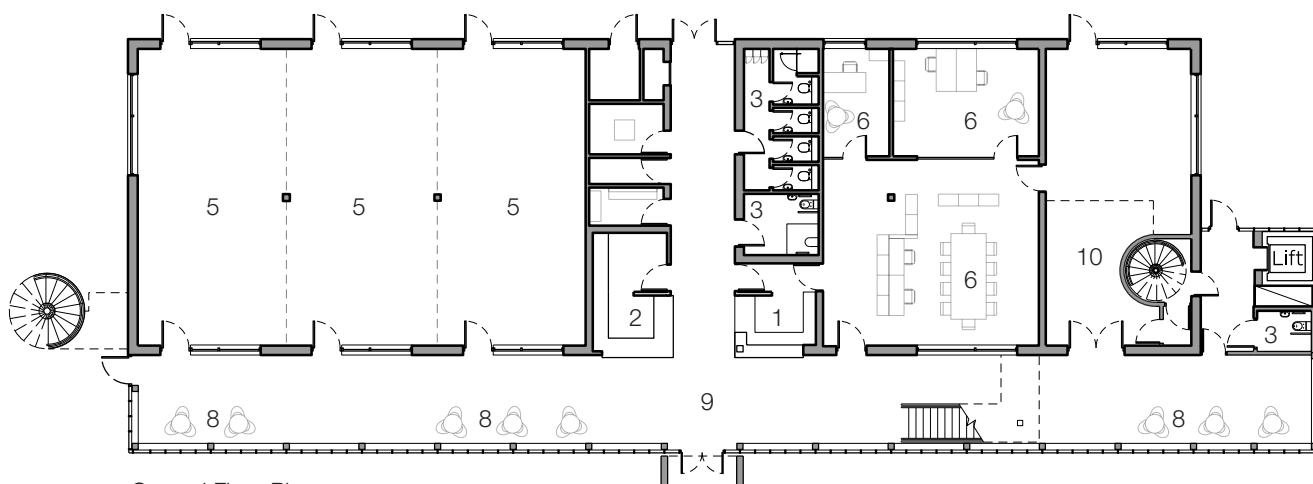
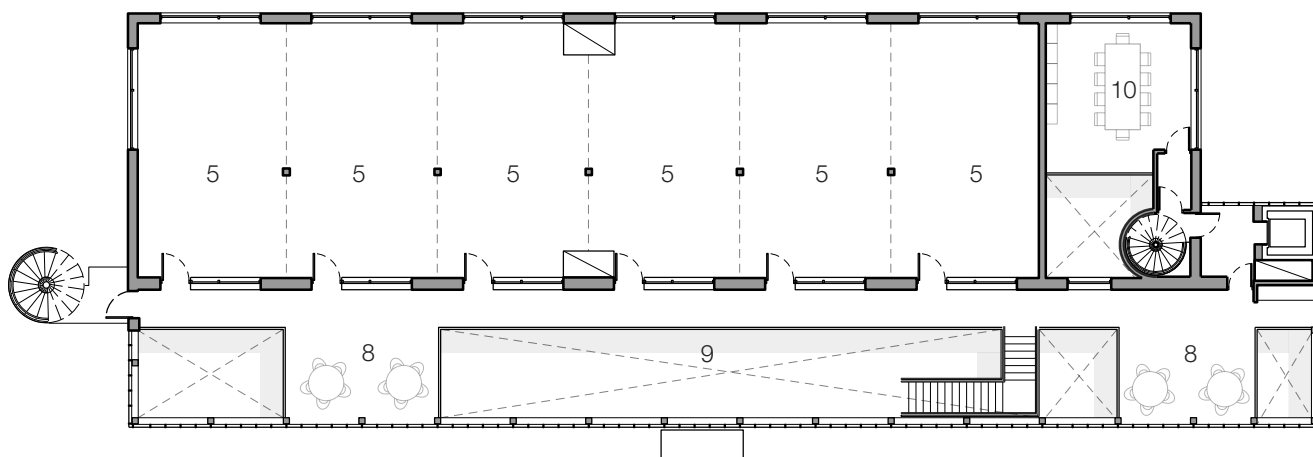
Roof Terrace



Third Floor



Second Floor



Ground Floor Plan

DRAWINGS

0m 1 2 3 4 5 6



South Elevation



North Elevation



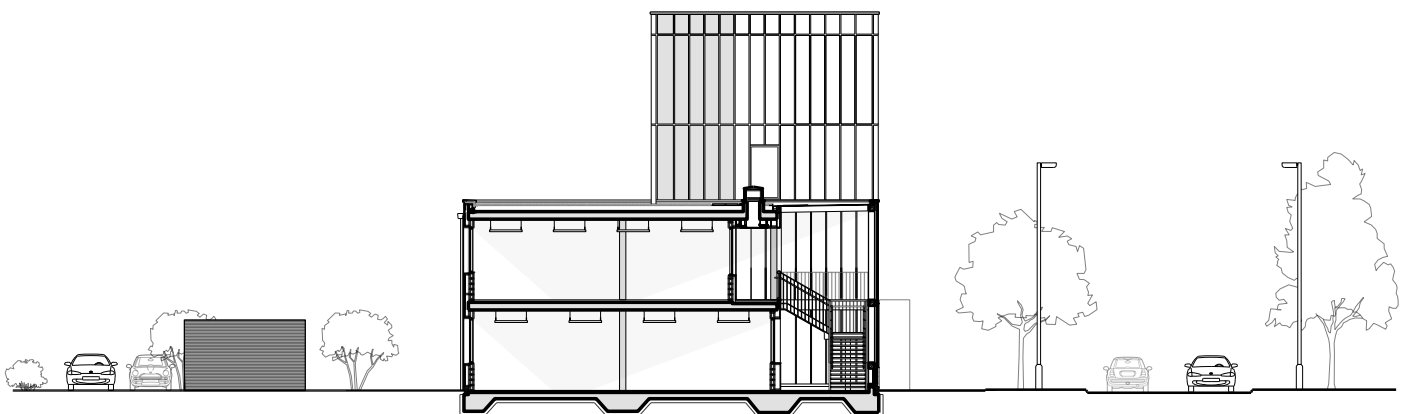
Section B



West Elevation



East Elevation



Section A

FINAL PHOTOS

Photographs by Timothy Soar



Elevation seen against the parachute loft



Sunset over the glazed gallery



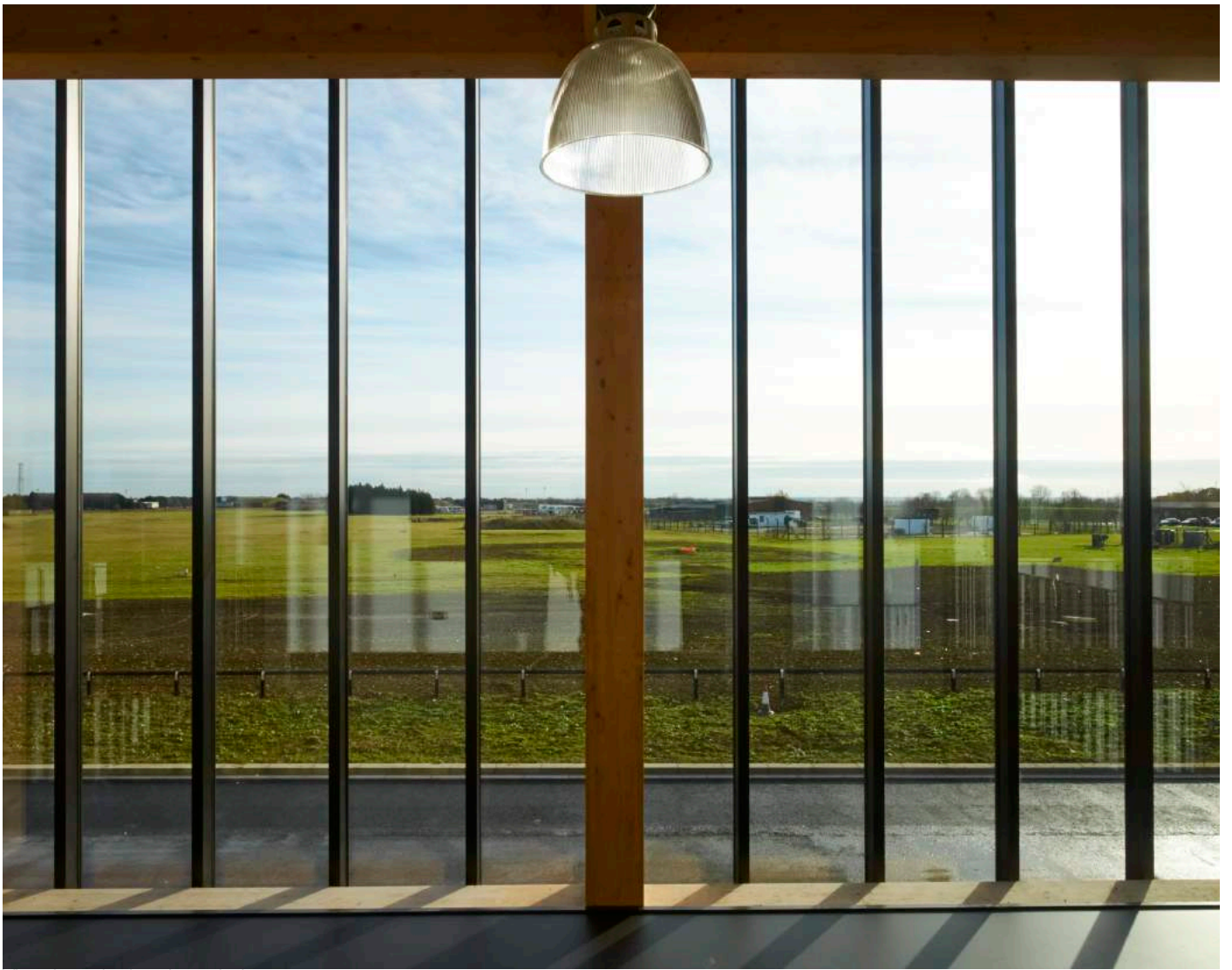
Glazed gallery reflecting the site



The tower



Glazed gallery at ground floor



View from the break out balcony



Glazed gallery from first floor



Divisible lettable units



View from the roof terrace