MIT University Park

3.7.14 University Park is an urban address at the University's doorstep, focusing on commercial floor space and high quality residential units. The Park provides an option for companies growing out of MIT's incubators.

3.7.15 Property developers Forest City started developing the site in the 1980s, as a relatively dense yet campus style development, operating immediately alongside and indeed mostly surrounded by MIT's principal campus.

3.7.16 MIT University works hard to create an entrepreneurial culture and collaborate with business on its own campus, but for those businesses wanting to lease dedicated floor space they are encouraged to look at University Park and the other commercial offerings in the vicinity – delivered by MIT's own investment arm and a number of other landlords.

3.7.17 The Forest City masterplan includes limited refurbishment of old buildings but is principally a modern environment that includes 210,000m² of development and approximately 12,000m² of open space that is intensively used by the community at the location. There are no known plans for further intensification of use or expansion by Forest City.

Chiswick Park

3.7.18 This example is included as a high quality and highly successful commercial environment, promoting an 'enjoy work' approach with extensive on-site social activities.

3.7.19 The site is highly accessible (M4 / bus / train / air) and 75% of staff arrive by public transport.

3.7.20 The site is masterplanned around well designed and utilised central pedestrian public space or 'inner garden'. This is a car free environment, with vehicle access and servicing restricted to site perimeter with discreet undercroft car parking. The total built area is approximately 180,000m2.

3.7.21 The site is characterised by very active on site management and maintenance teams, which organise extensive occupier events programme – seasonal, educational and leisure activities.

3.7.22 The estimated population of the site is 12,000 and the site provides extensive on site leisure and catering facilities but also incentivises them to use local off site amenities.

Interim uses and soft infrastructure

3.7.23 Examples for interim uses and soft infrastructure (i.e. active management of open space and shared facilities) have been drawn from the six case studies and Harvard University open space study.

3.7.24 In a number of examples, universities or developers support campus life through the work of dedicated teams.

3.7.25 MIT's Centre for Art, Science & Technology (CAST) intends to promote within MIT a culture where the arts, science and technology interrelate, mutually informing modes of exploration and knowledge. CAST promotes and supports artists' residencies, public performances, exhibitions, installations and a biennial symposium, using the spaces and facilities within the Campus. One of their most popular events is FAST, a Festival of Art, Science & Technology which includes a variety of performances, debates and installations which appear throughout the MIT campus, adding playfulness and animation to the different open spaces.

3.7.26 Chiswick Park owes part of its success to active on-site management and maintenance teams. Their programme includes a range of seasonal educational and leisure activities which bring activity to the excellent public realm and outdoor spaces and promote social mixing between companies.

3.7.27 Offices from across Harvard University contribute to the collaborative programming and successful implementation of events and activities. One of the key common spaces in focus is the Plaza, a recently renovated large open space with a programme of activities including:

- markets such as: weekly food market, open market, "Harvard Stuff Sale": beginning of the year sale of used items donated at the end of the year, sponsored by Harvard Recycling and Harvard Habitat for Humanity, daily food trucks;
- performances: the Office is looking for talented actors, musicians, singers, poets, dancers, jugglers, magicians, performance artists or entertainers (students, faculty or staff) to perform for the community;
- sports activities: ice rink in winter season, oversized chess set, table tennis, work out stations;
- self service cycle repair station.

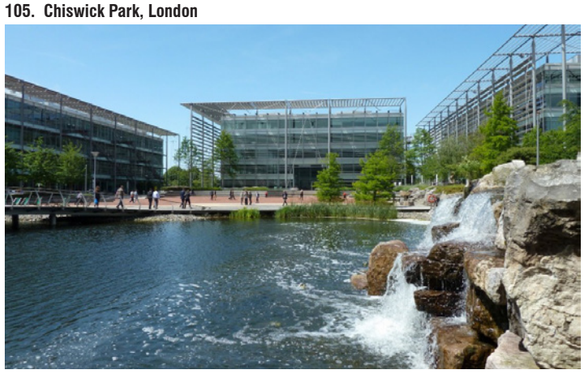
Key lessons

3.7.28 Key lessons from case study masterplans which have informed strategy for development at West Cambridge include:

- **Relationship between Academic and Commercial** has a significant impact on the character and culture of a campus - appropriate proximity and sharing of facilities provides benefits to both communities and helps viability
- **Knowledge transfer (exchange of knowledge between organisations):** beyond planning for businesses to be located on the site it is important that facilities and support are delivered to encourage research and R&D growth through collaboration
- **Scale** of commercial space points to importance of critical mass to grow a reputation of a knowledge cluster
- **Connectivity** is important both to attract businesses and to reinforce unity between the academic sites
- **Evolution from car based environment** is required to create conditions for collaboration
- **Open space:** quality and success rely on activities that happen on and around them
- **Shared social spaces** are necessary to provide necessary gathering space and space for interaction
- **Soft infrastructure:** a number of sites have dedicated teams in charge of management and events

104. MIT University Park

105. Chiswick Park, London



106. Harvard Plaza

Case studies - buildings for academic or commercial research

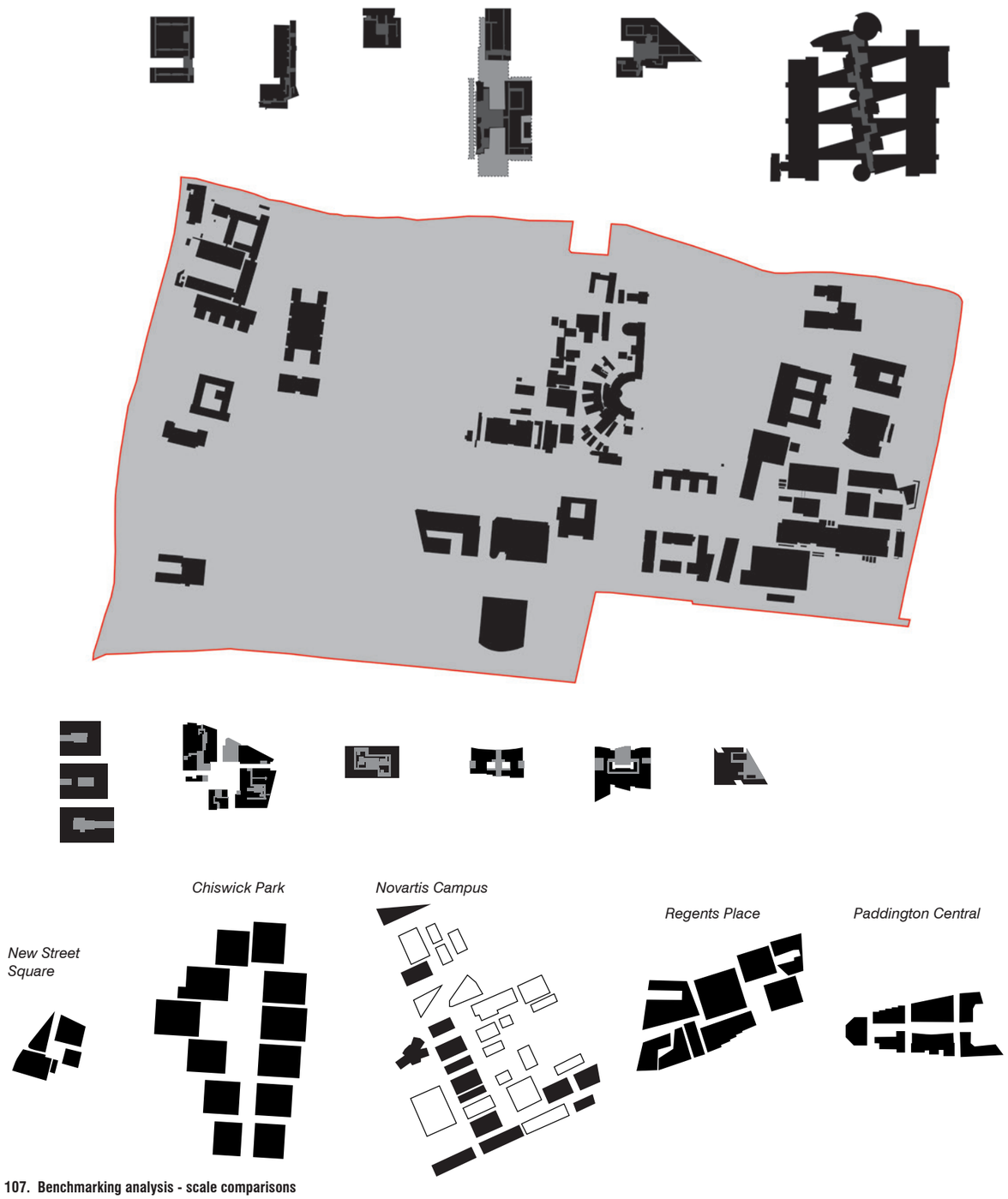
3.7.29 The team has analysed a range of academic and commercial developments, varying in size and complexity to illustrate challenges and opportunities brought by specific aspects of research buildings into their context, as well as to illustrate some exemplary organisational responses.

3.7.30 The current and future users' requirements for the site demand top quality academic and commercial research spaces which need to:

- be efficient and flexible for future change;
- provide spaces to facilitate interaction and exchange of ideas;
- provide spaces suitable for a range of research specific activities, many with onerous technical and health and safety requirements;
- be diverse to provide an 'ecosystem' of work spaces and respond to different types of demand.

3.7.31 Precedents for buildings which have informed the masterplan include:

- different types of academic buildings - related to size and complexity, they vary from small and compact to extra large complexes with internalised connective elements;
- types of commercial research buildings and districts - related to building floorplates and sizes and arrangements of buildings and open spaces;
- systems of connecting/circulation spaces within the buildings;
- social facilities, including catering facilities, teaching and meeting spaces, libraries and other emerging spaces for collaboration and learning;
- predominant types of spaces and their implications on the masterplan - floorplate size and height, daylight, safety, technical and servicing requirements, etc.



107. Benchmarking analysis - scale comparisons

Configuration and relationship to open space

3.7.32 Science Faculty Building in Amsterdam Science Park is an ensemble of three buildings with an area of approximately 65,000m2. The buildings are joined by a circulation loop and in places raised on pilotis, forming two semi enclosed yards with entrance and key social spaces in between. Such an arrangement creates protected and well scaled open spaces while providing dry and warm connections within the building.

3.7.33 Campus for pharmaceutical company Novartis, in Basel, is developed on a former factory site and keeps its main urban structure in the new development. The company has opted for a masterplan of separate buildings in which different units are located, utilising network of open spaces and buildings with social amenities to connect the campus. Open spaces consist of pedestrian streets and squares, creating a tight, intimate environment easy to navigate.

108. Science Faculty Building, Amsterdam

109. Novartis Campus Basel: well proportioned open spaces

Main connecting spaces

3.7.34 Concepts of transparency and connectivity are key for the new MIT Media Lab building in Cambridge, MA. The working spaces are arranged around two connected atriums leading to a rooftop conference suite with a terrace and views of Boston. This arrangement provides passing insight into research and brings ample daylight into the working spaces. Stairs are visible and clearly located to encourage movement.

3.7.35 Science Faculty Building at Amsterdam uses difference in floor to ceiling height between laboratories and write-up office spaces to create split level corridors with excellent visual connections across.

110. MIT Media Lab

111. Science Faculty Building, Amsterdam

Predominant types of working spaces

3.7.36 Buildings for research in physical sciences and technology consist of several predominant types of working spaces: workshops (large or medium floorplate with extra floor to ceiling height), dry or wet laboratories and clean rooms, offices and write up spaces for individual work, and meeting and informal spaces for collaborative work.

3.7.37 Large clear span space of the IMC Engineering workshop at the University of Warwick allows for easy and safe movement of people and equipment and is flexible to accommodate layout changes which various projects require. Large spaces lit from above can also be subdivided for better containment of noise and dust.

3.7.38 Small office spaces at the Science Faculty Building in Amsterdam are laid out for individuals to groups of 3 to 6, and intended for concentrated work. Glass partitions create a sense of openness and communication while reducing noise from circulation spaces.

112. Engineering Workshop, University of Warwick

113. Science Faculty Building, Amsterdam

Meeting and social spaces

3.7.39 In all of the precedents, social spaces are usually provided immediately alongside connecting spaces, creating an exaggerated circulation network tying the various programmes together.

3.7.40 The Science Faculty building in Amsterdam has catering facilities addressing the main loop. The seating areas are designed in ways that can also accommodate small meetings and group work.

3.7.41 It is also ensured that social facilities can spill out into open space, animate it and create inviting environments for external users. Such aspects are important for collaboration and sense of community.

114. Science Faculty Building, Amsterdam

115. Science Faculty Building, Amsterdam

Key lessons

3.7.42 Key lessons which have informed the masterplan:

- Accommodating uses within large buildings or in closely arranged buildings promotes **interaction between users;**
- **Open spaces** should be well defined by buildings and animated by **active** uses where possible;
- Internal circulation systems of large buildings are best arranged as a **highly active network of connecting spaces**, animated by locating catering and other shared spaces alongside;
- The mix and relationship between **key types of spaces** has a strong impact on building typology (size, floorplates, height);
- Relationship between **different types of working spaces** (offices, labs etc.) has a significant impact on users' experience and ease of daily use of the building;
- **Servicing access requirements and outdoor service yards** can limit activity along some parts of the building/block perimeter, for reasons of safety and access restrictions;
- It is necessary to create a spectrum of 'quiet to noisy' spaces for varieties of learning environments, from individual focused to group collaborative work;
- There needs to be **a hierarchy of social and shared spaces**, varying in size and catchment; from central canteens to small tea rooms nested within work spaces

Case studies - Cambridge landscapes and spaces

3.7.43 The selected precedents for scale and character of open spaces are taken from Cambridge sites. These examples are indicative of public realm environments that draw inspiration from the local context and create links back to the city.

3.7.44 The following precedents are selected and inform the masterplan in terms of character, design attributes, connectivity, scale and amount of open space required to support different activities.

3.7.45 To create a unified but distinct landscape that's relevant to Cambridge, a series of attributes have been identified from these precedents, related to landscape types identified in the existing wider context: agrarian, transitional and structured.

116. The existing West Cambridge site - to scale

Coton Footpath & Adams Road, Cambridge

Agrarian landscape

This is an example of agrarian landscape. It includes some remnants of agricultural landscape such as boundaries, markers such as trees, hedges and ditches that define the network of open spaces and routes.

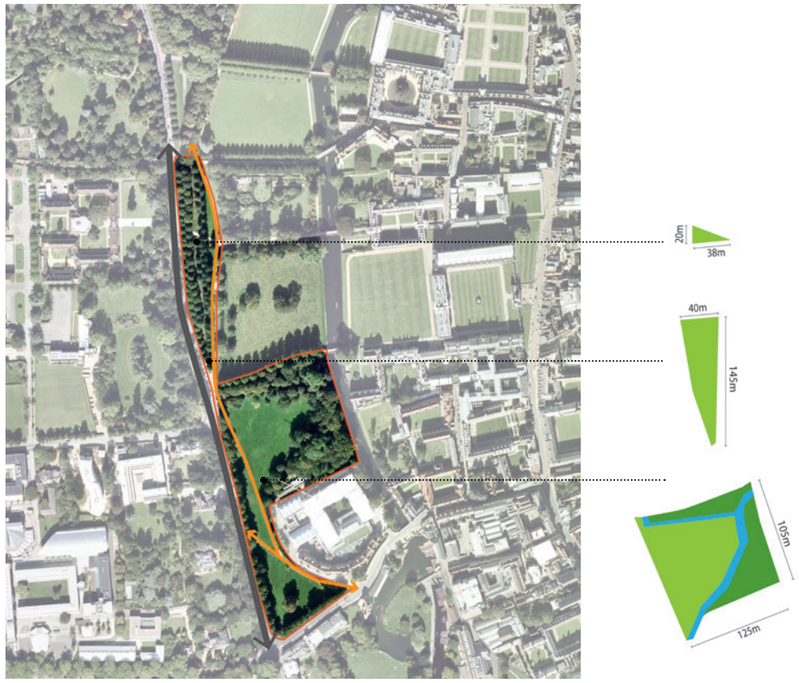
Attributes:

- *Informal mixed species rich hedgerows and specimen trees within Hedgerows;*
- *expanse of biodiverse open grasslands and species rich meadows.*

117. Adams Road

118. Southern Edge of the site and Coton Footpath

Queen's Road, Cambridge



Transitional landscape

- *Connecting space accommodates pedestrian and cycle routes within a landscaped area, as an alternative to being next to the road;*
- *curved paths with ornamental tree and shrub planting widen and narrow with usable and 'borrowed' (visible but inaccessible) landscape;*
- *open expanses of lawn for informal activities, rest and socialising;*
- *punctuated by large tree planting.*

Christ's Pieces, Cambridge

Structured landscape

- *Criss-crossed paths, form multiple open lawn areas and nodes for encounters;*
- *In the large area, the buildings do not communicate across the open space - they are distant and detached;*
- *In the smaller area, the space feels more enclosed and a neighbourly relationship between buildings is maintained;*
- *Large trees subdivide the space and create smaller, more defined areas;*
- *Sports pitches are provided in the corner with least people movement;*
- *Desire lines are uninterrupted and areas to stop and rest are established at nodes;*
- *Open areas are provided at different sizes to facility moderately large as well as small, intimate activities.*

119. Queens Road, Cambridge

120. Christ's Pieces, Cambridge

Case studies - An academic public realm

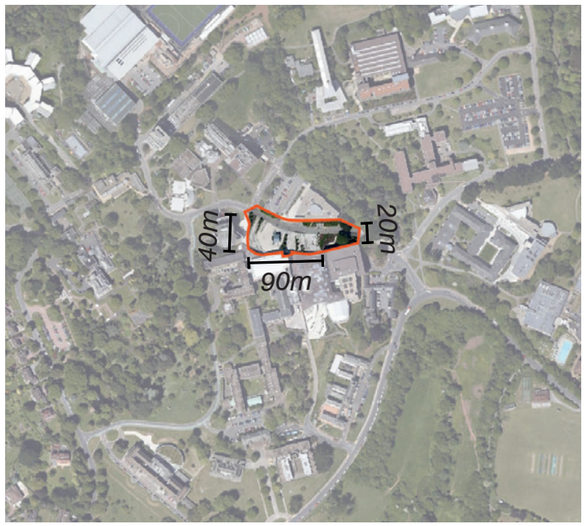
3.7.46 The selected precedents for scale and type of open spaces originate from the masterplanning case studies and from additional relevant examples of public realm. In the main, these examples speak of a particular type of public realm that serves to support academic activity, an environment that helps to attract students and staff and creates links back to the city spaces and streets - an academic public realm.

3.7.47 The examples were selected for their relevance to the use of open spaces and public realm to draw a campus together and promote activity and interaction. Other precedents are informative by showing the potential for high quality open space to transform the identity of an area.

3.7.48 The selected precedents inform the masterplan in terms of character and content, amount of open space required to support activity and support decisions on the scale and density of development, amount of enclosure and range of activities located within the public realm.

121. The existing West Cambridge site - to scale

Exeter University, Exeter

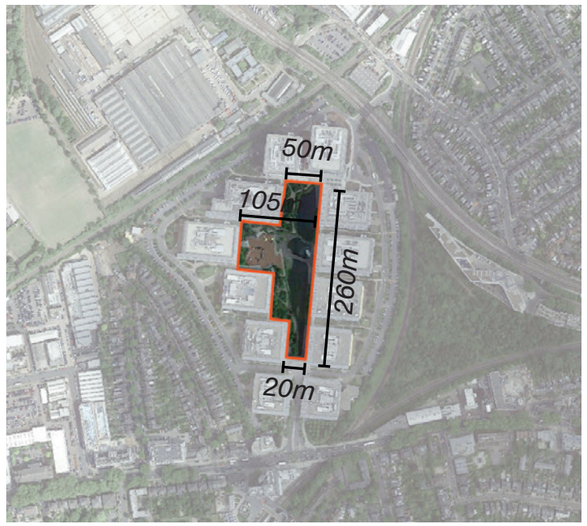


The Forum open space at Exeter University connects key social facilities of the University: Main Library, Theatre, Great Hall and the recently completed multi purpose Forum building. The Forum steps following the natural terrain of the campus and leads to the wooded park area.

The Forum building joined previously detached/unrelated buildings to provide a defining south edge to the Forum. The Forum now balances a sense of enclosure and a sense of openness, with consistent 2-3 storey frontages and 4-5 storey accent buildings.

122. Exeter University

Chiswick Park, London

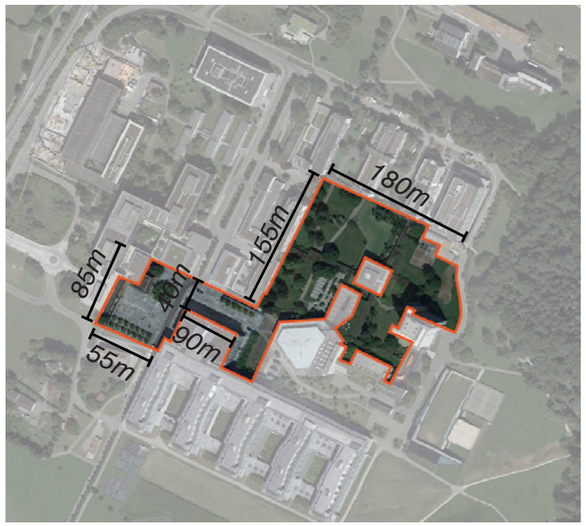


The central space at Chiswick Park is a generously landscaped area with a Lake and a multi-purpose outdoor events space.

It is useful to look at this space as a successful precedent for a system of linked spaces that might be possible at the West and East Forums. The space at Chiswick Park is larger in size but enclosed, overlooked and defined from all sides by development. The space is the central visual and active focus for the buildings and their occupants. The Lake, although not a usable space, provides a relaxing setting and spatial focus. The space provides the development with a unique, enjoyable identity.

123. Chiswick Park, London

ETH Zurich, Honggerberg



Plaza at ETH Honggerberg is constituted as a sequence of connected spaces which traverse a significant difference in levels. Two of the spaces are hardscapes, leading to an upper level and a soft, leafy lawn space.

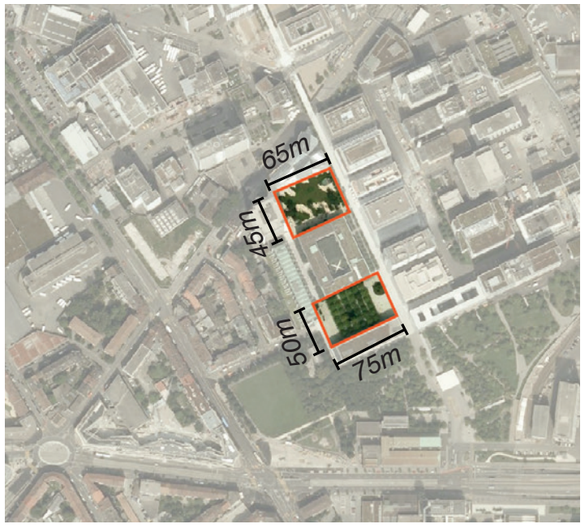
The Plaza is the 'heart' of the site, with old and more recent social buildings such as teaching/conference facilities and catering. The Plaza is also home to various temporary uses; including markets, science and art showcases, events, exhibitions etc.

Sidgwick Site, Cambridge

Sidgwick Site at Cambridge is one of the sites included in the Cambridge density comparison study (Section 3.6.5). With a pleasant density and balance of built form and open space, the development informs both development and public realm at West Cambridge. The buildings range from 3 to 5 storeys and are often raised on pilotis, letting open spaces flow between buildings.

The site contains linked open spaces varying from busy tight hardscapes in the centre to softer, calming courtyards.

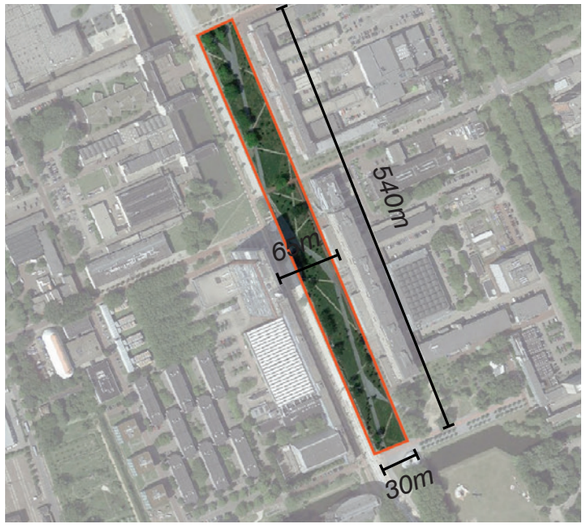
Novartis Campus, Basel



Novartis Campus is arranged on a grid and the open spaces are streets and voids/squares within it.

The campus is arranged in multiple buildings, linked by the open space network. Because of this, squares and streets are car free and in intimate scale.

Mekel Park, Delft



Mekel Park is a former car park and servicing area which has been transformed into a park and a connecting spine for the campus.

The Park accommodates cycle routes and paths zig-zaging and linking the buildings, as well as a space for a tram line. This geometry creates lawns where people can meet and relax.

124. ETH Zurich, Honggerberg

125. Sidgwick Site, Cambridge

126. Novartis Campus, Basel

127. Mekel Park, TU Delft

3.8. Development context - conclusions

Opportunities for a change in approach

3.8.1 West Cambridge is well located in comparison to other economic clusters in Cambridge, being close to the city centre and other University sites. In addition it has an advantage in terms of evolving in conjunction with NWCD, located immediately to the north. As NWCD is developed, the residential and University population in the area will increase and will support additional local facilities and social activity.

3.8.2 The changing context in the west of the city provides an opportunity to change the general perception of West Cambridge - as an uneventful and remote site - to intensify the use and transform the site into an integral part of the City with a stronger sense of place. However, this will require a step change in approach to development and management of the site, including access, quality of environment and social facilities.

Connectivity

3.8.3 The site is well located in strategic terms for cars/ vehicular connections but there is a lack of sustainable transport options. The North West Cambridge Development will have an impact on this by improving public transport services, an extended pedestrian and cycle network, new highway connections and local junction enhancements.

3.8.4 By offering new quality facilities locally – shops, leisure facilities, primary education and a hotel - the uses at NWCD will encourage movements across Madingley Road, from West Cambridge to the new local centre and create potential for relating these community uses to academic uses at Madingley Rise.

3.8.5 The Coton Footpath is an important and strong link to the City Centre. However, the West Cambridge site does not have an adequate relationship with the Footpath: the arrival points are convoluted, hidden, and in many places along the southern frontage there are no immediate overlooking uses. Furthermore, the microclimate at the exposed southern edge can be inhospitable, with frequent strong winds.

3.8.6 A new approach to access at West Cambridge will need to address these opportunities and challenges by adopting public transport and green travel plan initiatives, extending the public transport, cycle and pedestrian networks into and through the site, and by providing a more pleasant walking and cycling environment.

3.8.7 In addition to the public transport improvements which are part of NWCD, the new West Cambridge transport strategy will also need to look into accommodating public transport routes which are part of City Deal, the key programme for strategic city wide transport improvements.

3.8.8 As the populations of both North West and West Cambridge grow, it is expected that public transport will develop a better user base and become economically more sustainable, thus allowing for a long term high quality service and a gradual reduction in car dependence.

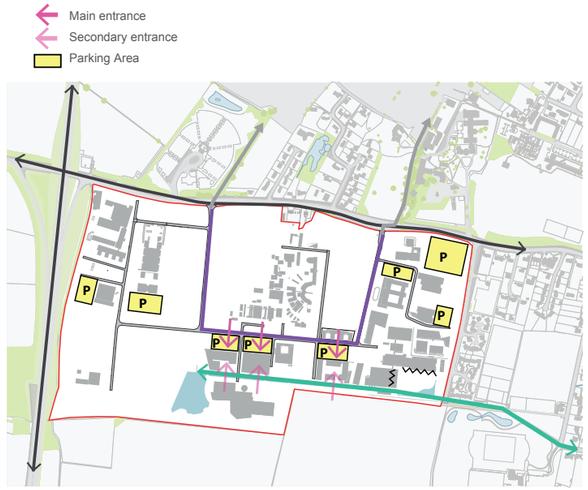
Character and built form

3.8.9 The site is characterised by a piecemeal, building-by-building development, and many of the original masterplan ideas which were aimed at creating overall coherence have, over the course of development, been substituted by on-plot solutions. Much of this is due to car-dependence: individual buildings and clusters of buildings are fronted and surrounded by car parking leaving little or no opportunity for interaction and activity in the public realm. Apart from resulting in poor overall character, such piecemeal development with abundant surface parking does not make the best use of the land.

3.8.10 Although there are large areas of undeveloped or open land currently on site, these are not accessible spaces and neither staff, students nor the surrounding community can use them. The existing accessible open spaces are either insufficiently defined by built form (e.g. East and West Forums and the Lake) or overlooked by backs and servicing areas (the Pond). As a result, even these (accessible) open spaces are not activated by any social facilities and are only sporadically used.

128. West Cambridge site: existing and buildings under construction, 2016

129. West Cambridge site: existing landscape features



130. Current surface car parking

3.8.11 Unfortunately, some of the 1999 masterplan guidelines, such as separation of car and pedestrian traffic and car oriented commercial research development, are not supportive of a pedestrian environment and will need to be revised. This is most evident in the southern academic core area, where prioritisation of landscape facing the south frontage for entrances has led to a lack of definition to the main vehicular loop in the north. The buildings are set back from the main roads and accessed via parking lots.

3.8.12 The views out of the site are strong. The existing masterplan already celebrates views to the south and emphasises the southern frontage to the open agricultural land. With the new masterplan, there will be an opportunity to give due importance to the views back to city from within the site, which are more sparse and subtle, but which could have a positive impact on identity and a sense of proximity/ unity with the City.

3.8.13 In addition, the new masterplan presents the opportunity to celebrate and emphasise the prominence of the Grade II* Listed Schlumberger Research Building. A new view corridor can be established to this landmark building and a new sympathetic setting formed.

3.8.14 Public transport and green travel plan initiatives, together with the proposed additional development and inclusion of the entire site into the new masterplan could help reverse this tendency of piecemeal character and create conditions for delivery of the pedestrian environment originally envisaged. It will be possible to address the issue of uneven density and lack of coherence by identifying a series of walkable and pedestrian scale character areas, unified by a site-wide public realm network. Such approach will also provide an opportunity for landscape and public realm to be more prominent in the perception of the site: as a series of identifiable open spaces users can relate to.

3.8.15 Like NWCD, the West Cambridge site has the potential to form a robust and defined edge to the city towards the M11 motorway and the countryside beyond.

Community

3.8.16 The site currently provides a workplace to academic and commercial staff, students and also a home for residents in just over 200 units. Also, there is a nursery and the University Sports Centre which are used by the wider community. Nearby uses include residential developments, academic uses and, in future, the new retail and community uses at NWCD. Currently, the site does not provide retail and other community uses, and, although there are catering facilities, they are hidden within buildings.

3.8.17 Although the site at present does have some catering facilities, the lack of social facilities (including catering) is often identified as the most negative element in perception of the West Cambridge site. The reason is that the investment in shared facilities, social amenity space and the public realm has so far mostly taken place to serve individual plots and the needs of each development, rather than the needs of the site as a whole.

3.8.18 The academic buildings in the east and south of the site are high quality research facilities, built to high standards, well utilised and well reviewed by their occupiers. This is particularly the case with Computer Laboratory (William Gates building) and Institute for Manufacturing. In the east, the Schlumberger Research building is also an exemplary workspace which brings together workshop, labs, offices and social spaces under one iconic roof, a city-scale landmark. The occupiers are satisfied and proud of their buildings.

3.8.19 However, the challenge these and other buildings face is how to integrate with other buildings. In an environment which lacks critical mass and footfall, they fail to meet and together define a shared open space. They are mostly separated by parking lots and the large impermeable paddocks of the Veterinary School.

3.8.20 The commercial partners have been isolated on the far west side of the site, beyond the paddocks, the undeveloped plots and car parking areas. There has been little interaction with the academic side of the site.

131. Large existing occupiers

3.8.21 As the NWCD progresses, it is expected that the new residential, retail and community uses will generate synergies between West Cambridge and NWCD, as well as offer amenities to the wider area.

3.8.22 The combination of development proposals within the west of the City will offer the existing residents benefits of improved transport and amenities. However, the quality of current residential areas must be considered and protected.

3.8.23 It is now understood that the delivery of shared facilities and public realm open space will be necessary for success of any future commercial development and the site as a whole in order to improve the amenity for users, and promote interaction and collaboration between different site users.

3.8.24 With the completion of road infrastructure and the public realm at West Forum, the west side of the site will be fully serviced, allowing the immediate creation of a western activity node, which could help bridge the distance between the commercial research partners and the academic cluster. At this point the Schlumberger Research building can fully realize its role as a site-wide landmark. This can be a beginning of a new skyline, with new accents distributed at key open spaces.

Climate

3.8.25 The already mentioned car dependency and lack of critical mass to support sustainable transport are key challenges in making the site more sustainable.

3.8.26 At present the share of cycling as a mode of transport is satisfactory amongst academic staff and for trips to the City Centre but more needs to be done to provide an alternative sustainable solution to car users commuting from more distant locations.

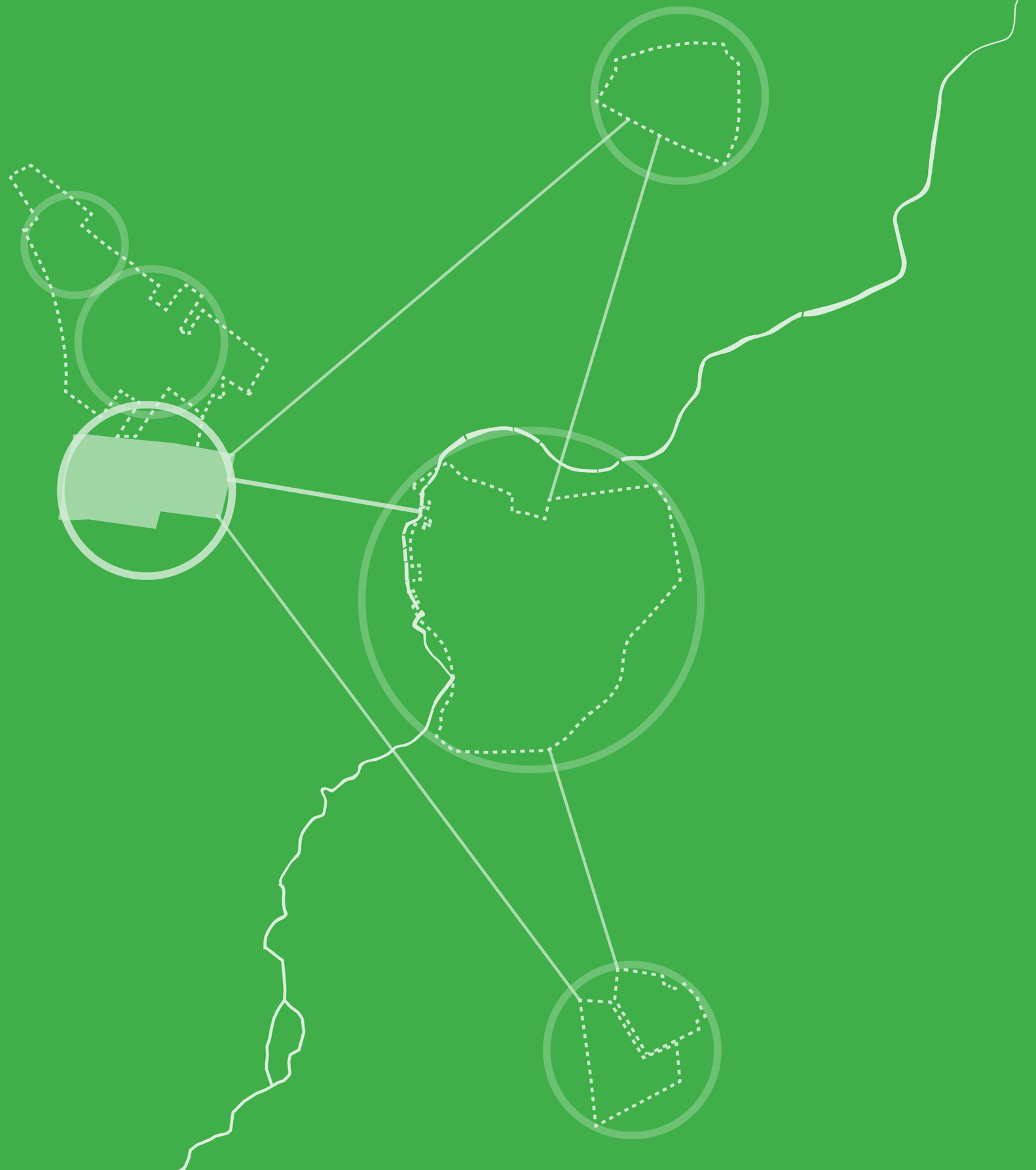
3.8.27 The existing blue infrastructure – Canal side and the Western Lake – forms a good drainage system which can be reinforced to suit the needs of the new developments.

3.8.28 The site has a high degree of open and undeveloped areas but the quality of landscape varies. The majority (almost the whole central area of the site) is not accessible and is fenced off for the use of the Veterinary School. The best quality pocket landscapes are private or used by a limited number of occupiers and are often in an awkward relationship with the surrounding built form: the south-eastern pond and the Veterinary School inner area with tall trees are both faced by service yards and interrupted by service access. The Schlumberger Research building has a courtyard which is beyond their security line and British Antarctic Survey has a landscaped area in the back of their plot.

3.8.29 There are opportunities to transform the site into a more sustainable place in line with the University's aspirations. With increased density and intensity of development, site wide strategies such as energy, servicing, recycling etc. could be developed in a deliverable and economically sustainable ways.

3.8.30 Relocation of the Veterinary School and redevelopment of the Cavendish Laboratories will allow for a new public realm and better connectivity across the site.

3.8.31 Increased density will lead to greater population numbers, activity and greater interactions between different types of site users. It will support provision of public realm and social spaces and lead to a better sense of place on the site.



MASTERPLAN DEVELOPMENT PROCESS

A4

A1 University need

A2 University vision

A3 Development context
International, Strategic and Local

A4 Masterplan development process

University response
Design response
Evolution of the proposals

Key issues:

A comprehensive development strategy and flexible framework for development

Sustainability Strategy

Requirements of Current and Future Occupiers

Opportunities for transformation

Evolution of the proposals in response to consultation

A5 Proposed development

4. MASTERPLAN DEVELOPMENT PROCESS

4.1. University response

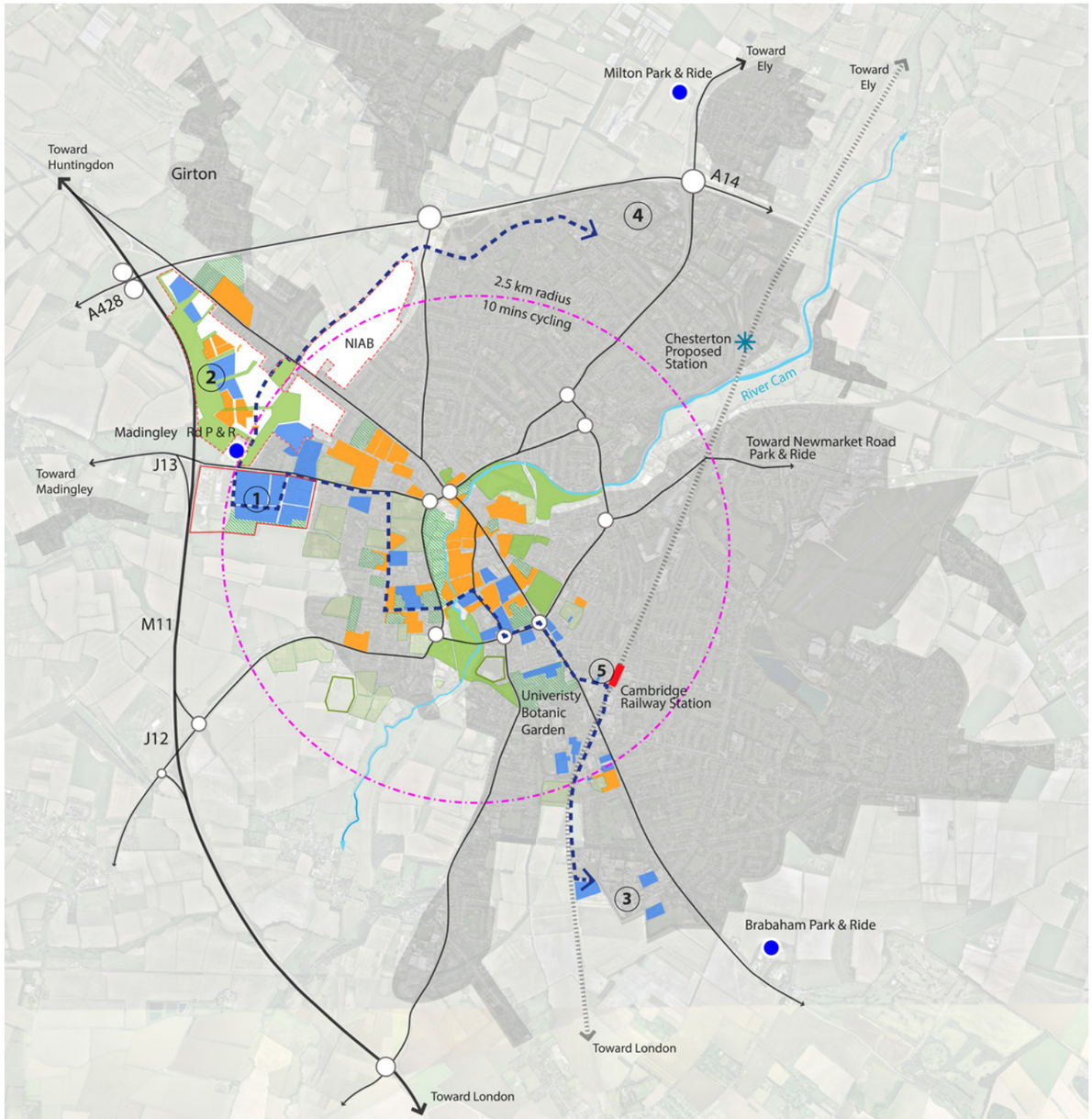
The University's Strategic Brief

4.1.1 In order to maintain global competitiveness, the University needs to secure additional amounts of high quality research space and, in parallel, strengthen its reputation in innovation and collaboration with industry.

4.1.2 Most of the University's sites are already intensively developed. The partially developed 66ha West Cambridge site is one of the two main exceptions to this, the other being the 150ha North West Cambridge Development.

4.1.3 The current presence of occupiers related to physical science and technology and further capacity on the West Cambridge site and the North West Cambridge Development, provide the University with an opportunity to gradually accommodate other related disciplines and establish the West Cambridge campus as a strong academic cluster for physical sciences and technology.

4.1.4 Additional capacity for commercial research space (catering both to start ups and major industry occupiers) is required to transform the West Cambridge site into a commercial cluster of significant scale. Here the University has a unique opportunity to bring the academic and industry research clusters together and promote the site as a campus for exchange of ideas, innovation and collaboration with industry research partners. As the comparison with world competitors indicates, such co-location provides Universities with reputational and financial benefits while creating a resilient employment base for their host cities.



132. Academic sites in city context

3.8.32 The two sites (West Cambridge and North West Cambridge) provide the University with an opportunity to deliver new development in line with the aims and objectives identified in the Estate Strategy:

- to maintain a locational strategy that is consistent with approved Reports and Operating Statements; which includes the clustering of associated University disciplines;
- to provide buildings and spaces with high levels of sustainability;
- to provide buildings and spaces with high levels of design quality;
- to deliver optimum space efficiency in existing and new spaces, including efficiency in the sharing of lecture spaces and catering facilities;
- explore options to accommodate a critical mass of commercial development at the West Cambridge.

KEY

① *West Cambridge*
② *North West Cambridge Development*
③ *Addenbrookes*
④ *Cambridge Science Park*
⑤ *Cambridge CB1*
Existing roads
Railway line
Railway station
Chesterton - proposed station
Orbital bus route
Cycling distance - 10 min. radius
Park & Ride
Academic & Research clusters
Colleges
Under construction
University & Colleges' green spaces
University & Colleges' Sports grounds
Public green space
Cambridge sports facilities

Requirements of current and known future occupiers

4.1.5 The team has drawn from stakeholder engagement, previous experience and selected case studies, to establish understanding of the functional requirements of current and future occupiers, both on a occupier by occupier basis and collectively.

4.1.6 The principles set out at the earliest stages of the process were refined against the high level needs and requirements of key occupiers.

4.1.7 Important lessons have been absorbed in relation to what is required to create and maintain a thriving research environment and how to establish a commercial address, while avoiding perceived conflicts with the independence of academic research and teaching activity.

Stakeholder engagement

4.1.8 Stakeholder engagement included gathering feedback through analysis and interviews with the existing occupiers and prospective future occupiers: These included but were not limited to:

- Cavendish Laboratory (Department leadership and appointed space consultants and the design team). A detailed building brief prepared by the consultants has directly informed the strategic masterplan brief. To date, the masterplanning team has continued to liaise with the Department's appointed architect, Jestico Whiles, to ensure the needs of the Department and the emerging architectural designs are accommodated within the proposed masterplanning framework;
- Department of Engineering (Department leadership and subsequently appointed design team). The masterplanning team has provided an initial assessment of the Department's spatial needs and has provided a design response, which was included in the first version of the Illustrative masterplan (February 2015). With the appointment of Grimshaw Architects to produce an inset masterplan and the design for its first phase (Civil Engineering building, recieved planning approval in Feb 2017), the design has been further refined and informed by closer collaboration of the Grimshaw team with the Department. The current design, included in the updated version of the Illustrative masterplan which is the basis of this planning application, responds to spatial and typological needs of the Department;
- Computer Laboratory (Departmental briefings);
- School of Veterinary Medicine (Department leadership);
- Drop-in sessions for all academic users;
- Entrepreneurship hub (Cambridge Enterprise and ideaSpace, currently located at Hauser Forum);
- Existing commercial and research institutes on site (including Schlumberger Research and British Antarctic Survey)

4.1.9 In consulting the stakeholders, the team has analysed relevant best practice case studies to facilitate the discussion and explore alternative solutions to functional requirements.

Market assessment

4.1.10 An assessment of the market for commercial R&D floorspace at West Cambridge has identified the potential for significant demand and pace of market absorption, anticipating a 15-25 year build out period for the commercial R&D floorspace on the site. The assessment has emphasised the benefits for research activity related to physical sciences and technology and a need to provide a range of work spaces, varying in size and support services.

The recommended range includes:

- embedded industry collaboration teams within faculty;
- small scale entrepreneurship space;
- innovation and incubator space;
- grow on space to enable SME's and others to develop from other space or secure a presence on site;
- major industry research and technology occupiers, looking for buildings or space within flexible, high qualitiy buildings, typically between 3,000 and 10,000m2.

4.1.11 Market assessment and industry research benchmarking have also provided input about requirements related to the overall research environment such as overall size (critical mass), transport infrastructure, desired amenities and open space qualities.

Community and placemaking requirements

4.1.12 To adequately respond to this aspect of the masterplan, the team has consulted users on site-wide related issues such as promotion of interaction and collaboration, attitudes to sharing of facilities, open space preferences, cycling and cycle parking, etc. These and individual users' requirements were collated to asses opportunities for site-wide strategies. Together with best practice case studies, these insights were used to establish principles for site-wide community and placemaking.

Development Objectives

4.1.13 In summary the proposals for West Cambridge need to:

- Accommodate a new **Cavendish III Laboratory** – this is a priority project which demonstrates future needs and issues and has potential to act as a catalyst for change. The building brief for the new Cavendish includes significant area requirements (to replace the existing provision in adequate accommodation and allow for growth), adjacencies and onerous technical requirements, including servicing and access;
- Accommodate buildings for a move and integration of **Department of Engineering**, in a phased manner;
- Accommodate space requirements for growth and for location of the **Physical Sciences and Technology Campus** (in general);
- Establish an **innovation and collaboration ecosystem** - which will introduce commercial spaces at different scales alongside the academic uses – blended together throughout the site. The aim of this range is to cater not only for established businesses but also to support entrepreneurship by providing smaller units on shorter leases and business support;
- Facilitate **formal and informal interaction** between users and establish a West Cambridge community – there is a need for the transformation of the quality of place for users through new public realm, social spaces and shared facilities;
- **Plan for flexibility** to accommodate future changes in University and commercial research and collaboration requirements;
- Ensure **servicing and other technical requirements** are met in a safe and efficient way.

Sustainability strategy

4.1.14 The University has an aspiration to make West Cambridge a genuinely sustainable academic and commercial research community. Two of the key drivers for the masterplanning of West Cambridge are major sustainability themes:

- to substantially improve the social realm across West Cambridge and hence increase the well-being of those working on the site;
- to improve pedestrian and cycle access to the site and to radically improve public transport provision so as to be able to build on the existing car-parks, densifying the site and making it more attractive to cyclists and pedestrians.

4.1.15 The development of the proposals has been informed by a Sustainability Assessment Matrix (SAM). This provides a bespoke sustainability assessment method as encouraged in the Cambridge City Council Draft Local Plan 2014. This SAM has helped to achieve optimal designs, within an overarching framework for the entire site.

4.1.16 The key drivers for the sustainability framework at West Cambridge, as reflected in the use of the SAM, are:

- To enable sustainability considerations to inform the development of the Masterplan and the selection of a preferred option;
- To ensure sustainability is taken into account early on so that opportunities are not missed;
- To address issues which the project team feel are of most relevance to the development of the site;
- To build on the innovative sustainability approach adopted for other University Estate's Masterplans and developments;
- To develop a mechanism which provides a greater incentive for action than existing schemes such as BREEAM (Building Research Establishment Environmental Assessment Method), recognising and valuing action, rather than promoting a criteria-driven approach;
- To demonstrate to the City Council planners that sustainability has been taken into account in a transparent way in compliance with the Draft Local Plan.

4.1.17 The SAM framework has been created taking the best features from existing rating schemes such as BREEAM Communities, BREEAM New Buildings, and CEEQUAL, as well as in response to local and national policies such as the National Planning Policy Framework (NPPF), the GLA's Supplementary Planning Guide regarding Sustainable Design and Construction, the Cambridge Local Plan 2006, the Cambridge Draft Local Plan 2014, the Cambridge Sustainable Development Supplementary Planning Guide, and the University of Cambridge's policies.

4.1.18 The framework includes 12 Sustainability Principles, grouped under four categories:

1. Resources and Climate Change:

- **Energy and Climate Change:** including an innovative low carbon energy supply strategy, minimising future energy demand, addressing greenhouses gases and adopting a climate change adaptation strategy;
- **Water:** related to flood risk, surface water management, and overall water use;
- **Materials and Waste:** promoting reuse of buildings and materials, responsible materials sourcing, minimising use of materials and waste generation, and reduction of operational waste.

2. Transport and Local Connectivity

- **Transport and Mobility:** developing a Sustainable Transport Strategy and promoting access to public transport modes, maximising uptake of walking and cycling, and reducing car use.

3. People's Health, Social and Economic Wellbeing

- **Health and Wellbeing:** related to high quality internal environment, facilities and amenities and secure, pleasant and attractive external spaces for both occupants and visitors;
- **Collaboration and Inclusion:** including consultation during design and post construction stages, designs which encourage collaboration through shared facilities and design for inclusion of all specialist needs.
- **Education and Knowledge Transfer:** incorporating innovative practices within the redevelopment, making use of University experience and research skills, supporting continual learning through monitoring and engagement with site users.
- **Employment Opportunities:** such as supporting the development of new skills, jobs, and local employment during the construction phases and promotion of local employment and training arrangements

4. Land Use, Ecology and Local Impact

- **Biodiversity and Ecology:** maintaining features of importance and enhancing levels of biodiversity and ecology.
- **Pollution and Local Environment:** mitigating all potential sources of pollution, limiting local environmental impact from construction and establishing operational procedures to prevent future pollution and adverse local impacts.
- **Reputation, Heritage and the City:** including delivery of Signature Sustainable buildings as part of the redevelopment and celebration/promotion of innovative measures and sustainable infrastructure for occupants and visitors to see and explore.

Sustainable Transport Strategy

4.1.19 The University is promoting a wide-ranging, balanced, sustainable transport strategy that includes the following measures:

- the delivery of a strong, development-wide, travel demand strategy to existing and future users of the site;
- provision of high quality pedestrian and cycle infrastructure both to, and across the site, reducing existing severance. Of particular interest is the provision of improved cycle routes into the City, with additional priority measures across busy roads;
- delivery of a high quality, regular and accessible bus service to popular destinations, including new links to the rail station;
- new and enhanced, appropriately sized, site access points, fitted with selected vehicle detection to maintain the existing highway capacity and provide priority for pedestrians, cyclists and buses; and
- provision of sufficient car parking places around the periphery of West Cambridge to minimise car movement within the site, and the implementation of a car parking management strategy.

4.1.20 These measures will both manage the car-borne impact of the Development on the surrounding transport network, and protect the quality and amenity of West Cambridge for all occupiers.

Development strategy

4.1.21 The requirement for a comprehensive, site-wide development strategy at West Cambridge has emerged in response to the need to establish a more flexible framework for the delivery of priority capital plan projects and to find more effective and sustainable ways of improving conditions for both existing and future academic research and partner commercial research communities. The work to establish the University need and inform the development of the proposals has considered:

- **University strategic brief**: based on the University's strategic objectives and estate-wide strategy and the role West Cambridge, clustered with North West Cambridge Development, is best suited to take;
- **University's sustainability commitments:** and opportunities that West Cambridge brings in achieving the estate wide targets;
- Needs of **current and known future occupiers**: particularly requirements of the priority project Cavendish III Laboratory, Department of Engineering and generic academic and commercial occupiers; as well as requirements for supporting and social facilities;
- **Benchmarking**: which considers opportunities against relevant precedents, including MIT and Stanford, ETH Zurich and TU Delft, Imperial West and Chiswick Park in London, reflecting on what others are achieving and planning for. Benchmarking considers types of commercial research demand, knowledge transfer initiatives and how these are brought together successfully with academic research and teaching space; critical mass and the influence of scale of populations on transport, social infrastructure and place-making practices, relative to locations;
- **Background analysis and site context:** (in Section A2 of this document) this collects information about the current state of the site, strengths and weaknesses, including spatial analysis and a detailed review of the town planning and transport contexts;
- **Market demand:** for commercial research and financial and reputational benefits of collaboration;
- Opportunities to help establish the **long term vision for transformation** and development of the site, based on an understanding of the whole site potential;
- **Capacity and constraints on development:** which describes limitations to the current transport network and possible transport improvements and so inform consideration of options, on a phase by phase basis.

4.1.22 West Cambridge responds to the University's needs by providing opportunities to:

- Create a high quality, well connected built environment, helping to attract and retain the very best research and teaching teams;
- Provide more flexible, efficient space for University use;
- Enhance connectivity both within and outwards from the University;
- Support the commercialisation of knowledge through entrepreneurship and through collaboration with industry;
- Maintain the University's globally competitive position, as its peers deliver high quality environments for research and collaboration on a similar basis;
- Improve financial returns on investment;
- Deliver shared facilities and spaces and places for social interaction in an economically sustainable manner.

4.1.23 On a corollary basis, there are significant risks associated with further piecemeal development at West Cambridge. Without a comprehensive development strategy and flowing from that, a new masterplan to make the most of the potential for the whole 66ha site, there are risks that include: running out of capacity for academic faculty growth; losing the opportunity for co-location with industry; failure to secure social amenity space on a cost efficient basis; and fewer opportunities for the University to compete in accommodating research institutes and to secure grants for research, in future.

4.1.24 However, considering the potential at West Cambridge in combination with the land available for academic and commercial research floor space at North West Cambridge, there is now the opportunity to plan for the future with the benefit of a substantial supply of available land, perhaps for the first time in the University's history.

133. West Cambridge Illustrative Masterplan within wider local context (including the North West Cambridge Development) - view from north

4.2. Design response

Strategic response

4.2.1 Given the changing context around Cambridge, the future City Deal and growing success at Addenbrookes and elsewhere, the potential exists to transform the West Cambridge site from a relatively isolated, edge of city campus, into an integrated part of the city, with a stronger character and better strategic transport connections.

High level distribution of uses

4.2.2 As a new vision is considered, the academic and commercial research clusters at West and North West Cambridge have the potential, over time, to grow and develop into a major academic research and teaching environment. From internal consultation it is clear that many wish to preserve an academic character and limit the scale of commercial activity within it. This objective can be met in a plan that seeks to develop an academic led environment at the east, with commercial research concentrated at the west. In neither cluster will the use be purely for one activity but differentiation of each cluster will be important.

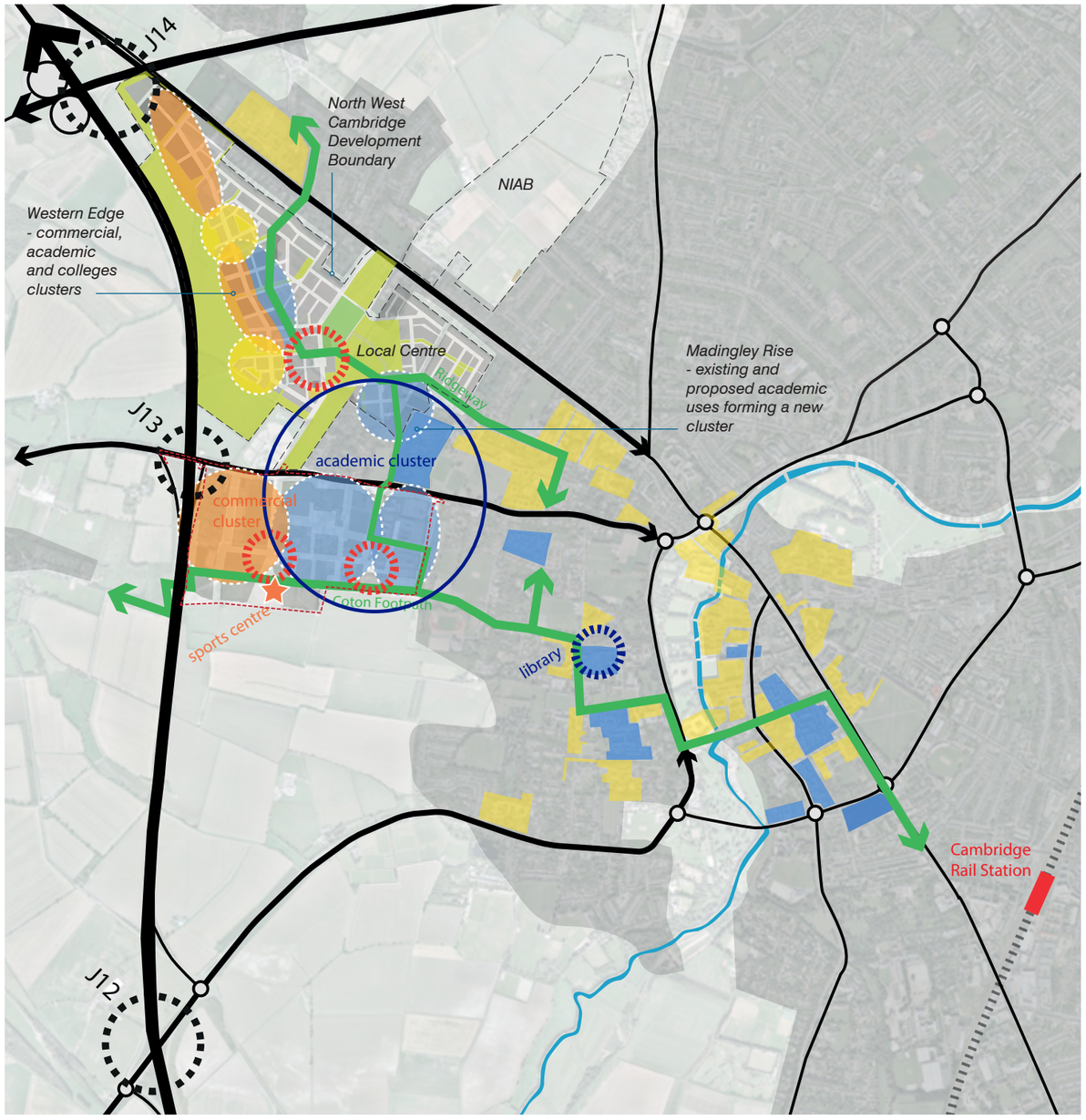
4.2.3 Locating additional academic uses at West Cambridge reinforces existing uses north and south of Madingley Road and forms the opportunity for a greater University quarter within the city. A new academic-led cluster will link with existing academic uses at Madingley Rise (Astrophysics, Earth Sciences) and establish a concentration of physical sciences and technology, answering the University's needs.

4.2.4 In the west, a Commercial-led cluster can be formed, continuing the commercial clusters along the proposed Western Edge within NWCD. These uses will be highly accessible from the M11. Proposed commercial development within West Cambridge will reinforce those already located within the site, forming a concentration that can constitute a commercial address of scale.

4.2.5 The co-location of academic and commercial research provides an opportunity to foster stronger links between the two and establish the base for University's closer collaboration with industry. The experience from world leading research Universities such as Stanford and MIT, testifies to the economic and reputational benefits that such arrangement can bring to both universities and cities.

4.2.6 Beyond planning for businesses to be accommodated on the site, the University understands it is important that facilities and 'soft infrastructure' (management) can be delivered in a way that encourages research and commercial R&D growth through collaboration.

4.2.7 As seen in the cases of TU Delft and MIT, arrangements of co-located but distinct clusters are the preferred relationship: identity is maintained and interaction is facilitated through free and easy movement of staff and sharing of facilities. Such proximity brings considerable benefit to both communities.



134. Strategic land use - creating academic and commercial clusters in the west of the city

Improving connections and a step change in access

4.2.8 To achieve the potential of the site, improved connectivity and a step change in sustainable transport accessibility will be essential for transformation of the site. This will encourage the reduction in the proportion of people accessing the site by car, encouraging a modal shift and the transition from a car-oriented environment to public transport, cycle and pedestrian prioritisation. Crossing points on Madingley Road will enable closer interaction between the two University sites. West Cambridge is within 10-15 minutes cycling distance from the City Centre, 25 minutes from Addenbrooke's. The proposed transport strategy aims to make the most of this proximity and also of wider transport improvement plans considered for this compact, evolving city.

4.2.9 Section 4 of the Transport Assessment summarises existing national and local policy, guidance and emerging strategies and provides an assessment of the performance of the proposed development against these policies. A detailed summary is included in Appendix 4.1 of the TA. The following documents were reviewed:

National Policy Guidance

- National Planning Policy Framework (NPPF);
- Planning Practice Guidance;
- Circular 02/2013 'Strategic Road Network and the Delivery of Sustainable Transport';

Local Policy and Guidance

- Cambridge Draft Local Plan 2014;
- Greater Cambridge City Deal;

Local Transport Policy and Guidance

- Cambridgeshire Local Transport Plan 2011-2026; and
- Transport Strategy for Cambridge / South Cambridgeshire

4.2.10 It concludes that the Development accords well with national transport policy and guidance to deliver sustainable development:

- its sustainable location within Cambridge, and the incorporation of employment well located adjacent to residential land-uses reducing the need to travel - supporting the stated aspirations and objectives of paragraph 34 of the National Planning Policy Framework; and
- by promoting ways to reduce the traffic impact of this development and the University's other activities within Cambridge, and by "managing down" traffic generation, the Development supports the policy of the Department for Transport's Circular 02/2013.

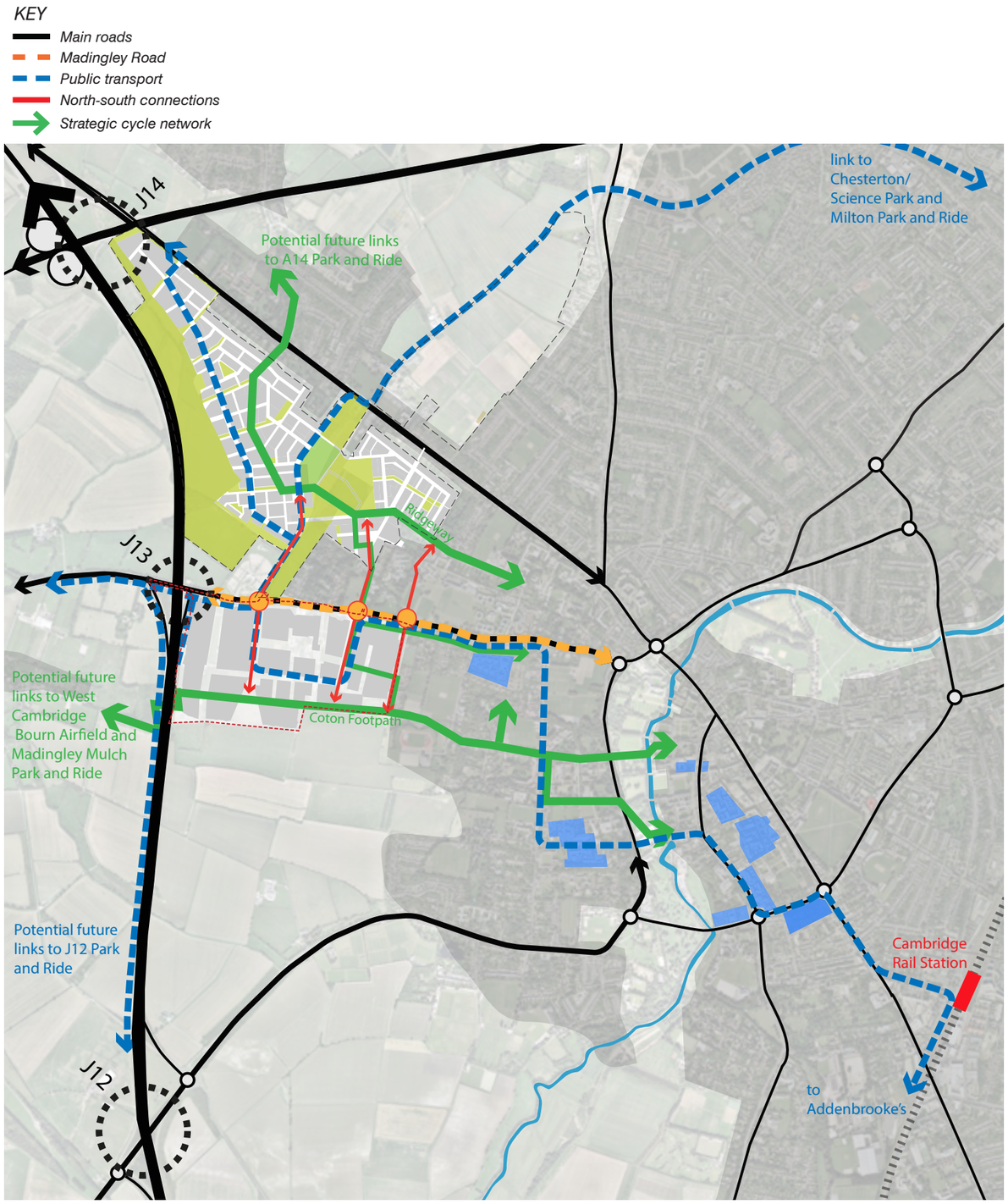
4.2.11 The Development also accords with important local transport and planning policy requirements:

- of Policy 18 of the Cambridge Draft Local Plan - by including a comprehensive transport strategy for the site, incorporating a sustainable transport plan to minimise reliance on private cars – including an assessment of the level, form and type of car parking on the site, as well as enhancing links for walking, cycling and public transport links (including access for all) to the city centre, railway station(s), other principal educational and employment sites, and other key locations within the city to support sustainable development;
- by improving the local footpath and cycleway network as an integral part of a wider transport system – thus improving access to the surrounding countryside – according with the Cambridgeshire Rights of Way Improvement Plan; and
- of the measures identified within the Cambridge Long-Term Transport Strategy, the public transport strategy would deliver enhanced public transport services.

4.2.12 This identifies that the Development accords well with national and regional transport policy and guidance to deliver sustainable development, as well as with the key local transport and planning policy objectives. It shows that, overall, the proposals for the Development, and the transport strategy evolving to support it, will make a substantial and significant contribution to sustainable development objectives and policies for the Cambridge area.

4.2.13 The Transport Assessment identifies the transport strategy and travel demand management measures to ensure that the Site will be developed in accordance with national and local policy, as well as the broad long-term strategy for the development of Cambridge as set out in the local planning documentation.

4.2.14 Overall, the proposals for the Development, and the transport strategy evolving to support it, will make a substantial and significant contribution to the achievement of sustainable development objectives and policies for the Cambridge area.



135. Strategic connections

4.2.15 The overall transport strategy for the Development responds to a number of important national, regional and local objectives, which may be summarised as follows:

- providing Development components, Development layout and disposition of uses designed from the outset to be inherently sustainable, pedestrian and cyclist friendly, being based upon the provision of an integrated transport system as well as minimising the distance to travel overall;
- encouraging the use of sustainable forms of transport such as walking, cycling, and public transport, thus reducing the dependency on the motor vehicle;
- minimising the traffic impact of the Development;
- assisting in reducing the number and severity of personal injury collisions on the local roads;
- integrating the Development proposals with the wider existing and proposed transport network;
- reducing "greenhouse gas" vehicle emissions; and
- implementing a Travel Plan / Travel Demand Management strategy for the development.

4.2.16 The specific elements of this Development Access and Movement Strategy are considered individually in the following sections of the TA:

- Section 6 – Pedestrian and Cycle Strategy;
- Section 7 – Public Transport Strategy;
- Section 8 – Car Parking Provision, Vehicular Access and Site Layout;
- Section 9 – Travel Demand Management Strategy;
- Section 10 – Construction Access Strategy.

Cycling

4.2.17 The Cycling Strategy was derived following:

- a series of workshops with the West and North West Cambridge Cycling Group, a community group set up to seek local information relating to existing operational issues;
- an initial response from the Cambridge Cycling Campaign;
- a review of existing Cycle movement data – including the Strava Heatmap, and an analysis of home postcode information for existing occupants of West Cambridge, as provided by the University; and
- further meetings with the Highway and Cycling Officers of Cambridge City and Cambridgeshire County Councils.

4.2.18 The Cycling Strategy proposes changes to the wider network of routes to:

- improve the existing good permeability through West Cambridge;
- strengthen links between West Cambridge and the adjacent North West Cambridge;
- improve access to the surrounding area, including to the City Centre.

4.2.19 The cycling infrastructure proposals for West Cambridge would:

- deliver quality cycle and pedestrian connectivity throughout the site;
- enhance pedestrian and cyclist safety off-site for both users of West Cambridge, and for all other pedestrians and cyclists;
- deliver improved strategic connections to key local destinations - such as the residential, employment and retail offer at North West Cambridge, and the residential development at Darwin Green, as well as towards the facilities within the City;
- significantly enhance the existing pedestrian and cycle provision to the surrounding area by providing and improving direct routes across the site and along Clerk Maxwell Road; and
- overall, preserve and enhance the attraction of walking and cycling as modes of travel.

Public Transport

4.2.20 Initial discussions have also been held with various stakeholders to agree the potential public transport strategy for the Site, including with:

- the Traffic Managers of the main local bus operators – Stagecoach Cambridge and Go Whippet; and
- the County Council's Public Transport officers.

4.2.21 The scale of the proposed Development means that there will be both a high quantum of demand for public transport, and a number of locations that will need to be connected to West Cambridge. New and enhanced bus services will be phased in to align with the development quantum and consequent growth in demand. The links are derived with reference to the Travel Habit Survey undertaken in May 2015 by the University and are summarised below:

- to the local Rail Stations – to both the existing Cambridge and future Chesterton Stations;
- to the City Centre;
- to the University / NHS sites in South Cambridge - including Addenbrooke's Hospital and the Cambridge Biomedical Campus;
- to various residential and employment / research sites around northern Cambridge - including North West Cambridge, the Darwin Green site and the Cambridge Science Park as well as to Milton Park and Ride Site.
- potentially, to residential areas along the A14 corridor - including St Ives and Huntingdon; and
- by the City Deal, to residential areas on the A428 corridor - including St Neots and the proposed Bourn Airfield proposals and West Cambourne fringe developments.

4.2.22 As such, West Cambridge Development would contribute towards additional bus services further to:

- enhance existing services to increase bus usage;
- provide quality infrastructure through the Development; and
- assist in the delivery of the Greater Cambridge City Deal aspirations.

Travel Demand Management

4.2.23 The overall broad objectives of the travel demand management strategy for the Development are:

- to reduce reliance on the private car with a long-term strategy of mode shift away from single occupancy car use;
- to build upon good urban design principles that improve the permeability of the Development for promoting walking, cycling and public transport use;
- to provide more appropriate levels of parking;
- to promote the use of car sharing where appropriate;
- to minimise costly road traffic congestion and further damage to the environment in the context of sustainable development which is consistent with Government policy; and
- to encourage a high level of community involvement in travel behaviour change initiatives.

Construction Access

4.2.24 The Construction Access strategy consists of the following main elements:

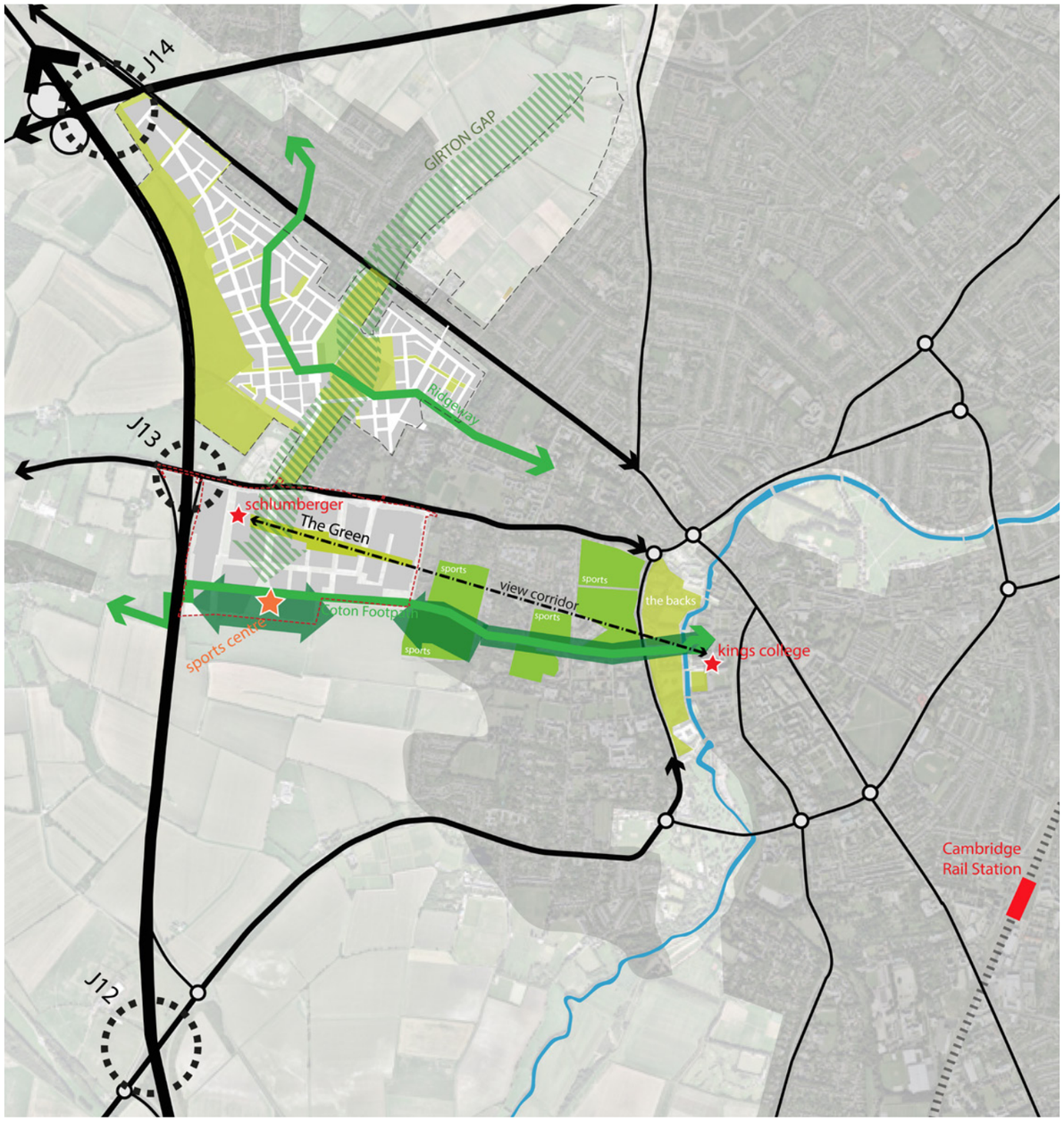
- design:
  - minimising the requirement for material to be imported or exported. For example, the movement of earthworks material off-site will be reduced to a minimum by maximising the use of raised material into the landscaping;
  - specifying materials and construction techniques that are resource-friendly;
- using locally sourced materials where possible, to reducing haulage lengths;
- managing effectively the supply of goods to construction sites - this can significantly reduce both road vehicle mileage and construction costs and wastage;
- encouraging the development of sustainable supply chains for construction materials; and
- managing the movement of workers into the development:
  - all construction sites within the Development will have comprehensive Construction Travel Plans, detailing how their workforce will travel to the Site.

Open Space network, spatial and visual integration

4.2.25 Key to the transformation of West Cambridge will be the creation of a strong landscape and open space character, with visual connections to the city centre. This must include a series of well defined new urban spaces, reinforced landscape connections and the upgrading of the existing internal street network.

4.2.26 Transformation proposals seek to create a new hierarchy of spaces through the site that will aid legibility, create a strong visual identity and form the setting for new social events and recreation that will become integral to the life of West Cambridge.

4.2.27 At a strategic level it is important for this new social and landscape setting to celebrate and rediscover key views to the city skyline and to improve the visibility of the Schlumberger Research building and its roof structure.



136. Strategic open space network and visual integration

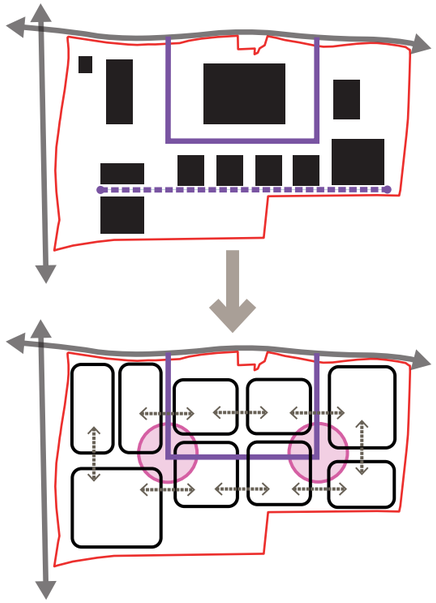
Site-wide strategies

4.2.28 Acknowledging the qualities and opportunities brought by the original masterplan and current developments, the masterplan aims to provide a framework for a gradual transformation and densification of the site. The key design concepts to guide this process are explained on the following pages and relate to a new urban and landscape integration, the creation of clusters of uses and the reinforcement of links with the surrounding areas and with the City Centre.

4.2.29 The full potential of academic and industry research communities on the site will depend on quality of place and the managements ability to truly bring them together. The transformation of the current environment requires a step change in the way the site operates, particularly in relation to car parking and amenity such as catering and usable open space. To this goal, the masterplan includes several site-wide strategies which aims to:

- create walkable character areas and a new density of development and working population;
- concentrate car parking along the edges to create pedestrian friendly public realm within the heart of the site;
- provide transport, and a user friendly cycle network and cycle parking;
- provide a sufficient amount of high quality social facilities, ensuring they are accessible and activate open spaces;
- ensure that a range of research workspaces, lease arrangements and support services are available for a broad spectrum of commercial research activity;
- through the provision of a new academic public realm connect the site together and integrate it into its surrounding urban and landscape context.

Creating character

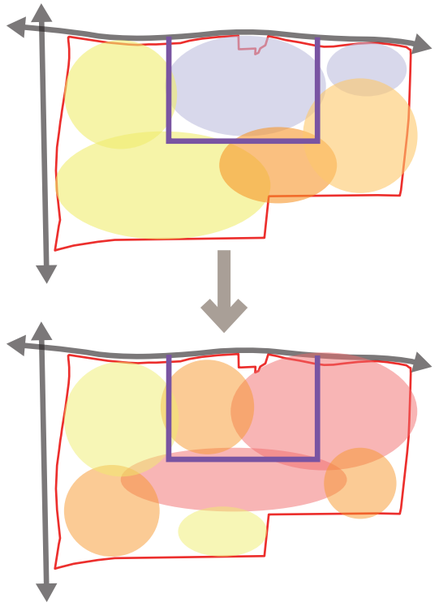


137. Site transformation: From plot by plot development to well scaled, pedestrian oriented character areas.

While many of the existing buildings at West Cambridge provide quality research space, the piecemeal development on a plot by plot basis, has in many cases resulted in detached buildings with little or no interaction with the public realm. On plot at grade car parking further exaggerates this condition.

The new strategy is to develop the site on the basis of character areas - well scaled, pedestrian orientated complexes of buildings and open spaces. This approach will allow for gradual delivery of the masterplan in a way that delivers visible benefits (buildings, open spaces and other amenities) at any stage of the process.

Density and achieving critical mass

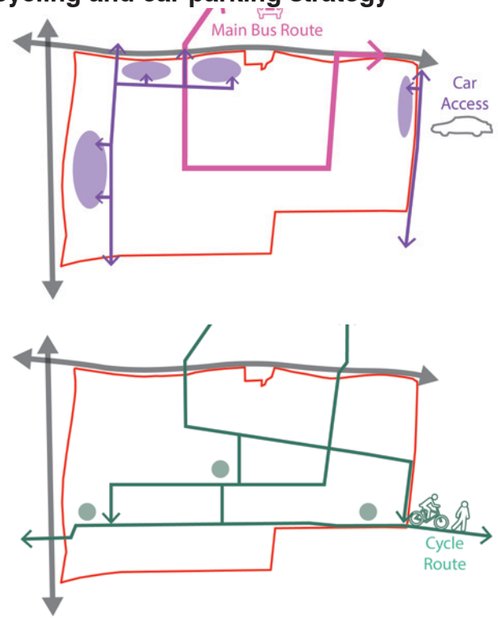


138. Site transformation: A new density and critical mass.

The existing consented masterplan did not achieve higher densities in part because of the remaining existing uses such as the Veterinary School and the Cavendish Laboratory remaining on site and partly to do with the strategy of plot by plot development with surface car parking. With the potential to relocate the Veterinary School off-site and decision to rebuild the Cavendish Laboratory elsewhere on-site there is an opportunity now to achieve a more coherent strategy for density across the whole site.

This refresh of the masterplan takes this opportunity to increase the density of the site and create critical mass in key locations, which will promote new levels of activity on-site, support social facilities and public transport and activate key public realm. A density profile has been carefully controlled to respond to the locations of key spaces within the masterplan and to respond to sensitive edges around the site.

Reducing car dependency: Public transport, cycling and car parking strategy



139. Site transformation: From vehicular orientated environment to promotion of public transport and cycling. Car parking concentrated and located to edge of site.

The character area approach will be made possible through the elimination of at-grade car parks through a step change in the transport strategy for the site: the new travel plan will include measures for gradual reduction in car use, friendlier cycling, walkability and distribution of car parking.

Key to realising the full value of the land available at West Cambridge will be the rationalisation of surface car parks into multi-storey, centrally managed facilities under University control. This will allow for increased parking capacity at key locations within the site and a shift from a 'drive to building' to a 'park & walk' mentality, through establishing attractive well defined pedestrian-orientated environments. The University will be able to manage down the proportion of car users carefully between academic and commercial users as public transport access is improved and population and density increases.