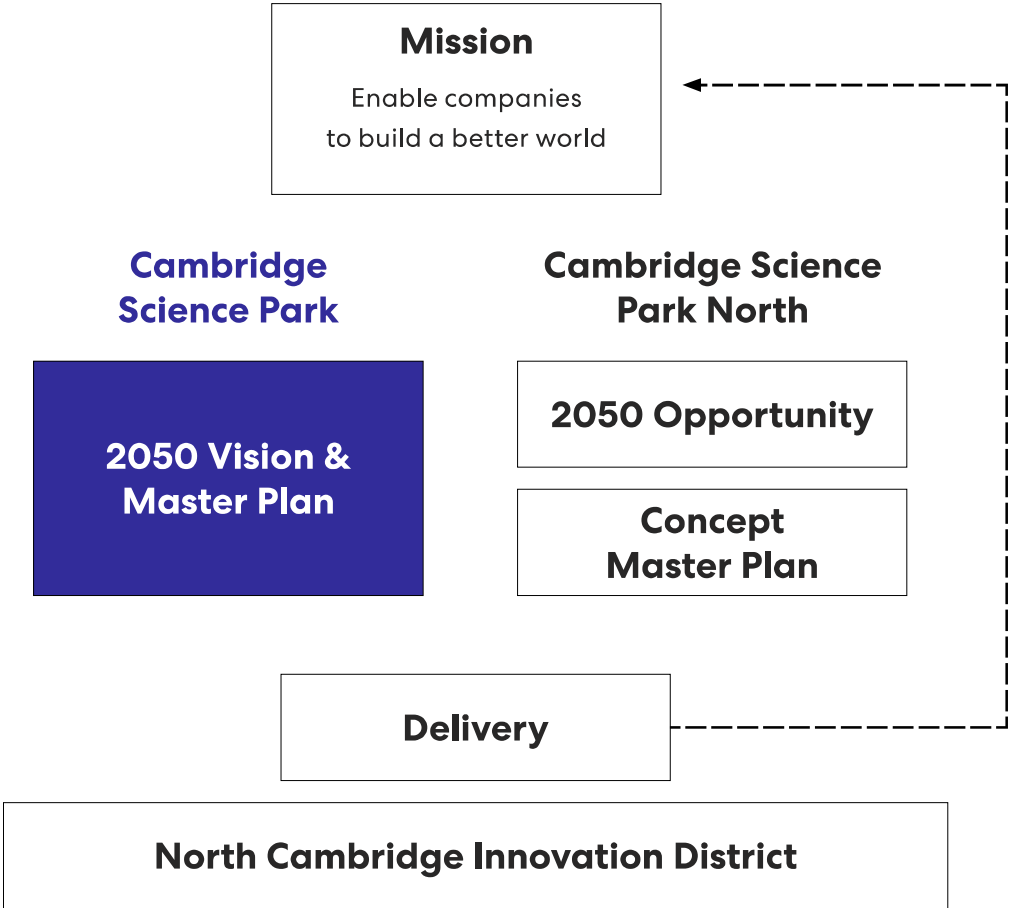


CAMBRIDGE SCIENCE PARK 2050 VISION - ABRIDGED VERSION

DRAFT CONSULTATION DOCUMENT

March 2021

Conceptual structure:



 This Document

Introduction

Building the future on the legacy of the past

In 1970 Trinity College Cambridge took the bold decision to transform a derelict parcel of land to the north of the city into Europe's first Science Park. Over a period of 50 years the Park has expanded and evolved to meet the changing needs of local, national and international companies. The last of the few remaining units that were built in the 1970s are currently being replaced with state-of-the-art laboratories and offices as part of the latest phase of investment.

The Cambridge Science Park 2050 Vision sets out a series of recommended goals for the phased renewal of the Park over the next 30 years. The recommendations include a combination of infrastructure and service improvements. Some of these are deliverable in the short term whilst the implementation of others depends on factors outside the control of the College.

This is a **consultation document** and will be updated over time to reflect the views of stakeholders including the Park's long leaseholders, members and local government.

It should also be considered in the context of the Area Action Plan for North-East Cambridge as well as Cambridge Science Park North - a proposal by the College to create a world-leading centre of excellence in hi-tech manufacturing on land between Milton and Histon and Impington as an extension to the Science Park.



Executive Summary

2050 Vision goals:

1. create a place where people enjoy working
2. provide flexible, energy-efficient properties fit for companies at all stages of growth
3. offer an unrivalled business community
4. help address inequality and create opportunity in the wider area
5. be a leader in sustainability and environmental protection

2050 Vision outputs:

1. approximately 4.7m sq ft of floor space, an increase from 2.3m sq ft (existing, under construction, and permitted)
2. up to 21,000 jobs, almost triple the current number
3. over 30 acres of green space (20% of the site), an increase from existing 27.4 acres
4. 50% fewer parking spaces

2021 Statistics

- 152 acres
- 2.3m sq ft
- 56 buildings
- 12 multi-occupier buildings
- 17 buildings with wet labs
- > 7000 members
- 108 companies
- 50% technology/materials/engineering
- 43% life sciences
- 7% business services



2050 Vision Principles

Innovation underpins each of the principles of the 2050 Vision. When it comes to the future development of the Park, from transport, buildings and outdoor spaces to connectivity and safety, our goal is to be an early adopter of cutting-edge technologies and services, particularly those developed by companies on the Park.



Recruitment & retention of talent

A place where people enjoy working

Based on consultations with members, the 4 key features of a place where people genuinely enjoy working are:

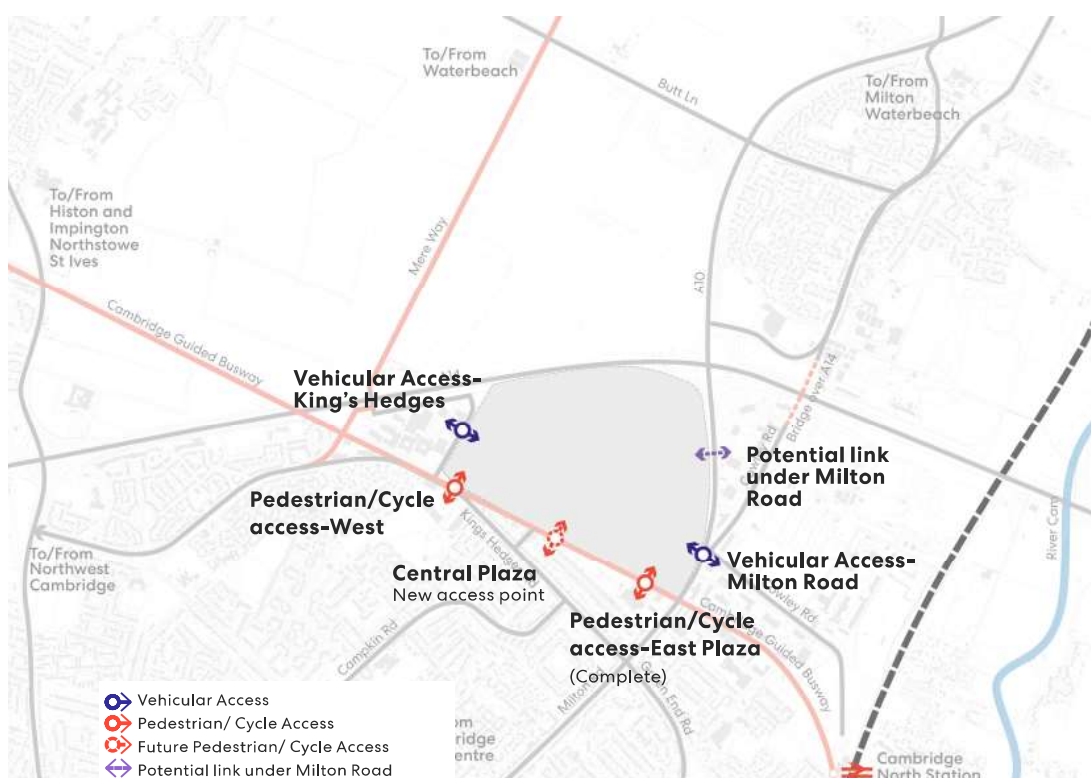
1. ease of access – a place that is easy and affordable to get to using all modes of transport particularly sustainable transport
2. attractive outdoor spaces for relaxation, exercise and entertainment
3. quality amenities & services that cater for all needs and budgets
4. an environment where staff and visitors feel safe at all times

Community and inclusivity are also important features. The Science Park's ecosystem caters for people of all ages, nationalities and backgrounds. Members are kept up-to-date with news, events and developments via ParkLife, a weekly newsletter, and we hold regular consultations and surveys with members to ensure our activities meet their needs.

**Fast,
sustainable
& affordable
commuting**

Reducing congestion & pollution

- priority access for cyclists, pedestrians and commuters using public transport
 - new pedestrian and cycle plazas from the Guided Busway
 - reconfiguration of the Milton Road and King's Hedges entrances
- reconfiguration of the Science Park ring road giving priority to cyclists and pedestrians
- extension of the Science Park ring road at the western end of the site
- reduction in number of drive alone drivers from 44% to 18%
- 100% replacement of internal combustion engine vehicles with electric/hydrogen vehicles
- last mile deliveries by drone
- use of autonomous vehicles for access to, and around the Park
- reduction in number of parking spaces from 7,442 for 2.3m sq ft to 3,745 for 4.7m sq ft
- new decked/multi-storey car parks to replace most of the existing surface parking
- innovative parking management system & compressed 'robot' parking
- artificial intelligence system for traffic counting and queue monitoring
- smart bus shelters
- up to 50% of parking spaces to be charging points
- maximum 15 minute evening rush hour queuing times



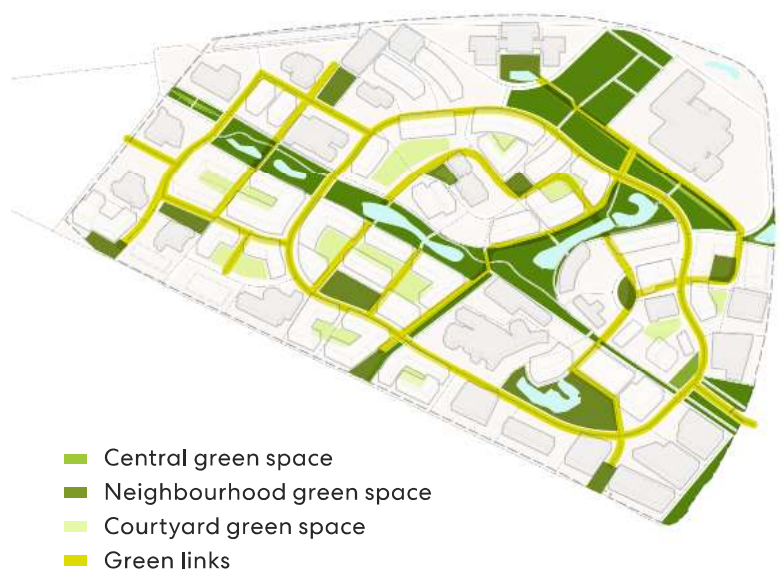
Stunning outdoor spaces

Enhancing the parkland character of the campus

- transformation of surface car parking into green, open spaces
- extension of Central Park to the west into Phase 6 and south to the Guided Busway at Central Plaza
- additional water features including new lake, fountains and transformation of the first public drain into the Science Park Brook
- new courtyards and squares where members can work, relax and socialise
- new garden zones e.g. hammock grove, outdoor meeting rooms, daffodil walk, orchard
- extended network of connected primary and secondary footpaths
- social track for walking and running with outdoor fitness stations
- new path or new surface on existing path through Central Park prioritised for pedestrians
- new lakeside footpaths in Central Park expansion
- paths or board-walks alongside The Brook
- replacement of some of the mown lawns with meadows to encourage wild life
- innovative public art
- new digital signage and way finding



Photo credit: John Murray



Connected network of Green

More than just a workplace

Amenities & services for all budgets and tastes

- new social hub comprising:
 - state-of-the-art gym
 - pub
 - restaurant
 - conference centre
 - retail units and pop-up shops
 - transport hub
 - recycling centre
 - fixed and mobile catering & services in new neighbourhood courtyards
 - permanent location for foodPark
 - outdoor pavillion for activities such as park-wide choir & prayer facility
 - relocation of nursery to social hub



Artist impression of the proposed Social Hub
(Source: Aukett Swanke)

Secure environment

Prioritising safety

- adoption of innovative, unobtrusive, sustainable lighting systems
- functional lighting throughout Central Park and main roads
- feature lighting in neighbourhood centres and along footpath network
- cycle lane round the ring road and gateways
- raised tables along ring road
- extension of CCTV through Central Park
- sensor and digital signage to control speeding
- consistent signage across the Park while also allowing individual company identity and brand



Space to succeed

Affordable, energy-efficient buildings that are fit-for-purpose for science-based businesses at all stages of growth

Trinity College is committed to providing property for businesses that share our vision “A better world for everyone” i.e. companies working in healthcare, environmental protection, communications, education and entertainment as well as business performance.

The consented planning for the Cambridge Science Park is restricted to research & development with ancillary services.

The Park’s property offer includes laboratories, workshops, offices and small-scale production facilities. Companies at all stages of growth are accommodated – from start-up and scale-ups to expansions and established businesses. We also offer flexible rental terms – from tenancies-at-will to long leases depending on the needs of individual companies.

State-of-the-art buildings in a parkland setting

Integrating the built and natural environments

- network of distinct, connected neighbourhoods each with a unique identity yet open and welcoming to everyone
- expansion of overall floor space by densification of plots and increasing height of some buildings up to 8 storeys
- strategically located landmark buildings providing distinctive gateways into the Park, identifiable focal points for wayfinding, and access to the eastern section of the new North Cambridge Innovation District
- re-alignment of frontage of buildings on the southern section to take advantage of the Guided Busway
- clustering buildings in neighbourhoods around lakes, streets, squares and plazas
- adoption of highest telecommunication connectivity standard at the time across the whole Park

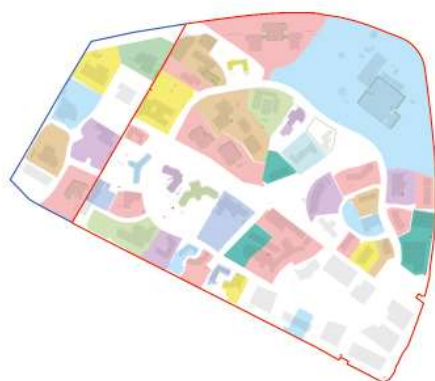


Artist Impression of future building at Plot 420 fronting onto the Guided Busway near King's Hedges Road and Cambridge Regional College.

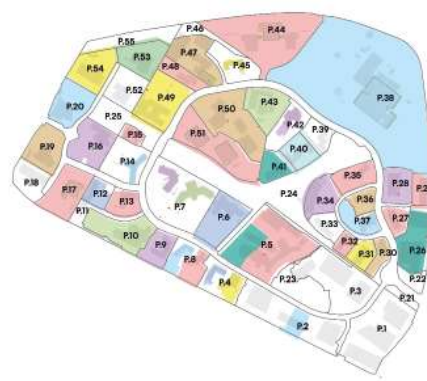
Transparent framework for future development

Enabling development within the 2050 Vision

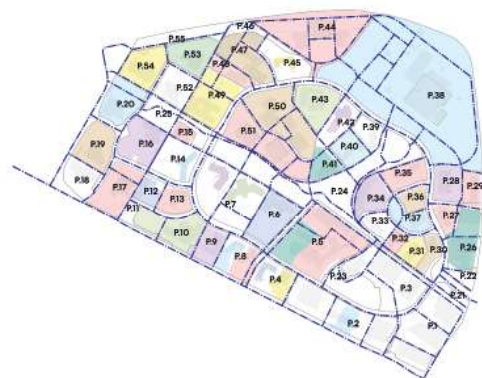
- new overall logic to the street, block formation and buildings
- tool to enable local planning authority to assess individual planning applications within the context of the wider park
- framework to help inform the development of the Park in the context of the Area Action Plan for North-East Cambridge
- framework to enable development in a manner consistent with the 2050 Vision



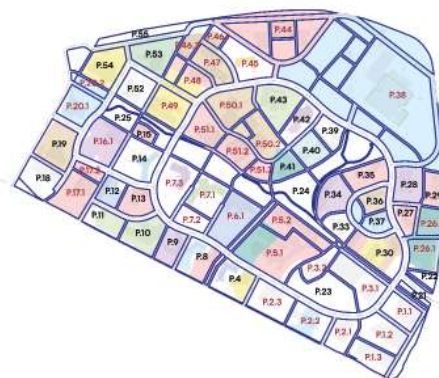
Step 1-Existing land and lease condition



Step 2-Unified plot numbering system for the whole Park



Step 3-Connectivity at the centre of the design



Step 4-New plot framework based on connectivity structure

Unrivalled business community

More than just property

- co-location of professional firms into new zone in the Social Hub providing members with a one stop shop for services such as insurance, banking, legal, financial and travel
- 100% participation by member companies in Special Interest Groups e.g. human resources, facilities management, transport, executive assistants, marketing & communications
- at least 75% of members use the park-wide community app
- expansion of the current range of events and programmes
- relocation of Park management office to the social hub providing members with easier access to the management team



(Source: Tech Nation)

**Positive impact
on the lives of
everyone in our
neighbourhood**

Creating opportunity for all

- more open and welcoming to the public
- expansion of current Corporate Social Responsibility and STEM Ambassador programmes
- closer relationships with families in our neighbourhood
- disadvantaged children and adults in Arbury and King's Hedges benefit from our activities
- increased local participation in the Park's activities and employment
- development of Cambridge Science Park North
- closer relationship with Cambridge Regional College



Cambridge Science Park Buy-a-Book scheme for the Grove Primary School

Net positive environmental impact

Embedding sustainability in everything we do

- achieve net zero carbon in advance of the local and national 2050 target
- zero waste at end of life
- 0.5kL/m²/year water consumption in buildings
- 65% reduction in use of potable water across the Park relative to 2021 baseline
- biodiversity net gain



Sustainability framework

Developed by Hilson Moran

		Phase H1: 0–5 years year 2020 to 2025	
RESOURCES			
WATER	... Management	Commission infiltration survey, Flood Risk Assessment, SUDS Strategy; Ensure that surface water runoff is not worsened by proposed developments and prevent watercourse pollution	
	... Consumption	Reduce water consumption by 25%; Install water meters, leak detection systems and water efficient equipment; Monitor, record and report water consumption during construction	
	... to Energy	Consider energy recovery and storage opportunities from the water cycle	
MATERIALS & WASTE	Materials	All timber legally harvested and traded; Reduce projects' environmental life cycle impacts (buildings and hard landscaping, 4 BREEAM credits); Commission a sustainable procurement plan; Design for robustness; Optimise material use; Life cycle costing and service life planning.	Reduce project
	Waste	Construction resource management plan; Recycled and secondary aggregates; Space for waste segregation; Show area or agreed floor and ceiling finishes; Climate change adaptation; Building adaptability	Design for de
	BIM	3D Building Information Modelling for all construction projects	4D and 5D
FUEL	Fossil fuel alternatives	Whole life feasibility study for energy recovery and storage, and renewable energy generation; Energy implementation strategy	Update fea
BUILDINGS & ENERGY			
LOW ENERGY DEMAND	Passive design	Heating and cooling demand < Building Regulations Notional Building performance; Minimum BREEAM EPR for 'Excellent' rating; Passive design measures prioritised and reported	Minimu
LOW ENERGY CONSUMPTION	Regulated energy efficiency	Regulated energy performance < Building Regulations Notional Building performance; Minimum BREEAM EPR for 'Excellent' rating; Sub energy metering; Tenant Building User Guide; Tenant energy reporting and benchmarking	Minimum BR
	Unregulated energy efficiency	Meaningful reduction in unregulated loads; Energy efficient design and specification of lifts; Energy efficiency improvements of tenant specialist spaces and equipment; Indirect greenhouse gas emissions reduction from refrigerant systems; Energy efficient external lighting	
LOW & ZERO CARBON TECHNOLOGY	On-site energy generation	LZC feasibility study; Regulated carbon dioxide emissions reduction from on-site LZC technology	Consider innov
INFRASTRUCTURE (Energy, Water, Waste, Data)			
STORAGE	Energy, Waste, Water, Data	Feasibility study to investigate on-site energy storage opportunities; Introduce 5G wireless telecommunications standard in buildings and hotspots; See Resources: Water and Waste for additional actions	Implement ene
TRANSFORMATION		Consider energy recovery opportunities in feasibility study; Initiate conversations with local waste processing facilities for the transformation of recyclable and non-recyclable waste	Engage with ter
DISTRIBUTION		Feasibility study of privatisation of existing HV and LV distribution networks; Tenant satisfaction survey re data services available across the Park; Understand whether site mobile network operators are 5G-ready; Consider intra-site dedicated fibre-ring	Update feasilb of water and w

Phase H2: 6–15 years year 2025 to 2040	Phase H3: 16–40 years year 2033 to 2057
Implement SUDS Strategy; Improve permeability of hard surfaces	Complete implementation of site-wide SUDS Strategy
Reduce water consumption by 50%	Reduce water consumption by 65%
Implement energy recovery and storage opportunities from the water cycle	Maximise energy recovery and storage opportunities from the water cycle
Reduce projects' environmental life cycle impacts (buildings and hard landscaping, 5 BREEAM credits); Apply life cycle costing and service life planning recommendations	Reduce projects' environmental life cycle impacts (buildings and hard landscaping, 6 BREEAM credits)
Implement waste management strategy; Investigate opportunities for material recovery at end of life; See <i>Infrastructure: Transformation</i>	Data tracking on incoming/outgoing material and waste - net zero waste micro-economy
Implement Building Information Modelling for all construction projects; Embodied carbon assessment	6D and 7D Building Information Modelling for all construction projects; Data sharing from BIM model with stakeholders
Update feasibility study; Implement energy recovery and storage, and renewable energy generation; Investigate transition to energy from hydrogen	Update feasibility study; Complete energy recovery and storage, and renewable energy generation
Achieve minimum BREEAM EPR for 'Outstanding' rating; Natural ventilation or mixed mode ventilation	Minimum 5% energy demand reduction and/or CO ₂ emissions reduction through passive design measures; Comfort cooling as last resort through feasibility study
Achieve BREEAM EPR for 'Outstanding' rating; Building services optioneering and innovations review; Consider smart metering technology	Revisit building services optioneering and innovations review and implement appropriate technologies; Install smart metering across site
Review feasibility of applying WELL Building Standard (or equiv.)	Achieve a WELL Building Standard certificate (or equiv.) for all new buildings and fit-outs
Install innovative LZC technologies; At least 10% regulated carbon dioxide emissions reduction from on-site LZC technology	Install innovative LZC technologies; At least 15% regulated carbon dioxide emissions reduction from on-site LZC technology
Expand energy storage capabilities across the Park; Upgrade to highest telecommunication connectivity standard at the time across the whole Park	Expand energy storage capacity across the site; Maintain highest standard of telecommunication connectivity across the Park
Enter into waste transformation agreements with local waste processing centres; Develop agreements with local waste processing centres	Enter into waste transformation agreements with local waste processing services to establish a net zero waste micro-economy across the Park (See <i>Resources: Waste</i>)
Conduct feasibility study; Assess viability of centralised vacuum waste system; Whole life cost analysis of wastewater distribution, considering operation outside current national water services; Consider implementation of private wire and landlord telecommunications network	Consider implementation of fully integrated water, wastewater, solid waste and energy networked systems across the Park; Virtual reality hub

(Source: Hilson Moran)

Cambridge Science Park: 2050 Vision - Concept Plan



CAPACITY PARKING



