## 3. Landscape and public realm strategy

The landscape strategy aims to deliver a more organic habitat buffer to the outer boundary of the campus, particularly where it meets the woodland and large formal residential green in the north and northeast respectively. As users move through the campus to more central areas the landscape and public realm setting will change in line with location, with spaces becoming increasingly formal and urban, especially in core areas such as library square. This space provides the 'pinwheel' for the various routes and the buffer between the natural zone of the west and more research-focused, industrial nature of the east airfield.

The intention is that distinctive routes within the campus will be linked and defined through a series of 'ribbons' which reflect the landscape hierarchy and act as a method of wayfinding. These links will also provide emphasis to the urban structure and celebrate key spaces or nodes of more specific activities or character. The aim is to encourage pedestrians to stay and linger in these spaces rather than revert to vehicular movement.

The following text sets out the various components and hierarchies promoted through the landscape strategy:

- Function of external spaces.
- Landscape movement hierarchy.
- Spatial hierarchy.
- Planting and biodiversity strategy.
- Sustainable urban drainage strategy.

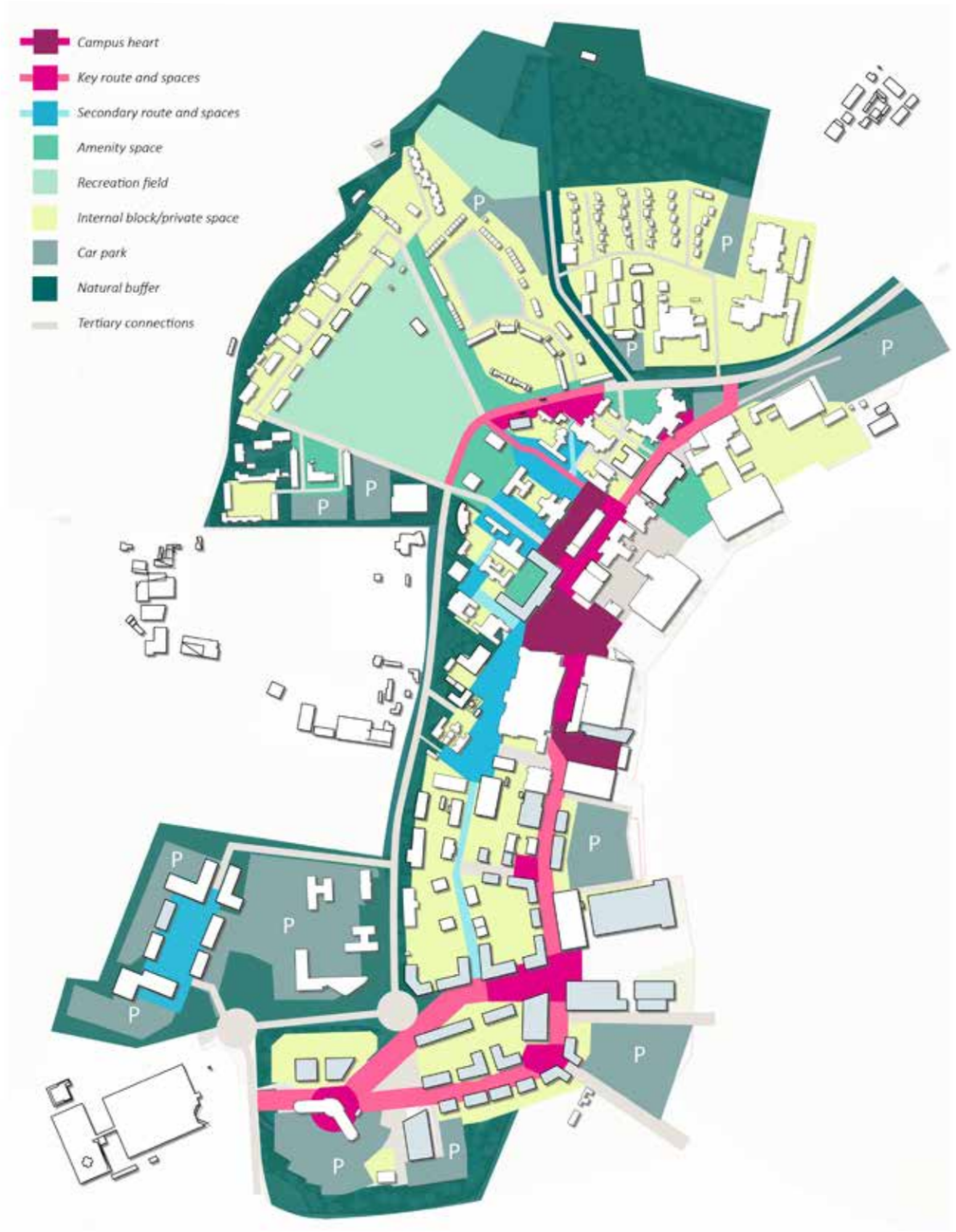
**Indicative landscape strategy**

Woodland walk

Space for informal recreation

Informal routes

Central campus zome




## Function of external spaces

The Masterplan defines a spatial function for the whole campus. The campus heart represents premium spaces and acts as the main image of the campus; pedestrian focused, high quality, multifunctional areas for corporate, academic, and social activities.

The primary route is predominantly focused along the new main link road but also features on College Road, connecting the campus and residential areas, and providing a visual identity for the campus along the thoroughfare. Traffic is more prominent in these spaces but pedestrians and cyclists are encouraged to use the spaces as their primary route.

Secondary routes and spaces are designed to provide service access to the campus and define back of house access. The spaces will have a medium-low maintenance requirement and a relaxed nature. Planting will be more informal but still allow for amenity space where required.

Amenity spaces enhance and build upon areas in the campus already used for informal recreation. By defining spaces, maintenance resources can be focused appropriately to on these relaxed areas whilst allowing a natural buffer to develop in peripheral locations.

## Spatial hierachy

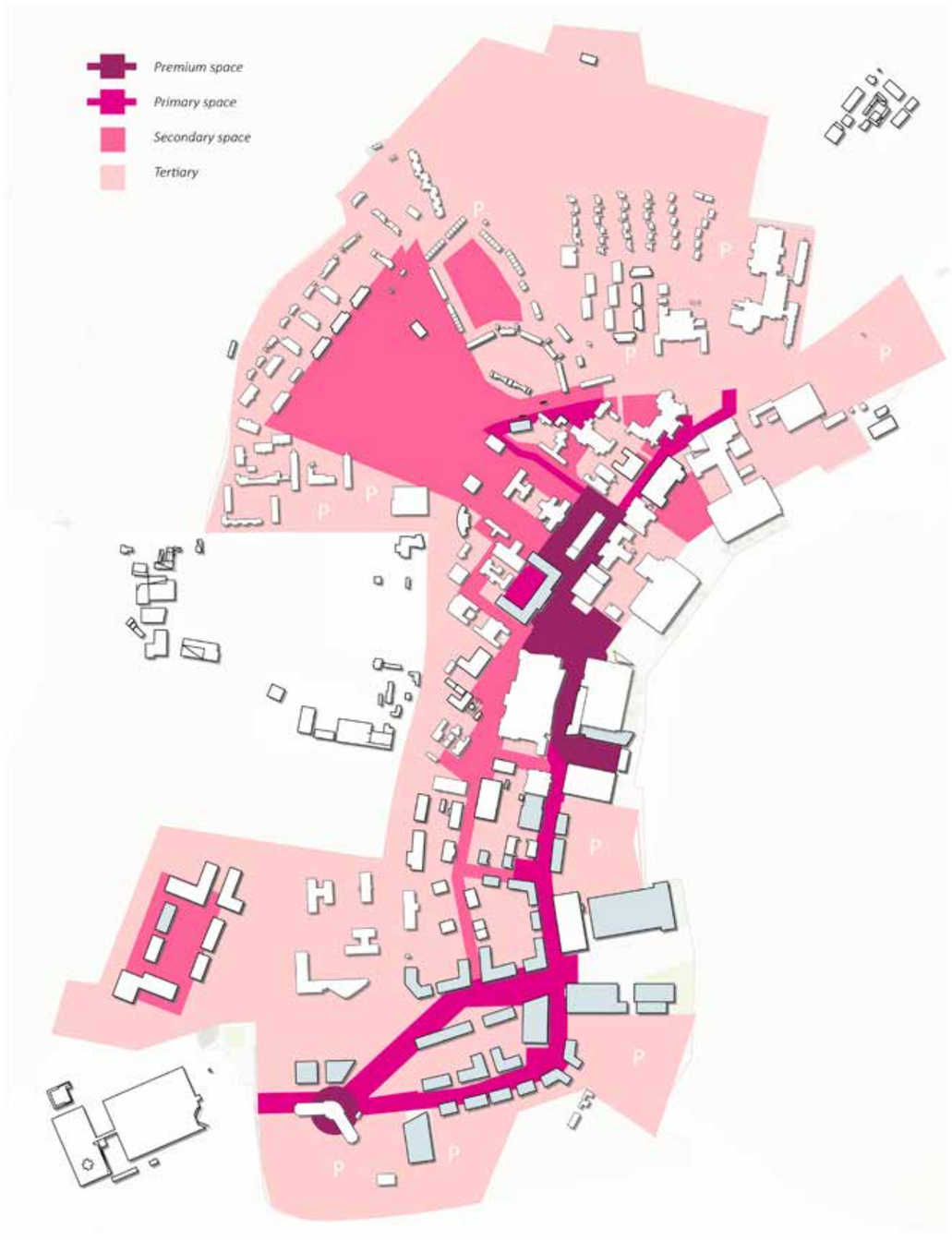
The spatial hierarchy of the campus has been designed to respond to the functionality of spaces, defining premium spaces down to tertiary areas. This hierarchy aids navigation, focuses investment in key areas and assists in shaping the setting for future development. Material specifications and finishes will respond accordingly to the prominence of location.

**Premium space**
Central squares and open spaces are key to the life of the campus. These areas will be dominated by pedestrian activity and measured vehicular traffic. These spaces should reflect simplicity and openness and be made of high quality materials.

**Primary routes**
Primary routes are the backbone to the campus allowing for interaction between staff, students, visitors and people passing through. Primary spaces and routes should have an urban character, being predominantly hard landscaping providing a distinction between vehicular and pedestrian zones.

**Secondary spaces**
Comprised of mostly promenades, large informal routes and park-like areas, secondary spaces portray a relaxed and leisurely atmosphere.
These generous spaces, designed for 'stay activities' act as buffer between the campus' centre and its residential edge. Such spaces promote a cross between urban and suburban attributes.

**Tertiary spaces**
Spaces set back from the campus' main arteries will see minimal intervention in terms of paving or surfacing. The key to these spaces is to blend the existing housing areas to the secondary spaces through casual paths and service routes.



Premium

Primary routes

Secondary

Tertiary

## Landscape movement strategy

The campus layout has been designed to focus activities along three routes. Defining the functional requirements for each 'ribbon' will inform their layout and spatial quality; the primary street will have a multifunctional role, spatially defined by requirements for:

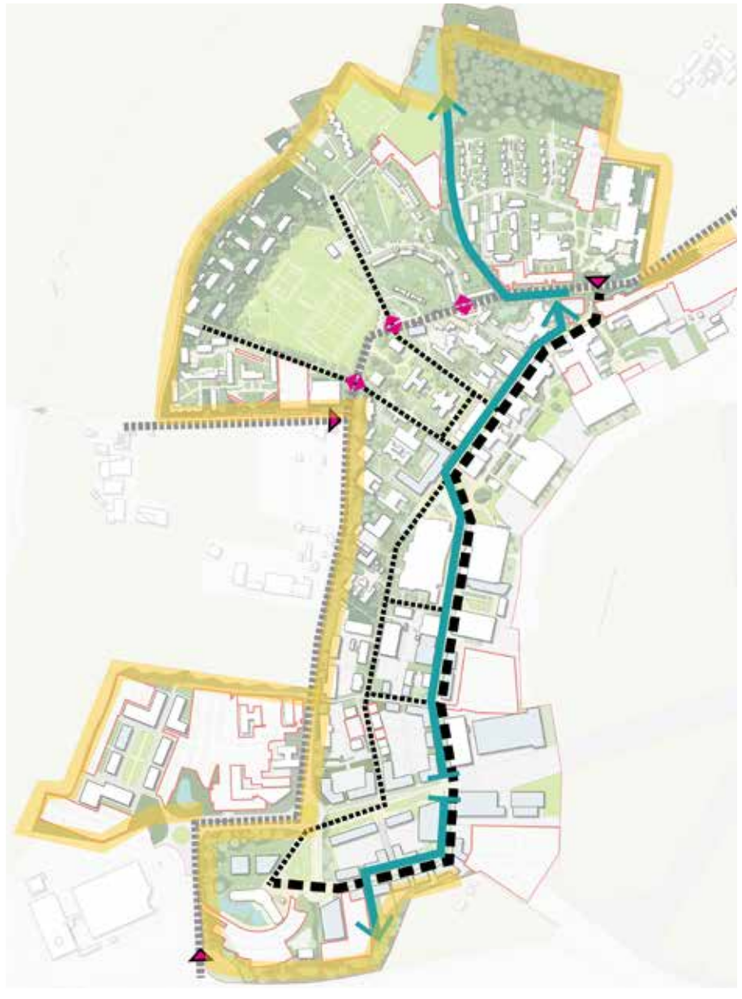
- Pedestrians
- Cyclists
- Vehicles
- Bus route
- Urban tree structure
- SuDs features
- Amenity trail

College Road and University Way will need to include:

- Key campus thoroughfare
- Habitat corridor
- SuDs features
- Amenity trail

Secondary campus routes will be predominantly used for service vehicles, however facilities for pedestrians and cyclists taking a direct route between Martell House and library square will need to be considered.

The 'ribbon' concept of linking related spaces and routes though a common language of landscape, materials and finish will improve orientation and navigation on campus.




Primary route will accomodate pedestrians, vehicles, and cyclists.

Suds will be incorporated in the urban structure.

Informal, low maintenance planting along cycle and pedestrian routes

Multifunctional spaces along the primary route

Habitat corridor will frame the edge of campus.

Use of landscape features to define entrance zones along the primary route.

Habitat corridors and trails combine ecology and amenity

Shared spaces can be defined with feature and functional planting

## Planting and biodiversity strategy

Planting is key to campus navigation and sits alongside the wider strategies for biodiversity, ecology and Suds. Formal planting shall be focused in key routes and spaces, with informal and woodland planting featuring in secondary and peripheral locations. The planting strategy should maximise visual interest and planting diversity whilst respecting and not conflicting with CAA guidelines given the adjacency of the airfield.

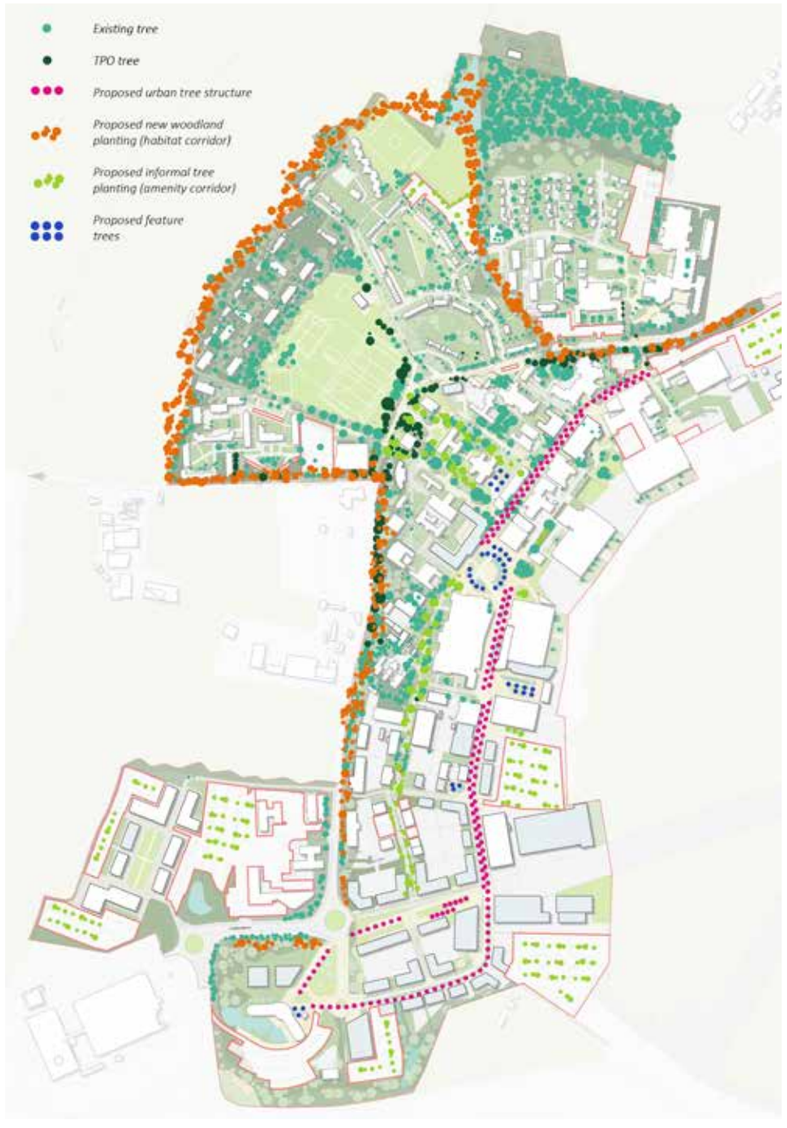
Four main categories guide the tree planting strategy:

1. Urban/formal tree planting.
2. Informal tree planting.
3. New woodland planting – habitat corridor.
4. Feature tree planting in specific locations.

It should be noted that many trees within the historic campus core are at the end of their maturity. Such specimens will be considered in new planting and replacement strategies.

The planting strategy has been prepared to align with the University's existing Biodiversity Action Plan, and promotes functional landscape and enhancement of biodiversity, with vegetation being a key component:

- create a distinctive and coherent public realm, with well-defined planting to unite disparate areas of the campus;
- - significantly enhance the environmental performance of the campus through promoting biodiversity, enabling an efficient SuDS network and micro climate modification;
- promote a very green environment that stimulates learning and productivity; and
- promote a green environment with increased amenity space.

Premium

Primary routes

Secondary

Tertiary

## Sustainable urban drainage strategy

The stormwater philosophy throughout the delivery of the Cranfield Masterplan is based on consideration of the existing conditions and hydrology and ensuring that the post-development conditions replicate the pre-development conditions as closely as possible. Therefore issues such as groundwater recharge and watercourse discharge capacities and locations are key to the design approach. Specific existing site features will require particular consideration in respect of the development.

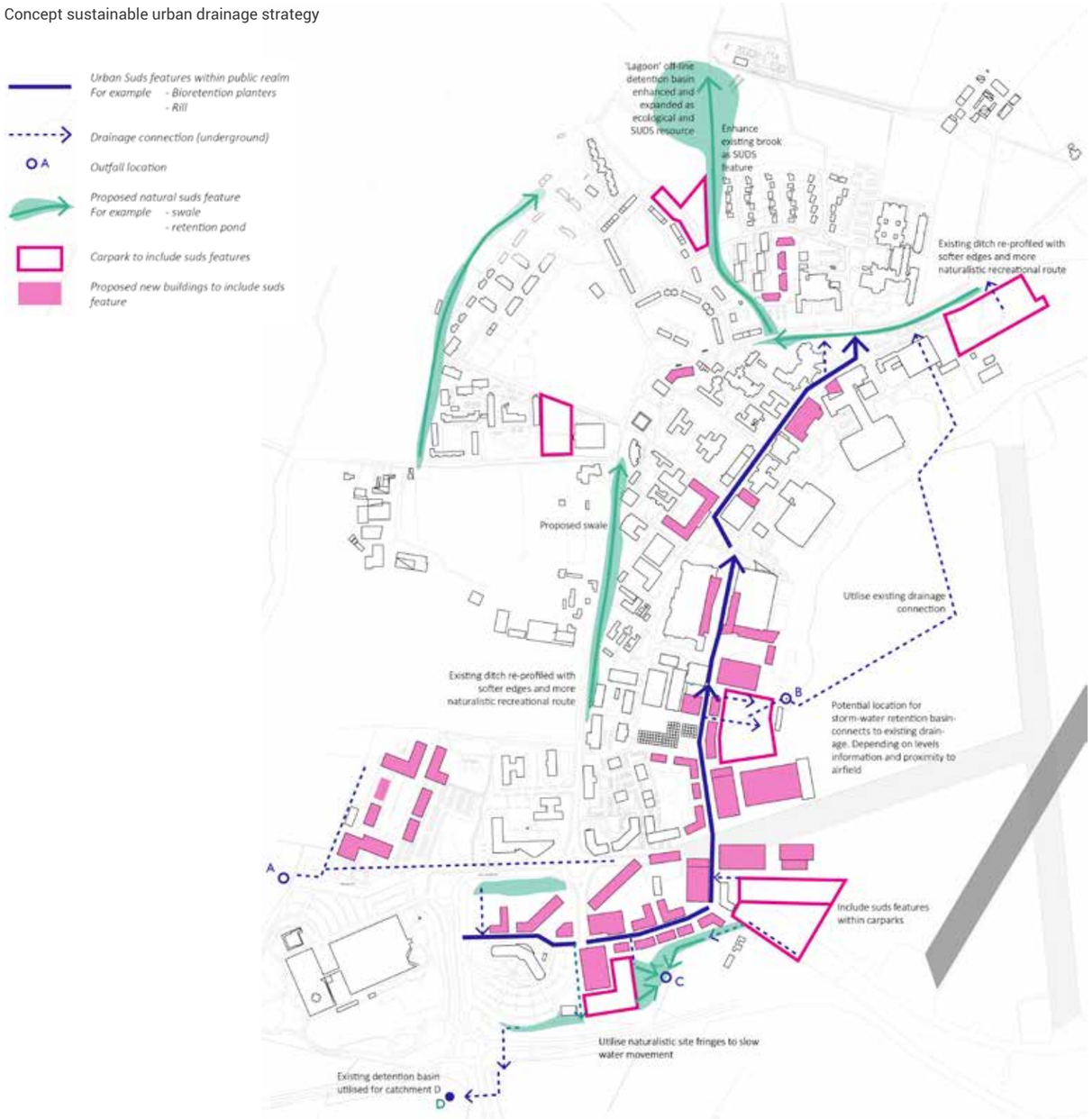
The drainage strategy includes all aspects of water management including green roofs, water retention and treatment at ground level and release into the nearby watercourses at managed rates. All new car parks shall incorporate SuDS features where possible. Where possible, teaching and research should be incorporated with the drainage strategy.

The primary campus route will also contain key SuDS features to deal with day-to-day surface runoff, this will include:

- bioretention planters.
- urban rills.
- permeable paving features.

Storm water retention basins will be located at site peripheries, these will be naturalised grass and planted basins with limited periods of standing water to limit negative impact on airfield hazards.

Concept sustainable urban drainage strategy



Car parks to feature integrated Suds systems

Possible bioretention planters along MUEAVI Road

Feature bioretention planting within pedestrian areas

# Chapter six
# Delivery

## The Cranfield Masterplan provides the University with an ambitious programme of development.

## All development will need to be phased to ensure minimal disruption to the University's staff and students, allowing the university to remain operational whilst meeting academic and industry demands.

The delivery of the masterplan is divided into three general phases:

- short term
- medium term
- long term

The pace and level of change will ultimately be guided by the availability of resources and funding. However, the University is committed to the delivery of certain 'non-building specific' projects over the next three to five years. These projects will bring about a significant improvement to the quality of the campus, providing a solid grounding for future development.

As a result of the innovation partnership approach being promoted,the majority of development within the Technology Park / campus expansion zone will come forward on a demand led basis.

Phasing will of course alter, but irrespective of changing projects, functions and timeline, the principles set out in chapter five will ensure that all new proposals are consistent and relate to each other.

### Short term projects:

1. PC labs refurbishment
2. Vincent building alterations
3. Building 83 extension - (phase 1 & 2)
4. Building 52 extension
5. North south link road (MUEAVI)
6. Aerospace integration research centre
7. Aerospace square landscaping
8. Airc car park
9. Sports hall car park
10. Residential car park
11. University square landscaping
12. Central square landscaping
13. Facility for Airborne Atmospheric Measurements (FAAM) building
14. Central teaching facilities
15. Library extension
16. Martell refurbishment
17. North car park
18. Hub phase 1
19. Air tower
20. South car park
21. Commercial / retail redevelopment
22. Transport interchange
23. Agrifood buildings
24. School of Management building
25. Mitchell hall new student residences
26. Digital Aviation Research & Technology Centre (DARTEC)

### Medium term projects:

27. Air Safety Investigation Centre (CASIS)
28. Manufacturing centre
29. Estates relocation
30. Energy technology centre
31. New laboratories
32. Hub phase 2

### Long term projects:

Continued phased expansion across the campus including possible additional student accommodation in the residential zone.


## Indicative phasing plan

**SHORT TERM**

1 PC Labs Refurbishment [completed]
2 Vincent Building Alterations [on site]
3A Building 83 Extension -IMEC Phase 1
3B Building 83 Extension -IMEC Phase 2
4A Building 52 Extension -Phase 1 [Urban Water]
4B Building 52 Extension -Phase 2
5 Link Road from Martell House [separate drawing]
6 Aerospace Integration Research Centre [AIRC]
7 Aerospace Square Landscaping
8 South Car Park
9 Sports Centre Car Park
10 Residential Car Park
11 University Square Landscaping
12 Central Square Landscaping
13 FAAM Building
14 Central Teaching Zone
15 Library Extension Building
16 Martell Refurbishment
17 North Car Park
18 Hub Phase 1
19 Air Tower and Fire Station Relocation
20 South Car Park
21 Commercial / Retail Redevelopment
22 Transport Interchange
23 Agrifood Buildings
24 School of Management Building
25 Mitchell Hall New Student Residences
26 Digital Aviation Research & Technology Centre [DARTeC]

**MEDIUM TERM**

27 Air Safety Investigation Centre [CASIS]
28 Manufacturing Centre
29 Estates Relocation
30 Energy and Technology Centre
31 New Laboratories
32 Hub Phase 2

**LONG TERM**

Continuing Phased Expansion across the campus including possible additional student accommodation in residential zone

## Short term projects:

1. **PC labs refurbishment**
2. **Vincent building alterations**
3. **Building 83 extension - phase 1 and 2:** Phase 1- Intelligent Mobility Engineering Centre (IMEC) is a facility that will provide additional teaching accommodation related to transport engineering systems. Phase 2 - will complete the extension on the south side of the building in the same thematic zone.
4. **Building 52 extension - Phase 1 and 2:** Phase 1- Urban water purpose built laboratories and faculty meeting space. Phase 2 - Energy theme extension to allow relocation of existing activities within building 52 to purpose built spaces.
5. **North south link road - Mutli User Environment for Autonomous Vehicles (MUEAVI):** This road will act as the primary route through the campus and provide the critical link to the south end of the campus. Additionally as a private road it will provide a testing environment for autonomous vehicle technology moving forward.
6. **Aerospace Integration Research Centre (AIRC):** Will provide a new research facility with distinctive platform-level capabilities to investigate system integration issues associated with novel technological concepts for airframe propulsion integration in the future aircraft.
7. **Aerospace square landscaping:** Will be a premium public realm space that will have airfield views.
8. **AIRC car park:** Peripheral car parking zone to serve future development and compensate for loss of parking in core areas which will be removed.
9. **Sports hall car park:** Peripheral car parking zone to serve future development and compensate for loss of parking in core areas which will be removed.
10. **Residential car park:** Peripheral car parking zone to serve adjacent student residences, future development, and compensate for loss of parking in core areas which will be removed.
11. **University square landscaping:** Will replace existing car parking to become a premium public realm space that will have airfield views.
12. **Central square landscaping:** Will replace existing car parking to become a premium public realm space.
13. **Facility for Airborne Atmospheric Measurements [FAAM] Building:** Will provide office space primarily for the relocation of FAAM from Building 125.
14. **Central teaching facilities:** A new communal teaching space available to all thematic zones.
15. **Library extension:** To allow consolidation of campus IT resources and library services.
16. **Martell house refurbishment:** Renovation of existing building to accommodate executive staff and executive education.
17. **North car park:** Extension of exisitng car park to serve future development and compensate for loss of parking in core areas which will be removed.
18. **Hub phase 1:** A new centre that will accommodate a variety of student support services as well as social and retail spaces located in the campus core.
19. **Air tower:** Replacement of airport services responding to operational requirements.
20. **South car park:** Peripheral car parking zone to serve future development.
21. **Commercial/retail redevelopment:** Accommodating different types of retail offering to provide everyday services for staff and students and is conveniently located next to the student residences.
22. **Transport interchange:** A new public transport hub integrating with the commercial/retail redevelopment.

23. **Agrifood buildings:** New purpose-built facilities for agrifood including year-round environmentally controlled (heating, lighting, ventilation) growing space and supporting research infrastructure.

24. **School of Management building:** A new fit for purpose, modern building to enhance existing School of Management facilities enhancing the offering for both staff and students.

25. **Mitchell Hall new student residences:** Demolition of outdated accommodation and replacement with modern, high quality student housing.

26. **Digital Aviation Research & Technology Centre (DARTeC):** a new teaching and research facility with an aviation focus.

## Medium term projects:

27. **Air Safety Investigation Centre [CASIC]:** A purpose built centre for teaching and testing related to air accident research and training.

28. **Manufacturing centre:** A new fit for purpose, modern building to replace existing Manufacturing thematic facilities, enhancing the research offering for both staff and students.

29. **Estates relocation:** The consolidation of estates facilities management into one common zone.

30. **Energy technology centre:** A new fit for purpose facility to expand the existing Energy thematic activities, enhancing the research offering for both staff and students.

31. **New laboratories:** Reserved locations for new functional lab resources.

32. **Hub phase 2:** Expansion of student hub accommodating a variety of student support services as well as social and retail spaces located in the campus core.

## Long term projects:

Continued phased expansion across the campus including possible additional student accommodation in the residential zone.

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