2014

MASTER PLAN

GRIFFITH UNIVERSITY GOLD COAST CAMPUS

Griffith UNIVERSITY

Consultant Team

Master Planner	Cox Rayner Architects
Landscape Architects	RPS Landscape Architects
Traffic Planner	Geleon Consulting
Cost Planner	Rider Levitt Bucknall
Planting Strategy	Associate Professor Catherine Pickering Griffith University

2014

MASTER PLAN

GRIFFITH UNIVERSITY GOLD COAST CAMPUS

COX RAYNER ARCHITECTS

Existing campus and context

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LEGEND

G01 BUSINESS 1
G02 CLINICAL SCIENCES 1
G03 LECTURE THEATRES 1 AND 2
G04 SERVICES
G05 HEALTH SCIENCES
G06 BUSINESS 3
G07 THE LINK (STUDENT GUILD)
G08 FLAMMABLE LIQUID STORE
G09 ENGINEERING
G10 GRAHAM JONES CENTRE
G11 LIBRARY
G12 SCIENCE 2
G13 MULTISTOREY CARPARK
G14 VISUAL ARTS
G16 CLINICAL SCIENCES 2
G17 LECTURE THEATRES 3 AND 4
G19 FACILITIES MANAGEMENT
G20 CHILLER HOUSE 1 (WEST)
G21 CHILLER HOUSE 2 (EAST)
G22 CHILLER HOUSE 3 (NORTH)
G23 MULTIMEDIA
G24 SCIENCE 1
G25 GLYCOMICS 2
G26 GLYCOMICS 1
G27 BUSINESS 2
G28 KIOSK
G29 CHILLER HOUSE 4
G30 ARTS AND EDUCATION 1
G31 ARTS AND EDUCATION 2
G32 THE PAVILION
G33 STUDENT CENTRE
G34 THE CHANCELLERY
G36 LAW
G37 CHILLER HOUSE 5
G38 CHILLER HOUSE 6
G39 SCIENCE, ENGINEERING AND ARCHITECTURE
G40 GRIFFITH HEALTH CENTRE
G42 GRIFFITH BUSINESS SCHOOL (UNDER CONSTRUCTION)
G51 SMART WATER RESEARCH CENTRE
G52 INTERNATIONAL BUILDING
G53 CHILLER HOUSE 7
GT1 CLINICAL SCIENCE ANNEX
GT2 COASTAL MANAGEMENT
GT3 DEMOUNTABLE

Contents

Long Term Master Plan Concept Sketch

INTRODUCTION

This Master Plan strategy accords strongly with the University's stated vision, described in The Griffith University Strategic Plan 2013-2015:

"Our comprehensive campus, with its particular strengths in health, environment, biomedical sciences and engineering...collocated with the Gold Coast University Hospital and 2018 Commonwealth Games Village...will create the most exciting education precinct in Australia."

The Griffith University Gold Coast Campus Master Plan is designed to create a rationally implementable,dynamic urban campus which correlates with the exciting future set out in the Griffith University Strategic Plan 2013–2017.

The singular most important aspect of this Master Plan is the consolidation of the campus on the existing Northern Precinct rather than extending onto the Southern Precinct.

The purpose of this consolidation is two-fold; one is to urbanise the campus into a subtropical township, fostering interaction and collaboration between disciplines, the other is to facilitate integration of the campus with the wider Gold Coast Health and Knowledge Precinct to the north. While focused on the public and private hospitals, this precinct will become a township and the opportunity should be taken to coalesce commerce, living and knowledge into a vibrant, mixed-use urban environment.

The Master Plan facilitates an orderly progression of growth to a notional development potential. However, the earliest opportunity should be taken to commence negotiations for the campus to expand across Parklands Drive and become an integral participant of the wider precinct.

The Master Plan is organised into three phases as follows:

Short Term, primarily to restructure the pedestrian movement system into a legible form and to establish two clear campus hearts.

Medium Term, which reinforces the structure by new buildings on sites which are generally readily available.

Long Term, which envisages (what may be regarded as) a maximum development potential on the Northern Campus, completing the pattern of movement paths and urban spaces.

The descriptors – short, medium and long – are not related to specific time-frames, however using current growth forecasts, notional time-frames could be considered to be 2013-2015, 2016-2020 and 2020-2030 respectively.

The key strategies in the Master Plan are:

- development of a perimeter vehicular system that enables the campus to become primarily a pedestrian domain
- formation of a major longitudinal pedestrian spine, together with a series of lateral pathways, which significantly improve legibility and accessibility within the campus
- evolution into a distinctly urban subtropical campus of robustly scaled buildings, active ground levels and vibrant courtyards
- creation of a new regime of planting shifting emphasis away from a bushland setting to a more formalised subtropical landscape
- continued activation of Parklands Drive and engagement with the wider Gold Coast Health and Knowledge Precinct with a view to expansion across Parklands Drive into its future 'Knowledge Precinct'
- utilisation of open spaces as intrinsic elements for teaching, learning and research.
- development of two major 'campus hearts' – east and west – that are the centres of university social life
- expansion of the Athletics Field into a defined health, sports and lifestyle precinct incorporating aquatic and other sports venues.

Short Term Master Plan

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LEGEND

NOTIONAL NEW BUILDINGS

EXISTING BUILDINGS

SUMMARY MASTER PLAN

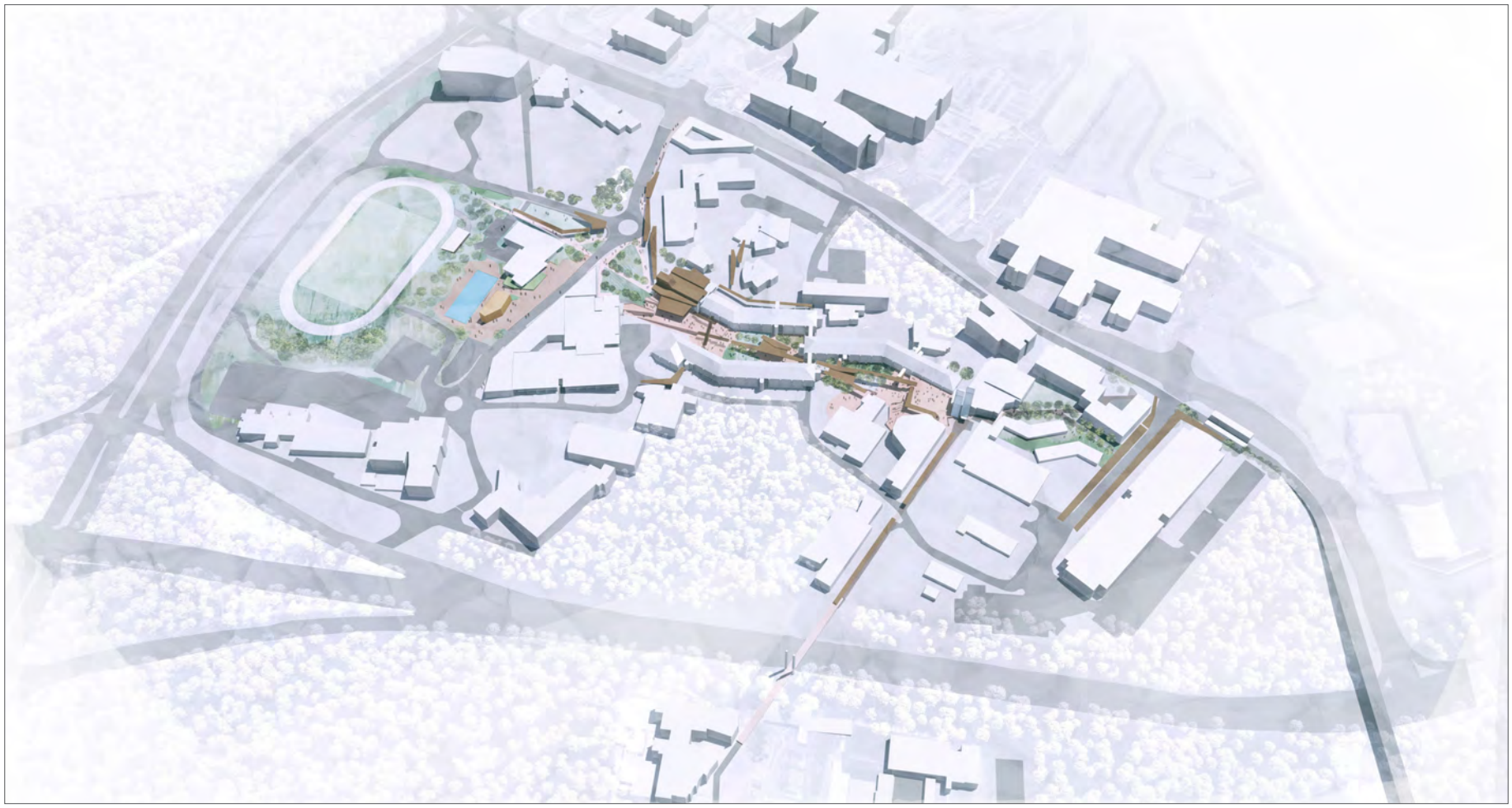
The Master Plan is structured in three phases – short, medium and long term – to facilitate an orderly pattern of integrated development and campus enhancement. The three phases are defined as follows.

Short Term Master Plan

This phase could be expected to be implemented within the next three to five years. It is intended to primarily create a new clear pedestrian movement structure, an enrichment of social spaces along the structure, and the initiation of two Campus Hearts at pivotal locations. The strategy also includes a new aquatic and fitness centre that forms a comprehensive sports and lifestyle precinct with the existing western facilities.

Therefore, this phase does not envisage any substantial new academic buildings, however there is no reason that new buildings indicated on the Medium Term Master Plan cannot be brought forward into this phase.

An important consideration in the short term is for a solution to the impending loss of carparking due to the Commonwealth Games development. There are two major options for new multistorey carparking; one in the Southern Precinct, and one a duplication of the existing northern multistorey carpark. The latter potential will depend upon approval to construct ingress and egress points along Smith Street, thus without such approval, the southern option seems likely to be a necessity.



Three-dimensional view

Medium Term Master Plan

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LEGEND

NOTIONAL NEW BUILDINGS

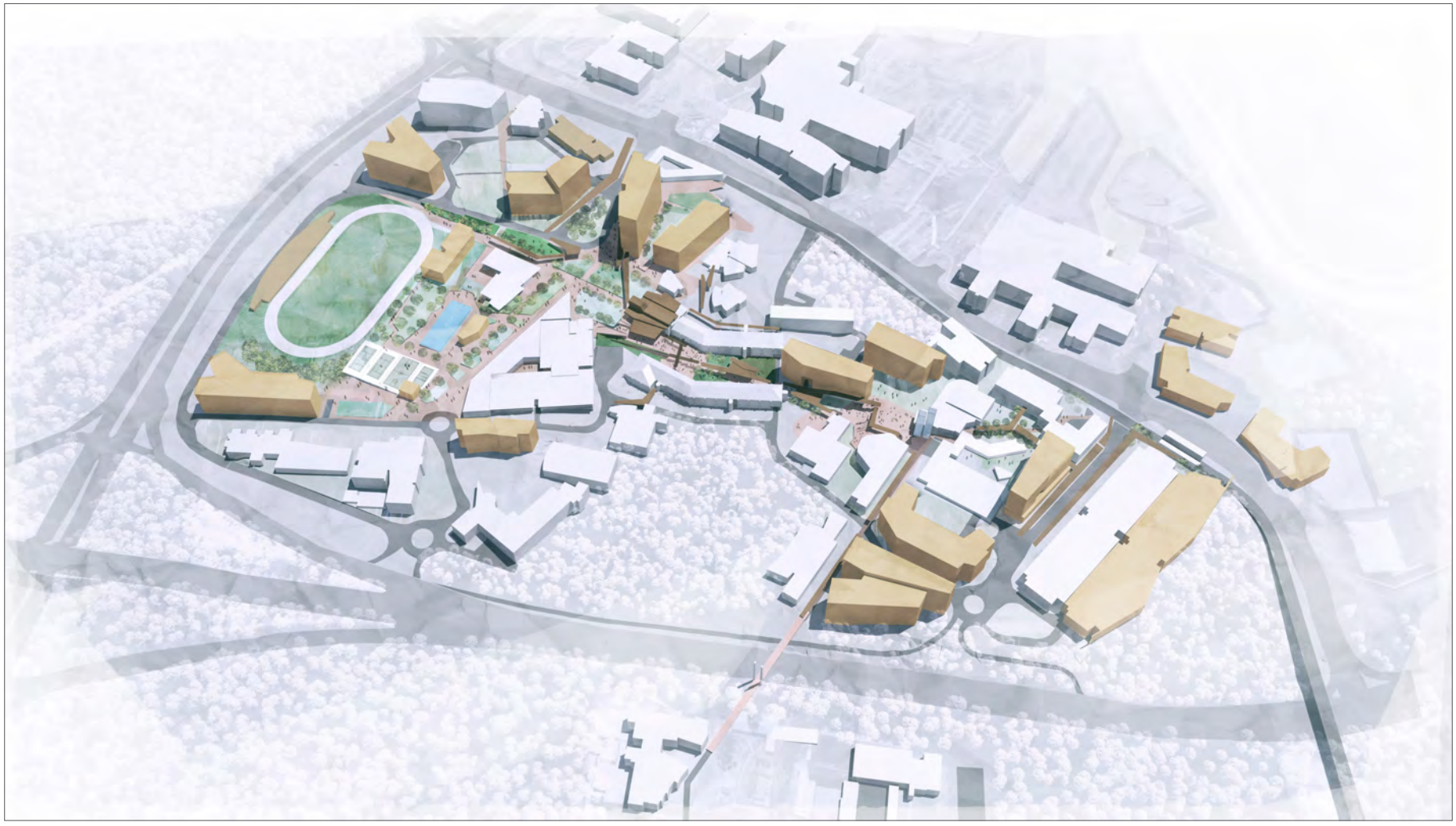
EXISTING BUILDINGS

Medium Term Master Plan

This phase could be expected to be implemented within the next seven to ten years. It builds upon the Short Term Master Plan expanding the two Campus Hearts and developing a new ring road around the western and southern edges of the northern precinct, to further enhance the campus as a primary pedestrian realm.

The western ring road is the first stage of a longer loop that will, in the long term, connect University Drive around the precinct to Engineering Drive, potentially with, by then, approved ingress and egress links to Smith Street. The plan envisages up to ten new buildings which meet current University forecasts, and are located and configured in form to enhance campus structure.

A duplication of the existing multistorey carpark is proposed to be constructed within this time period, its potential is however dependent upon adequate provisions being made with respect to access and egress to and from the surrounding road network.



Three-dimensional view

Long Term Master Plan

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LEGEND

NOTIONAL NEW BUILDINGS

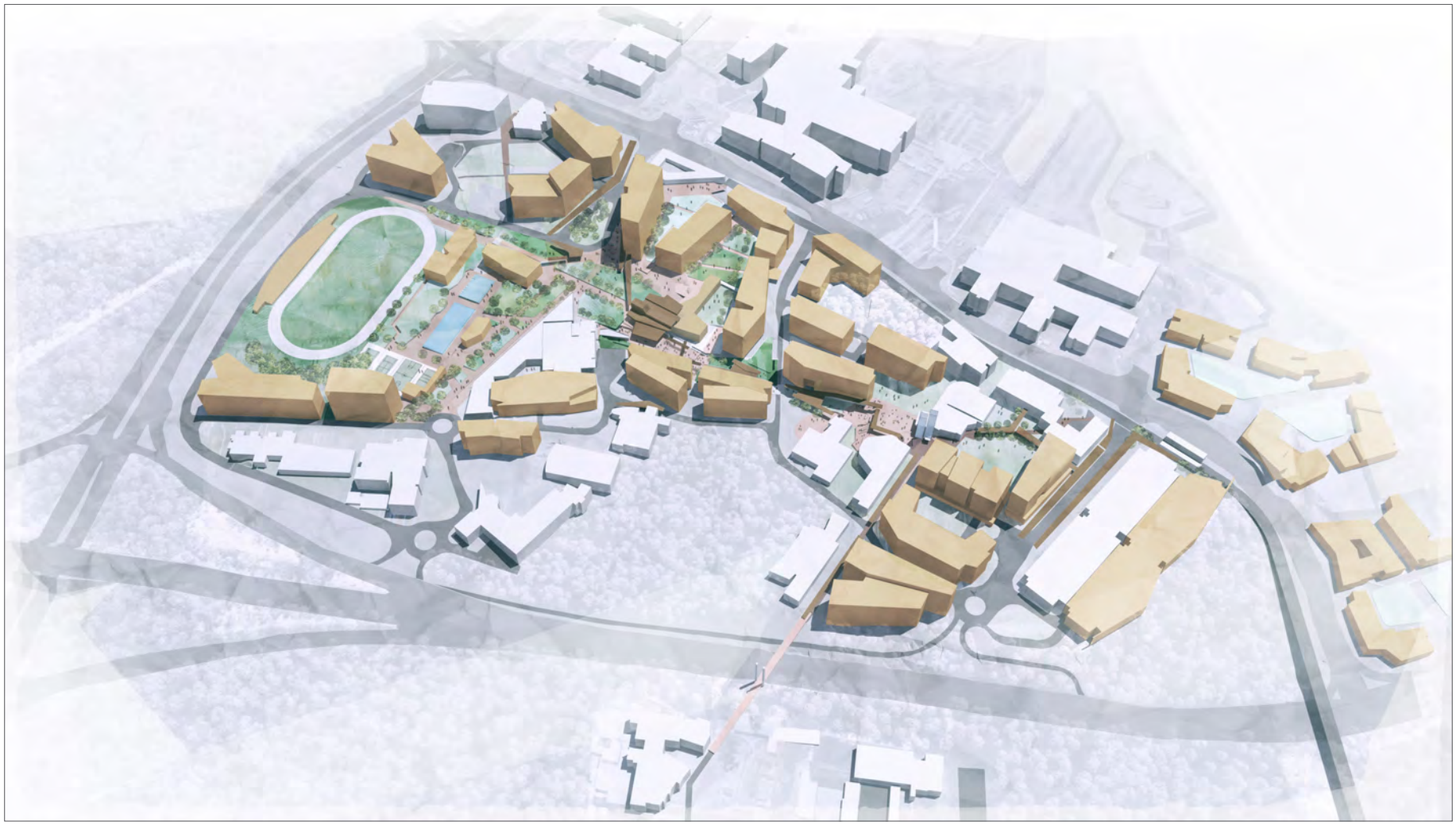
EXISTING BUILDINGS

Long Term Master Plan

The Long Term Master Plan illustrates close to what the maximum amount of development that could be envisaged on the Northern precinct. It should be considered in terms of a 2030 horizon.

The long term plan builds upon the short and medium term plans to create a distinctly urban campus of robust architecture and well defined intervening spaces that denotes a vibrant, progressive Australian university of world standing.

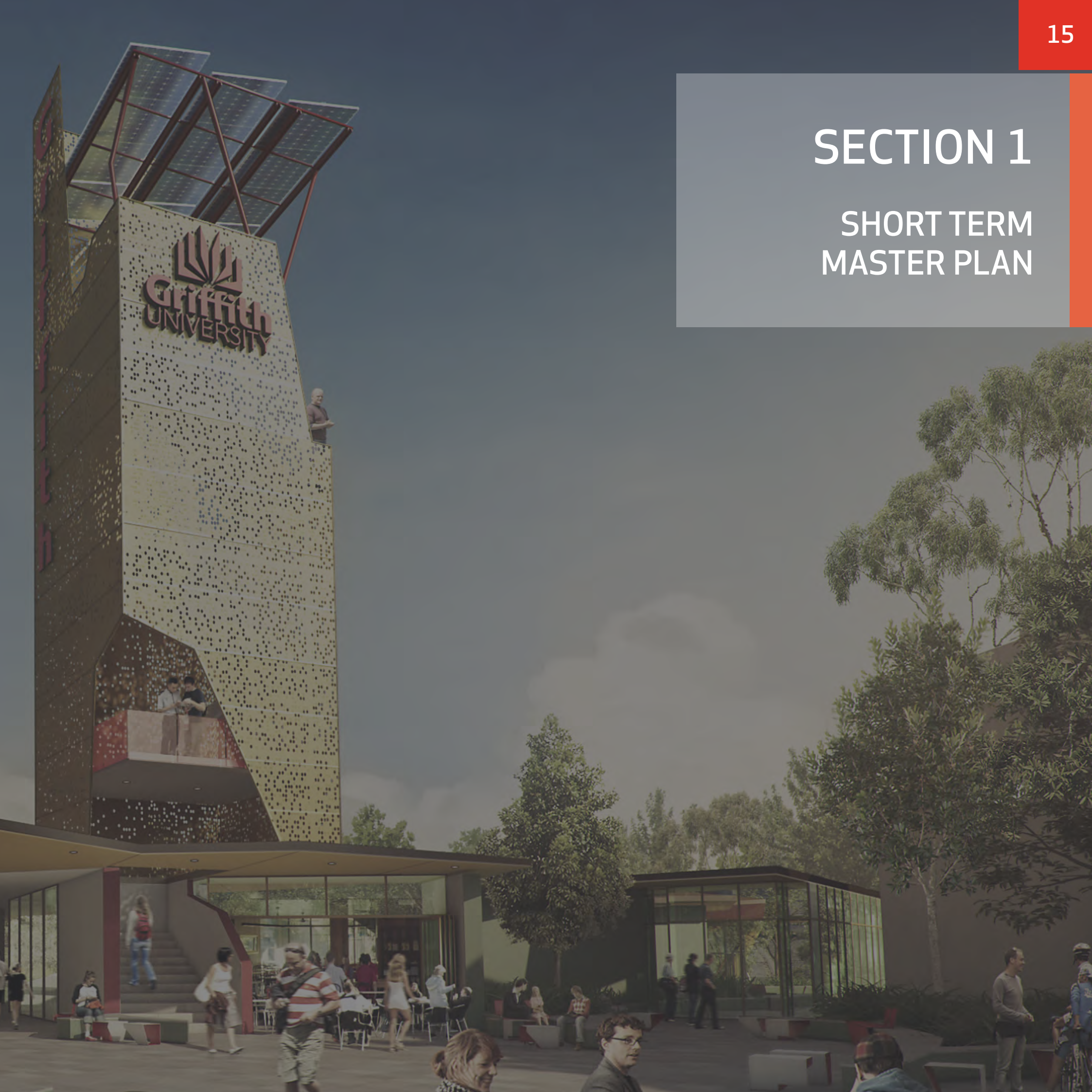
The long Term Master Plan anticipates that there will be a need to develop University and/or knowledge/commercial buildings to the north of Parklands Drive on the land released after the Commonwealth Games.



Three-dimensional view

SECTION 1

SHORT TERM MASTER PLAN



Short Term Master Plan

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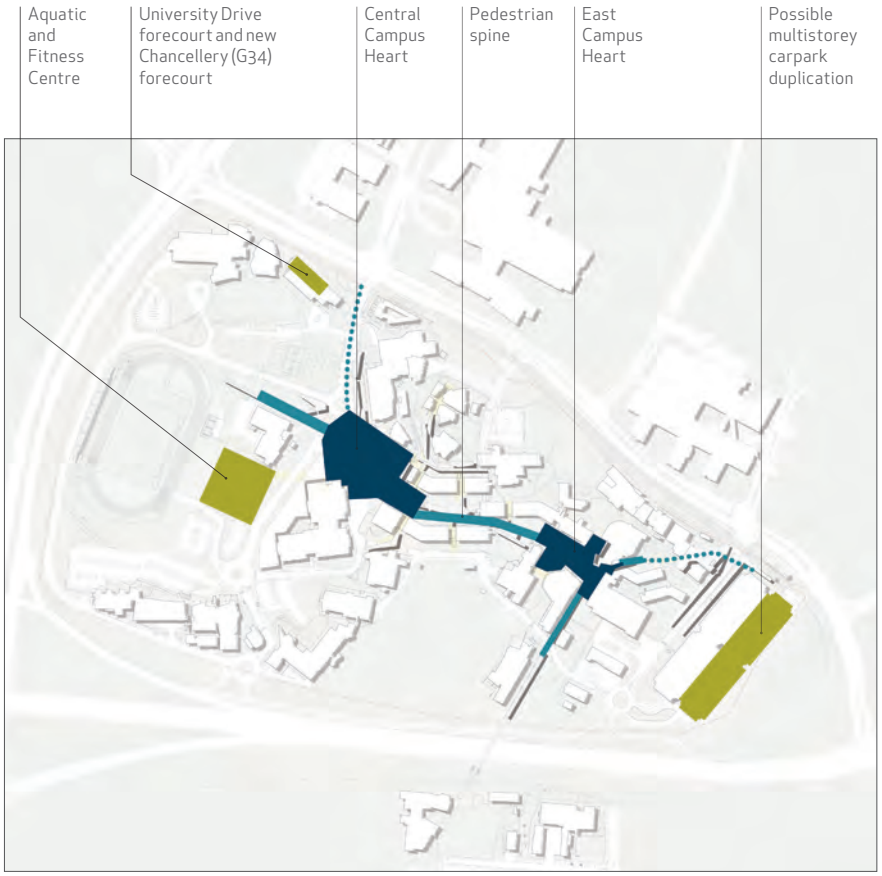
LEGEND

PREFERRED SITES FOR NEW BUILDINGS SHORT TERM

1.1 OVERVIEW

The Short Term Master Plan encompasses a series of projects which can be implemented in stages but which together will redefine the campus character and legibility in a way comparable to the upgrade of the Nathan Campus, although more extensive.

The plan does not identify the need for new academic or common use buildings, except for the need to construct a new multistorey carpark. However, should new buildings be required, reference should be made to the Medium Term Master Plan for a variety of sites throughout the campus which would reinforce the Master Plan structure.



Short Term Master Plan: key projects

The key projects in the Short Term Master Plan are:

Central Campus Heart – the initial phase of a wider strategy to create a distinctive Campus Heart off University Drive that engages the Library (G10), forms a defined Campus Green, resolves pedestrian and disability access up from the valley, and replaces the end of the Business 1 (G01) with a new social hub.

East Campus Heart – the creation of a dual level courtyard at the point of intersection of the pedestrian triangle corridor and the proposed east-west pedestrian spine, activated by new uses in the base of Multimedia (G23) and changes to the buildings form to create a new campus marker.

East-West Pedestrian Spine – the insertion of a pedestrian spine joining the two Campus Hearts and running between Health Sciences (G05) and Business 3 (G06). This spine entails remodelling of stairs and ramps, courtyard space transformations, new lifts for equitable access and most importantly a continuous line of canopy structures. It also entails a new pedestrian link between Multimedia (G23) and Engineering (G09) directed toward the new GCRT Station.

Aquatic Centre – the development of a 50 metre competition standard pool and gymnasium complex between the Athletics Field and the Student Centre (G33) as the first stage of creating an integrated sports, health and lifestyle precinct at the western end of the campus.

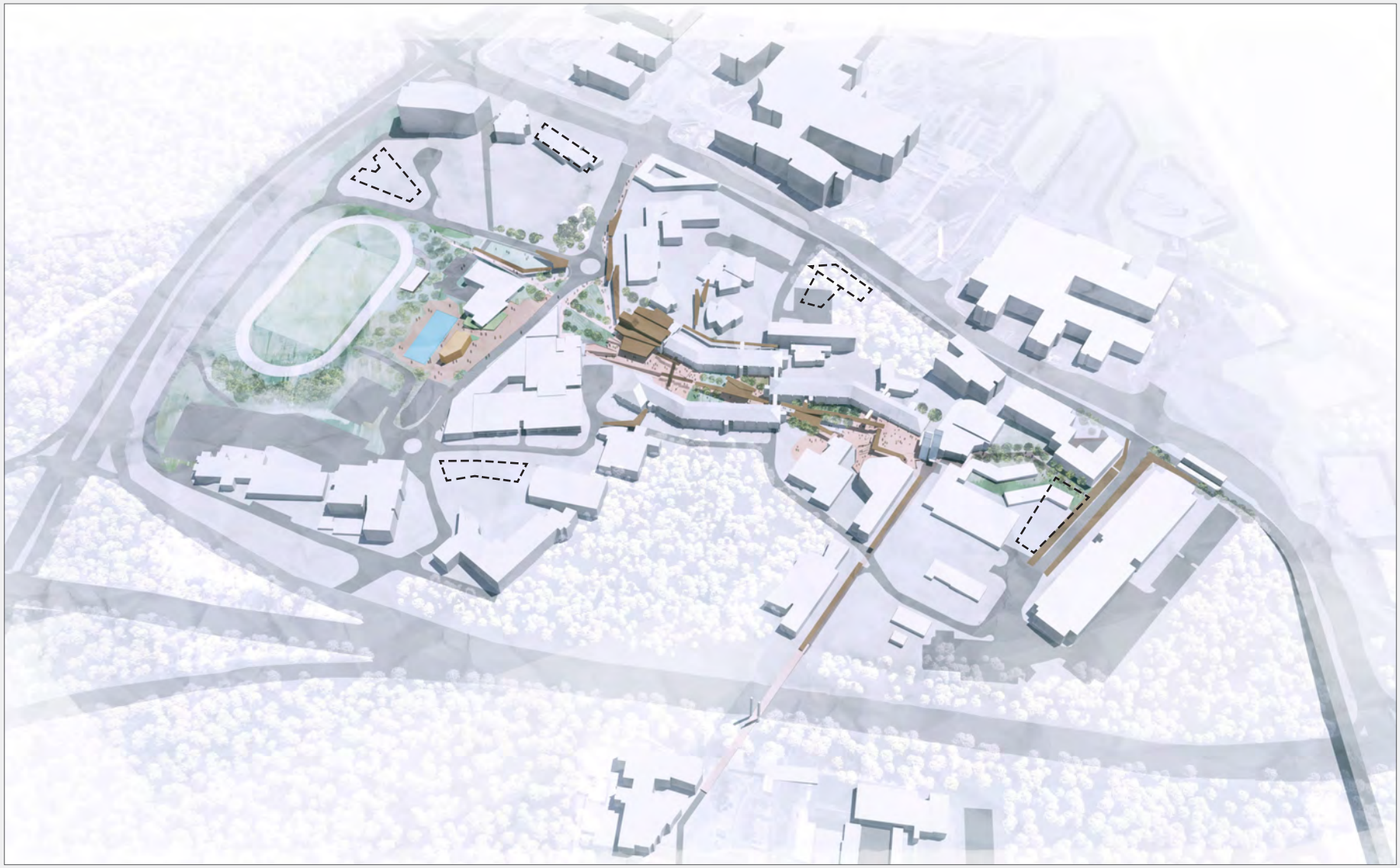
Former CAE Buildings – a cosmetic upgrade of the three oldest buildings on the campus (G01, G05, G06) as a short term measure to enhance their perception and social space attraction.

These projects underpin a possible program of wider campus open space upgrades which could occur concurrently if funds become available.

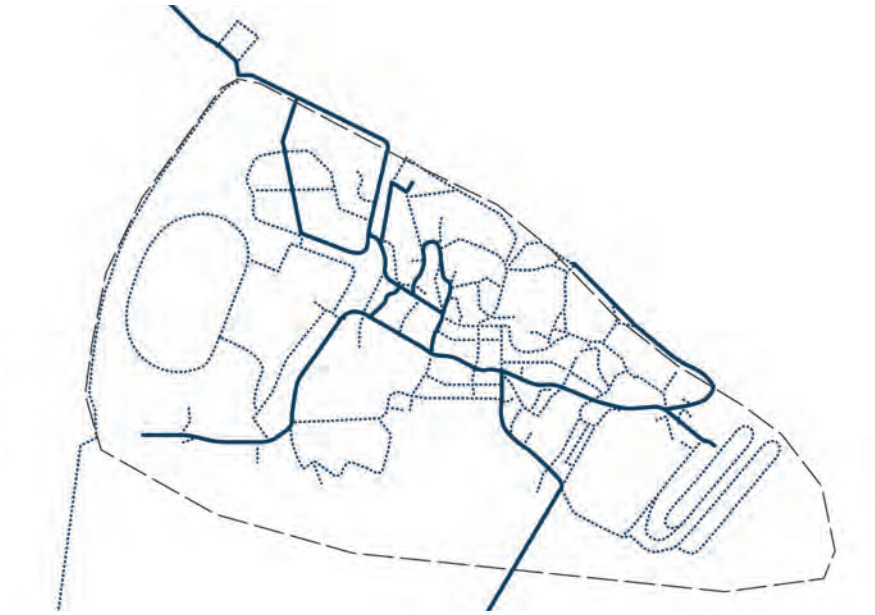
Priorities for open space upgrades are:

- the courtyards between the old CAE buildings (G01,G05) and on the northern side of Business 1 (G01)
- pathways around the new Griffith Business School (G42) and adjoining bushland and their connection into the campus
- the courtyard between Multimedia (G23) and Science, Engineering and Architecture (G39)

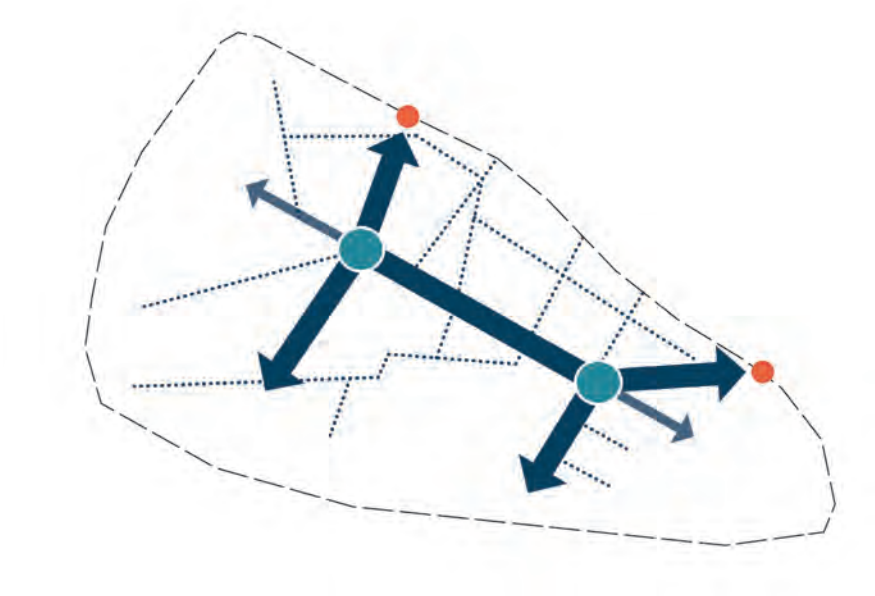
A further project in this phase is an entry structure between the GCRT University Drive Station and The Link building (G07) which is being implemented in conjunction with the GCRT project.



Short Term Master Plan Axonometric showing preferred early building sites if required (N.B. The Chancellery (G34) as possible art gallery)



Existing Pedestrian Network



Pedestrian Spine Concept

The diagrams at left illustrate the intent to change the pedestrian movement network from a pattern of non-hierarchical paths to a more structured pattern of main spine and lateral paths. As such, the lower drawing is diagrammatic only as there will still be the need for interconnecting pathways.

The axonometric drawing at far left illustrates the proposed short term focus upon creating the two 'campus hearts', the main pedestrian spine and the aquatic centre, as the focus of a defined sports and lifestyle precinct to the west of the campus.

The Short Term Master Plan therefore does not anticipate new buildings although these may occur in the timeframe of the next 2-3 years. It is understood that possible buildings are adjacent to the Griffith Health Centre (G40) and/or in the Science 1 (G24)/Glycomics precinct (G25/G26). From a master plan perspective, it would be beneficial to develop a new Sciences building along Engineering Drive, simultaneously demolishing the two annex buildings to Engineering (G09), as this would initiate the quality of a 'main street' linked to the proposed 'main street' north of Parklands Drive for the Commonwealth Games and beyond.

The development of robustly scaled new buildings along Parklands Drive (G39, G42, G40) has created a strong urban interface with the Gold Coast University Hospital which could be continued with a further building adjoining Alumni Place. Another potential is the possible conversion of The Chancellery (G34) into a University Art Gallery, activating the frontage to the University Drive GCRT Station. This would require relocation of The Chancellery (G34) to a new building which would be well-positioned in a building replacing the existing Link Building (G07).

Campus Heart at upper level view from University Drive

1.2 CENTRAL CAMPUS HEART

The Central Campus Heart is proposed to be the hub of social life on the campus and the point of convergence of the new pedestrian spine with the campus entry path from the University Drive GCRT Station.

Its location is chosen for this role as it is relatively central in the Northern campus and there is space to create a significant public place. Another factor is its central position between major common use facilities including the Library (G10), the Student Centre (G33), The Link building (G07) and The Chancellery (G34).

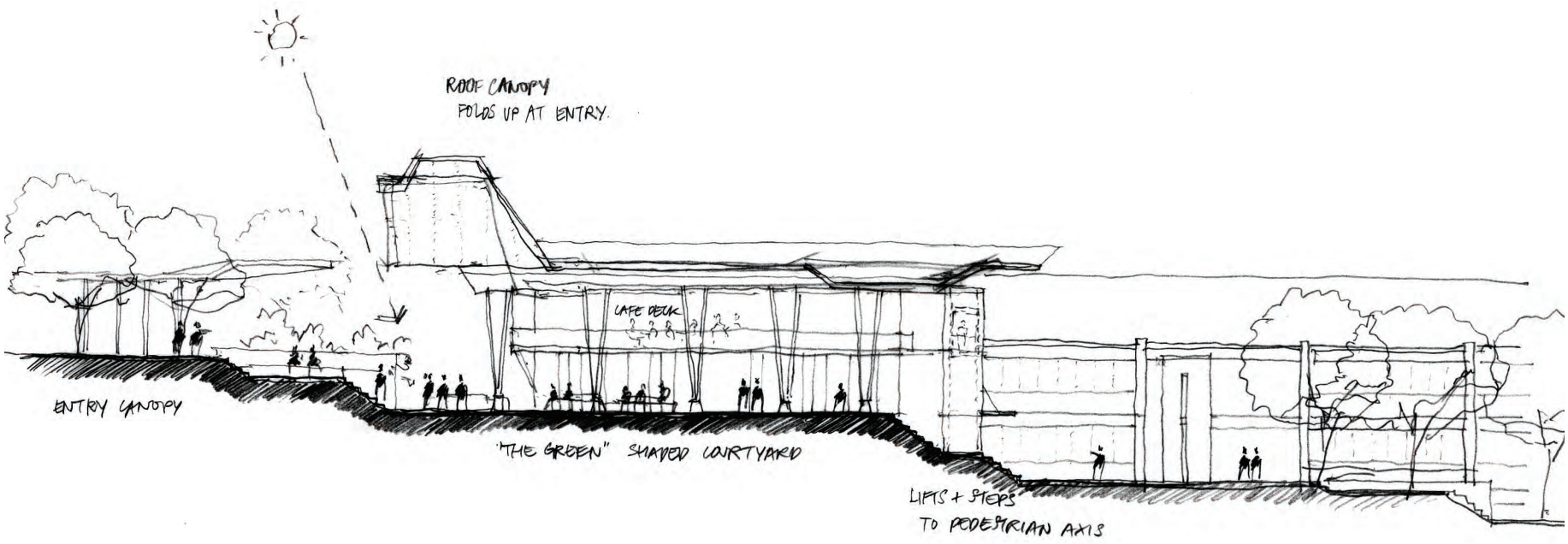
In the medium to long term planning, it is proposed to demolish and replace The Link (G07) with two new large buildings flanking an arrival court from the GCRT Station (refer Medium Term Master Plan), which would rehouse the Student Guild and The Chancellery. The Short Term Master Plan for the Central Campus Heart provides for this eventuality. Similarly, the Student Centre (G33) could also be demolished at that time and its uses integrated with the Student Guild in one of the new buildings.

The Central Campus Heart is proposed as a two level place which facilitates compliant disability access up from the valley to the University Drive level. This program results in a series of broad stairs and landings acting as social spaces, ramps and an external lift which are all needed to negotiate the steep grade and to resolve disability access.

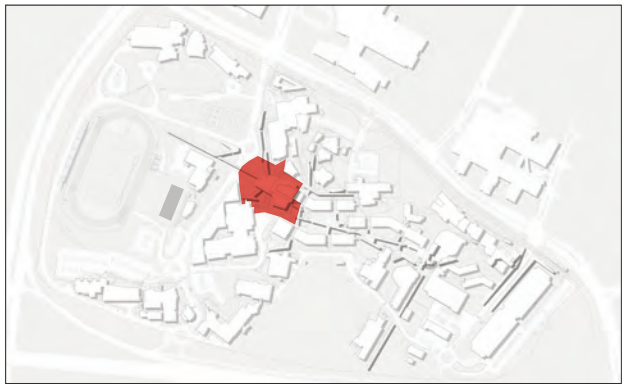
The project would demolish the existing western end of Business 1 (G01) and replace it with a new Campus Heart building comprising 2-3 levels. Notionally the lower level would accommodate existing student facilities, the middle level retail outlets, while a third level, if provided, could comprise seminar or other social spaces. The new building is designed to identify and energise the Campus Heart in the same way as at Nathan Campus.

The architectural concept of the new building is for it to create a roof which extends out covering much of the plazas around it and thus provide an all-weather social space. This roof is also conceived to be of a high scale which is visible from afar as distinguishing the Campus Heart well into the future.

With the absence of any existing Campus Heart or great court, this project is considered to be of high priority recommendation to the University. It promises to be a transformative project, connecting the Library (G10) and its new additions, into the precinct and acting as a key first stage of campus revitalisation.



Longitudinal section through concept pedestrian spine



Location plan

Central Campus Heart concept, lower level plan

Concept sketch, Central Campus Heart from pedestrian spine

Concept sketch, Central Campus Heart from University Drive

Central Campus Heart concept, upper level plan

Concept perspective, East Campus Heart

1.3 EAST CAMPUS HEART

The East Campus Heart entails a comparable project scale to that for the Central Campus Heart. It has four major purposes:

- **To create a defined centre to the east campus facilities of Sciences, Arts, Education, Law, Multimedia and Business.**
- **To form a distinct point of arrival to the northern campus from the Smith Street pedestrian bridge.**
- **To create a clear thoroughfare through toward the Engineering Drive GCRT Station.**
- **To act as a vertical marker for visual identity of the campus from outside the campus, particularly the future Knowledge Precinct planned to the north of Parklands Drive.**

The accompanying illustrations portray a design concept for the project which compasses the following components:

- creation of two levels of plazas, one at level of the pedestrian bridge corridor and one between Visual Arts (G14), Multimedia (G23) and Business 3 (G06), connected by a new grand staircase and external lift for equitable access
- demolition of the annex building to Visual Arts (G14), necessary to create the lower plaza, with its uses relocated
- remodelling of Engineering (G09) to relocate plant into a new tower forming the vertical marker and night 'lantern' that defines the east campus heart's location
- conversion of the upper western edges of Engineering (G09) into student social and computer hubs which open out to and activate the courtyard
- remodelling of the junction between Engineering (G09) and Multimedia (G23) to replace the existing indistinct link between them with a major pedestrian thoroughfare that will direct movement between the Campus Heart and the Engineering Drive GCRT Station. This link could have 24 hour access if new entrances to G09 and G23 were created off the link space

The Short Term Master Plan does not necessitate demolition of the two linear annexes extending out from Engineering (G09). However, their removal would facilitate creation of an important space that unites the Sciences and Multimedia buildings, generates a defined link the GCRT Station, and establishes a new building site along Engineering Drive.

The upper level plaza may need to provide service vehicle access as currently occurs, unless alternative arrangements can be made. This plaza will act as the pivotal point signifying the change of direction in the campus's two pedestrian spines and diverting people from using the steep, narrow and disability-inequitable Science Road from the Smith Street pedestrian bridge. The upper level plaza will be activated by the remodelled and refurbished corner of Multimedia (G23) where an East Campus Heart café is envisaged.

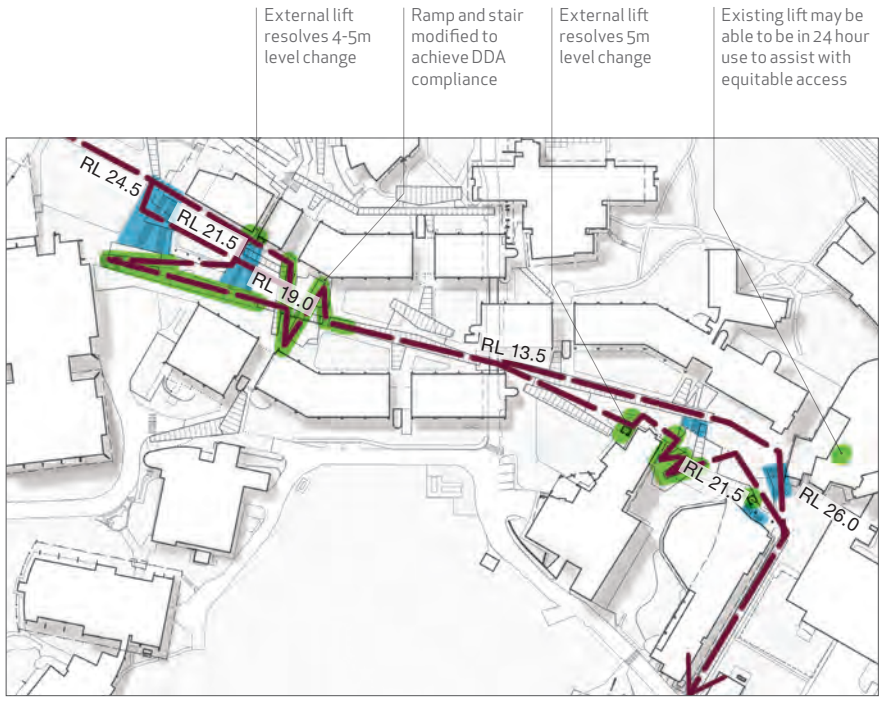
The remodelled through-way to the Engineering courtyard will further activate this space as it becomes used as the main conduit of movement from the GCRT Station to the pedestrian spine.

Location plan

East Campus Heart concept, lower level plan

East Campus Heart concept, upper level plan

Conceptual study for campus pedestrian spine



Diagrammatic study of main elements required for disability (DDA) accessibility

1.4 EAST-WEST PEDESTRIAN SPINE

The East-West pedestrian spine is designed to link the proposed two Campus Hearts, but more importantly to define the major movement corridor through the campus.

The position of the spine has been chosen because it offers a direct line of sight between the East and West campuses. It encompasses the spaces between the three former CAE buildings (G01, G05, G06), and it encourages access into the campus from the pedestrian bridge direction to utilise this corridor instead of Science Road.

The impact of the spine is proposed to be comparable to that in the Nathan Campus revitalisation. It however involves a much more intricate and specific series of ramp, stair and lift interventions in order to facilitate equitable access for people with disabilities.

The principal distinguishing component of the spine is a series of high canopies that are key to the spine being identified as the campus' major movement conduit. The canopies reflect the subtropical lifestyle of the campus, providing all-weather movement and coverage of adjoining courtyard spaces. Redevelopment of those courtyard spaces is necessarily integral to the work.

There would be potential merit in the canopy architecture being comparable with that at the Nathan Campus to reinforce the sense of a single cohesive university. This strategy would not require direct imitation, but a synergy of dramatically structural geometries.

The strategy has required detailed study of the topography, the existing stairs and ramps, to ensure that there are workable solutions to the compliances for disability access. These solutions are depicted on the accompanying diagram.

Apart from generating a defined pedestrian corridor through the campus and resolving existing disability access in equities, the new spine is proposed to create upgrades to the existing courtyards.

The major courtyards are those at the proposed Central and East Campus Hearts, however, significant upgrades are also proposed to the courtyard between Business 1 (G01) and Health Sciences (G05), and the courtyard between Business 3 (G06) and Visual Arts (G14).

These enhancements should be seen as the catalyst projects for further courtyard upgrades, with priority given to spaces to the north of Engineering (G09) (particularly if the small annex to Engineering can be removed).

The proposed courtyard upgrades along the pedestrian spine are intended to remain largely intact should decisions be made to redevelop the former CAE buildings with new buildings, as indicated on the Medium and Long Term Master Plans.

Concept perspective of Aquatic and Fitness Centre

1.5 AQUATIC AND FITNESS CENTRE

A competition 50-metre swimming pool is proposed along the alignment of University Drive opposite the Library. It is sited to gain expansive views out over the athletics field and to reinforce the proposed conversion of the adjoining part of University Drive into a pedestrian spine.

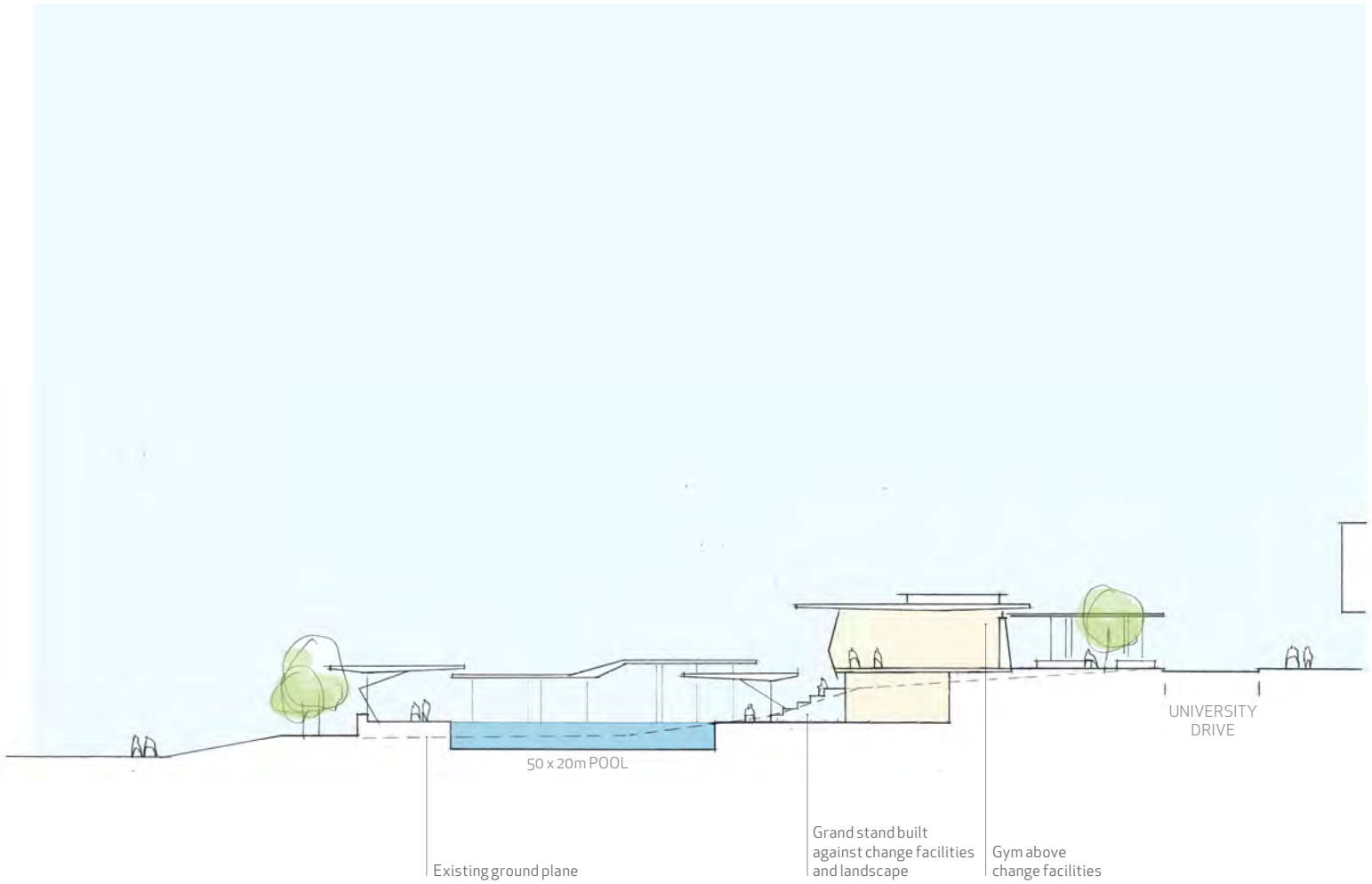
The purpose of the pool is to build upon the Athletics Field to create a comprehensive sports, health and lifestyle precinct unique to the University campus and acting as a major attraction to existing and future students and staff.

The proposal incorporates a two level pavilion on the upper edge. The pavilion is configured to accommodate a shop, change amenities and stores and a café at ground level, and a gymnasium and deck at upper level. The plan is for an 8 lane pool. This width is suitable for major competition events however not for major international competitions which require a 10 lane configuration. The concept proposes a canopy edge providing shelter for swimmers and spectators around the pool.

The concept is designed to facilitate expansion up the slope to incorporate future diving and/or water polo pools, together with a series of garden terraces which will reinforce the precinct as the 'green heart' of the campus.

Apart from its role to facilitate swimming and other aquatic activities as a major attraction of the Gold Coast campus, the pool acts as a strong social magnet. Its development is thus strongly recommended for consideration.

Location plan



Section

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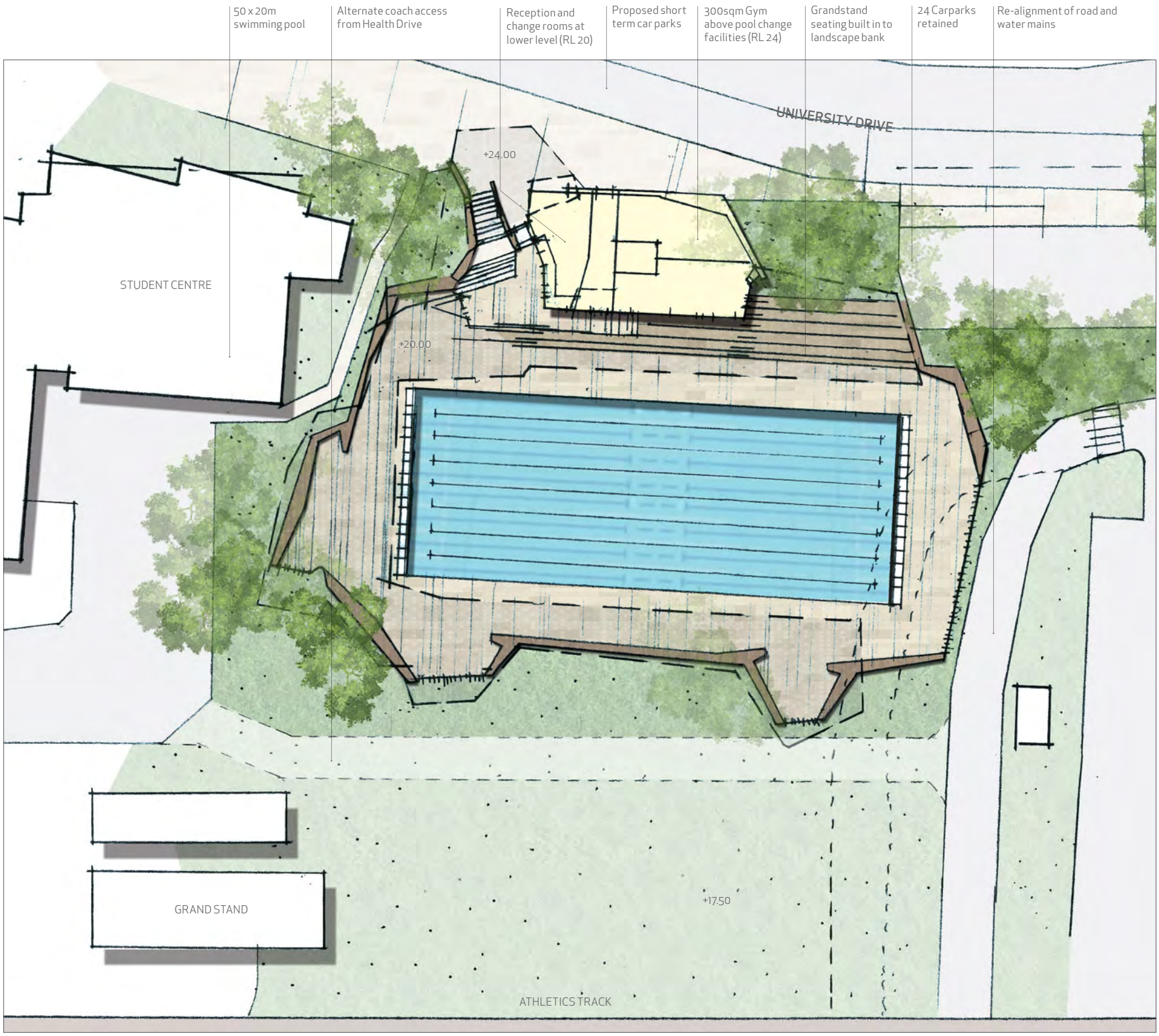


Aquatic and Fitness Centre Concept, lower floor plan

Potential conversion of The Chancellery (G34) into University Art Gallery and functions venue - short/medium term

Upgrade The Chancellery (G34) forecourt

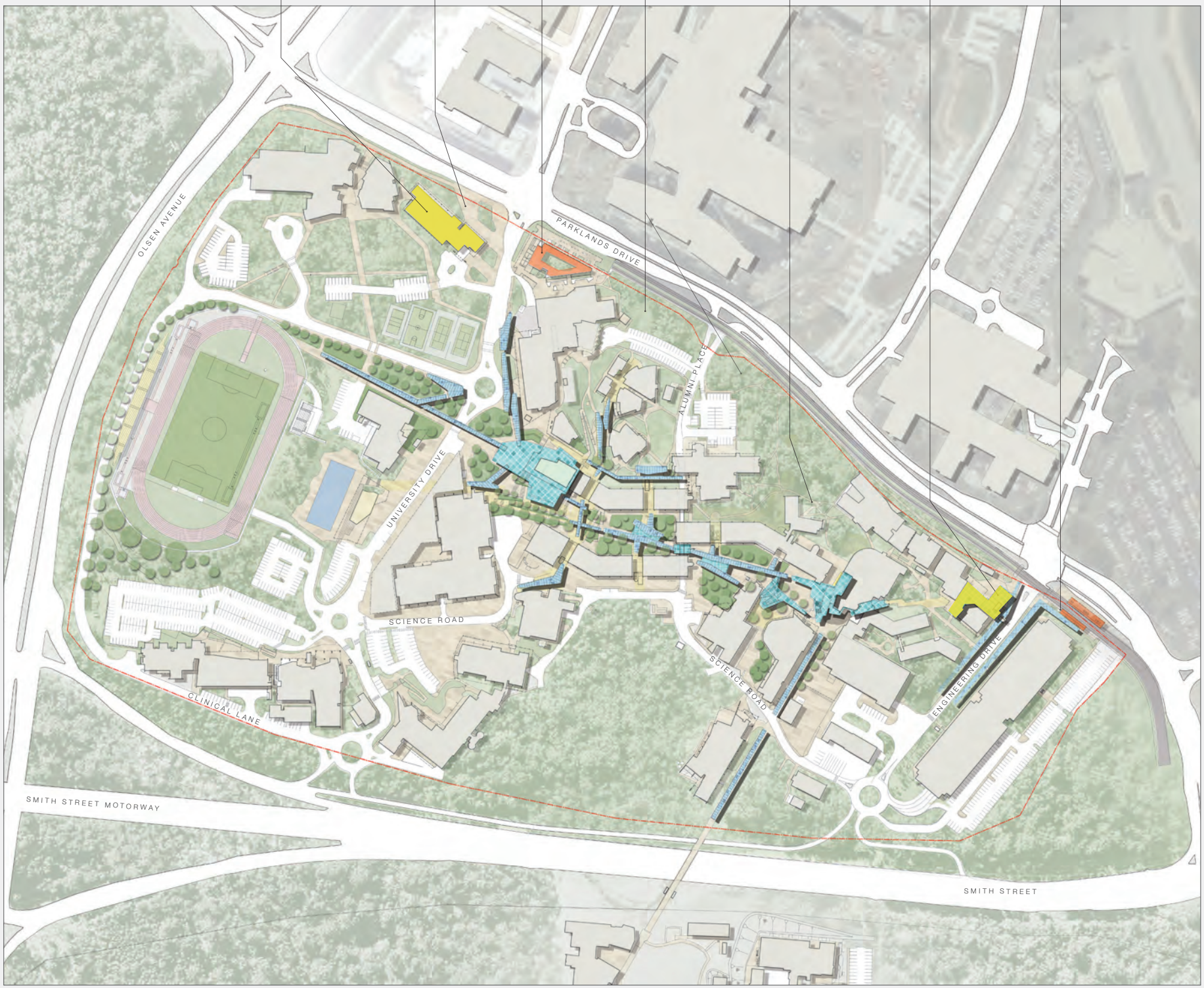
GCRT station and canopy

Key sites for new buildings to activate Parklands Drive (refer to Medium Term Master Plan)

Rationalise pathways from Griffith Business School (G42) into campus

New plaza upgrade, canopies lighting + University signage

GCRT station and possible pavement/canopies to same design character as for pedestrian spine



Short Term potential improvements to Parklands Drive

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LEGEND

NOTIONAL NEW BUILDINGS

EXISTING BUILDINGS

1.6 PARKLANDS DRIVE INTERFACES

The Parklands Drive edge of the campus is important because it is the line of interface with the Gold Coast University Hospital, the Private Hospital and future Knowledge Precinct development after the Commonwealth Games.

The visual impact of the Gold Coast Rapid Transit, and of traffic reduced by it to two lanes, are mitigating factors that hamper Parklands Drive from being experienced as a pedestrian friendly avenue. However, the University has contributed to creating a positive interface in its most recent buildings, the Griffith Health Centre (G40) at the western end and the Griffith Business School (G42) toward the eastern end.

The direction created by these new buildings should be reinforced as other new projects are implemented. Recognising that most of these projects are unlikely to be short-term, the major opportunities are considered to be from west to east, as follows:

1.6.1 The Chancellery

The short term project is a transformation of the building's foreground along Parklands Drive from a bush setting to a paved garden with University outdoor furniture, lighting and signage that encourages street edge social gathering.

The medium term project is the conversion of The Chancellery (G34) into an Art Gallery to which the building type, fabric and scale is easily adapted. This proposal would create a distinct cultural interface for the University to Parklands Drive, well situated adjacent to the GCRT University Drive Station.

A notional concept has been created for both eventualities, illustrated over the page.

1.6.2 GCRT Gold Coast University Hospital Station Address

The University has decided to proceed with the canopy design offered by the GCRT provider. A scheme prepared by Push Architecture for The Student Guild will, if implemented, in the short term provide an improved address amenity to the campus from the University Drive GCRT Station.

In the medium to long term however, it is proposed to demolish the existing Link Building (G07) and develop two new buildings flanking an 'arrival square'. Thus, it is recommended that minimal expenditure is outlaid on the short term improvements.

1.6.3 Alumni Place

Alumni Place serves mainly as a service lane access route through the campus, but has a current role also for carpark access to Carpark F and to Theatres Lane carparking. These carparks are proposed to be replaced long term by basement parking under new buildings.

A short term concept has been prepared for enhancing the vitality of Alumni Place where it runs under Buildings G27/G01/G06/G05 involving painting of these buildings' laneway soffit, and outdoor furniture and lighting installation.

1.6.4 Conservation Forest and Business School Pathways

This area is a protected forest with a number of pathways within it. A request from the Business School has been received recommending a rationalisation of these pathways and the adjoining connections to Business 3 (G06) and into the campus beyond from the new Griffith Business School (G42). These changes require a detailed landscape plan which is recommended to be undertaken through Campus Life.

1.6.5 Engineering Drive and Multi-storey Carpark Frontages

The conversion of the former roundabout to a signalised intersection is being undertaken as part of the GCRT project. This intersection will connect Engineering Drive into the Commonwealth Games Precinct for 2018, and thereafter into the proposed 'Knowledge Precinct' post-Games.

In the short term, a scheme for improving the landscape frontage to the Science, Engineering and Architecture building (G39) should be prepared to a comparable quality as that proposed for The Chancellery (G34) frontage. This plaza frontage will play a role in facilitating access from the Engineering Drive GCRT Station diagonally between the two portions of G39 and into the proposed revised connection between Multimedia (G23) and Engineering (G09). Thus, the corner plaza and Engineering courtyard upgrades should be considered as a short term priority.

A concept scheme has been prepared to animate the current barren plazas between G39 and the Parklands Drive/Engineering Drive corner. The scheme involves a series of lighting and canopy structures, the latter extending across Engineering Drive between the GCRT Station and the Multistorey Carpark (G13). This scheme also identifies currently lacking but important Griffith University signage at this major entry point to the campus. The scheme is illustrated over.

1.6.6 GCRT Engineering Drive Address

It is unfortunate that this address adjoins the end of the Multistorey Carpark (G13) from an aesthetic viewpoint, for which consideration should be given to a canopy walkway from the GCRT Station to the Engineering Drive intersection, extending into the G39 corner plaza and along the western side and/or eastern side of the Engineering Drive for about half its length.

In the medium term, a new building is proposed adjoining Engineering Drive, to which the canopy could be attached.


GRIFFITH UNIVERSITY
GRIFFITH GOLD COAST

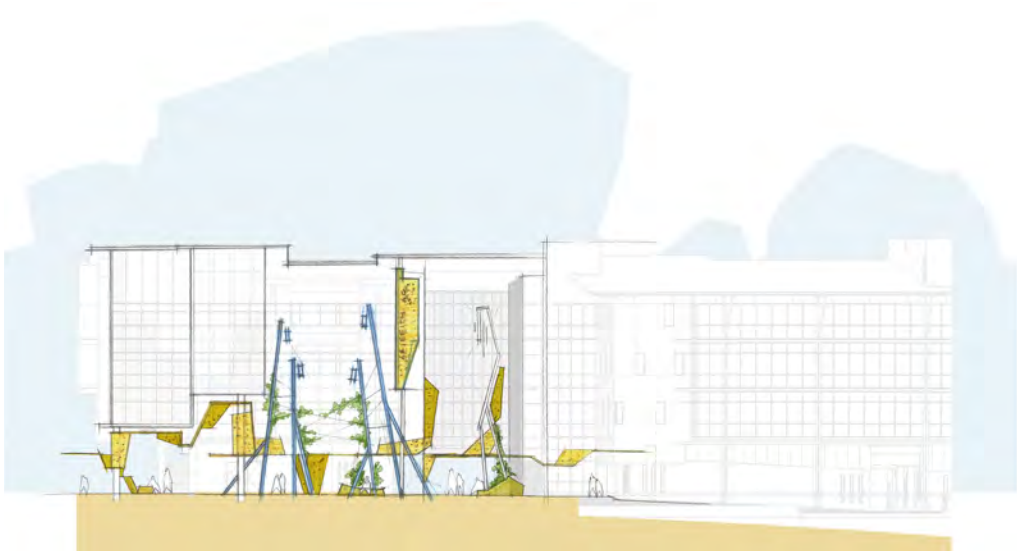
1.6.7 GCRT Griffith University Station Address

The University Station for the rapid transit corridor will become a highly important gateway to the campus during and following the Commonwealth Games. The potential for the University to grow onto the GCHKP 'Knowledge Precinct' land, post-Games, increases its importance.

In addition, there is little existing presence to this entry point to the campus at Engineering Drive/ Parklands Drive interface, there being no distinct signage and a lack of pedestrian amenity.

The accompanying sketches illustrate a concept for animating the undercroft spaces at Building G39 and linking new canopies toward a canopy structure at the station. The canopy structures are designed to continue diagonally into the campus directly to the proposed East Campus Heart, thereby also extending the Pedestrian Spine through the campus linking the two GCRT Stations.

This concept will thus create strong clarity of pedestrian movement from entry point to entry point, but as importantly, will enliven the prominent corner of the campus that is the first sight of the University along Parklands Drive from Smith Street.



Location plan

Concept study of The Chancellery (G34) conversion to art gallery, ground floor plan

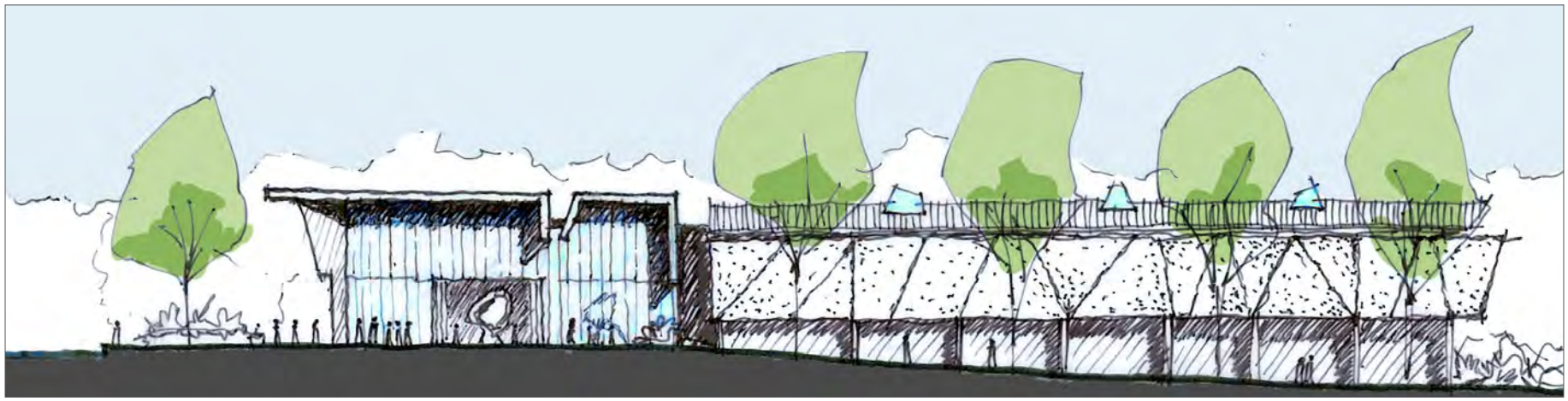
1.6.8 The Chancellery as Art Gallery

The potential for The Chancellery (G34) building to be converted into a University Art Gallery on the Gold Coast campus has been notionally considered. The building is a two storey building of mostly lightweight architecture and partitions which can be readily modified to create spacious galleries at both levels, together with administration and storage facilities.

The notional ground level plan also indicates a possible café opening to a revised forecourt as a means of creating a scale of external public realm engagement. This may be achieved in other ways should it be seen as competitive with The Link (G07), or it may be regarded as a future potential.

The use as a gallery building could be enhanced by retaining the upper boardroom as a function venue, benefiting from co-location with the gallery. It would be desirable for some degree of external remodelling of the façades to occur as the building's architecture is dated, and there would be a need for the architecture to convey the impression of having cutting edge arts activities inside.

Aerial view of concept University Drive precinct at Parklands Drive



Concept Elevation - The Chancellery conversion to Art Gallery

Commonwealth Games concept plan provided in tender offer to potential developers, 2013 (subject to change)

0 50 N

Land use intent – legacy mode post-games (subject to change)

LEGEND

- COMMONWEALTH GAMES VILLAGE/ FUTURE RESIDENTIAL 7.96HA
- COMMONWEALTH GAMES VILLAGE/ FUTURE KNOWLEDGE PRECINCT 7.98HA
- COMMONWEALTH GAMES VILLAGE/ FUTURE TOWN CENTRE 5.29HA
- PARKLAND 8.18HA

1.7 POST-COMMONWEALTH GAMES POTENTIALS

It is not possible to develop a Master Plan for the portion of the Commonwealth Games domain which is delineated as a Health and Knowledge precinct at this stage. The area in question is reserved to function as facilities (supporting the Games residential village), to be removed after the 2018 event.

The area is included here as a reminder of the potentials of the area – approximately 7.98 hectares – to accommodate University growth in a variety of ways. Growth could include; academic buildings, commercial buildings that could have a relationship the university, a 'lifestyle' precinct and possibly a multilevel carpark. Such a carpark could replace the loss of existing carparking used by University students of some 1,310 spaces, or a larger number that caters for future growth.

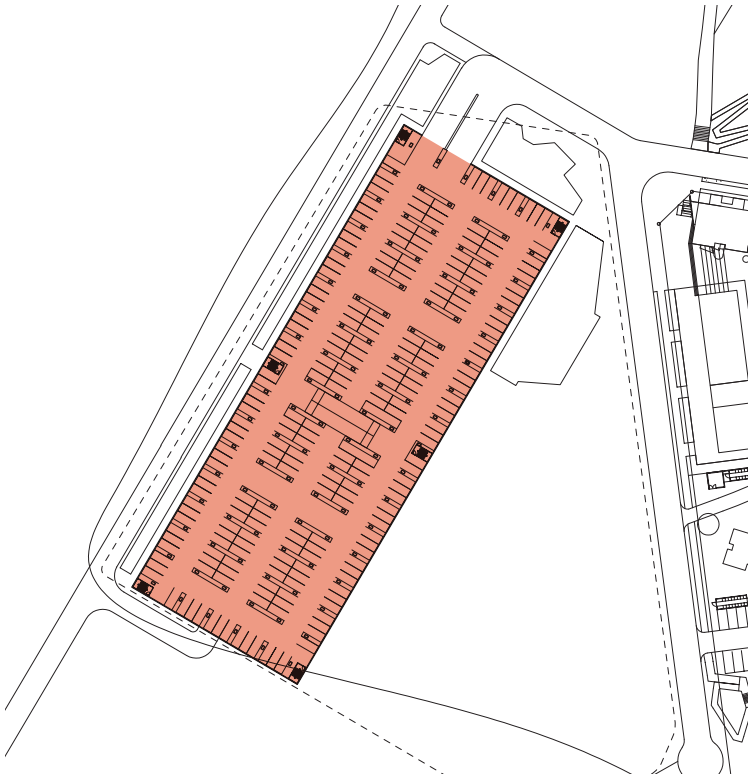
The diagram at far left is a concept plan produced for the Games village tender process and has no particular status. The diagram at left is the control drawing provided to prospective tenderer's outlining future zoning post-Games. As such, it is subject to change, however it delineates the future road connection to Smith Street to the north-east of the existing Parklands Drive intersection. This new connection will be an important provision as it will act as an alternative ingress/egress to the campus to the Parklands Drive intersection.

The 'Main Street' of the knowledge precinct is planned to align with Engineering Drive, meeting Parklands Drive at a signalised intersection adjoining the GCRT Station. Hence, University or related building development should begin along either side of the 'Main Street' as priority and then along Parklands Drive.

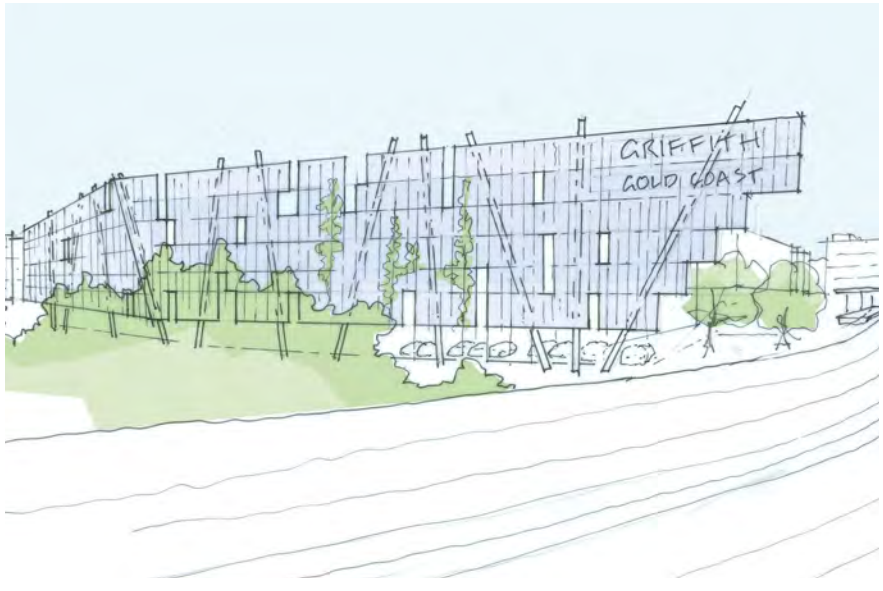
It is possible that the Games Village developer and/or Economic Development Queensland will not require all the land once the developer is known. If not, the most likely land available would be along Parklands Drive. There may thus be an opportunity for the University to negotiate an early outcome that could include a building or a multilevel carpark.

It is for this reason that this discussion is included in the Short Term Master Plan for consideration by the University.

Typical Floor



Option 1 - Typical Floor



Sketch Illustration of Possible G13 Carpark Expansion from Parklands Drive

Sketch Illustration of Possible Southern Campus Multistorey Carpark

1.8 CARPARKING STRUCTURES

The images on the preceding page illustrate potentials for two multistorey carparks for which further analysis is needed to test their viability and suitability with respect to traffic accessibility.

The option for expanding the Multistorey Carpark (G13) is most efficient in car space yield if it includes a small incursion into the adjoining DTMR land, however, this incursion is not essential. The expansion has the benefit of utilising the ramping in the existing carpark structure. The potential of this option is dependent upon gaining vehicular accessibility to Smith Street in addition to the existing carpark access to Parklands Drive. The new carpark structure has the potential to create a new attractive expression of the campus to Parklands Drive, as diagrammatically illustrated.

The option for constructing a new carpark in the Southern Precinct is preferred as the first stage of new carparking as it is not reliant on Parklands Drive nor Smith Street access, instead gaining access from Olsen Avenue via extension of Griffith Way. A number of locations have been considered, with the hatched area showing the preferred zone, and an indicative site positioned on axis with the Griffith University Bridge. The sketch is an illustration as to how the structure could camouflage well into the bush setting.

SECTION 2

MEDIUM TERM MASTER PLAN

Medium term Master Plan

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LEGEND

PREFERRED SITES FOR NEW BUILDINGS MEDIUM TERM

Medium term Master Plan potential building removals

2.1 OVERVIEW

This Master Plan is prepared to illustrate a preferred pattern of growth over the next 7-10 years, building upon the movement structure devised for the Short Term Master Plan.

The Plan identifies a range of potential new buildings that can accommodate the University's current forecast growth as well as indicating additional potential buildings should growth exceed these forecasts. Some of these buildings are identified because they would contribute to improving the campus structure and character, in particular two buildings that would replace The Link (G07) to create a significant arrival court into the campus from the University Drive GCRT Station.

The Medium Term Master Plan utilises development of new buildings to continue a staged process of campus open space improvements. The plan is configured to retain the open space improvements that would have been made in the short term master plan.

The major vehicular changes that are proposed in the medium term are:

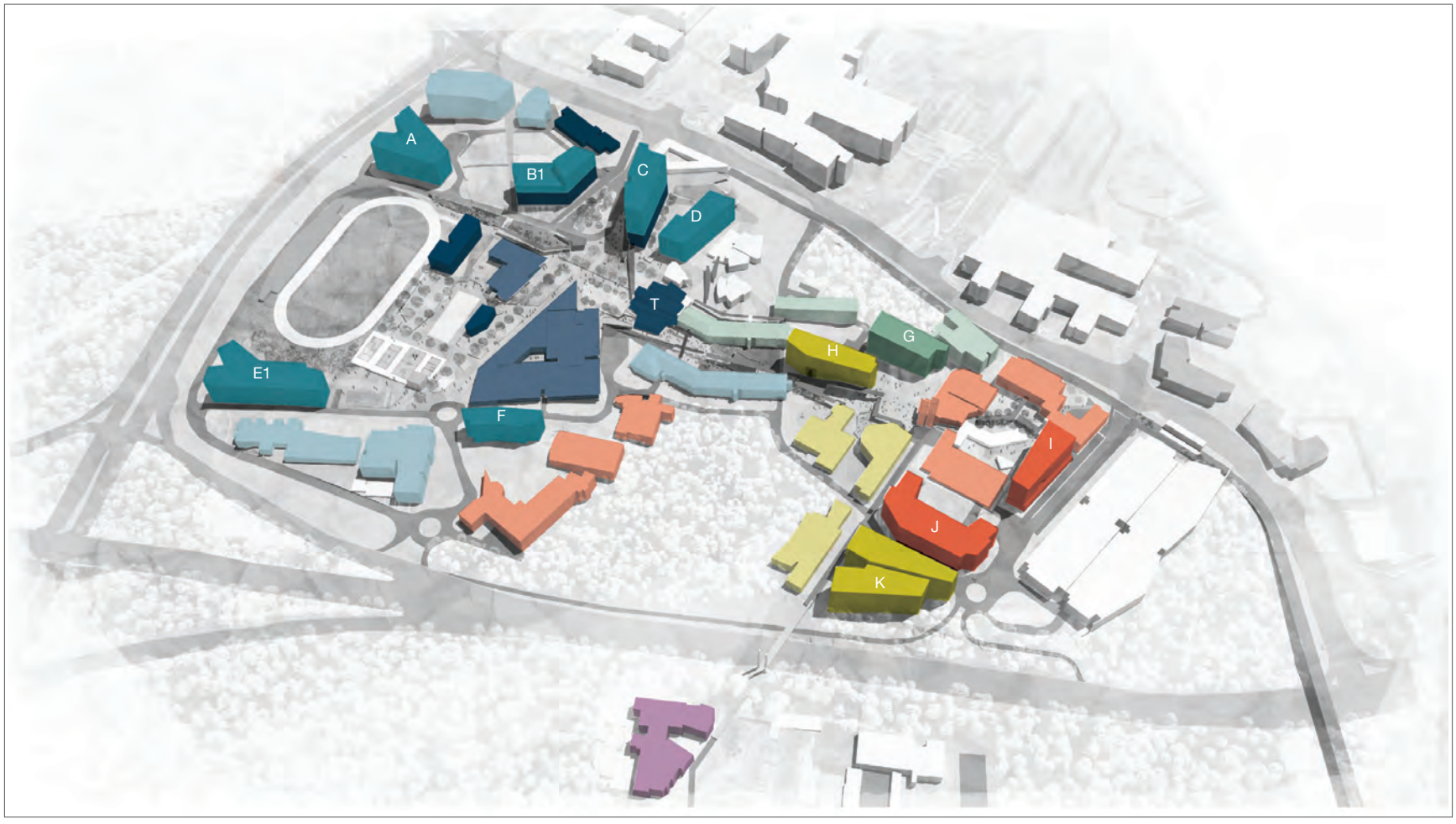
- The extension of Health Drive around the athletics field to link with an upgraded Clinical Lane. This extension would be the first stage of a continuous ring road that is intended to connect around the campus with Engineering Drive.
- The conversion of the middle section of University Drive into a lateral pedestrian spine with occasional service vehicle access. This conversion is intended to create a strong pedestrian character to the western campus, linking the Central Campus Heart with the Aquatic and Fitness Centre created around the Athletics Field as a major campus amenity.
- The removal of at-grade carparking from the western campus requiring replacement carparking for which it is proposed to construct a multi-level semi-basement carpark to the south of the athletics field. A detailed study of carparking demand would be required at this time.
- The possible construction of a duplication of the existing Multistorey Carpark (G13), depending on further investigation of traffic impacts upon Parklands Drive and on the potential for an egress ramp from Engineering Drive to Smith Street.

The ability to realise this master plan is thus largely based upon the implementation of significant vehicular movement changes from which a pedestrian-focused urban campus character can emerge.

MEDIUM TERM BUILDING USES & GFA

BUILDING	GFA	HEIGHT (FLOORS)	SUGGESTED USES
A	14000	7	HEALTH, RESEARCH
B1	13000	7	HEATH ADMIN, THEATRES
C	17000	12	THEATRES, STUDENT SERVICES, HEALTH, COMMERCIAL, RESEARCH
D	12000	6	COMMERCIAL, HEALTH, RESEARCH
E1	12000	6	HEALTH, SCIENCE
F	6000	6	HEALTH, SCIENCE
G	9000	7	STUDENT SERVICES, RESEARCH
H	6000	6	ARTS EDUCATION, MULTIMEDIA
I	9000	8	SCIENCES
J	13000	6	SCIENCES
K	16000	7	ARTS EDUCATION MULTIMEDIA, SCIENCES

EXISTING GFA	168423
DEMOLISHED GFA	11700
TOTAL ADDITIONAL GFA	**127000**
TOTAL INDICATED GFA	**283723**



Medium Term Notional Building Uses + Areas

LEGEND

SCIENCES	BUSINESS	ARTS, EDUCATION, MULTIMEDIA	HEALTH	COMMON FACILITIES	INTERNATIONAL BUILDING
EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
PROPOSED	PROPOSED	PROPOSED	PROPOSED	PROPOSED	

2.2 POTENTIAL NEW BUILDINGS

The diagram at left indicates potential sizes, heights and locations of the new buildings identified in the Medium Term Master Plan. The diagram is thus only a potential scenario subject to change depending upon demand, funding and other criteria. It is provided to illustrate how the campus could grow to a total yield of approximately 250,000m^2 GFA.

In summary, the potentials for each new building are as follows:

Building A

Building A is a previously mooted health-related building on a site already reserved for this purpose. From an urban design perspective, it would form a coupling with the Griffith Health Centre (G40) and be potentially linked to it. The building would take advantage of a climatically favourable north-east and south orientation. It is indicated as having an area of approximately 14,000m^2 over 7 levels, however its strong presence along Olsen Avenue could entail a larger building if required. The substantial scale intended for the building would reinforce the campus future legibility aligned with Health Drive and framing the Athletics Field.

Building B1

Building B1 is planned to frame the large courtyard framed in front of the Griffith Health Centre (G40), and would thus be seen as relating architecturally to Building A. It would replace the existing tennis courts with a strong portal building framing University Drive with an opposite new building, the two fanning out to reveal the campus. The building is planned to create a triangular entry 'circuit' to the campus allowing vehicles to circulate and return to University Drive. It would have a reasonably favourable north-south orientation, and while most suited to health uses, could also re-house The Chancellery (G34) and contain Student Services.

Buildings C and D

Buildings C and D are proposed as two substantial buildings that flank and define a major arrival court into the campus from the GCRT Station. They would replace the existing Link Building (G07) and re-accommodate its facilities at courtyard level to activate the courtyard with indoor/outdoor dining. Building C in particular is envisaged as a 'flagship' tower capable of being 12 levels or higher, and it would potentially accommodate the new Chancellery as an alternative to Building B1.

The buildings necessarily have an east-west orientation in order that they define the arrival court and for Building C to align with University Drive. Although this orientation requires architectural solar control, the configuration enables Building D to step down the steep terrain and provide equitable access to the existing theatres G03 and G17. The appropriate main functions of these buildings is less clear than other buildings because they are not directly associated with any particular facilities, but are shown as possible health-related buildings. An alternative could be for commercial uses in part, University Corporate Services in part, student services as well as health-related functions.

Building E1

Building E1 is on the opposite end of the Athletics Field to Building A and forms with it a frame defining the Athletics Field. Its position suggests a health/clinical sciences role. The building has a favourable north-south climatic orientation as envisaged.
An additional purpose for this building is to part conceal a possible multi-level carpark that would compensate for the loss of at-grade carparking to the west of the athletics field. This carpark would need to be accessed from the proposed Western Ring Road.

Building F

Building F is a potential building related to the Glycomics (G25, G26) and Sciences buildings (G12, G24). It is sited to gain north-south orientation and to create a defined courtyard between it and these existing buildings.

Building G

Building G is a potential new Business-related building that would replace the small existing Law Building (G36), its uses to be relocated into the Arts, Education, Law and Multimedia precinct.
This building would orientate north-south and approximately parallel to the Griffith Business School (G42) building to which it could be bridge-linked. The new building would help to frame the existing bushland as well as to activate the northern side of the East Campus Heart.

Building H

Building H is a potential replacement of the aging Business 3 (G06) building although its siting allows G06 to remain longer term in place if desired. This building sits between the Business, Arts, Education, Law and Multimedia precincts and thus could belong to either precinct. Like most of the proposed new buildings, it is planned to orientate north-south. Its design would help to activate the pedestrian spine and to create a courtyard between it and Building G.

Building I

Building I is planned to align with and activate Engineering Drive and is logically a building for the Sciences Precinct. It would require removal of at least one of the existing linear annex buildings, however removal of both would create a significant courtyard forming a central heart to the Sciences Precinct. This building can also be regarded as having significance in activating Engineering Drive as this road will be seen in future as an extension of the 'main street' proposed to the north of Parklands Drive.

Buildings J and K

These buildings would replace the existing Services (G04) and Facilities Management (G19) buildings.
The sites are large and thus could accommodate buildings of large floor areas up to the in the order of 2,000m^2 per floor.
The Facilities Management (G19) building is readily relocated into a replacement building or to another new building in the Master Plan.
However, relocating the functions of the Services (G04) building would require staged development in order to provide continuous operation. It is thus likely that Building K would be developed first to in part have the services functions at its lower level with access to Engineering Drive and Science Road. The location of the services functions would also be of benefit if the proposed ring road around the southern edge along Smith Street was constructed by this time.

Medium term Master Plan pedestrian movement and potential open spaces structure

LEGEND

SPORTS

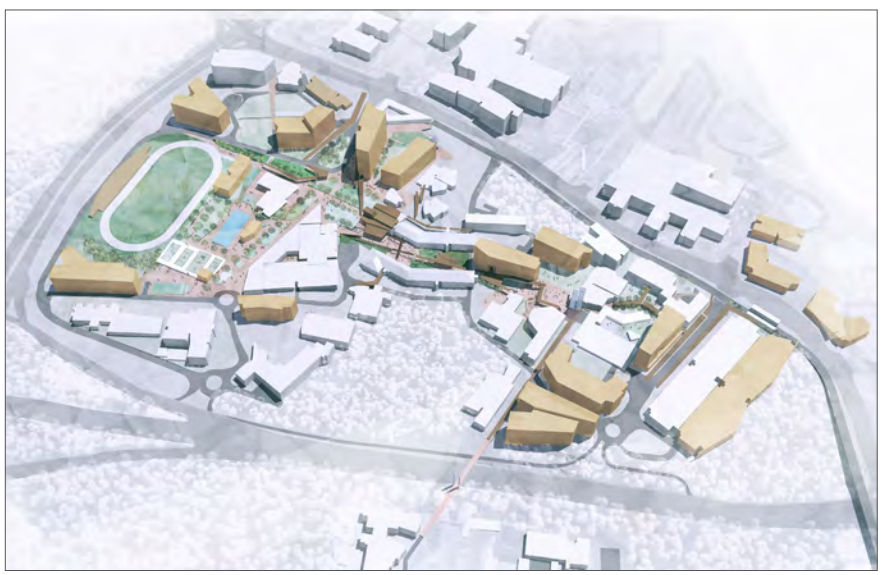
GRASS AND PAVING

BUSH

PRIMARY PEDESTRIAN PATH

SECONDARY PEDESTRIAN PATH

GOLD COAST RAPID TRANSIT STATION AND CORRIDOR



Axonometric study of potential building scale

2.3 BUILT ENVIRONMENT

By the time that the Medium Term Master Plan is realised, the campus will have the look and feel of an urban campus. Much will depend on the quality of architecture and the building's sense of permanence, shifting away from the lightweight framed architecture of the past. The table of indicative heights provided on the preceding page suggests an average height of 6-10 storeys in order to reflect the desire to create a more urban campus, and this scale is intended to balance the area and proportions of the courtyards and other open spaces between the buildings. There is, nevertheless, no suggested height limit and heights of some buildings could be substantially increased, particularly as the adjoining Gold Coast Health and Knowledge Precinct develops.

The diagram at left illustrates the open spaces, which would be upgraded in parallel with building development, creating multiple lateral connections across the campus and to the longitudinal campus spine. The diagram is intended to reinforce that whenever a new building is developed, its adjoining space should form an integral part of the project. Also illustrated are the primary lines of pedestrian movement that should be prioritised in order to strengthen the structure of the master plan.

Medium term Master Plan vehicular movement and servicing

2.4 VEHICULAR CIRCULATION

The Medium Term Master Plan envisages that the primary public vehicular movement will be around the periphery of the campus with the aim of pedestrianising most of the precinct.

The vehicular route is proposed to connect University Drive off Parklands Drive around the Athletics Field via Health Drive to Clinical Lane on the first stage. The second stage connects Clinical Lane via a new roundabout to a 'Little Smith Street' that joins into the Engineering Drive roundabout.

Two additional potentials are indicated in the accompanying diagram. One is for an upgrading of the existing service ingress ramp of the Smith Street/Olsen Avenue interchange to a public ingress route, together with a roundabout that facilitates connection into Little Smith Street.

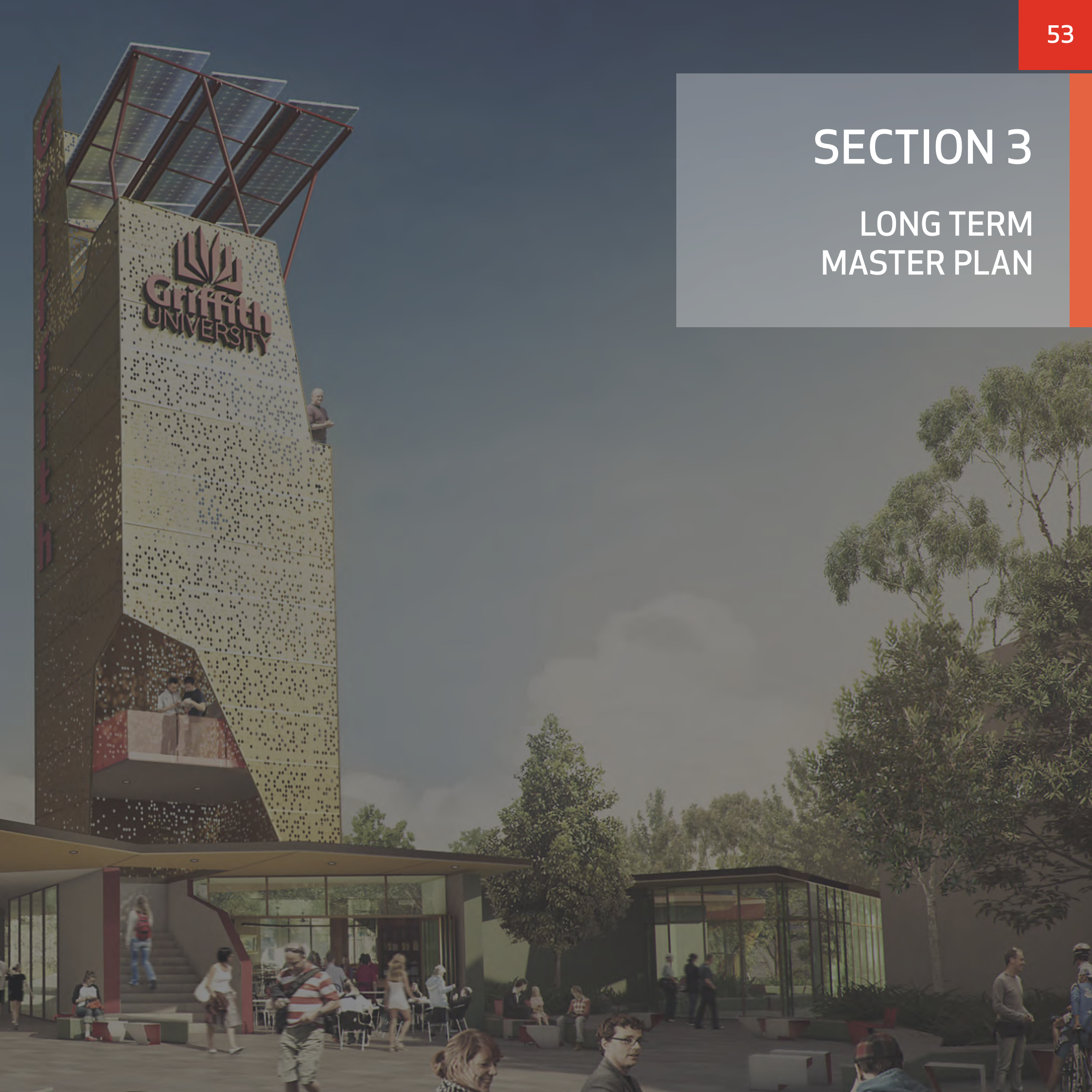
The second is a possible egress route from the Engineering Drive roundabout onto Smith Street as discussed in the Appendix: Campus and Context Analysis. As noted there, this potential egress has received notional favourable response from the department of Transport and Main Roads and is thus recommended for further investigation. If feasible, this egress will have major campus benefits in enabling student traffic to leave the campus via Smith Street rather than Parklands Drive, and it would be a necessity to enable duplication of the Multistorey Carpark (G13).

A further major component of the proposed vehicular system is the creation of a Circuit off University Drive in order to provide a formal vehicular entrance with ability to set down passengers and directly egress the campus. This proposal will require relocation of the existing tennis courts.

The service road system is seen as changing little from the current pattern as access corridors are already restricted by typography and existing building layout. However, it is considered that a more comprehensive study of the campus servicing system should be undertaken by Campus Life in order to best facilitate the future expansion.

SECTION 3

LONG TERM MASTER PLAN



Potentially expanded Aquatic Centre

Expanded Campus Heart

Alumni Place activated by new buildings

Developed external Knowledge Precinct

Long Term Master Plan

0 50 N

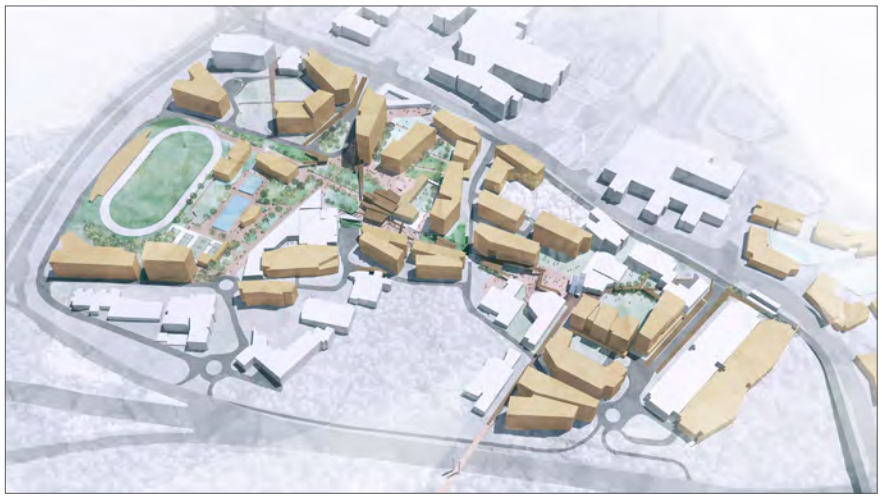
LEGEND

PREFERRED SITES FOR NEW BUILDINGS LONG TERM

Movement and spatial principles

LEGEND

SPORTS
GRASS AND PAVING
BUSH
PRIMARY PEDESTRIAN PATH
SECONDARY PEDESTRIAN PATH
GOLD COAST RAPID TRANSIT STATION AND CORRIDOR



Axonometric study of potential building scale

3.1 OVERVIEW

The Long Term Master Plan is largely aspirational as undoubtedly demands will change through the 2020's decade. However, it illustrates a logical progression from the Short and Medium Term Master Plans to a potentially ultimate campus with a clear structure and an ideal balance of built and open space.

The plan results in approximately 320,000m^2 GFA on the Northern Precinct which is approximately 2.4 times the size of the existing campus. From a built environment perspective, the campus could accommodate a larger yield however it is considered that the surrounding traffic network is unlikely to be able to accommodate higher student numbers without significant changes. Such changes may of course occur over time.

An alternative scenario beyond the 320,000m^2 GFA yield is to seek to expand the campus to the north of Parklands Drive on land reserved post-Games for a Knowledge Precinct. This scenario is particularly attractive as it would facilitate integration of the University with the Gold Coast Health and Knowledge Precinct, and create the sense of arriving through a 'portal' of University buildings along Parklands Drive.

3.2 PRECINCT STRUCTURE

The Master Plan is structured to create a network of distinct precincts each with its own character and presence. These precincts are described in the diagram over the page.

It is appreciated that building uses may change from those anticipated in the diagram which may alter their clarity somewhat. However, there has never before been a precinct approach to enhancing the legibility of the campus and will become more important as the number of buildings increase over time. Thus, some adjustments to the precinct outlines may be necessary in time without losing the overall diagrammatic clarity.

The definition of such precincts could commence much earlier than the Long Term Master Plan and could be made in the next two years. Thus, signage totems could be erected that bear the name of the precincts and the building codes for the buildings that sit within each precinct.

The precincts defined in the diagram are as follows, from west to east.

Sports and Fitness Precinct | Health South Precinct | Health North Precinct | Library Precinct | Sciences Precinct South | Entrance Precinct Mixed-use | Valley Precinct Mixed-use | Business Precinct | Arts, Education and Multimedia Precinct | Sciences Precinct East | Southern Campus Precinct

Long Term Master Plan Precinct Structure

0 50 N

LEGEND

MAJOR OPEN SPACE

Health North

This precinct is currently anchored by the Griffith Health Centre (G40). It contains The Chancellery (G34) which in the medium term is suggested for conversion into the Universities Gold Coast Campus Art Gallery. Over the longer term, it could be expected that this two storey building might be replaced with a more substantial health building related to the Gold Coast University Hospital opposite. The precinct is already well focused on a central large garden around which new buildings form a defined frame.

Sports and Fitness Precinct

This precinct is anchored by the existing Athletics Field and by the proposed adjoining Aquatic and fitness Centre. At this stage, the aquatic centre is seen as having expanded to incorporate a water polo/ diving pool, with the tennis courts brought into the precinct to consolidate all campus sports facilities into the one cohesive precinct.

This comprehensive sports and fitness precinct would be a unique attribute of Griffith University which embodies the Gold Coast lifestyle and its centrality to the Health North and Health South Precincts creates a wider overall precinct focused on health and healthy living.

It is thus not intended to develop more than one major building in this precinct. One tower building is proposed as a marker structure on the site of a demolished Student Centre (G33) (it being currently only two storeys). This tower of potentially 6-12 levels in height could accommodate university sports organisations, sports and health research facilities and commercial spaces related to these facilities.

Health South

The Health South precinct is already occupied by the Clinical Sciences buildings (G02 and G16) of the Health Faculty. Two new buildings are provided for replacing Carpark E and which create a 'pedestrian boulevard' between the lines of new and existing buildings. The boulevard would become the focal outdoor space of the precinct.

The two new buildings would logically comprise health faculty uses and would have climatically favourable north-south orientation as well as expansive outlook over the athletics field and the existing ring of trees to its south. The larger building, or both buildings, is intended to partially conceal an underground carpark for 500-600 car spaces which provides for the parking demands of most the Western Campus.

Central Campus Heart

The Central Campus Heart would already have been completed sequentially during the implementation of the Short and Medium Term Master Plans. However by this time, the new pavilion for the Student Guild and/ or other student spaces could be replaced by a larger such building, incorporating general lecture theatres and seminar spaces.

Entrance Precinct

This precinct should also have already been created in the medium term as the major arrival precinct into the University opposite the University Drive GCRT Station. The precinct focus is a paved arrival courtyard surrounded by the campus retail outlets.

It is envisaged that the University Drive facing building of 12 or more levels could house The Chancellery (G34) and function spaces with views over the entire campus (as an alternative to the opposite building; B). Although the two buildings are normally labelled as health buildings, they could be mixed use buildings with commercial opportunities for companies related to the University's research.

Valley Precinct

This precinct relates to the Entrance Precinct in which Building D would be designed to accommodate the steep ground level cross-fall from east to west.

The valley precinct would comprise two linearly configured buildings designed to activate Alumni Place. A courtyard would be formed on their eastern side, stepping and ramping up to the Central Campus Heart. The two buildings do not have obvious purposes but would logically cater for Health or Business expansion. Building N would need to be a major activator of Parklands Drive.

Library Precinct

The Library Precinct adjoins and effectively forms an integral relationship with Central Campus Heart. It is not expected to expand horizontally such that, should expansion be required over time, a vertical redevelopment would be preferable.

The amenity of the Library Precinct is enhanced by the earlier Medium Term conversion of University Drive into a pedestrian (shared service) boulevard overlooking the Sports and Lifestyle Precinct.

Sciences Precinct South (Science)

Sciences South comprises the existing Glycomics 1 and 2 (G25, G26), and Sciences 1 and 2 buildings (G12, G24). The precinct has space for only one new building (F) adjoining Science Road. The triangular space formed by the building would establish the precinct heart.

It is possible, given the age and low scale of the two Science buildings that these may be redeveloped into larger new buildings over the long term. From a campus amenity perspective this outcome would be preferable as constructing the new Building F would create a large courtyard space, however this is not regarded as a necessity.

Business Precinct

The Business Precinct is planned for expansion to its east, wrapping around the bushland conservation area as its central focus. The precinct accommodates three new buildings, each with predominate northern orientation.

Building P is considered to be an important activator of Parklands Drive and of Alumni Place.

Arts Education and Multimedia Precinct

The Arts, Education and Multimedia Precinct comprises the four existing buildings stretching to the Southern Campus, with provision made from one new building to north adjoining the east.

Campus Heart

Should further Arts, Education and Multimedia expansion be required, the Building K could accommodate such expansion and thus, the precinct definition adjusted to reflect this potential.

The Arts, Education and Multimedia Precinct has the smallest available open space to act as a Faculty Heart, however the precinct adjoins the East Campus Heart such that it would form the hub of faculty social life.

Sciences Precinct East (Environment, Engineering and Technology)

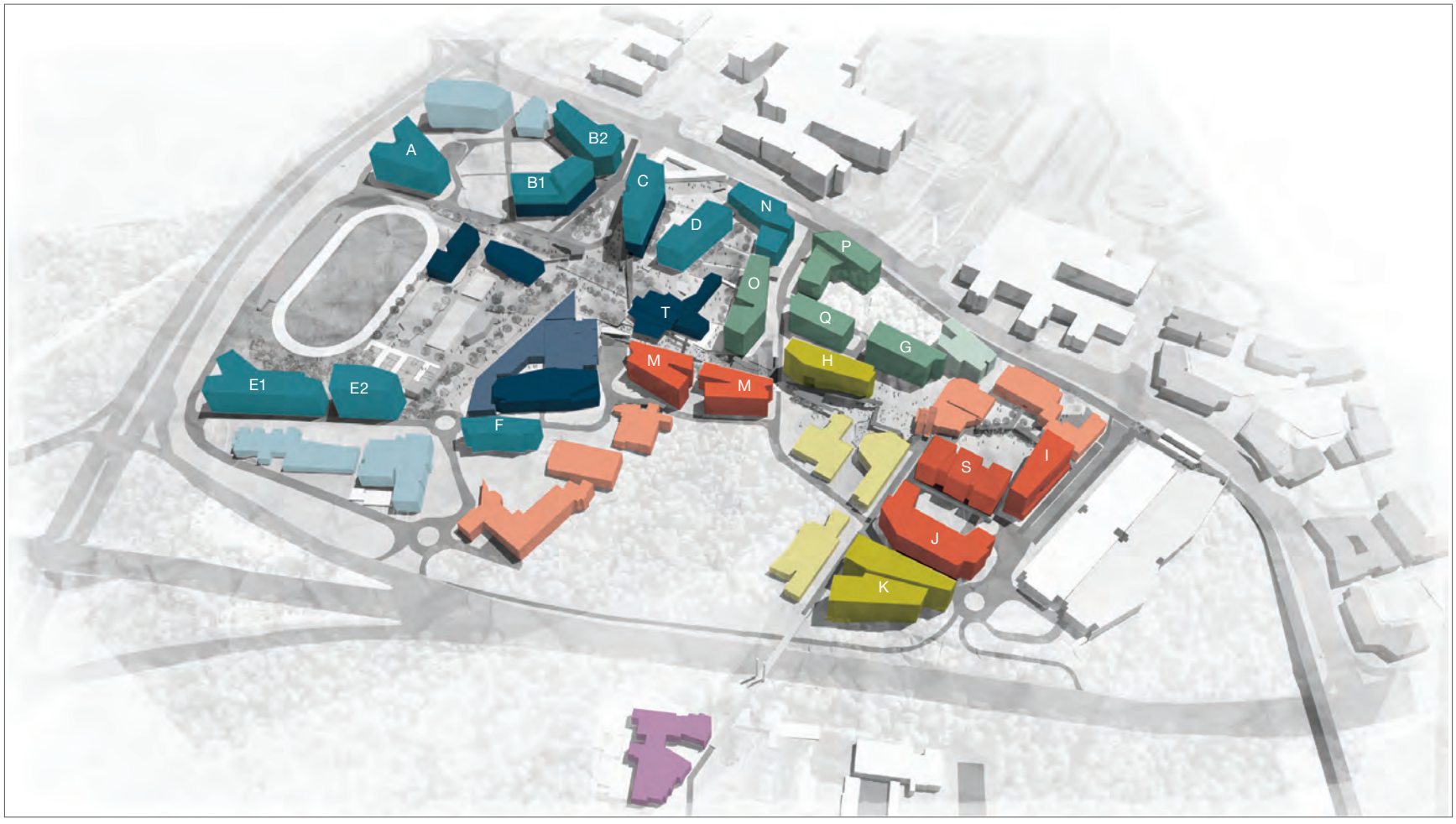
The Sciences Precinct East forms a cohesive precinct defining the eastern end of the campus. It is planned to comprise new buildings to replace the existing Engineering (G09) building around a major courtyard space formed earlier in the medium term.

The precinct is planned to have a second courtyard with permeable connections made between the two spaces. The second courtyard is intended to provide amenity for two potentially large floor plate buildings to the south ('Building J and K'). As primarily noted, both of these buildings may not be required for Sciences expansion depending upon long term demand. The new buildings in this precinct would each have a dramatically favourable north-south orientation. 'Building K' would have a role as a 'flagship' building for the University along Smith Street.

LONG TERM BUILDING USES & GFA

BUILDING	GFA	HEIGHT (FLOORS)	SUGGESTED USES
A	14000	7	HEALTH, RESEARCH
B1	13000	7	HEATH ADMIN, THEATRES
B2	14000	7	HEALTH
C	17000	12	THEATRES, STUDENT SERVICES, HEALTH, COMMERCIAL, RESEARCH
D	12000	6	COMMERCIAL, HEALTH, RESEARCH
E1	12000	6	HEALTH, SCIENCE
E2	8000	7	HEALTH, SCIENCE
F	6000	6	HEALTH, SCIENCE
G	9000	7	STUDENT SERVICES, RESEARCH
H	6000	6	ARTS, EDUCATION, MULTIMEDIA
I	9000	8	SCIENCES
J	13000	6	SCIENCES
K	16000	7	ARTS, EDUCATION, MULTIMEDIA, SCIENCES
L	6000	5	SPORTS, SCIENCES
M	16000	8	SCIENCES
N	11000	8	HEALTH, RESEARCH
O	11000	7	BUSINESS
P	9000	6	BUSINESS
Q	6000	6	BUSINESS
R	6000	5	LIBRARY
S	10000	6	SCIENCES
T	7000	5	STUDENT SERVICES, COMMERCIAL

EXISTING GFA	168423
DEMOLISHED GFA	33000
TOTAL ADDITIONAL GFA	**231000**
TOTAL PROPOSED GFA	**366423**



Indicative Long Term building uses and areas

LEGEND

SCIENCES	BUSINESS	ARTS, EDUCATION, MULTIMEDIA	HEALTH	COMMON FACILITIES	INTERNATIONAL BUILDING
EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
PROPOSED	PROPOSED	PROPOSED	PROPOSED	PROPOSED	

Long Term Master Plan potential faculty groupings

3.3 DEVELOPMENT SCALE AND FLEXIBILITY

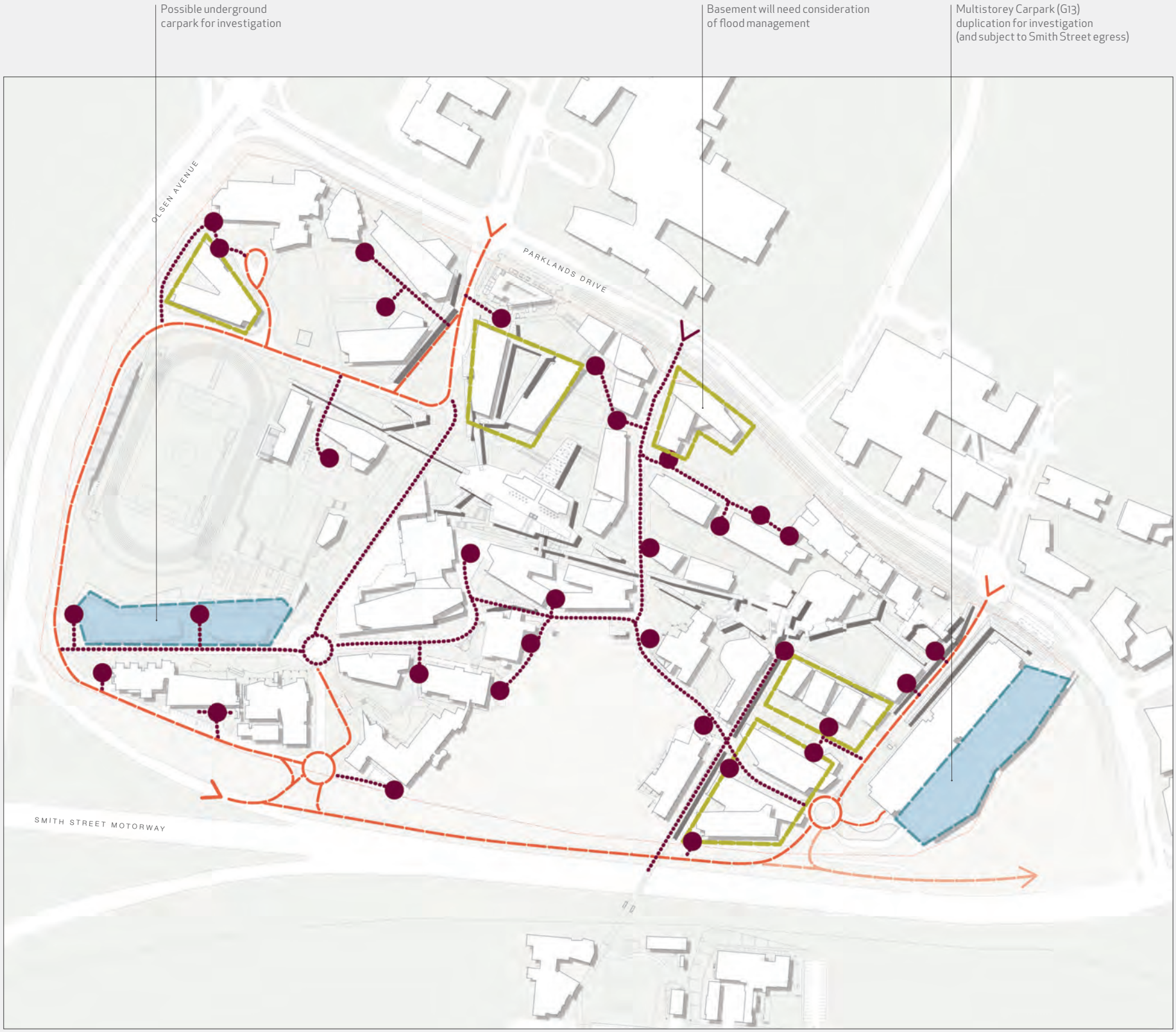
The diagram at far left illustrates a potential long term development scenario equating to approximately 320,000m^2 GFA on the northern campus. The diagram is provided solely to give an idea of possible yields and building uses that might eventuate over time with a balance of scale to open space. It seeks to cluster buildings into cohesive faculty precincts that reinforce the structure and legibility of the campus.

The diagram demonstrates that the average scale of new buildings would need to be 6-12 storeys in order to achieve a target of approximately 320,000m^2 GFA in the long term. It also demonstrates that the majority of buildings can have relatively large floorplates in the range of 1400m^2-2200m^2, which are likely to be required for disciplines such as Health, Science and Engineering.

As noted, while potential uses are allocated to the buildings, the plan provides considerable flexibility for the faculties to expand at different rates if required, and the precinct boundaries can be adjusted accordingly. Generally, it entails Health occupying the western campus and Business, Arts, Education, Multimedia and Sciences consolidating in the middle campus area.

The diagram at left indicates the locations of buildings of the likely most flexibility to meet potentially different faculty growth demands, the majority being in the middle of the campus. One alternative scenario is that if the University decides to open a new faculty in the future, the diagram illustrates that this could occur effectively in the middle zone, forming a cohesive cluster.

Another possibility is for the University to allow commercial development to occur within the campus as is happening in other universities, such as for industries related to university research. As per above, the plan provides well for this possibility in a central cluster of buildings. There could also be integrated research, academic and commercial buildings of substantial scale.



Long term Master Plan indicative vehicular movement and servicing

0 50 N

LEGEND

- VEHICULAR MOVEMENT
- SERVICE VEHICLE LOADING
- PROPOSED MULTILEVEL CAR PARKS
- SERVICE AND STAFF VEHICULAR MOVEMENT
- FUTURE VEHICULAR MOVEMENT
- FUTURE BUILDINGS WITH BEST POTENTIAL FOR BASEMENT CARPARKING

3.4 VEHICULAR MOVEMENT AND SERVICING

The long term vehicular movement strategy is the same as for the Medium Term Master Plan with extensions for servicing of potential new buildings.

Although the steep terrain has already generated a twisting pattern of service roads, it is possible to utilise the routes to facilitate service access to all new buildings. The diagram at left should however be regarded as conceptual and design provisions will be needed for specific study as new buildings are developed.

The public traffic movement system is, as per the Medium Term Master Plan, a ring road proposed from the University Drive entrance around the western and southern boundaries to Engineering Drive. The diagram includes the proposed upgraded ingress from the Smith Street/Olsen Avenue interchange and the proposed egress onto Smith Street off Engineering Drive, both of which are subject to Gold Coast City Council and Department of Transport and Main Roads approvals.

The public movement strategy is both to link University Drive with Engineering Drive within the campus and to create a highly pedestrianised network of pubic realms within the campus. For this reason, the design of future service nodes will need to avoid overt visual impact and generally comprise paved pedestrian surfaces that are clear of obstruction to enable service vehicle movements out of hours.

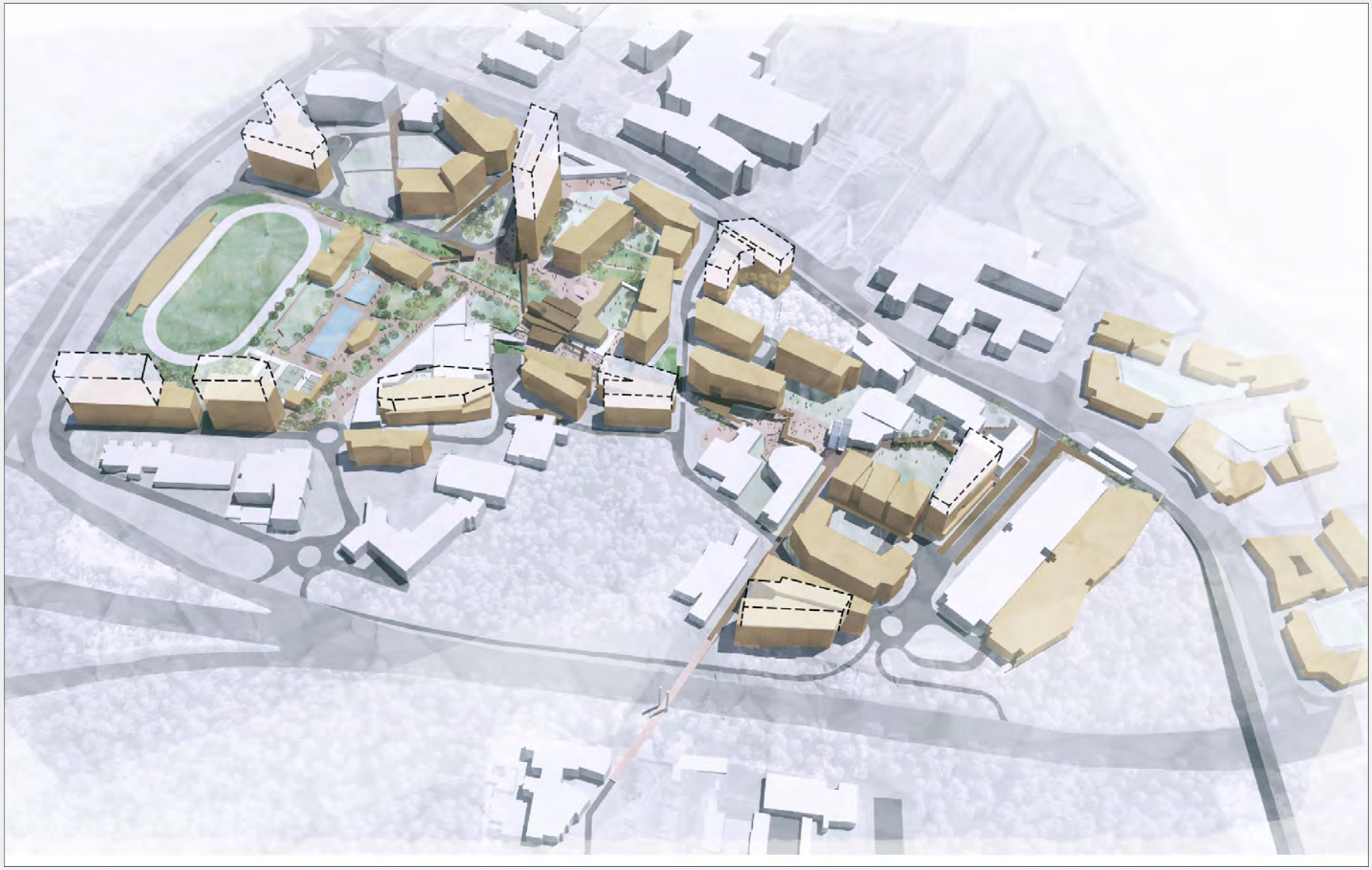
The campus has several existing stand-alone chiller houses which are generally unattractive and unconducive to public space quality. However, it is recognised that these facilities are expensive to relocate and there are possibilities of camouflaging them architecturally. Some chiller houses with houses will necessarily need to be incorporated into new buildings that occupy their sites. The most prominent existing chiller house relevant to the future is G29, which has caused the entry road off Clinical Lane to be bent around it. Over time, this deficiency needs to be resolved, preferably with G29 relocated into a new building so that the road can be directed more effectively.

As noted for the Medium Term Master Plan, the Multistorey Carpark (G13) duplication shown would not be feasible if approval for a new Smith Street egress was not forthcoming. A second multilevel carpark is proposed for investigation in the western precinct, to be partly underground and with building development over.

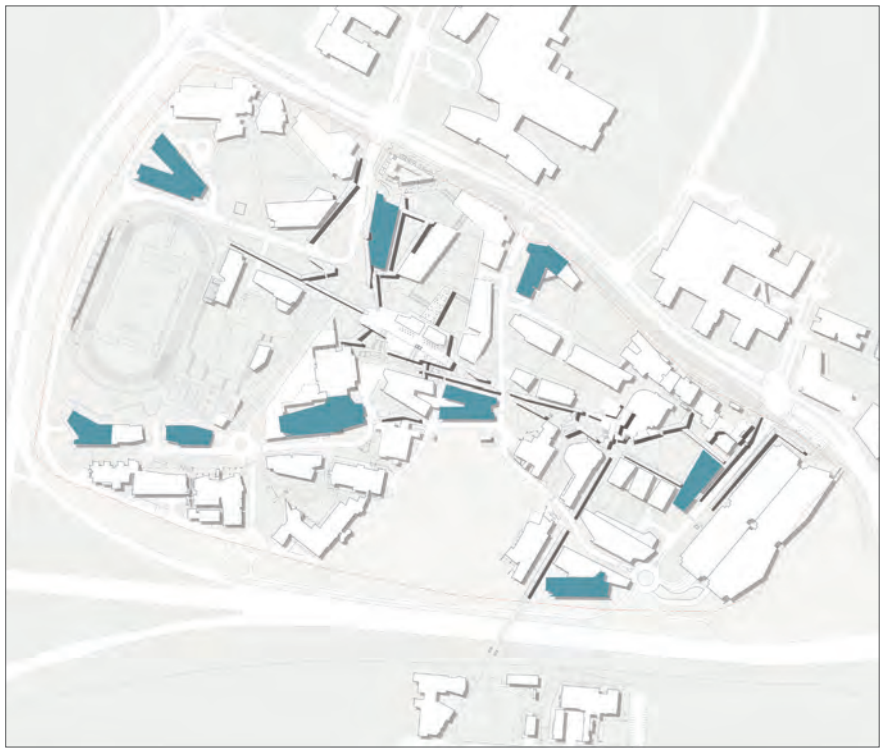
Generally these two multilevel carparks will replace existing lost carparking, with some expansion capacity if an additional multilevel carpark is built on the southern campus for approximately 1,400 spaces. Therefore, carparking demand from new buildings will in principle need to be met by basements to the buildings where they are accessible off the ring road. The main opportunities are:

- in the 'Entrance Precinct' under its two proposed buildings and arrival court
- in the 'Health North Precinct' under the new building that would adjoin G40
- in the 'Sciences East Precinct' under the two large floorplate buildings to the south (one of these buildings will also be needed for the Campus Services Centre)

Whether or not the combined general and precinct-specific carparking proves adequate to cater for long term demand is partly dependent upon patronage of the GCRT line and other future public transport improvements, as well as surrounding road and access improvements. Nevertheless, it is possible that the University may, as other Universities have done, have to decide whether carparking should be more limited than the current ratios.



Locations of potential buildings of increased height if desired



Potential tall building scenario where outdoor spaces are not overshadowed

LEGEND

POTENTIAL TALL BUILDINGS

An indicative sketch of the arrival court in the Entrance Precinct

3.5 BUILT ENVIRONMENT

The aerial three-dimensional diagram at far left illustrates how the Griffith Gold Coast Campus could look in 20 - 25 years. It is conceptualised as a highly urbanised campus with a strong longitudinal spine and the triangular-shaped Health and Lifestyle Precinct forming a definitive landscape heart unencumbered by buildings except for one tower and the aquatic centre.

The scale, architectural quality and ground level activation of adjoining spaces and street edges will have much impact upon reaching the status of a great campus because the standard of architecture at universities is generally high. Many universities have become recognised for experimental architecture that fosters collaboration between schools and programs. The substantial network of courtyard spaces identified in the Master Plan should be used to facilitate outdoor learning and teaching programs employing digital technologies such that the whole campus offers learning experience.

One such learning experience being developed at the campus is the planting strategy prepared by Associate Professor Catherine Pickering, which underpins the landscape planning strategy in this Master Plan. Other potentials are to utilise buildings themselves as educational opportunities in the way they respond to the environment, harness alternative energy sources and generate indoor/outdoor edges which blur definitions of built and open space.

The anticipated average scale of 6-12 levels is an outcome of calculating the extent of available new building footprints within an overall maximum GFA of around 320,000m^2, being as much as traffic consultants believe the campus can accommodate in relation to the road network. However, this framework should be regarded with flexibility should the opportunity for higher buildings be taken. In principle the 6-12 storey scale is desirable to maintain solar penetration of open spaces however taller 'marker' buildings on southern sides of open spaces could occur at reasonable spacings through the campus. Potential such buildings are shown in the diagram at left.

SECTION 4

BUILDING DESIGN GUIDELINES

Overt Expressionism


RMIT SWANSTON ACADEMIC BUILDING


RMIT STOREY HALL


UTS DR CHAU CHAK WING


VICTORIA UNIVERSITY ONLINE TRAINING CENTRE


UNISA M2 BUILDING


LATROBE INSTITUTE OF MOLECULAR SCIENCE


ANU LINNAEUS BUILDING


RMIT BUILDING 22

Distinctive but Restrained


RMIT BIOSCIENCES BUILDING


UNSW SCIENTIA BUILDING


UNIVERSITY OF AUCKLAND BUSINESS SCHOOL


ANU JOHN CURTIN MEDICAL SCHOOL


UNIVERSITY OF SYDNEY LAW SCHOOL


MACQUARIE UNIVERSITY LIBRARY


RMIT PRINTING FACILITY


VICTORIA UNIVERSITY LEARNING COMMONS

4.1 INTRODUCTION

This section provides design guideline information on three areas of significance as the campus develops, as follows:

- building design
- outdoor furniture, lighting and signage
- landscape design

The guidelines are not intended to be prescriptive but to set a framework for unifying the campus while also providing flexibility for creativity, especially with respect to building design.

4.2 BUILDING DESIGN

4.2.1 University Architecture

University architecture is frequently at the forefront of world architecture. It could be said that just as universities compete for world academic and research rankings, so too do they compete for the quality of their built environment, the advanced design and technologies in their architecture and more recently, the environmental sustainability of their buildings.

This competition is most glaring at the University of Technology Sydney (UTS), which appointed arguably the world's most recognised 'brand' architect Frank Gehry to design the new Dr Chau Chak Wing, a building of virtually no contextual integration but seeking iconic status for the university. Whether or not there is an eventual backlash against this extremist trend remains to be seen, but the illustrations at top left demonstrate there is a breadth of the direction across several Australian universities.

The images at lower left reflect a more sober yet nevertheless high quality of architecture occurring simultaneously in universities, including through to utilitarian buildings like printing facilities. They illustrate that it is no longer sufficient to produce merely functionally adequate university buildings of any type, and that universities everywhere are seeking to express the advancement of their teaching and research in the buildings and spaces that house them.

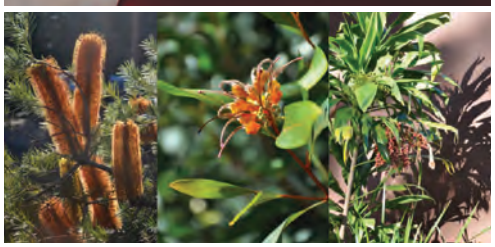
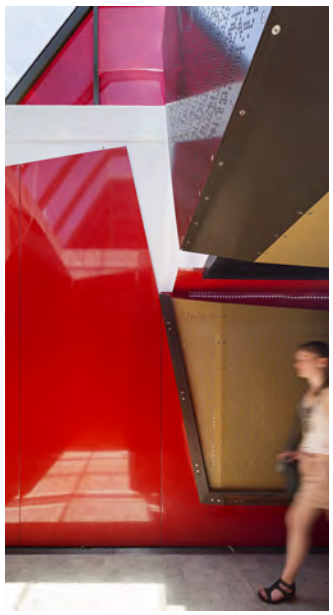
4.2.2 Griffith University

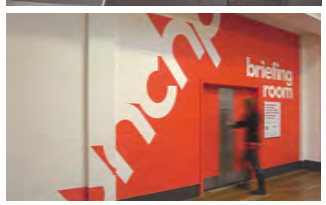
Griffith University's Gold Coast campus is in a strong position to develop its built environment to a standard that is competitive with other Australian universities. Although many of its buildings are lightweight, utilitarian facilities, many are also ageing and of a scale that will require replacement over the next decade. Moreover, as the Medium and Long Term Master Plans illustrate, there are numerous sites available to create more urban, architecturally dynamic buildings as the campus grows in the Gold Coast Health and Knowledge Precinct.

The second vital aspect of an outstanding campus is a network of courtyards and other open spaces where students go to socialise and where outdoor learning is commonplace. This aspect is not often achieved well in Australian universities, particularly those which have prioritised iconic architecture as some of the illustrations show. This is an aspect that is prioritised in this Master Plan – its pedestrian spine and program of courtyard creation and improvement in particular – that optimises the desirable climate of the Gold Coast and sets the foundation for future building integration.

The shift in direction of the campus is already evident in new buildings like the Griffith Health Centre (G40) and the new Griffith Business School (G42).

The design guidelines that follow cannot in themselves ensure high quality of architecture as that is always an outcome of strong architect-client relationship and intent. However, they itemise certain universal qualities of good urban design which are fundamentals towards that purpose.




Colour Red

The university has historically encouraged the use of the 'Griffith Red' as a way of branding buildings as being distinctly of Griffith. While that intent is reasonable, it has been implemented on a project-by-project basis without a coordinated approach. The danger in a laissez-faire allowance is that the colour will become overly dominant and brash.

Painting is the usual mode of expression of the colour, extending over large wall surfaces and prone to fading over time, evident in several buildings. It is recommended that this practice be limited to surfaces that are nearly always in shade.

The following are more creative preferred approaches to the use of the colour, which in total will have the desired effect without undue imposition on the landscape or the future built environment.

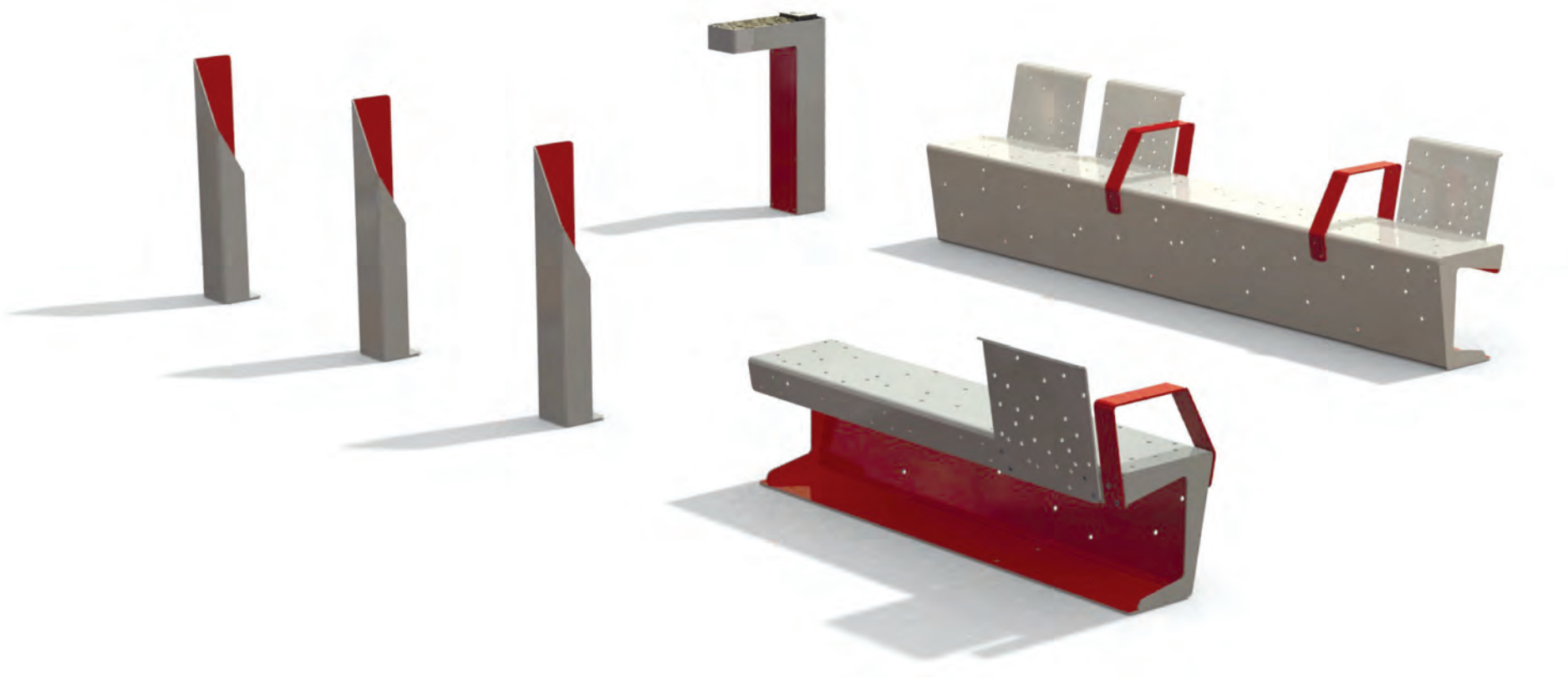
> Planting native species which flower red, as identified in Associate professor Catherine Pickering's 'Vision for Vegetation on Griffith Gold Coast Campus' (June 2013) – refer Appendix.
> Implementation of the signage wayfinding system developed for Nathan Campus and applied to the Gold Coast campus.
> Limited use of red tiling on external walls and particularly in breezeways and other through-building links (thus being a material with the colour bonded in and not subject to fading).
> Use of the external furniture suite developed for Nathan and extended to the Gold Coast campus with its subtle use of red.
> Painting limited to external areas which receive minimal or no direct sunlight, where the red can be effective in enlivening darkish spaces.
> Large 'Griffith University' signs where appropriate at high building levels or roofs.
> Occasional and limited use of red glass on buildings where used for defined purposes such as illumination at night.

While this proposed regime is implemented it is recommended that no other methods of the colour are permitted.

Colour Generally

Colour as painted surface was a common form of expression for the lightweight framed and clad buildings in the 1990s, both on the campus and in architecture elsewhere on the Gold Coast.

It is a recommendation that colour as applied finish is considered undesirable in principle for new buildings. It is an aim instead to prioritise the use of materials where colour is an integral element (refer Materials). This recommendation does not apply to existing buildings where repainting may be appropriate to freshen their appearance.



4.3 OUTDOOR FURNITURE, LIGHTING AND SIGNAGE

4.3.1 Outdoor Furniture

The outdoor furniture suite designed by COX Rayner with Derlot for the Nathan campus is intended to be installed in all Griffith campuses.

How it is rolled out on the Gold Coast campus is a matter for the University to decide. One option is to wait for the courtyards and other spaces to be upgraded as per the master plan. Another is to begin installing the furniture in selected existing spaces and relocating it to other spaces once the redevelopments occur.

One area where the furniture could be installed now is around the Sciences North and Business Precincts (G39, G42) as the spaces are virtually barren of seating places and there is a degree of shelter from the building undercrofts.

Another opportunity will occur with the proposed repainting of the old CAE buildings (G01, G05, G06) where undercrofts also occur, even though the furniture might need to be relocated when the spaces are later upgraded.

It is recommended that a plan be drawn up of a series of these and other sheltered locations for trialling the furniture. It is also recommended that no other type of outdoor furniture is installed at the campus so that the suite designed becomes part of the unifying strategy across the campus and with other campuses.

4.3.2 External Lighting

External lighting can be as effective as outdoor furniture in unifying the campus through consistency of design.

It is recommended that a single design aesthetic is created for both tall light standards for street lighting and shorter standards for pedestrian space and pathway lighting, such as that shown in the accompanying illustrations.

The intent of the examples shown is for the campus to have its own customised light standards for free-standing lighting, designed so that it is fitted with a proprietary luminaire such that it can be readily replaced when required.

Where pedestrian spaces are to be remodelled, in particular those along the proposed pedestrian spine, it is desirable that lighting is incorporated as much as possible in courtyard and pathway walls as distinct from freestanding elements. Recognising that there will be spaces where such walls will not occur, a uniform bollard light should be designed to roll out across the campus.

Preliminary concept for major University signs and for individual precinct signs

LEGEND

MAJOR GRIFFITH UNIVERSITY MARKER

FACULTY/PRECINCT MARKER

0 50 N

4.3.3 Signage

Major Griffith University Signs

As for the furniture livery, it is proposed that the same new signage system adopted for the Nathan Campus is rolled out over the Gold Coast Campus, adapted to its nomenclature. This will create consistency of legibility in the two campuses (and potentially at Mt Gravatt and Logan), and it will potently brand the University with its characteristic red theme.

A recommended strategy particular to the Gold Coast Campus is a series of major signage elements which identify the university at key approach points. These points are suggested in the accompanying illustration, due to the fact that there is currently little identification of the campus, particularly on approach along Parklands Drive and around Olsen Avenue. The signage is also made more important with the location of the two GCRT Stations.

Precinct and Faculty Signs

A further strategy previously discussed for consideration is the creation of a precinct signage system. This system could assist in providing clarity to the locations of the faculties given that they are relatively cohesive, even though some of the buildings are separated from their faculty clusters. This strategy will also help to give identity to the primary areas of teaching and research focus in contrast with the present unawareness other than small signage at building entrances. The diagram at left also provides a notional system of precinct signage for consideration.

Gold

Wheatmeal

Dulux
P15E7

Paint Finish

Precious Gold Pearl

Dulux
Satin Powder Coat
971-96604

Colour to match Dulux
Wheatmeal

Gold Anodise

G James

Aluminium Framing

Bronze

Goanna Grey

Dulux
PG2C8

Paint Finish

Precious Bronze Pearl

Dulux
Satin Powder Coat
971-94686

Colour to match Dulux
Goanna Grey

Residential Bronze

G James

Aluminium Framing

Green

Olive Leaf

Dulux
P19C5

Paint Finish

Honeydew

Dulux
P19E3

Paint Finish

Other

Custom G40 Red

Dulux
1L Formula -
True Red Base
V78B2G30W20EE34

Paint Finish

Palais Blue

Dulux
PW1G4

Paint Finish

Ginger

Colourmix Concrete

Grape

Concrete Colour
Systems

Aggregate:
50% River Red
50% Blue Heeler

Finish:
Light Abrasive Blast

4.4 INDICATIVE COLOUR PALETTE FOR FUTURE BUILDINGS

The palette at left is a preliminary set of colours to be further developed in order to generate a consistency through the campus with a focus on relationship with the natural vegetation.

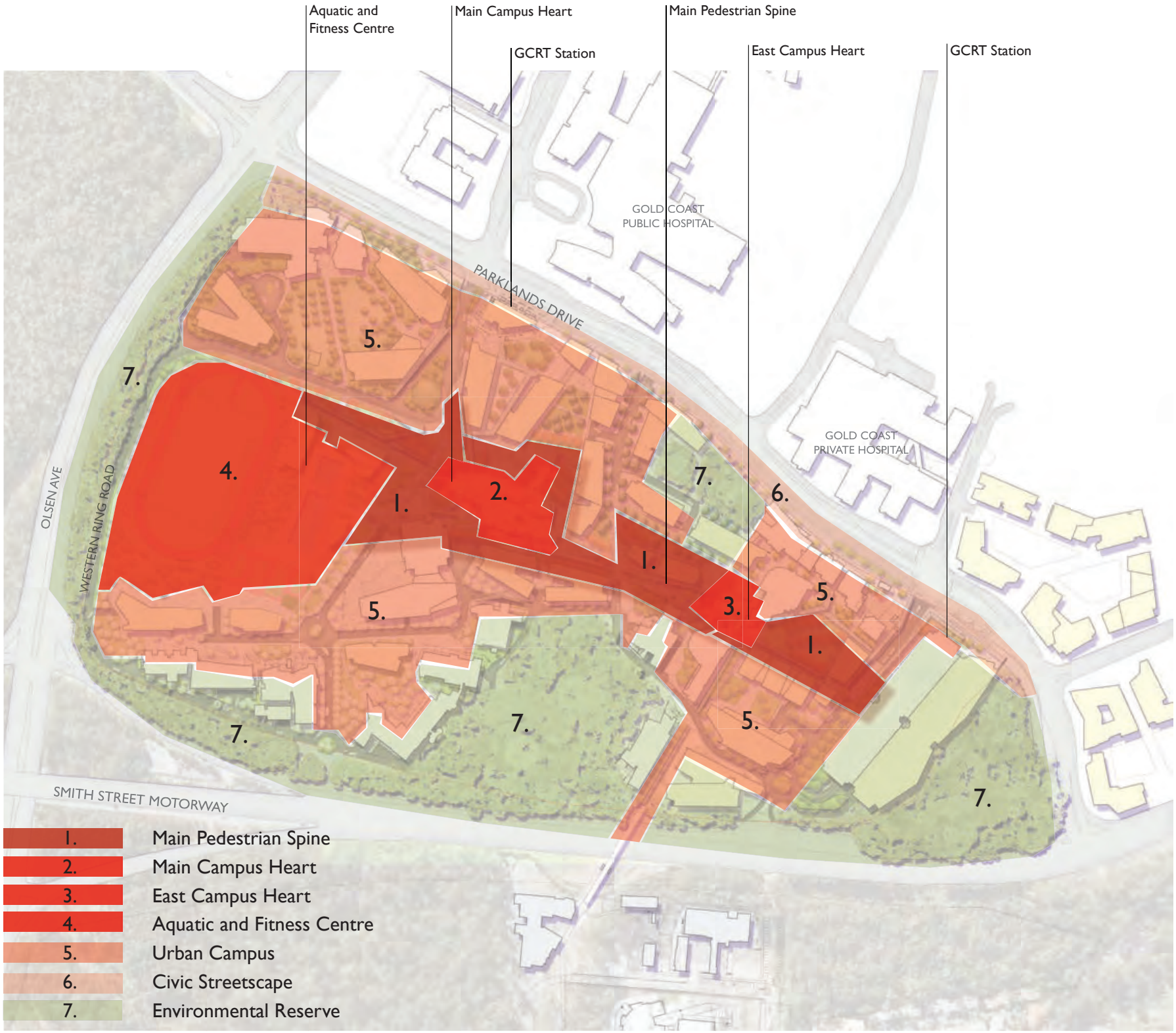
The colours are not intended to be used in equal proportions, some being for highlights while others being more suitable for larger surfaces. In principle, the following act as guidelines:

Top Row	External walls and metal screens either paint or powdercoat
Middle Row – Upper	Structural elements
Middle Row – Lower	External walls
Bottom Row	Red for highlight colours in small amounts
	Blue for exposed soffits and limited external wall use
	Ginger and Grape for coloured concrete paving and walls

Due to the scale of future development, this palette will need to be extended. However, as previously noted, there is a preference for solid external walls to be of unfinished natural materials such as precast concrete, pre-coloured insitu concrete and timber, as well as metallic-surface metal sheet where lightweight surfaces are required.

SECTION 5

LANDSCAPE STRATEGY



Proposed Landscape Precincts

5.1 SUMMARY STRATEGY

The Landscape Strategy is designed to strengthen the Master Plan while equally creating a new palette of treatments and planting that is intrinsic to the campus' environment.

The planting scheme has been largely informed by the research work of Associate Professor Catherine Pickering. The scheme represents a considerable shift from previous planting regimes, aimed at prioritising native and endemic species.

The key elements of the Landscape Strategy are as follows:

Urban Structure

The structure of planting and spatial design reinforces the proposed pedestrian spine by its consistency of treatment distinct from campus precincts outside the spine.

A series of precincts develops on either side (north and south) of the spine which each have their own distinct character.

Plant Species

The plant species relate to each precinct type and to the microclimate of the precinct (shade, sun).

Plant species showcase the Gold Coast inland region, and attract native wildlife.

Existing Northern Precinct forested areas are conserved and rehabilitated, especially in areas of known high conservation value.

Plant species are low maintenance and require little or no irrigation, but are not what are known as 'hardy' plants.

A predominance of red flowers occur which showcase Griffith University's emblematic colour, a preferred alternative to applied building colours.

Gardens are 'layered' with varied plant heights and rich textures and colour fields are created.

Social Spaces

Spaces along the pedestrian spine are distinctly 'urban', with a dominant focus on building edges which activate the public realm and which facilitate indoor/outdoor connectivity (this is a key objective).

Spaces along the spine comprise predominantly stone-paved courtyards with defined garden beds and extensive shade tree planting.

Spaces beyond the spine (north and south) are also 'urban' in character but with increased planting beds in proportion to paving.

All new and upgraded spaces prioritise abilities for teaching and learning activity, either in whole or in nooks and along edges.

All spaces have a degree of architectural shelter in accordance with the Master Plan in order to facilitate year-round, all-weather use.

'Teaching gardens' are created around the campus which educate people about the micro-environment (refer 'Grows at Griffith' mobile application).

Movement paths are straight and direct between destinations.

The following pages describe the proposed location and key characteristics of the campus hearts, pedestrian spine and surrounding precincts.

5.2 LANDSCAPE PRECINCTS

> Main Pedestrian Spine

The main pedestrian spine is the main conduit which runs through the centre of the campus connecting the eastern entrance with the Aquatic and Fitness Centre. It encapsulates the Main Campus Heart and East Campus Heart, unifying the ground plane, creating legibility and a sense of human scale throughout the campus. The pavement is a robust, large format dark stone while a Queensland native tree species with a red flower such as the Weeping Bottlebrush & NSW Christmas Bush will create a spine of vivid colour. The Spear Lily plant with it's spectacular flower acts as a accent feature.


NSW Christmas Bush


Weeping Bottlebrush


Spear Lily

> Main (West) Campus Heart

The Main Campus Heart is the hub of the university campus. The signature plant is a climber such as the Dusky Coral Pea which weaves it's way up the vertical structures creating a seasonal display of red flowers (Griffiths signature colour). The pavement in this precinct is the same material as the Main Pedestrian Spine but is made up of larger format pieces. Well-manicured ornamental turf for casual sitting is also a dominant feature of the Main Campus Heart precinct.


Dusky Coral Pea

> East Campus Heart

The East Campus Heart is a central meeting point in the eastern half of the campus. It is where the eastern entry meets with the Smith Street overpass entry and the campus pedestrian spine. It is a multi-level meeting point which provides an excellent vantage point from where to orientate yourself. Signature plants include the Doryanthes excelsea (Gymea Lily) which provides a unique vertical element to the planting palette along with Adiantum hispidulum (Rough Maidenhair Fern) which sits nestled in the shaded pockets of planting. Furniture structures are multi-coloured to celebrate the meeting space.


Rough Maidenhair Fern


Gymea Lily

> Aquatic and Fitness Centre

The Aquatic and Fitness Centre is a main attraction and place of recreation in the Griffith University campus. It is located at the termination of the Main Pedestrian Spine and is made up of dense canopy shade trees such as Waterhousia floribunda (Weeping Lillipilli) and Melaleuca quinquinervia (Paperbark). Tree species such as Casuarina littoralis (Black She-Oak) provide a soft grey-green colour contrast unifying the precinct with the adjoining natural character of the Environmental Reserve.


Weeping Lillipilli


Paperbark Tree


Black She-Oak

> Urban Campus

The Urban Campus includes all the urban areas within the campus which aren't major meeting spaces or high areas of activity. They are divided into areas of sub-precincts and include the following:
a) the plaza; b) University Drive forecourt; c) Engineering Drive entrance; d) Griffith University Bridge entry and e) southern urban campus. Each sub-precinct will have a signature tree used to highlight individual areas, whilst a common pavement is the unifying element which exists throughout the majority of the whole campus.


Water Gum


Pink Euodia


Tulip Lancewood

> Parklands Drive

The Civc Streetscape runs along Parklands Drive and unifies the Gold Coast Private Hospital, Gold Coast Public Hospital and the Griffith University Campus. A signature street tree such as the robust Cupaniopsis anacardioides (Tuckeroo) and Harpullia pendula (Tulipwood) will provide shade and appropriate scale to the street. Exposed aggregate and turf make up most of the footpath allowing for unobstructed pedestrian movement.


Tulipwood


Tuckeroo

> Environmental Reserve

The Environmental Reserve is the most important character of the campus, it is made up of a variety of native, endemic and scientifically significant plant species. It provides the urban fabric of the campus with a natural backdrop which is full of an abundance of wildlife. The Griffith campus is a locally significant site due to the educational values it has. Tree species such as Acacias, Eucalypts and Angophoras create a unique natural character which the Griffith Gold Coast University campus is renowned for.

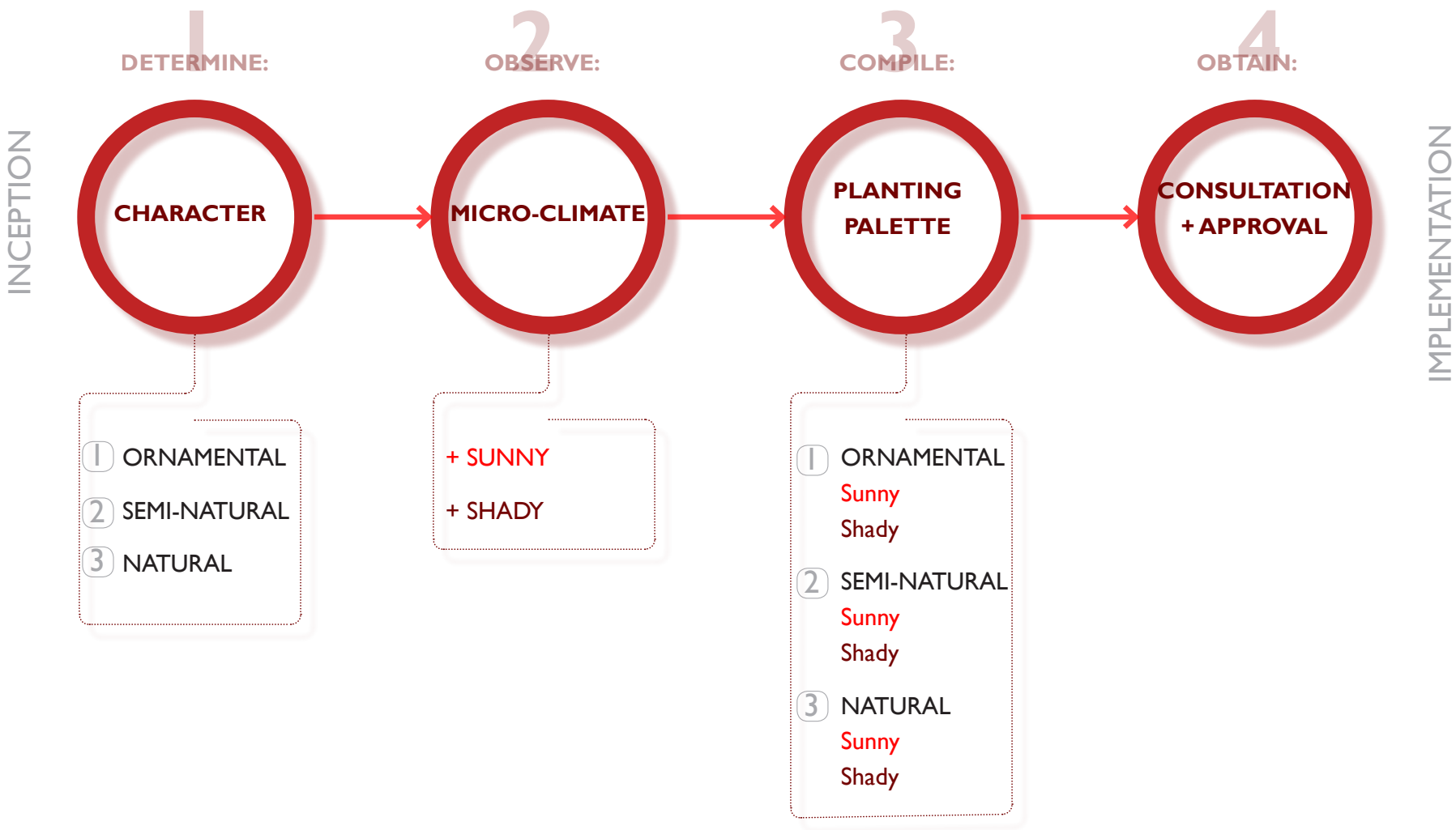

Acacia species


Eucalypt species

5.3 METHODOLOGY

Planting design undertaken within the campus should follow a methodology that focuses on a strategic approach to plant selection and design process.

The following diagram is an overview of a process that could be followed to undertake landscape design within the campus. This methodology will ensure both a consistent design language for a the long term campus vision and a clear and concise engagement process that includes the consultation and approval of the university.



5.4 CHARACTER

The character of the planting palette is to be used as the first step in identifying an appropriate response to the planting design of the campus and its surrounds. The character of the planting design speaks directly to the site planning of the campus and how planting characters can be used to assist in way finding and campus legibility.

1 ornamental

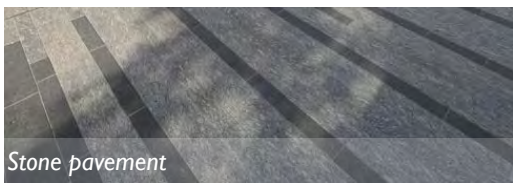
A planting palette that is characterised by its diversity in foliage, form and flower colour. The ornamental planting palette is applicable to campus nodes, plazas and places of social gathering or significance where colour, visual interest and sophistication are essential for way finding, defining space and complimenting the built environment.


Coloured foliage


Colour and texture


Glossy leaves


Vibrant flowers


Stone pavement


Lighting

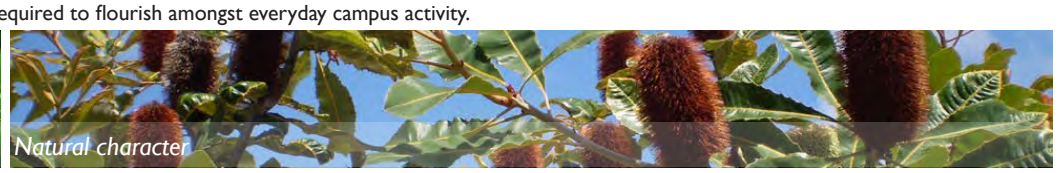

Concrete seating


Seating (image: Cox Rayner)

2 semi-natural

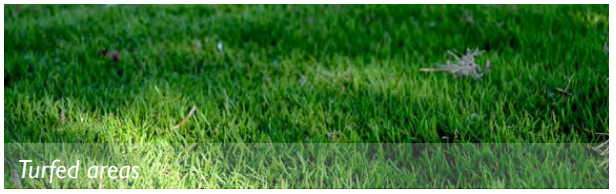
A planting palette that is characterised by a mix of predominantly native and site-endemic species. The semi-natural planting palette is applicable to pedestrian movement corridors and linkage conduits where a robust and semi-self maintaining landscape is required to flourish amongst everyday campus activity.


Shade trees


Natural character


Exposed aggregate concrete


Moveable furniture


Turfed areas

3 natural

A planting palette that is characterised by its exclusive use of a diverse range of native and endemic species of the greater gold coast region. The natural planting palette is applicable to any zones that are not defined as being ornamental or semi-natural and where the lowest maintenance requirements of the campus would be applicable. This would include but is not limited to vegetation protection, re-vegetation and succession planting strategies.


Decomposed granite


River gravel

5.5 MICROCLIMATE

The two fundamental micro-climatic conditions of *sunny* & *shady* are the key indicators as to what the nature of the planting should be to achieve a successful planting palette. By using this simple breakdown of climatic requirements, the planting design across the campus will be varied and unique to the individual spatial conditions whilst maintaining a common design language campus wide. Note: To be read in conjunction with the planting palette.

1 ornamental

sunny

planting on northern and western aspect in exposed locations.

shady

planting on an eastern and southern aspect in protected locations.

2 semi-natural

sunny

planting on northern and western aspect in exposed locations.

shady

planting on an eastern and southern aspect in protected locations.

3 natural

sunny

planting on northern and western aspect in exposed locations.

shady

planting on an eastern and southern aspect in protected locations.

5.6 PLANTING PALETTE

> Ornamental

	BOTANICAL NAME	COMMON NAME	NATIVE AUSTRALIAN	NATIVE TO REGION	NATIVE TO SITE	EDUCATIONAL
TREES	SUNNY					
	ALLOXYLON flammeum	Queensland Tree Waratah	●	●		
	ALLOXYLON wickhamii	Queensland Waratah	●	●		
	BUCKINGHAMIA celsissima	Ivory Curl	●	●		●
	CALLISTEMON salignus	Willow Bottle Brush	●	●		
	CALLISTEMON viminalis - cultivars	Weeping Bottlebrush	●	●		
	CERATOPETALUM gummiferum	New South Wales Christmas Bush	●	●		
	CUPANIOPSIS anacardioides	Tuckeroo	●	●		
	ELAEOCARPUS reticulatus	Blueberry Ash	●	●		
	HARPULLIA pendula	Tulip Lancewood	●	●	●	
	LIVISTONA australis	Cabbage Palm	●	●		
	STENOCARPUS sinuatus	Fire Wheel Tree	●	●		
	XANTHOSTEMON chrysanthus	Golden Panda	●	●		
	SHADY					
	BOSISTOA pentacocca	Ferny-leaf Bosistoa	●	●		
	SYZYGIUM hodgkinsoniae	Red Lillipilli	●	●		●
	SYZYGIUM smithii	Lilly Pilly	●	●		
	SYZYGIUM leuhmannii	Brush Cherry	●	●		
	TRISTANIOPSIS laurina	Water Gum	●	●		
	WATERHOUSEA floribunda	Weeping Lilliplilli	●	●		
SHRUBS	SUNNY					
	BANKSIA spinulosa	Hairpin Banksia	●	●	●	●
	CALLISTEMON 'Little John'	'Little John'	●			
	CRINUM pedunculatum	Swamp lily	●	●		
	DODONAEA triquetra	Hopbush	●	●	●	
	DORYANTHES excelsa	Gymea Lily	●			
	DORYANTHES palmeri	Spear Lily				
	GREVILLEA lanigera	Wooly Grevillea	●			
	GREVILLEA CULTIVAR Liliane	Cultivar hybrid	●			
	GREVILLEA laurifolia	Laurel-leaf Grevillea	●			
	GREVILLEA cultivar "Nancy Otzen"	Nancy Otzen	●			
	G. venusta x G. glossadenia	Grevillea Orange Marmalade	●	●		
	HOVEA acuitifolia	Hovea	●	●	●	●
	MELALEUCA linariifolia 'Claret Tops'	'Claret Tops'	●			
	XANTHORRHOEA johnsonii	Johnson's Grass Tree	●	●	●	
	SHADY					
	ADIANTUM hispidulum	Rough Maidenhair Fern	●	●	●	
	ASPLENIUM australasicum	Birds Nest Fern	●			
	BAECKEA virgata sp.	Twiggy Heath Myrtle	●			
	BLECHNUM indicum	Swamp Water Fern	●	●	●	
	CORDYLINES (C. rubra, & petiolaris)	Palm Lily	●	●		
	CYATHEA australia	Rough Tree Fern	●	●		
	DRYUARIA rigidula	Basket Fern	●			
	LEPIDOZAMIA peroffskyana	Shining Burrawang	●	●		●
GROUNDCOVER						
	SUNNY					
	DIANELLA caerulea	Blue flax-lily	●	●	●	
	GREVILLEA 'Poorinda Royal Mantle'	Poorinda Royal Mantle	●			
	HELICHRYSUM ramosissimum	Yellow Buttons	●	●		
	KENNEDIA rubicunda	Dusky Coral Pea	●	●		●
	NOTELAEA ipsviciensis	Cooneana Olive	●	●		
	PANDOREA pandorana	Ruby Bell Pandora	●	●		
	STYLIDIUM graminifolium	Grass Trigger Plant	●	●		
	XEROCHRYSUM bracteatum		●	●		
	SHADY					
	GLEICHENIA dicarpa	Pouched Coral Fern	●	●		
	PROSTANTHERA phylicifolia	Spiked Mintbush	●	●		
	VIOLA betonicifolia	Purple Violet	●	●	●	
	VIOLA hederacea	Ivy Leaved Violet	●	●	●	

> Semi-natural

TREES

BOTANICAL NAME	COMMON NAME	NATIVE AUSTRALIAN	NATIVE TO REGION	NATIVE TO SITE	EDUCATIONAL
SUNNY					
AKANIA bidwillii	Turnipwood	●	●		
ARCHONTOPHOENIX cunninghamiana	Bangalow palms	●	●		
BACKHOUSIA citriodora	Lemon-scented myrtle	●	●		
BANKSIA integrifolia	Coast Banksia	●	●		
CASUARINA cunninghamiana	River She Oak	●	●		
CUPANIOPSIS anacardioides	Tuckeroo	●	●		
CUPANIOPSIS baileyana	Narrow Leaved Tuckeroo	●	●		
EUCALYPTUS sp. - hybrids	'Summer Beauty' 'Summer Red'	●			
GREVILLEA robusta	Silky Oak	●			
HARPULLIA pendula	Tulip Lancewood	●	●	●	
LOPHOSTEMON confertus	Brush Box	●	●	●	
MACADAMIA integrifolia	Macadamia	●	●		
MACADAMIA tetraphylla	Macadamia	●	●		●
MELALEUCA leucadendra	Weeping paperbark	●	●		
MELALEUCA nodosa	Prickly Leaf Paperbark	●	●		
MELALEUCA quinquenervia	Paperbarked Tea Tree	●	●	●	●
MELICOPE elleryana	Pink Euodia	●	●		
TRISTANIOPSIS laurina	Water Gum	●	●		
XANTHOSTEMON verticillatus	Little Panda	●	●		
SHADY					
ALPHITONIA excelsa	Soap Tree or Red Ash	●	●		
AUSTROMYRTUS fragrantissima	Sweet Myrtle	●	●		
CASSIA marksiana	Bush Cassia	●	●		
DIPLOGLOTTIS campbellii	Small-leaved Tamarind	●	●		●
MEDICOSMA cunninghamii	Pinkheart	●	●		
SYZYGIUM australe	Brush Cherry	●	●		
SYZIGIUM leumannii	Small Leaved Lillipilli	●	●		
SYZYGIUM moorei	Coolamon	●	●		

SHRUBS / GROUNDCOVERS

BOTANICAL NAME	COMMON NAME	NATIVE AUSTRALIAN	NATIVE TO REGION	NATIVE TO SITE	EDUCATIONAL
SUNNY					
ACACIA complanata	Flat Stem Wattle	●	●	●	●
ACACIA concurrens	Black Wattle	●	●	●	●
ACACIA fimbriata	Brisbane Golden Wattle	●	●	●	●
GREVILLEA lanigera	Wooly Grevillea	●			
ACACIA podalyriifolia	Queensland Silver	●	●	●	●
AUSTROMYRTUS dulcis	Midgen Berry	●	●	●	
BANKSIA aemula	Wallum Banksia	●			
BANKSIA robur	Swamp Banksia	●	●		
DORYANTHES palmeri	Spear Lily	●			
GREVILLEA cultivars Coconut Ice, Robyn Gordon, Ned Kelly	Various cultivars	●			
GREVILLEA cultivar John Evans	Cultivar hybrid	●			
G. venusta x G. glossadenia	Greville Orange Marmalade	●	●		●
GLOCHIDION ferdinandi	Cheese Tree	●	●	●	
LEPTOSPERMUM flavescens	Tantoon	●	●		
LOMATIA silaifolia	Parsley Bush, Crinkle Bush	●	●	●	
MELALEUCA nodosa	Prickly Leaf Paperbark				
MELASTOMA affine	Blue tongue	●	●	●	
NOTELAEA ovata	Mock Olive	●	●	●	
NOTELAEA lloydii	Lloyds Olive	●	●		
PROSTANTHERA ovalifolia	Native Mint Bush	●	●	●	
PULTENAEA petiolaris	Woolly Bush Pea	●	●		
SHADY					
ADIANTUM aethiopicum	Maidenhair Fern	●	●		
BLECHNUM cartilagiueum	Gristle Fern	●	●	●	
CHRISTELLA dentata	Binung	●	●	●	
CALOCHLAENA dubia (was CULCITA dubia)	Soft Bracken Fern	●	●	●	●
CAPPARIS sarmentosa	Bush Caper Berry	●	●		
DOODIA caudata	Rasp Fern	●	●		
GOODENIA rotundifolia	Star Goodenia	●			
PLATYCERIUM superbum	Staghorn	●	●		
VIOLA betonicifolia	Purple Violet	●	●	●	

> Natural

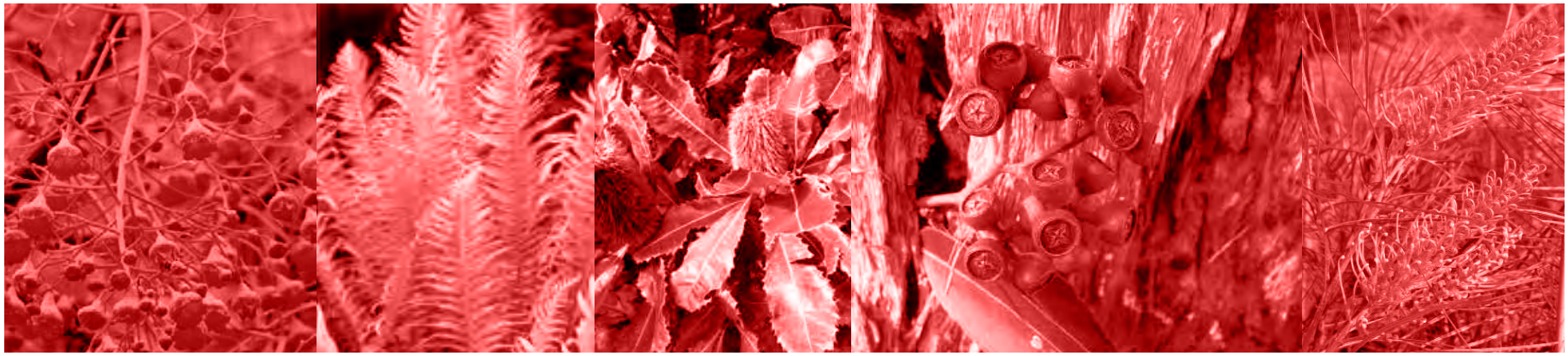
	BOTANICAL NAME	COMMON NAME	NATIVE AUSTRALIAN	NATIVE TO LOCAL AREA	NATIVE TO SITE	EDUCATIONAL
TREES	SUNNY					
	ACACIA complanata	Flat Stem Wattle	●	●	●	●
	ACACIA concurrens	Black Wattle	●	●	●	●
	ACACIA leiocalyx	Black Wattle	●	●	●	
	ACACIA maidenii	Maidens wattle	●	●		
	ACACIA fimbriata dwarf form	Dwarf Fringed Wattle	●	●	●	
	ACACIA suaveolens	Sweet Wattle	●	●		
	(ALLO) CASUARINA littoralis	Black She Oak	●	●	●	
	ANGOPHORA costata	Rusty Gum, Smooth-Barked Apple	●	●	●	
	ANGOPHORA woodsiana	Smudgee	●	●	●	
	EUCALYPTUS acmenoides	White Mahogany	●	●		
	EUCALYPTUS curtisii	Plunkett Mallee	●	●		●
	EUCALYPTUS eugenioides	White Stringybark	●	●	●	
	EUCALYPTUS gummifera	Red Bloodwood	●	●	●	
	EUCALYPTUS intermedia	Pink Bloodwood	●	●	●	
	EUCALYPTUS pilularis	Blackbutt	●	●	●	
	EUCALYPTUS resinifera	Red Mahogany	●	●	●	
	EUCALYPTUS seeana	Narrow Leaved Red Gum	●	●	●	
	EUCALYPTUS umbra	Broad-leaved White Mahogany	●	●	●	
	EUCALYTPUS tindaliae	Tindale's Stringybark	●	●	●	
	FICUS coronata (fraseri)	Sandpaper Fig	●	●	●	
	JACKSONIA scoparia	Dogwood	●			
	MELALEUCA bracteata	Tamarisk Honey Myrtle	●			
	PERSOONIA cornifolia	Broad Leaved Geebung	●			
	SHADY					
	GLOCHIDION sumatranum	Broad Leaved Cheese Tree	●	●	●	
SHRUBS	SUNNY					
	ACACIA suaveolens	Sweet Wattle	●	●	●	
	ACACIA ulicifolia	Prickly Moses	●	●	●	
	BREYNIA oblongifolia	Coffee Bush	●	●	●	
	CYMBOPOGON refractus	Barbwire Grass	●	●	●	
	DAVISIA ulicifolia	Gorse Bitter Pea	●	●	●	
	DODONEA triquetra	Hopbush	●	●	●	
	GOMPHOLOBIUM pinnatum	Pinnate Wedge Pea	●	●	●	
	GOODENIA bellidifolia	Daisy-leaved Goodenia	●	●	●	
	HAKEA florulenta		●	●	●	
	HAKEA pluriuervia		●	●	●	
	HARDENBURGIA violacea	Native Sarsparilla	●	●	●	
	HOVEA acuitifolia	Hovea	●	●	●	●
	LEPTOSPERMUM trinervium	Flaky-barked Tea-tree	●	●	●	
	LOMATIA silaifolia	Parsley Bush	●	●	●	
	PATERSONIA glabrata	Native Iris	●	●	●	
	PATERSONIA sericea	Native Iris	●	●	●	
	PULTANAEA myrtoides	Swamp Pea	●	●	●	
	PULTENAEA retusa	Notched Bush Pea	●	●	●	
	PULTENAEA villosa	Hairy Bush Pea	●	●	●	
	LEPIDOSPERMA laterale	Variable Sword-sedge	●	●	●	
	THEMEDA australis	Mingo Grass	●	●	●	

5.7 LANDSCAPE MASTER PLANS - CONCLUSION

The following two pages illustrate the short and long term master plan landscapes and the transition from a predominantly bushland character to one which contrasts relatively formalised urban spaces against a bushland surround. Main features of the planning are:

- the longitudinal pedestrian spine defined by architectural canopies and a red flowering tree
- urban spaces created by new development characterised by varying degrees of formalised planting and tree patterns reinforcing movement.

It has been previously noted that the environmental constraints that have historically precluded development on the Southern Precinct have been removed by the Queensland Government. Should the constraints also be removed from two areas of conservation bushland on the Northern Precinct, consideration of their value as natural habitats could be made by the University, noting that they occur in areas subject to hydrological flows. This issue thus requires further analysis when appropriate.



Landscape Master Plan - Short Term

Landscape Master Plan - Long Term

APPENDIX 1

GROWS AT GRIFFITH

GROWS AT GRIFFITH

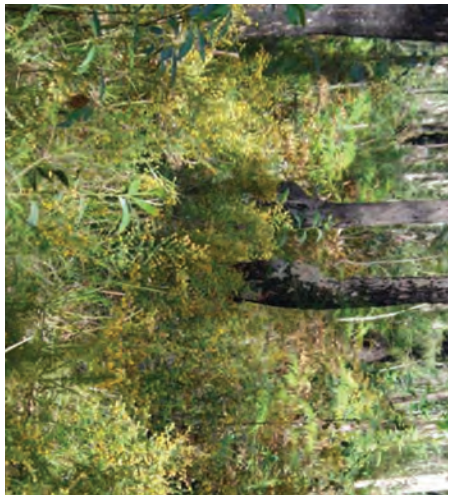
GrowsAtGriffith is a teaching application developed by Associate Professor Catherine Pickering and PhD student Mark Ballantyne, and built in collaboration with Griffith's INS Learning and Teaching Team. It provides an interactive flora database of 200 plants on the Griffith University campuses and more broadly across South East Queensland.

The knowledge that generated this app has been utilised in detail to inform the Landscape Strategy for the Master Plan, both in terms of species and major principles, including conserving existing native vegetation and rehabilitating native vegetation with planting of species endemic to the campus. Other key principles taken from the app development are listed below.

Gardens

1. Only plant species native to Australia (a few minor exceptions).
2. Priorities using attractive natives to site or South-east Queensland in garden areas around buildings and landscaping paths, roads etc.
3. Select species that require little or no irrigation and are low maintenance.
4. Select species based on practical benefits such as trees to shade west facing walls of buildings, using canopy trees along walkways to protect people from the sun and rain, plant to provide passive cues to help people know where they are on campus by using blocks of distinctive species in particular garden beds and that enhance the visual impact of main corridors through the campus.
5. Plant for visual delight and beauty. For example making grand statements at the main campus entrances and around Griffith signage with vivid displays of Griffith colours (e.g. red flowers/fruit) and striking foliage.
6. Avoid the overuse of some 'hardy' but not very attractive plantings – e.g. avoid a supermarket carpark planting style.
7. Ensure that site preparation (reduced soil compaction, soil improvement, good quality thick mulch etc) is used to enhance growth for the long term and minimize requirement for replanting within 3 years.
8. Plant to better utilize micro-climatic conditions on campus e.g. some areas have rainforest, riverine, heath, dry Eucalyptus forest, coastal microclimates. This can be taken into account when selecting species and allows the campus to represent different types of local 'ecosystems/ species' on campus.
9. Plant to support native wildlife by providing habitat and food sources including use of species flowers and fruit that attract and support local birds, insects and mammals.
10. Avoid overuse of fast growing, but sometimes short-lived species (Acacias etc) by mixing with slower growing but longer-lived species to minimize the need to replant areas within 5-10 years.
11. Develop one or more areas as 'teaching' gardens with distinctive plantings of botanically important local species including bush tucker, potential medicinal plants, local rare and vulnerable species, and other botanically distinctive species.



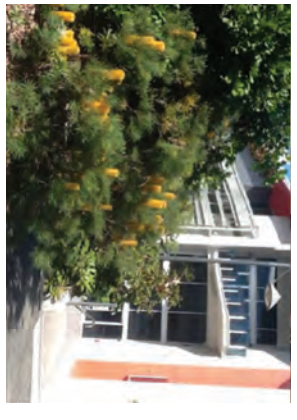











APPENDIX 2

PAINTING AND REFURBISHING

PAINTING AND REFURBISHING FORMER CAE BUILDINGS G01, G05, G06

It is proposed to refresh the three former CAE buildings in the short term. As these buildings are intended to be progressively demolished and replaced by new buildings in the medium-long term, the revitalization is limited to external painting and a refurbishment of a selected number of social spaces with new furniture and paving.

The following pages illustrate three closely related but different colour schemes for the three buildings. The intention is to subtly distinguish the buildings with the three palettes.

There has been discussion as to whether the awnings could be removed in order to simplify the aesthetic. However, Campus Life have advised that they need to remain to prevent heat discomfort inside the buildings. As replacement with new awnings is likely to be expensive, it is proposed to only replace the sheeting and retain the support structure. Colour schemes are included for the structure and awnings, with a recommendation that the underside of the sheet material is painted a dark charcoal to camouflage potential mildew.

In addition to repainting, it is proposed to upgrade some of the external spaces where building users could meet socially and some of the entrance foyers and stairwells in order to encourage internal social activity. The external space refurbishments are considered a priority for the new Derlot-designed outdoor seats and table settings, and other changes which need to be designed. Schemes will also be required for the internal refurbishments, including painting, furniture, artwork and possibly floor treatments. These changes, albeit minimal, will have a dramatic influence on the sense of welcome of the buildings

Sky Blue scheme

Eucalyptus green scheme

Charcoal Blue scheme

Service spine along Alumni Place - Option 1

Service spine along Alumni Place - Option 2