

**/University of The South Pacific: Emalus Master Plan
November 2013**

Revision A



Jasmax



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Revision A: 14 February 2014

- Plan of existing campus master plan added (page 7)
- Notes added regarding master plan status of Chinese Government funded projects.
- Areas in tables on Page 6 and 22 amended to suite areas for Chinese Government funded projects as supplied by USP on 05-12-2013 .



/1.0 Executive Summary

The University of the South Pacific outlines several aspirations/ objectives within the Triennial Submission 2013-2015 report. The mentioned aspirations are further substantiated and elaborated within the Emalus Campus Development Plan (2011-2012). These ambitions were used as guidance for the purpose of progressing this Master Plan.

This Master Plan is a tool to deliver the USP Vision for the Emalus campus which is as follows:

- To be proactive in recognising and meeting the higher educational needs of its member counties.
- To deliver quality learning and teaching, research and enhance quality in all university services.
- To be highly regarded locally, regionally and internationally.
- To provide relevant and sustainable solutions across the spectrum of contemporary challenges in the pacific.

To ensure the Emalus Campus Master Plan successfully achieves the above set goals, and keeps up with international tertiary education trends, the AAPPA guidelines were used to help progress and guide this document. The AAPPA guidelines are based on typical (large) Australian Universities, to better align the guidelines for the environment at the University of the South Pacific – Emalus Campus assumptions and amendments were made. The following section outlines the assumptions of this Master Plan, and section 3.0 *Benchmarking and AAPPA Guidelines* notes how these guidelines are employed and areas where the guidelines have been amended to better suit this campus.

The areas found to be lacking sufficient space (via using the AAPPA and amended guidelines) within the campus were Administration, Academic, General Teaching and Library areas. Several physical and contextual aspects within the site were also found in need of improvement, such as circulation, site profile and accessibility. In addition to the mentioned shortfalls/ areas of improvement, the Emalus Campus Development Plan (2011-2012) outlines specific projects the university wish to undertake. All of these shortcomings, needs and desires create development opportunities which became the key aspects of the proposed Master Plan.

In the proposed Master Plan the current organic arrangements of buildings and site around a hub/ heart is amended to incorporate a clear rational of movement and space allocation where needed buildings could be introduced over time. The development of a Conference Centre, as requested by the University of the South Pacific, is included within this document and is proposed as a flagship from which the entrance and visual perception of the campus is improved.

The size, curriculum, and methods of teaching used at the University of the South Pacific – Emalus Campus indicates the need for spaces which are, flexible, adaptable or both. This document concludes with a brief description of ways to create flexible and adaptable spaces that can evolve as context and need dictate.

The produced Master Plan displays an immediate strategy to consolidate the site, amend the perceived shortfalls found, as well as a methodology of growth both short and long term.

/2.0 Assumptions

A list of assumptions were created to strengthen the design of the proposed Master Plan and to assist in its interrogation. The Master Planning assumptions based on USP Vision, our understanding of the working of the campus, and AAPPA Guidelines are as follows:

- The overall GFA/ EFSTU for the Emalus Campus are expected to be lower than those outlined in the AAPPA Guidelines.
- The current numbers of students, courses and the nature of teaching and learning within the Emalus Campus (face taught, online and distance learning) calls for less designated space and more multi-purpose areas.
- Distance Taught students make up a large proportion of the USP Emalus Full time Student (EFTSU) population. These students are assumed to have a reduced need for space on the Emalus campus. In the following section (3.0 Benchmarking) we have separated the 'Distance Taught (DSL)' students from the 'Face Taught' and amended the AAPPA guidelines for the 'Distance Taught' EFTSU's to better suit needs.
- This Master Plan will primarily focus on growth, progressing towards AAPPA Guidelines and managing the currents assets of site, as the current scale and materiality of the university appear to be acceptable and well suited to their context.
- Library and cultural spaces are understood to be of high importance to this campus. Care should be taken to allow these aspects to grow within the masterplan.



Existing Site Plan



/3.0 Benchmarking and AAPPA Guidelines

This document uses the *AAPPA Space Planning Guidelines: Edition 2*, as an analysis tool to investigate the existing Emalus campus, and as an estimate for areas in need spatial growth.

Before progressing fully with the prescribed AAPPA guidelines we have made the assumption that the needs of the Emalus campus will not align exactly with those set out in the *AAPPA guidelines*. The *AAPPA guidelines* will be employed as a rough guide and not a definite planning tool. The following paragraphs outline broad areas in which the Emalus campus is not expected to meet AAPPA, and how we envision the campus relating to the *AAPPA guidelines*.

Australian universities have a relatively high GFA per Equivalent Full time Student Unit (EFTSU), with the majority of campuses ranging between 12-19sq.m per EFTSU. New Zealand does not have a AAPPA guideline equivalent, however from our experience working with New Zealand Universities we assume the ratio of GFA per EFTSU to be between 8 and 14. Due to the nature of campus development, class sizes and the number of distance taught students, the Emalus Campus is expected to have a lower ratio than New Zealand and much lower than Australia.

Secondly, General Floor Area (GFA) and Usable Floor Area (UFA) within most Australasian Campuses have noticeable differences, due to travel and engineering taking up large areas of built space, the AAPPA Guidelines place UFA as typically 70% of GFA. The current Emalus Campus is naturally ventilated with rooms being accessed via external covered walkways. The lack of need for air-conditioning plant and internal circulation for buildings causes the campus to have a minimal difference between UFA and GFA (UFA between 95-100% of GFA). The difference in UFA/ GFA within the Emalus Campus reduces the need to achieve the exact GFA figures set out by the AAPPA Guidelines.

The following outlines how the spaces within the Emalus campus compare to areas benchmarked in the AAPPA guidelines. The succeeding table notes the estimated growth of the Face Taught and Distance Taught Equivalent Full Time Student units (EFTSU) at the Emalus campus. These EFTSU growth numbers are introduced to the AAPPA and modified guidelines to find benchmark areas for the campus. The existing campus areas are then compared with the benchmarks and highlighted to indicate areas which fall below benchmarked areas.

For the 'Distance Learning' EFTSU, we have adjusted the AAPPA benchmarked guidelines to better suit what we understand the needs of Distance Learning to be, for example Distance Taught EFTSU require little or no academic space but require administration space for tutors, professors and staff.

To absorb any potential shortcomings in Distance Taught benchmark assumptions, the benchmark areas for Face Taught EFTSU follow the upper range of AAPPA - UFA/EFTSU guidelines

The schedule indicates that the Academic, Administrative and General Teaching areas of the current Emalus Campus are below (or soon to be below) their Benchmarked areas. The current nature of teaching, learning, and culture within

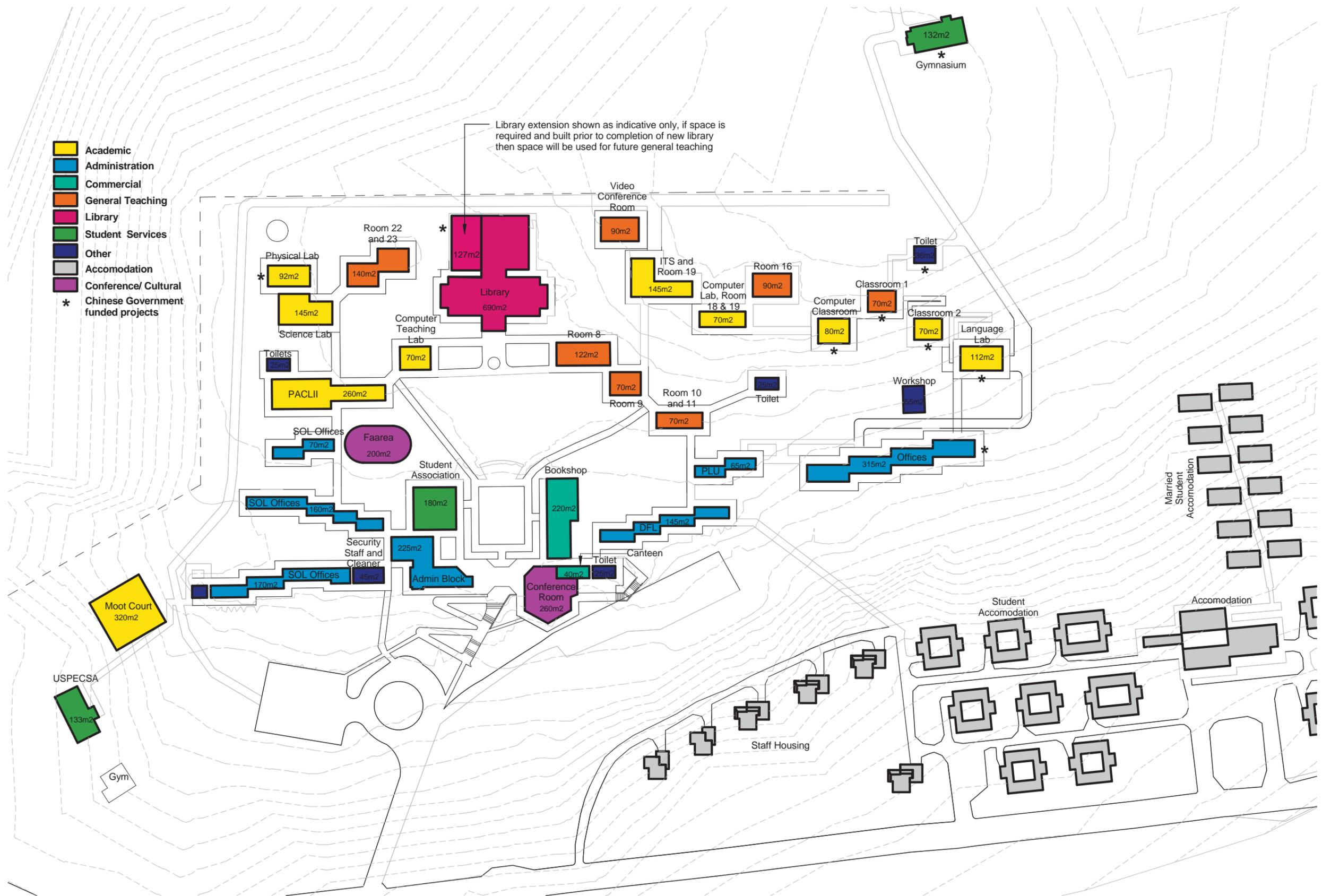
the Emalus campus also indicates that study and Library spaces are an important aspect which should meet or surpass AAPPA guidelines.

Group	AAPPA Guidelines		Jasmax Assumption
	% of total space on campus	m2 UFA/ Total Campus EFTSU	m2 UFA/ Distance Taught EFTSU
Academic	43-57%	4.5-6m ² /EFTSU	0m ² /EFTSU
Administrative	9-12%	1-1.2m ² /EFTSU	1.0m ² /EFTSU
Commercial	2.8-4.2%	0.3-0.4m ² /EFTS	0.1m ² /EFTSU
General Teaching	12%	1.2m ² /EFTSU	0.4m ² /EFTSU
Library	10%	1m ² /EFTSU	0.6m ² /EFTSU
Student Services	4-8%	0.4-0.8m ² /EFTS	0.2m ² /EFTSU
Other	8%	0.8m ² /EFTSU	0m ² /EFTSU

AAPPA Benchmark Areas / EFTSU

Year	Existing GFA	2012	2013	2014	2015	2016	2017	2018
Emalus EFTS		1033	1111	1166	1225	1286	1350	1418
Admin staff								
Academic staff		27	29	30	32	34	35	37
face taught EFTSU		208	224	235	247	259	272	286
distance taught EFTSU		825	887	931	978	1027	1078	1132
Face Taught Academic AAPPA Benchmark GFA		1248	1344	1410	1482	1554	1632	1716
Academic Distance Taught Benchmark GFA		0	0	0	0	0	0	0
Academic Benchmark GFA - Total		1248	1344	1410	1482	1554	1632	1716
Academic Proposed GFA	1362	1362	1672	1672	1672	1672	2512	2512
Face Taught Administrative AAPPA Benchmark GFA		249.6	268.8	282	296.4	310.8	326.4	343.2
Administrative Distance Taught Benchmark GFA		825	887	931	978	1027	1078	1132
Administrative Benchmark GFA - Total		1074.6	1155.8	1213	1274.4	1337.8	1404.4	1475.2
Administrative Proposed GFA	1150	1150	1220	1490	1490	1490	1490	1490
Face Taught Commercial AAPPA Benchmark GFA		83.2	89.6	94	98.8	103.6	108.8	114.4
Commercial Distance Taught Benchmark GFA		82.5	88.7	93.1	97.8	102.7	107.8	113.2
Commercial Benchmark GFA - Total		165.7	178.3	187.1	196.6	206.3	216.6	227.6
Commercial Proposed GFA	260	260	260	260	260	260	230	230
Face Taught General Teaching AAPPA Benchmark GFA		249.6	268.8	282	296.4	310.8	326.4	343.2
General Teaching Distance Taught Benchmark GFA		330	354.8	372.4	391.2	410.8	431.2	452.8
General Teaching Benchmark GFA - Total		579.6	623.6	654.4	687.6	721.6	757.6	796
General Teaching Proposed GFA	652	652	752	752	752	752	1562	1562
Face Taught Library AAPPA Benchmark GFA		208	224	235	247	259	272	286
Library Distance Taught Benchmark GFA		495	532.2	558.6	586.8	616.2	646.8	679.2
Library Benchmark GFA - Total		703	756.2	793.6	833.8	875.2	918.8	965.2
Library Proposed GFA	817	817	817	817	817	817	965	965
Face Taught Student Services AAPPA Benchmark GFA		166.4	179.2	188	197.6	207.2	217.6	228.8
Student Services Distance Taught Benchmark GFA		165	177.4	186.2	195.6	205.4	215.6	226.4
Student Services AAPPA Benchmark GFA		331.4	356.6	374.2	393.2	412.6	433.2	455.2
Student Services Proposed GFA	445	445	445	445	445	665	665	665
Face Taught Other AAPPA Benchmark GFA		166.4	179.2	188	197.6	207.2	217.6	228.8
Other distance Taught Benchmark GFA		0	0	0	0	0	0	0
Other Benchmark GFA - Total		166.4	179.2	188	197.6	207.2	217.6	228.8
Other Proposed GFA	230	230	230	230	230	230	230	230
Conference Benchmark GFA								
Conference proposed GFA	460	460	460	460	460	2000	2000	2000
Total	5376	5376	5856	6126	6126	7886	9654	9654
mSq per Face Taught EFTSU	25.85		26.14	26.07	24.80	30.45	35.49	33.76
mSq per Face Taught EFTSU + Distance Taught	5.20		5.27	5.25	5.00	6.13	7.15	6.81

Benchmark Areas / EFTSU, Existing Areas / EFTSU over time



Existing Master Plan, Including Chinese Government funded projects
Not To Scale

/4.0 Campus Site Analysis and Objectives

Theme	Analysis	Objective
8.1 Context	<p>Context & Grain</p> <ul style="list-style-type: none"> Located in residential setting with some commercial to the west Open campus with small scattered buildings and pathways <p>Character</p> <ul style="list-style-type: none"> Distinct pacific character <p>Profile</p> <ul style="list-style-type: none"> Low profile entrance with multiple casual site entry points <p>Facilities & Assets</p> <ul style="list-style-type: none"> Wonderful communal heart to campus 	<ul style="list-style-type: none"> Provide a secure environment for staff and students Create a sense of rational planning within existing organic site to allow and promote growth. Consolidate and promote site connection to surrounding community. Strengthen gateway to the campus
8.2 Environment and Natural Ecology	<p>Landscape</p> <ul style="list-style-type: none"> Large site with established native vegetation and well maintained gardens Sloping site to the south with developed flat areas to the north <p>Topography</p> <ul style="list-style-type: none"> Elevated building platforms with open views to 270° <p>Views</p> <ul style="list-style-type: none"> Native vegetation area with native landscaped planting beds and grassed areas <p>Bio-diversity</p> <ul style="list-style-type: none"> Buildings rely on natural ventilation and shaded verandas <p>Environmental Sustainability</p> <ul style="list-style-type: none"> Site an excellent example of a sustainable university campus 	<ul style="list-style-type: none"> Better connection between slopes of the site. Promote the strong existing biodiversity within the site Celebrate and promote a sustainable campus
8.3 Sociological Ecology	<p>Sense of Place</p> <ul style="list-style-type: none"> Well defined sense of locality Well utilised social spaces. Could use more large and small format internal social spaces <p>Social Gathering</p> <ul style="list-style-type: none"> On site Gym segregated from main campus hub <p>Recreation</p>	<ul style="list-style-type: none"> Create more cultural spaces. Promote culture as a strong conceptual and visual driver for development.
8.4 Movement	<p>Accessibility</p> <ul style="list-style-type: none"> Some disabled accessibility on site <p>Pedestrian</p> <ul style="list-style-type: none"> Lack of control for pedestrian access to site Meandering pedestrian movement within campus. Inter-building covered walkways allowing year round usage. <p>Transport</p> <ul style="list-style-type: none"> Controlled vehicular access and parking. Established bus routes 	<ul style="list-style-type: none"> Consolidate and control access to site Develop a struture that efficiently defines pedestrian movement. Realign vehicular access and movement to better promote entrance to the site.
8.5 Built Site	<p>Overall</p> <ul style="list-style-type: none"> Core buildings arrayed around central hub. All other building scattered throughout site. <p>Spaces</p> <ul style="list-style-type: none"> Scale of building and their arrangement shapes unique private external spaces <p>Quality</p> <ul style="list-style-type: none"> External access allows for efficient buildings with a high ratio of UFA to GFA. Buildings appropriate for use and have medium term lifespan <p>Adaptability</p> <ul style="list-style-type: none"> Generic design of most buildings allows for high degree of adaptability, however they are narrow and limit size of classes <p>Heritage</p> <ul style="list-style-type: none"> Architectural style of the campus should be maintained and enhanced. 	<ul style="list-style-type: none"> Rationalise existing building relationships without degrading pacific feel. Develop an adaptive way to promote new uses and new technologies and allow for future growth



Main Entrance of Emalus Campus



Typical Emalus Campus Building form



View to Forested Area



View from Campus Towards Staff Living



View from SOL towards Faarea



Emalus Open Day (courtesy of <http://www.vanuatu.usp.ac.fj/centre/>)



/5.0 Campus Growth and Needs

The current Emalus campus requires growth of Academic, Administration, General Teaching, Library spaces, and a strategy for programmatic and physical growth. Furthermore there are several physical and social aspects of site that are in need of improvement.

The needs of the Emalus campus are not fully encapsulated within the AAPPA Guidelines. The size of the campus and student numbers indicate a need for flexibility in its academic and teaching spaces to accommodate all courses on offer. We propose to investigate the increase of academic space in conjunction with general teaching space towards a flexible outcome.

As the Emalus campus grows the Administration area will need expansion. The existing location of the Administration space, at the gateway to the campus building, is ideal. Future additions should aim to be equally well placed and connected.

The existing Library building is not currently below benchmark levels for the campus however the current use indicates it will soon be insufficient to accommodate student and staff needs. The Emalus campus demands further library expansion that is adaptable to incorporate future evolution of library and spaces, as currently e-technology is rapidly altering the way in which libraries are managed and used.

The Emalus Campus Development Plan (2011-2012) indicates the desire to develop a Conference Centre within the existing campus site. The Conference centre would act as a cultural/ community flagship for the campus. The space could be rented out to supplement USP income whilst being available as overflow space for general teaching (seminars) and exams.

Analysis, outlined in section *4.0 Campus Site Analysis and Objectives*, indicates the significant aspects in need of improvement. These aspects include, promoting a stronger gateway, improving access to the campus, organising the scattered campus buildings and developing better movement within site. The previous section also outlines several important aspects of site that could be strengthened; these include continuing the development of the rich biodiversity and culture of campus.

/6.0 Master Plan

Design Principles

The basis for this Master Plan is to allow and promote the continual growth of this university in both a highly functioning and sustainable manner. The key drivers that are guiding the design of this Master Plan are as follows:

- Understanding the key assets and features of the existing Emalus campus.
- Understanding and consolidating the existing campus as a whole.
- Formulating a method for growth within the campus with the least amount of disturbance or destruction and without weakening existing assets.
- Finding and promoting development opportunities.
- Promoting the existing campus and community culture(s).
- Allowing new innovative ways of teaching and learning to progress.
- Promoting the Emalus Campus and USP as a world class tertiary education provider.
- Developing the Campus to better align itself with the AAPPA Guidelines.

The five key areas of investigation and design, outlined in *4.0 Site Analysis and Objectives*, will be employed to both understand the strengths and downfalls of the existing campus and to isolate opportunities for improvement. The five areas of investigation and design take into account most of the aspects relevant within a modern campus Master Plan and ensure a well-rounded resolution to our proposals.

As previously mentioned the AAPPA Guidelines are employed to direct areas that require development and guide overall site programming. The Emalus Campus is contextually different to the Australian Campus specified in the AAPPA Guidelines, thus these guidelines will be used as rough estimates and not defining design benchmarks.



Image courtesy of Lyn flickr

/7.0 Master Plan Overview

7.1 Strategy

The following Master Plan proposal presents opportunities for the needed developments, as outlined in the *Emalus Campus Development Plan (2011-2012)* and areas of growth indicated through the AAPPA Guidelines, as well as allowing for long term expansion within a clear system and rational for the existing campus. The following Master Plan primarily sets a method of consolidating the existing campus towards a clear ideology, taking into account points outlined within section 5.0 *Campus Growth and Needs*. Ideal locations of developments are proposed and rough forms for the aforementioned are outlined in the following sections. This Master Plan is both a short and long term solution for campus growth, it incorporates a plan for the immediate upgrade of the campus, labelled *Stage 1*, and a method to allow growth beyond Stage 1. The final chapter of this master plan displays a method for phased growth in Stage 1 to minimise decanting issues, spread out construction and allow indicated growth gradually as needed.

7.2 Spatial Master Plan

The Emalus Campus was originally arranged in a hub formation. Communal areas make up the heart / or core of the hub of the campus with various departments and buildings splaying off this heart/ hub. This arrangement is ideal for small confined campuses. Currently the campus is expanding away from its established heart /hub in an organic arrangement. Care and strategy is needed to prevent the weakening of this established heart through uncontrolled development. A clear method of movement and growth is required to prevent such uncontrolled development and to allow the campus to continually function as it grows. We propose to retain the existing hub and re-purposing the existing library into a Flexible Learning Environment with distant learning video conference space and indoor student social space. The Hub will be connected to a conference centre to the east via a pedestrian axis that will also provide connectivity to teaching, social and housing environments.

The conference centre acts as a conduit connecting the campus to the community by presenting a strong visual connection to the surrounding area. The potential conference centre is proposed to be flexible in use and accommodate external (outside of university) and internal seminars, conferences, large meetings and lectures. The usage of the centre for external conferences and seminars brings the external community within the campus and also acts to supplement the university income. To make up for any potential shortfall in general teaching space within the campus the conference centre could be employed to accommodate such activities.

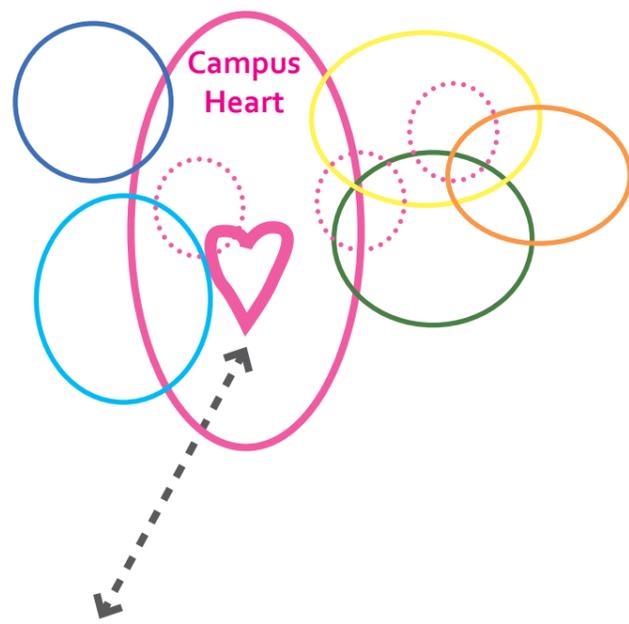
Section 5.0 *Campus Growth and Needs* outlines the need for additional academic, general teaching, administration, and library space within the campus. To increase the amount of academic areas within the site we propose to build additional academic spaces off of the proposed spine and to retrofit some of the smaller general teaching rooms to become academic space. The Library is understood to be well used but lacks capacity to fit users. The masterplan proposes a new library building that will include a book shop. To accommodate the need for student space study bure are scattered throughout the campus allowing all weather use, as requested in the *Campus Development Plan*.

Included in this Master Plan are potential accommodation upgrades for the campus. New or future staff housing can be achieved East of the current student accommodation. The existing staff accommodation could then be reused as visitor accommodation. Student housing is cramped and sees a high turnover of students who choose to move off site after their first year. This accommodation could be made more generous and desirable within the existing areas. Similarly the married students accommodation could be improved to offer more privacy.

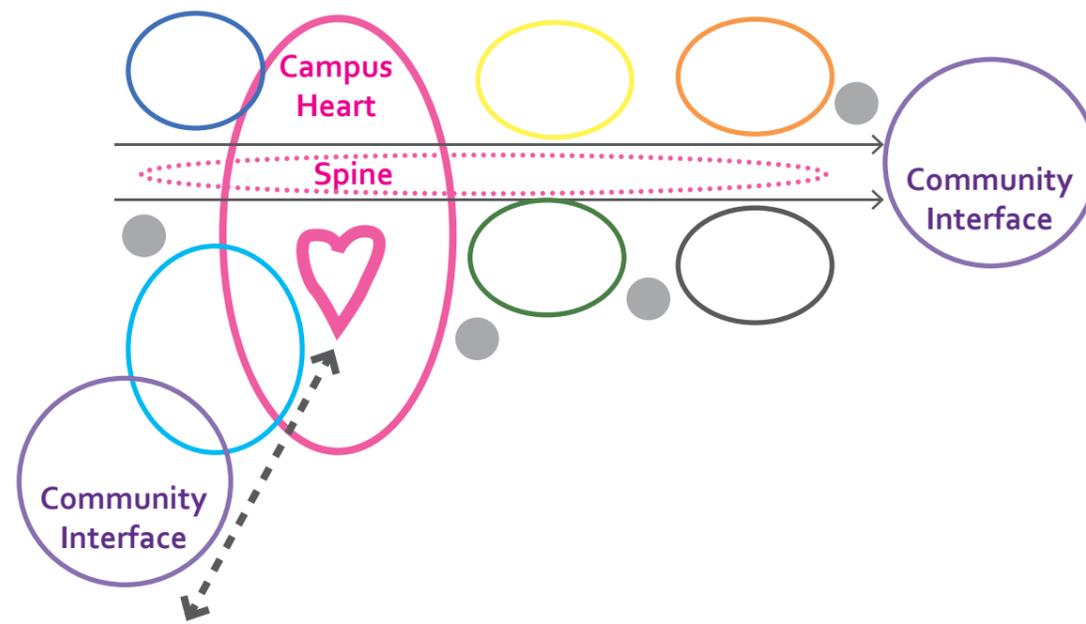
The tables and drawings that refer to existing areas have assumed Chinese Government funded projects as existing.



Photo of Science room

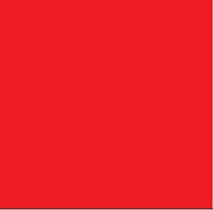


Existing Site Diagram



Proposed Site Diagram

-  Multi-Disciplined Buildings
-  Programme/ Department
-  Communal Space (Bure)
-  Main Site Access
-  Main Pedestrian Movement



/8.0 Specific Aspects of the Master Plan

Synopsis of chapter

To fully explore the implications of the proposed Master Plan the following section explores how the proposed design effects and / or fulfils the set objectives of the five themes outlined in *4.0 Campus Analysis and Site Objectives*. Highlighted in this section are development opportunities to achieve or improve set objectives. The way the proposed Master Plan addresses AAPP shortfalls outlined in *5.0 Campus Growth and Needs* is discussed at the culmination of this section. Note: this section primarily focuses on the immediate future of the campus (Master Plan stage 1).



Plan of Proposed Site at Stage 1

/8.0 Specific Aspects of the Master Plan

8.1 Context

- Context & Grain**
 - Located in residential setting with some commercial to the west
 - Open campus with small scattered buildings and pathways
- Character**
 - Distinct pacific character
- Profile**
 - Low profile entrance with multiple casual site entry points
- Facilities & Assets**
 - Wonderful communal heart to campus

Objective

- Provide a secure environment for staff and students
- Create a sense of rational planning within existing organic site to allow and promote growth.
- Consolidate and promote site connection to surrounding community.
- Strengthen gateway to the campus

Development Opportunity

- Develop a master plan structure for growth.
- Develop a clearly visible network of the campus that organises connective and gathering spaces
- Realign and define front entrance.
- Use proposed Conference Centre as a 'landmark building' to create a strong gateway to the campus
- Landscape site at road boundary to promote perimeter of site
- Develop buildings that address or build upon existing campus assets.

The University of the South Pacific Emalus campus currently has a strong position within the surrounding area of Port Vila. However there is room to improve this perception within the Port Vila, Vanuatu and the South Pacific context.

Collectively the connection to land, forms and materials of the buildings and the arrangement of space give the campus a distinctly Ni-Vanuatu and South Pacific character. This distinct character highlights the fact that this is not just a university but is a South Pacific university with a connections to its community. This character is an integral part of the campus. This Master Plan rejects placing this campus into a western campus mould. Rather the established character seen as an asset giving the campus a distinct sense of place. This Master Plan presents a way for modifying the existing character and campus towards a more efficient Pacific and International solution.

Currently the entrance to the campus is relatively underwhelming from the main road. The positioning of the proposed conference centre creates a strong visual entrance to the surrounding community and presents a highly visible symbol that the campus is more than just a local university but a world class institution that is connected to the world and can host conferences and functions. The rationalising of the campus layout and the highlighting of future expansion indicates the USP's desire to lay the foundations for continual growth and improvement. Presenting a clear relationship between main entrance, heart and learning areas of the campus allows a clear understanding and language between connections and spaces to develop. The strength of this language has a major impact of the functionality and usability of area within a campus.

The Heart or hub established within the campus is a major asset not only as a space that shapes the campus but also as a communal area. The current position of the library, centred with the heart, is ideal visually, and in relation to other aspects and departments of the campus. This Master Plan proposes to retain, protect and enhance these assets by connecting the heart with the proposed major connective route eastward, expanding the library and realigning the access to campus.

8.2 Environment and Natural Ecology

- Landscape**
 - Large site with established native vegetation and well maintained gardens
 - Sloping site to the south with developed flat areas to the north
- Topography**
 - Elevated building platforms with open views to 270°
- Views**
 - Native vegetation area with native landscaped planting beds and grassed areas
- Biodiversity**
 - Buildings rely on natural ventilation and shaded verandas
- Environmental Sustainability**
 - Site an excellent example of a sustainable university campus

Objective

- Better connection between slopes of the site.
- Promote the strong existing biodiversity within the site
- Celebrate and promote a sustainable campus

Development Opportunity

- Use landscaping to passively create site boundaries and frame access ways
- Incorporate landscaping into future designs so strong connection with site remains within the campus.

The size of the site on which the Emalus campus is located allows plenty of room for campus growth. The site slopes significantly down towards the main access road, with the steepest area of slope occurring between the campus accommodation and campus proper. This steep area creates a programmatic boundary between the education and accommodation aspects of the campus.

The undeveloped areas of site are predominantly forested spaces. In developed areas or spaces encroaching developments care has been taken to landscape the topography with an abundance of native flora. It appears that the landscaped areas are very well maintained. The culmination of plant life and landscaping within the site creates a rich biodiversity. This rich biodiversity is a large catalyst in the creation of place and character within the campus. We propose to develop significant

landscaping around the lower site boundary fence to improve the experience of arrival. The use of covered walkways and study areas are highly important in creating shelter for occupants from tropical rain storms and sun. This Master Plan promotes the continual use of sheltered walkways in the new developments and several additional study bure to be located around the campus.



View showing diversity of plant life within site



View of existing bus stop indicating slope of topography



Plan Displaying areas of flora and landscaping for Stage 1

/8.0 Specific Aspects of the Master Plan

8.3 Sociological Ecology

- | | |
|-------------------------|---|
| Sense of Place | <ul style="list-style-type: none"> Well defined sense of locality Well utilised social spaces. Could use more large and small format internal social spaces |
| Social Gathering | |
| Recreation | <ul style="list-style-type: none"> On site Gym segregated from main campus hub |

Objective

- Create more cultural spaces.
- Promote culture as a strong conceptual and visual driver for development.

Development Opportunity

- Develop methods to create sense of order and identification of space within site.
- Increase number of all-weather social spaces (bure)
- Allow cultural aspect to continue to conceptually drive development

The social wellbeing of the campus and campus life appear to have a strong foundation within the existing campus plan. Communal areas, such as the library Faarea, and large open spaces are highly visible and well used assets to the campus. The level of use of these areas and facilities indicates the need for expansion, adaptation and creation of more communal areas.

The proposed Master Plan indicates the creation of several study bure scattered around the campus. Currently the main open area within the heart of the campus is a well utilised space for study during fine weather. Bure, similar to those constructed the USP Laucala campus, create effective spaces to study and work regardless of weather. The creation of the east west circulation corridor invites

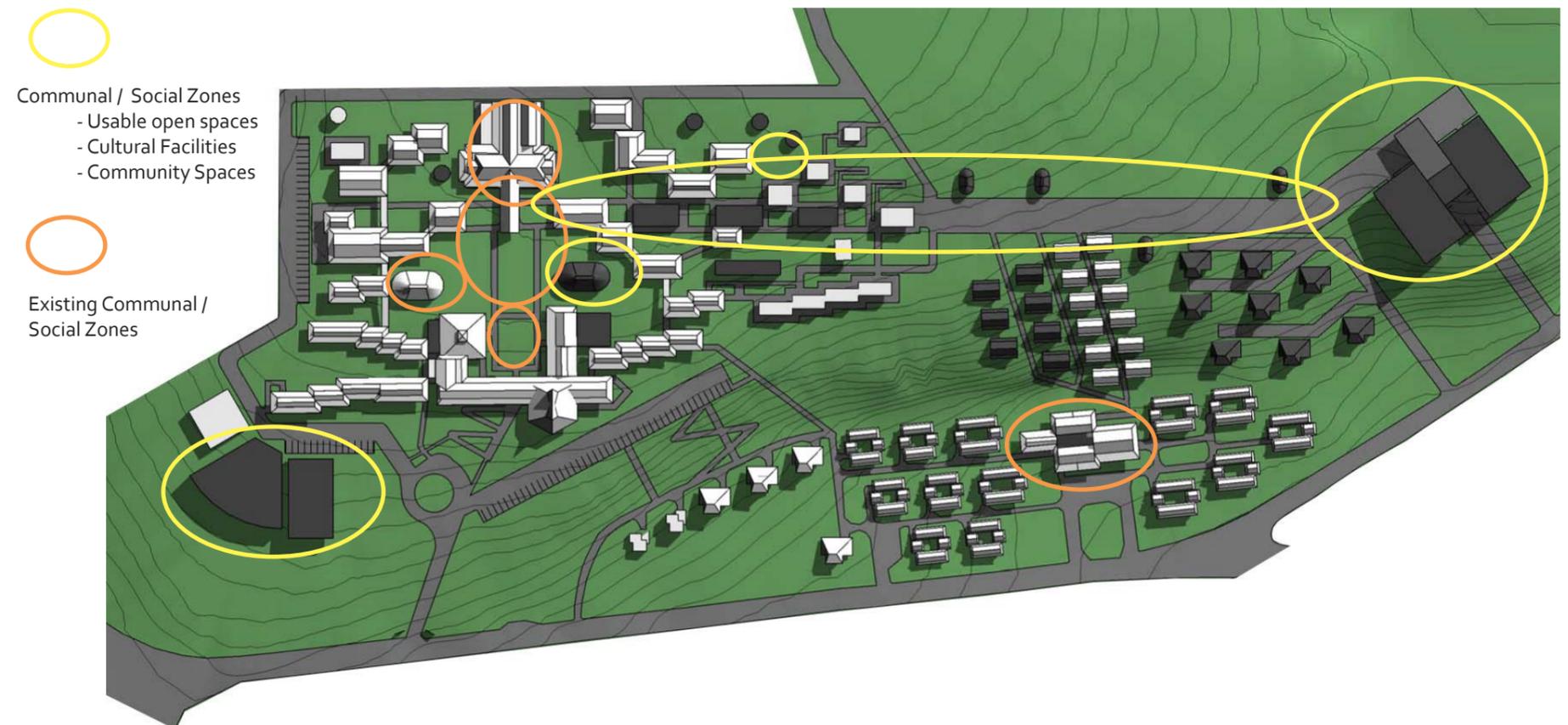
the creation of several minor 'cluster' based open spaces that could be utilised on a department or classroom(s) level. The recommended extension to the existing library expands the existing cultural spaces within the campus giving the opportunity to create a protected outdoor reading area for students.

Innovation is understood to be an aspect that the University of the South Pacific values. Creating dynamic areas to study, work and more importantly collaborate in, is a strong catalyst for the occurrence of innovation. The aforementioned areas are seen as spaces where the existing rich tapestry of culture the campus exhibits can grow, further promoting the society of campus life to prospective students.

The Emalus Campus advisory committee has outlined their desire to enhance the community and civic engagement with the surrounding community(s). The modification to the entrance of the campus and surrounding landscaping improves the visibility and promotes the stature of the campus to. The library could house a café and retail shop (book) which would work to activate the boundary of the campus. The situation of the proposed Conference Centre acts as a 'flagship' and gateway building for the campus within the community, and its function attracts community use to the campus without disrupting the everyday working of the university proper.



View of existing well utilised Faarea



8.4 Movement

- | | |
|----------------------|--|
| Accessibility | <ul style="list-style-type: none"> • Some disabled accessibility on site |
| Pedestrian | <ul style="list-style-type: none"> • Lack of control for pedestrian access to site • Meandering pedestrian movement within campus. • Inter-building covered walkways allowing year round usage. |
| Transport | <ul style="list-style-type: none"> • Controlled vehicular access and parking. • Established bus routes |

Objective

- Consolidate and control access to site.
- Develop a structure that defines pedestrian movement.
- Realign vehicular access and movement to better promote entrance to the site.

Development Opportunity

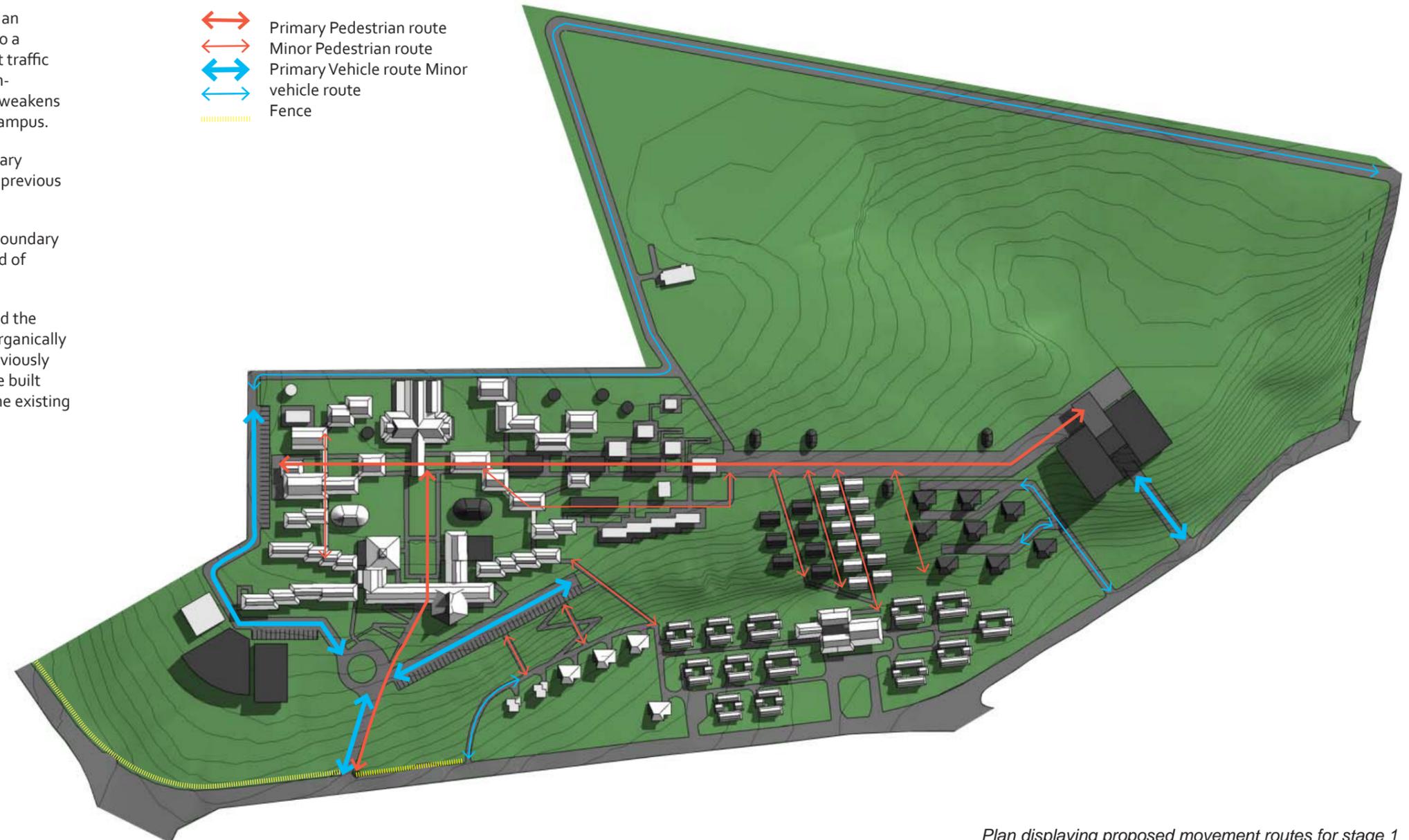
- Amend existing internal movement to create rational and better connection and circulation.
- Develop an internal movement system that allows future expansion.
- Create boundary fence to control access and provide a secure campus.
- Create a ring road around the campus with parking bays

The existing main entrance to the campus comes off of the main road at an oblique angle immediately past the roundabout. This access way leads to a vehicle turn-around, car parking and administration block. Currently foot traffic permeates through to the campus via a few walkways and a variety of un-established paths. The lack of defined and utilised access to the campus weakens the sense of arrival and the control of how and where people enter the campus.

The proposed main entrance, turn around and establishment of a boundary fence and planting present a clear entrance (as well as points outlined in previous sections), providing better control of access to the campus.

The implementation of extensive planting and landscaping to the road boundary creates passive barrier controlling access to the campus without the need of imposing fencing.

The pedestrian movement within the campus was initially defined around the heart / hub of the campus. The expansion eastward of the campus was organically arranged, preventing simple linear access from A to B. As mentioned previously an east west circulation route is proposed to clarify movement within the built area of site. The established covered walkways are a strong feature of the existing campus and are proposed to continue along the added walkways.



Plan displaying proposed movement routes for stage 1

/8.0 Specific Aspects of the Master Plan

8.5 Built Site

- | | |
|---------------------|--|
| Overall | <ul style="list-style-type: none">• Core buildings arrayed around central hub. All other building scattered throughout site. |
| Spaces | <ul style="list-style-type: none">• Scale of building and their arrangement shapes, unique private external spaces |
| Quality | <ul style="list-style-type: none">• External access allows for efficient buildings with a high ratio of UFA to GFA. |
| Adaptability | <ul style="list-style-type: none">• Generic design of most buildings allows for high degree of adaptability, however they are narrow and limit size of classes |
| Heritage | <ul style="list-style-type: none">• Architectural style of the campus should be maintained and enhanced. |

Objective

- Rationalise existing building relationships without degrading pacific feel.
- Develop an adaptive way to promote new uses and new technologies and allow for future growth

Development Opportunity

- Use existing as starting point and develop with minimal disruption and demolition (unless warranted).
- Design future developments to allow a high degree of flexibility.
- Adapt current buildings to achieve AAPPA guidelines for academic space.

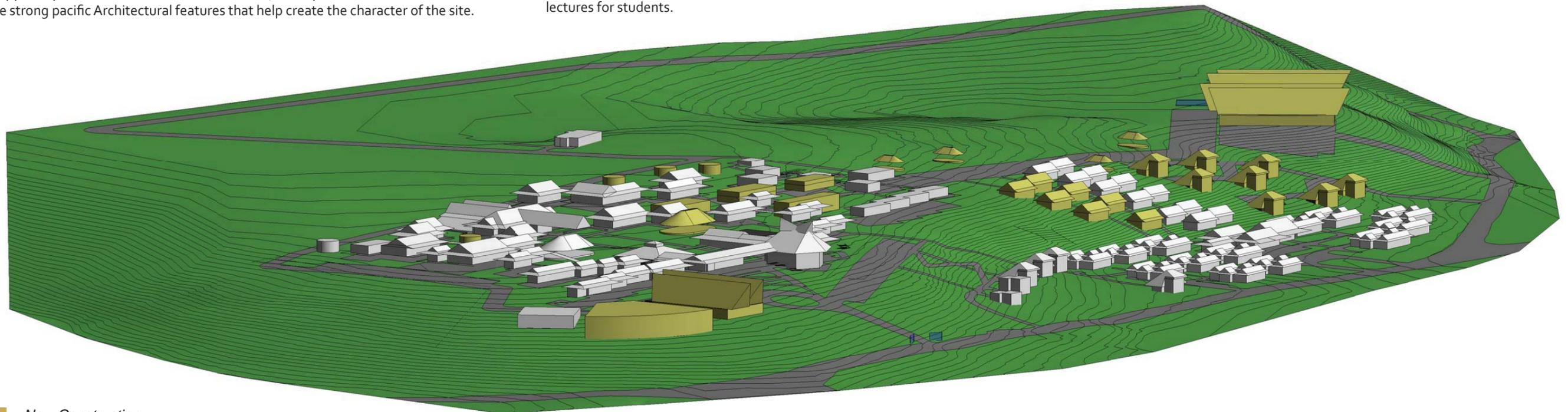
The current buildings within the Emalus Campus are well situated within the exiting culture of the campus, and for the scale and environment within the site. At present there is a lack of rational in the positioning of buildings beyond the central hub of the site which has allowed recent developments to dissolve the visual relationships between buildings. The existing teaching/ learning areas have a high ratio of General Floor area (GFA) to Usable Floor Area (UFA), due to the relationship between buildings and covered walkways minimising the need for internal circulation space. This UFA to GFA ratio, size and the partitioning of internal spaces makes the existing rooms and spaces highly adaptable. However the current size of many of the classrooms limits the amount of students and size of tasks that could occupy the space. The current Conference Room, Library and Administration Block have strong pacific Architectural features that help create the character of the site.

The proposed circulation 'Spine' in the master plan acts to improve movement within the site and develops a network that creates greater connection between buildings. Outlined in this Master Plan are possible locations for adaptive future spaces such as, computer study room, small lecture rooms and classes, which run along the aforementioned 'spine'.

The proposed development of a Convention Centre at the east end of the campus has several beneficial reasons. Architecturally the situation and use of the proposed building creates the opportunity to enhance the architectural style developed though the existing key buildings. The size and infrequent use typical to conference spaces make the proposed building ideal to also house large and medium sized lectures for students.

In addition to the proposed Convention Centre, we recommend a new purpose built library and lecture theatre, the existing library can be used for flexi-learning spaces, student social space and video conference spaces for distant learning.

All new developments demand interrogation of new technologies, allowing proposed spaces to take advantage of new methods in learning and teaching.



New Construction

/8.0 Specific Aspects of the Master Plan

8.6 Programme and AAPPA Guidelines (stage 1)

The Master Plan develops the site wide programmatic functioning to better align the campus with AAPPA and Assumed DSL Guideline benchmarks. The *Campus growth and Needs* section outlines the need to focus on the increase in Academic, General Teaching, Administrative and Library spaces within the campus whilst accommodating for the future growth beyond this Master Plan.

The following table notes the estimated growth of Face Taught and Distance Taught EFTSU at the Emalus campus, the benchmark areas in relation to the estimated EFTSUs and the proposed area given within the campus Master Plan (Stage 1).

The current shortfall in Academic space could be made up by adapting some of the smaller General Teaching spaces (rooms 16,22 and 23, and classrooms 1 and 2) into Academic space as well as developing a new academic block beside current rooms 10 and 11. New larger format General Teaching spaces along the proposed circulation spine would reduce the need for some of the Existing Generic teaching space allowing the above changes to occur. The new general teaching spaces would need a high level of flexibility to allow multi-functionality. The below figures still indicate a lack of General Teaching space beyond 2017. The numbers in the table do not reflect the fact that both the Conference Centre and Conference Room could be used as occasional general teaching spaces (especially at peak space usage times such as during exams). The potential multiuse of the existing Library space and Conference Centre could be used to absorb the shortfall in General Teaching area beyond 2017.

Administration space within the existing campus appears limited. This Master Plan proposes developing and extending the adapting Student Association building into Administration space (this develops a strong relationship with the proposed Admin space existing Administration Block), the space vacated by the bookshop (the bookshop could be incorporated in the new library) could then be used to house and consolidate Student Services space to the east of the entrance. Rooms 10 and 11 due to their size and proportions are ideal for adaptation into more Administrative space.

Library space within the campus is over utilised and undersized. The Master Plan proposes a new library. Beyond 2018 the campus could require additional Academic, General Teaching and Administrative space. As mentioned previously in this document, we propose campus expansion eastward, following the proposed spine arrangement to accommodate the needed spaces.

Note. Revision A. Areas have been adjusted to reflect schedule of areas for Chinese Government funded projects. Bure areas have been removed form the schedule and not included in the final area totals.

EFTS & Staff Numbers

Year	Existing GFA	2012	2013	2014	2015	2016	2017	2018
Emalus EFTS		1033	1111	1166	1225	1286	1350	1418
Admin staff								
Academic staff		27	29	30	32	34	35	37
face taught EFTSU		208	224	235	247	259	272	286
distance taught EFTSU		825	887	931	978	1027	1078	1132

Note:
Existing numbers include Chinese Government funded projects currently planned or under construction.

Bure have not been included in area schedules.

Area Benchmarking

Face Taught Academic AAPPA Benchmark GFA		1248	1344	1410	1482	1554	1632	1716
Academic Distance Taught Benchmark GFA		0	0	0	0	0	0	0
Academic Benchmark GFA - Total		1248	1344	1410	1482	1554	1632	1716
Academic Proposed GFA	1362	1362	1672	1672	1672	1672	2512	2512
Face Taught Administrative AAPPA Benchmark GFA		249.6	268.8	282	296.4	310.8	326.4	343.2
Administrative Distance Taught Benchmark GFA		825	887	931	978	1027	1078	1132
Administrative Benchmark GFA - Total		1074.6	1155.8	1213	1274.4	1337.8	1404.4	1475.2
Administrative Proposed GFA	1150	1150	1220	1490	1490	1490	1490	1490
Face Taught Commercial AAPPA Benchmark GFA		83.2	89.6	94	98.8	103.6	108.8	114.4
Commercial Distance Taught Benchmark GFA		82.5	88.7	93.1	97.8	102.7	107.8	113.2
Commercial Benchmark GFA - Total		165.7	178.3	187.1	196.6	206.3	216.6	227.6
Commercial Proposed GFA	260	260	260	260	260	260	230	230
Face Taught General Teaching AAPPA Benchmark GFA		249.6	268.8	282	296.4	310.8	326.4	343.2
General Teaching Distance Taught Benchmark GFA		330	354.8	372.4	391.2	410.8	431.2	452.8
General Teaching Benchmark GFA - Total		579.6	623.6	654.4	687.6	721.6	757.6	796
General Teaching Proposed GFA	652	652	752	752	752	752	1562	1562
Face Taught Library AAPPA Benchmark GFA		208	224	235	247	259	272	286
Library Distance Taught Benchmark GFA		495	532.2	558.6	586.8	616.2	646.8	679.2
Library Benchmark GFA - Total		703	756.2	793.6	833.8	875.2	918.8	965.2
Library Proposed GFA	817	817	817	817	817	817	965	965
Face Taught Student Services AAPPA Benchmark GFA		166.4	179.2	188	197.6	207.2	217.6	228.8
Student Services Distance Taught Benchmark GFA		165	177.4	186.2	195.6	205.4	215.6	226.4
Student Services AAPPA Benchmark GFA		331.4	356.6	374.2	393.2	412.6	433.2	455.2
Student Services Proposed GFA	445	445	445	445	445	665	665	665
Face Taught Other AAPPA Benchmark GFA		166.4	179.2	188	197.6	207.2	217.6	228.8
Other distance Taught Benchmark GFA		0	0	0	0	0	0	0
Other Benchmark GFA - Total		166.4	179.2	188	197.6	207.2	217.6	228.8
Other Proposed GFA	230							
Conference Benchmark GFA		-	-	-	-	-	-	-
Conference proposed GFA	460	460	460	460	460	2000	2000	2000
Total	5376	5376	5856	6126	6126	7886	9654	9654
mSq per Face Taught EFTSU		25.85	26.14	26.07	24.80	30.45	35.49	33.76
mSq per Face Taught EFTSU + Distance Taught		5.20	5.27	5.25	5.00	6.13	7.15	6.81

Face Taught Academic based on 6.0m2 / EFTS
Distance Taught Academic based on 0.0m2 / EFTS

Includes new lecture theatre

Face Taught Admin based on 1.2m2
Distance Taught Admin based on 1.0m2

Administrative to include WCs and provision for cleaners

Face Taught Commercial based 0.4m2 / EFTS
Distance Taught Commercial based 0.1m2 / EFTS

Bookshop relocated into new library

Face Taught General Teaching based 1.2m2 / EFTS
Distance Taught General Teaching based 0.4m2 / EFTS

Existing library converted to flexi learning and video conference. If library extension built prior to new library, Generic Teaching will increase by 127m2 when new library complete

Face Taught Library based 1.0m2 / EFTS
Distance Taught Library based 0.6m2 / EFTS

Library to include WCs and provision for cleaners

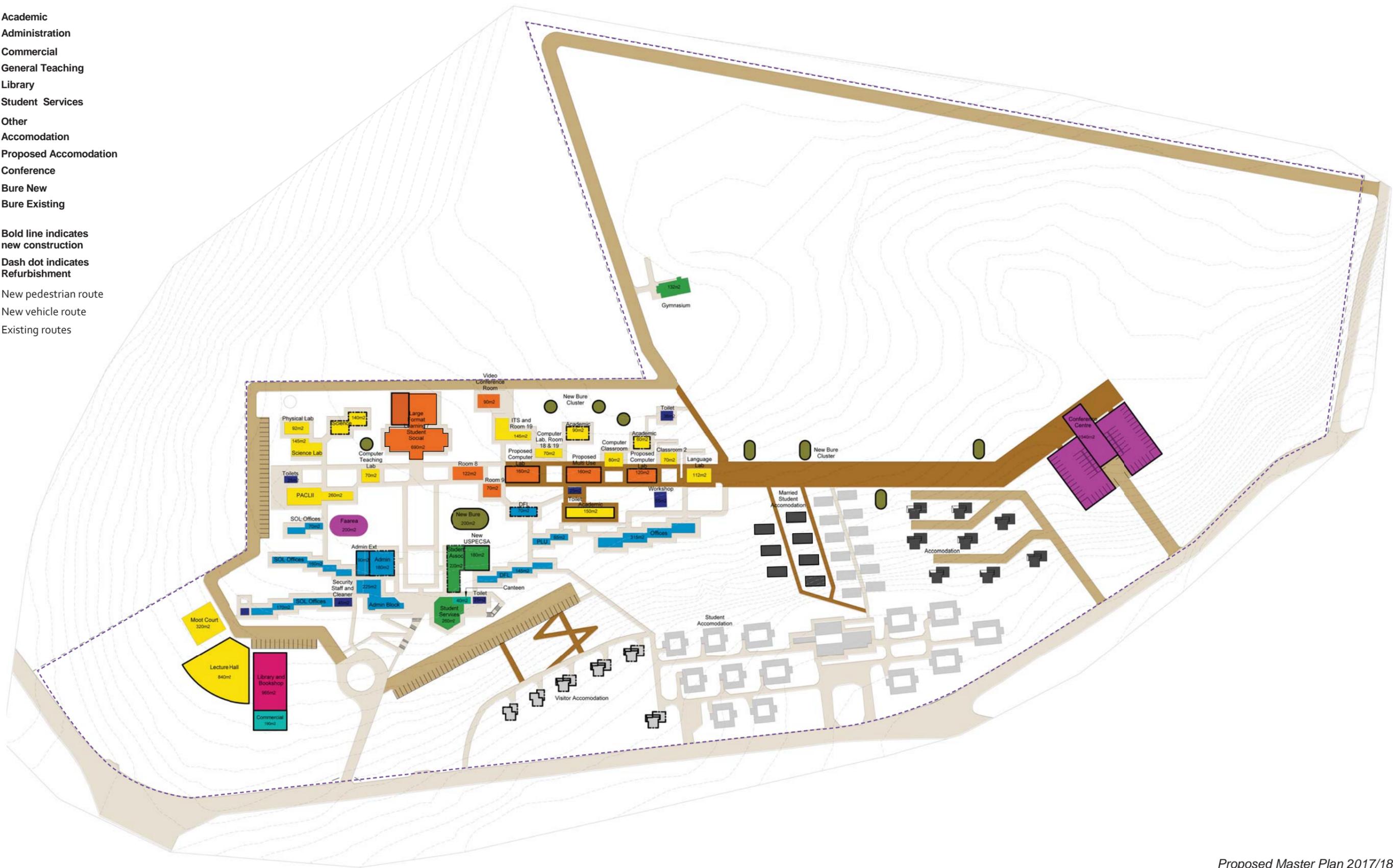
Face Taught Student based on 0.8m2 / EFTS
Face Taught Student based on 0.2m2 / EFTS

Face Taught other based on 0.8m2 / EFTS
Face Taught Other on 0m2 / EFTS

Includes WCs, workshop and cleaners

Conference centre to include WCs and provision for cleaners
Note: Confrence centre could be counted as General Teaching space
Note: Existing student conference space in student services above

- Academic
 - Administration
 - Commercial
 - General Teaching
 - Library
 - Student Services
 - Other
 - Accomodation
 - Proposed Accomodation
 - Conference
 - Bure New
 - Bure Existing
-
- Bold line indicates new construction
 - Dash dot indicates Refurbishment
 - New pedestrian route
 - New vehicle route
 - Existing routes



Proposed Master Plan 2017/18
Not to scale

/9.0 Implementation of the Master Plan

9.2 Project Timing

Construction

