



PHYSICAL MASTER PLAN

2012 - 2032



Final Report
August 2012

Prepared for the Solomon Islands College of Higher Education

by

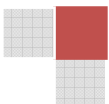
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Final report, August 2012



FOREWORD

The formulation of the Physical Master Plan (PMP) is one of the key expected outputs of the Council and the Strategic Plan for the medium term development period 2011-2015, as SICHE prepares to become the National University of Solomon Islands. In 2011 SICHE was tasked to prepare a Long Range Physical Master Plan 2012-2032.

Whilst the previous development strategy focused on the short term strategic plans, and action plans, the PMP is more of a long Term in Nature covering a period of 20 years. The PMP sets out a framework for physical development programme for SICHE as it evolves to becoming the Solomon Islands National University (SINU). The PMP will form a basis for dialogue with all our stakeholders including Development Partners for support to SINU for the next 20 years, and it will be a catalyst for development of all three campuses of SINU. To ensure full ownership of the PMP, the DREGAR Consulting Group has taken a broad consultative process by talking to every stakeholders including Staff, students and Government agencies.

The PMP is focused on developing the SINU as one of the premier academic tertiary institutions in the region with its physical environment conducive to teaching and learning. It needs to be emphasised that the achievement of the goals and objectives of the PMP will take time and will require a concerted efforts and actions of all of us. Physical development is expensive, buildings and infrastructure development will require a bigger portion of the SINU budgets for the next couple of decades.

The good news is that we have a PMP which will direct action and prepare us to delve more into targeted development plans and programmes. Resources are scarce, and budget will always be constrained by several external factors as government strives to meet the Millennium Development Goals. The PMP is a long Range Plan for the development of all our Honiara based campuses, and it is here that all other action plans on infrastructure and development hinge and bundle together.

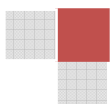
Effective implementation of the PMP all depends on each school and division having a clear instructions and understanding of what needs to be done, as defined by time and space. Therefore reading and digesting the substances of the plan is most important.

Finally but not the least I wish to express my personal gratitude to all the heads of schools and the consultancy group DREGAR Consultancy Group for the commitment and dedication in preparing the PMP in time for the commencement of the SINU in early 2013.

With these few remarks, I dedicate this Physical Master Plan 2012-2032 and its implementation to SINU and to the people of Solomon Islands.

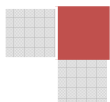


Donald Malasa
Director.



PROJECT INFORMATION

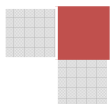
PROJECT TITLE:	SINU Physical Master Plan 2012 - 2032
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DATE PMP COMPLETED:	31 st August 2012



ACKNOWLEDGEMENT

This Physical Master Plan is a product of combine efforts from SICHE Council, Management, staff and students. DREGAR Consulting Group, on capacity as the consultant has provided the technical inputs and prepared this plan. The contributions rendered by those concern is highly appreciated, for without would have been impossible to accomplish this plan. The financial support from the Solomon Islands Government through SICHE towards the development of this plan is hereby acknowledged. The consultant would like also to acknowledge the assistance provided by others, especially Eddie Gaza of ESCo, who provided expertise in the assessment of electrical infrastructures.

This plan provides a thoughtful context and is a tool to guide the SICHE / SINU Council and Management for the infrastructure development of its three campuses, and to provide the required facilities and services for staff and students to interact through training, learning and research. For the SICHE-SINU, the challenging task and hard work of developing the required infrastructures is vast. Sincere good wishes are extended to them using this plan.



ACRONYMS

CBD	-	Central Business District
CSU	-	Curriculum Standard Unit
DCG	-	DREGAR Consulting Group
CITES	-	Convention on International Trade in Endangered Species
DEC	-	Distant Education Center
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
FOPA	-	Festival of Pacific Arts
FTE	-	Fix Term Estate
HCC	-	Honiara City Council
HOD	-	Head of Department
HOS	-	Head of School
HTI	-	Honiara Technical Institute
ICT	-	Information and Communication Technology
LPS	-	Local Planning Scheme
MECDM	-	Ministry of Environment, Climate Change, Disaster Management and Meteorology
MTC	-	Marine Training School
NGOs	-	Non-government Organizations
PMP	-	Physical Master Plan
SBH	-	School of Business and Hospitality
SEH	-	School of Education and Humanity
SID	-	School of Industrial Development
SICHE	-	Solomon Islands College of Higher Education
SIG	-	Solomon Islands Government
SITC	-	Solomon Islands Teachers College
SHMS	-	School of Humanity, Media and Science
SINU	-	Solomon Islands National University
SIEA	-	Solomon Islands Electricity Authority
SIWA	-	Solomon Islands Water Authority
SMFS	-	School of Marine and Fisheries Studies
SNHS	-	School of Nursing and Health Science
SNHS	-	School of Nursing and Health Studies
SNRAS	-	School of Natural Resources and Applied Science
SOE	-	School of Education
STMS	-	School of Technology and Maritime Studies
ToR	-	Terms of Reference
USP	-	University of South Pacific

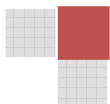
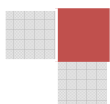


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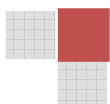
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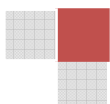
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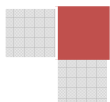
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Chapter A Introduction

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A INTRODUCTION

A-1 Background

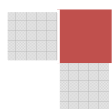
The Solomon Islands College of Higher Education (SICHE) is in a transitional period when this Physical Master Plan (PMP) is prepared. The governing legislation of the College is still in force, whilst the Solomon Islands Government (SIG) is preparing a Bill to convert SICHE to Solomon Islands National University (SINU). Thus, SINU is expected to evolve out of SICHE in 2012 by an Act of Parliament. Under such circumstance, it is important to make reference to the needs of SICHE, and at the same time address the future vision of SINU. The PMP therefore, resorts to the usage of the name SICHE/SINU throughout the text.

SICHE/SINU has three campuses located at the east of Honiara, and with a total land area of about 106.7ha, and a fourth campus is situated at Poitete in the Western province. This PMP focuses only on the Honiara based campuses, they are Kukum: 56.5ha; Ranadi: 2.8 ha; and Panatina: 47.3ha. Its development plan reflects a balance between academic and physical environmental needs, both of which are addressed in this PMP.

The Solomon Islands Government through an Act of Parliament established SICHE in 1984. It started formal operation in 1985 following an amalgamation of a number of training institutions, which were established during the colonial period. The three technical schools, namely the Solomon Islands Teachers College (SITC) at Panatina, the Honiara Technical Institute (HTI) at Kukum, and Marine Training School (MTC) at Ranadi were separately run institutions. These schools were brought together under SICHE in 1985, and the three campuses have ever since being maintained. In 2008, the need to diversify the training scope was realized by the government which gave rise to the need to amend the SICHE Act to include the School of Tourism and Hospitality and any other schools. The amendment also made way for the establishment of the School of Humanities, Science and Media. Since its establishment, SICHE has played a major and vital role in developing the human resources of the country, and its challenges are always on the rise given the ever-growing needs of the country.

A-2 Purpose of the Physical Master Plan

The purpose of the PMP is to identify, describe and plan the physical development needs of SICHE/SINU in order to achieve the campuses' academic goals through 2032 and beyond. It is basically a land use plan for the development of future needs of the higher institute of learning and addresses the visions, goals and requirements of the academic institution as stipulated under SINU Act 2012. At the same time, there is also a supporting infrastructure and facility audit of the three SICHE/SINU campuses. It is the intention that the results obtained from the audit are used as a base-line data for the PMP.



A-3 The Contents of the Physical Master Plan

The PMP is organized in Chapters. Chapter A is the Introduction, which introduces the PMP, its content and how it is prepared. Chapter B outlines the Overall Context describing it as determined by the academic requirements, the SICHE/SINU location within a large geographical region of Honiara and existing land uses on the campuses of 106.7ha. An overview of Honiara city plan and the previous SICHE campus plans are also described in this chapter.

The Planning Frame Work is summarized in Chapter C. It emphasizes that the formulation of PMP is the Academic Plan, which sets forth academic requirements, the SICHE/SINU, as it evolves to become the Solomon Islands National University. The physical space required to achieve the academic goals is discussed in this Chapter, as well as applicable planning and environment policies and regulations as they relate to SICHE/SINU. The Chapter concludes with a summary of SICHE/SINU sustainable programmes, which shapes both campus planning and operation.

Chapter D through H outlines the Physical Master Plan for SICHE/SINU including Land Use and Development, Transportation and Parking, Open Spaces and Landscape and Utilities and Infrastructure. These Chapters describe the numbers and locations of new academic buildings, housing, roads and parking, recreational facilities and open space areas. The Town and Country planning Act, the Environmental Act and Policies that apply to the three campuses development are explained in each chapter along with proposed actions and procedures that will ensure full compliance.

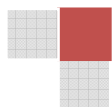
Chapter H, the last chapter of the PMP-its implementation – contains a detailed set of development procedures, permitted land uses and other information for implementation of the Plan. It also has the important section on the development matrix that spelt out action plans to be undertaken for the implementation of the PMP.

The PMP is a multi-phase outline for the development of SICHE/SINU over the coming 20 years. It does not, however commit SICHE/SINU to the construction of any particular project. Competing funding priorities, project plans (from donors and SIG) and construction schedules are determined within the Annual Capital Development programme of SICHE/SINU office of the Directorate, the Council and also with the Ministry of Education and Training influences. The Plans, Maps and sketches generally illustrate just one of various ways that development can support the implementation of SICHE/SINU while retaining constituency with required planning regulations currently enforced.

A-4 Academic Master Plan

A-4-1 Current situation

By way of historical events, prior to 1984, most of the training needs of the country were conducted by various training institutions established and administered by responsible government ministries. Some of these training schools existed before Solomon Islands gained its independence in 1978.



SICHE at present is a dual-sector institution. Its courses straddle technical and vocational training and higher education. For instance, courses offered by the School of Industrial Development are technical-vocational oriented and courses offered by the School of Finance and Administration, the School of Education and the School of Nursing and Health Studies are academic oriented and pitched at the higher education levels.

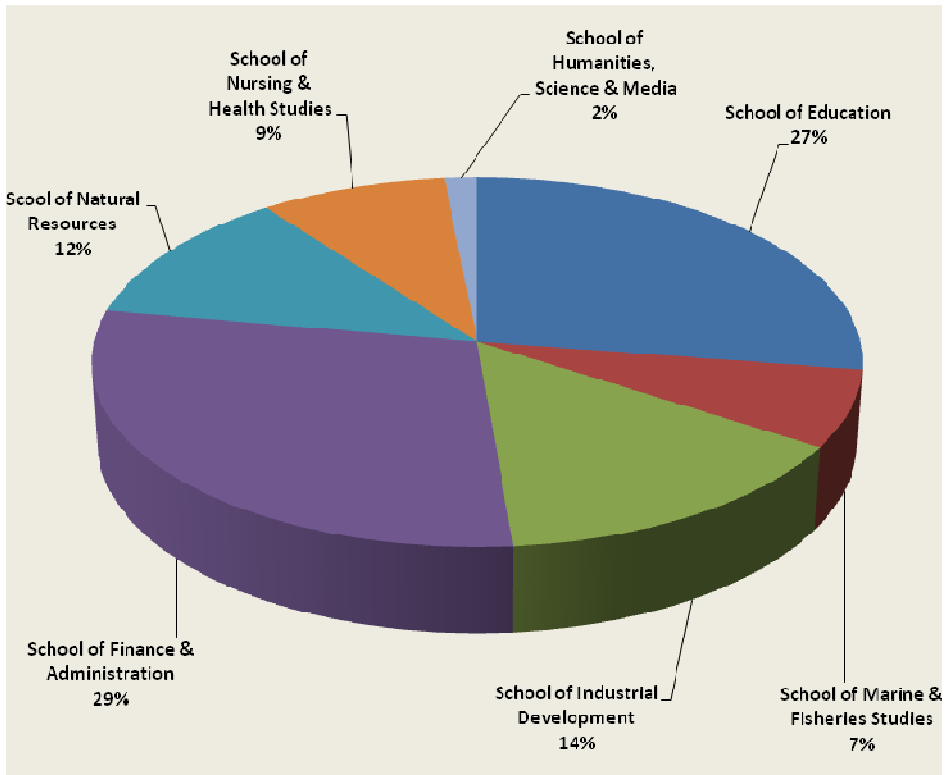
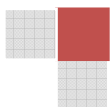


Figure A-1: Student Enrollment at SICHE in 2011

Figure A-1 shows the distribution of students in the various schools, the biggest in 2011 was the School of Finance and Administration, followed closely by the School of Education. SICHE as shown in Table A-1 is also a multi-discipline institution. It operates seven Schools and there are plans to fully establish one more, the School of Tourism and Hospitality by 2013. As presented, the current and fully established Schools are the: School of Education (SOE), School of Finance and Administration (SFA), School of Industrial Development (SID), School of Natural Resources (SNR), School of Nursing and Health Studies (SNHS), School of Humanity, Science and Media (SHSM), and the School of Marine and Fisheries Studies (SMFS). The School of Humanities, Science and Media is the new addition which also hosts a Distance Education Centre and a Curriculum Standards Unit.

SICHE through its Schools offer programmes at Diploma and Certificate levels in teacher education, administration, finance and banking, nursing, agriculture and forestry, and in technical trades such as marine engineering, carpentry and plumbing, electrical and vehicle maintenance, tourism and journalism. The demand for SICHE courses is very high. This is evident by the fact that each year the



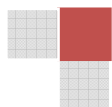
application for placements at the various Schools has been very high. For instance, in 2010 a total of 5,500 applications were received but only 1,270 students were accepted as intake for that year.

Since its establishment, SICHE has graduated over 12,000 students with certificates and diplomas and many more have attended various community outreach courses. These graduates are serving the country in government and private sector organizations, and in non-government organizations (NGOs).

Table A-1 Academic Courses offered by SICHE in 2012

SCHOOL OF EDUCATION	SCHOOL OF HUMANITIES, SCIENCE & MEDIA
Certificate in teaching Primary	Diploma in Youth Development
Certificate in Teaching Early Childhood Education	Certificates in Journalism & Media
Certificate in Education Adult Learners	
Diploma in Teaching Early Childhood Education	
Diploma in Teaching Primary	
Diploma in Teaching Primary (In-service)	
Diploma in Teaching Secondary	
Graduate Diploma in Teaching Secondary	
SCHOOL OF FINANCE AND ADMINISTRATION	SCHOOL OF NATURAL RESOURCES
Basic Office Proficiency Award	Certificate in Plantation Forestry
Certificate in Secretarial Studies	Certificate in Environmental Studies
Certificate in Tourism Studies	Certificate in Tropical Agriculture
Certificate in Business studies	Diploma in Tropical Agriculture
Diploma in Business Studies	
SCHOOL OF NURSING & HEALTH STUDIES	SCHOOL OF INDUSTRIAL DEVELOPMENT
Diploma in Nursing (Pre-service)	Cert.in Trade (Plumbing & Allied Trade)
Diploma in Public Health	Cert. in Trade (Electrical)
Diploma in Community Based Rehabilitation	Cert. in Trade (Carpentry & Joinery)
Advanced Diploma in Nursing (Midwifery)	Cert. in Trade (Light Motor Vehicle)
Bachelor of Nursing	Cert. in Trade (Heavy Vehicle and Plant)
	Certificate in Industrial Drafting
	Advanced Cert. in Plumbing
	Diploma in Surveying
	Cert. in Marine Engineering: class 3,4,5,6
	Short courses: Servicing & overhaul - OBM, chainsaw, lawn mower, brick laying, tilling, timber grading, painting.
SCHOOL OF MARINE & FISHERIES STUDIES	SCHOOL OF TOURISM & HOSPITALITY
Basic Sea Safety	Certificate in Hospitality
Advance Safety (Advanced Certificate)	Certificate in Travel & Tourism
Basic Maritime & Fisheries	Certificate in Culinary Arts
Class 6 Master/Engineering	Diploma of Hospitality Management
Class 5 Master	Diploma of Travel and Tourism
Class 4 Master	Diploma of Culinary Arts
	(Yet to open)

The School of Nursing has recently introduced a degree programme in nursing and plans are underway for the School of Education and the School of Finance and Administration to offer degree programmes in the not too distant future. The School of Natural Resources is also planning to introduce new programmes in 2012. Given the diversity and increase of its programmes, and the increasing intake of students each year, SICHE certainly needs to develop its physical infrastructure well beyond its current level and capacity.



A-4-2 Future outlook

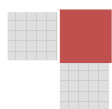
Without prejudice to an approved Academic Master Plan for SINU which is being prepared, the PMP relies on the academic structure specifically mentioned in the draft SINU Bill and the relevant information presented by the SINU project team. An important proposition through this exercise is the structure, which entails five schools, under which are thirteen departments. The PMP hereby bases its design on the provision of services, facilities and infrastructure on the interpretation of the academic requirement. The suggested Academic Structure as drafted by the SINU Project Team for the SINU is as follows:

1. School of Education and Humanities (SEH)
 - Department of Education
 - Department of Arts & Culture,
 - Department of Communication and Media
2. School of Nursing and Health Science – (SNHS)
 - Departments of Nursing
 - Department of Public Health
3. School of Technology and Mari-time Studies (STMS)
 - Department of Trade
 - Department of Marine
4. School of Natural Resources and Applied Science (SNRAS)
 - Department of Agriculture
 - Department of Fisheries
 - Department of Forestry
 - Department of Environment and Science
5. School of Business and Hospitality (SBH)
 - Department of Finance and Administration
 - Department of Tourism and Hospitality

Within the above Academic Structure, divisions and units will be proposed. The PMP hereby interpret these Academic requirements and places them within the confinement of the three existing campuses into a long term spatial and physical dimension of academic spaces and land use.

A-5 Physical Master Plan (Long Range Development Plan)

The PMP is the physical counterpart to the Academic Master Plan and it interprets the needs of the Academic plan spatially and physically. The Finance/Business Plan will ensure a funding framework is enforced and implemented for sustainability of SINU. The Academic Research Programme and Courses will impart academic Training and Research as the main function of SINU. Figure A-2 diagrammatically presents such relationship between PMP and AMP.



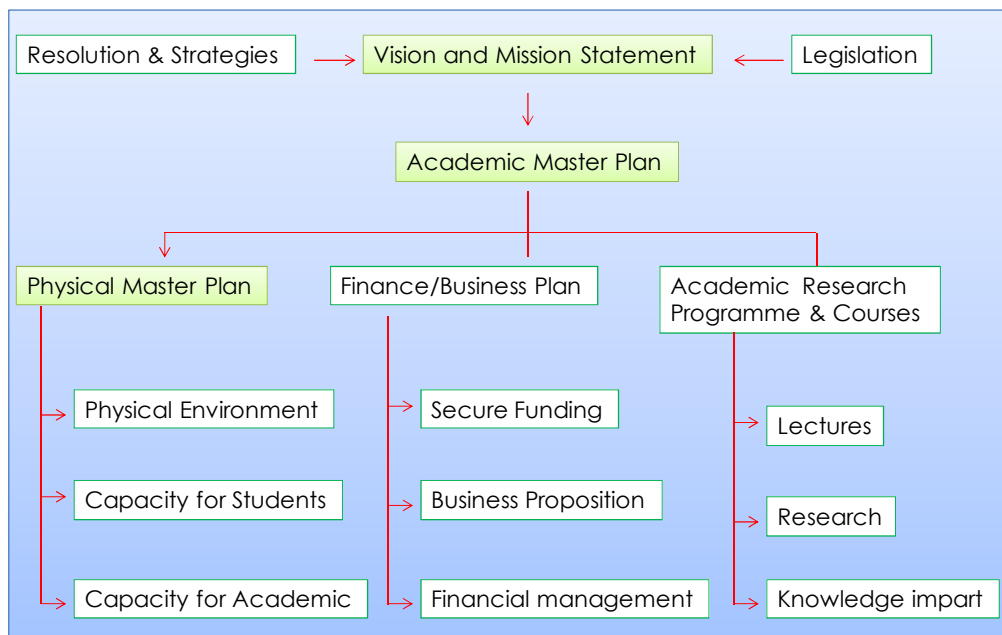


Figure A-2: Relationship between PMP and AMP

The Physical Master Plan takes its direction from the Academic plan, and in so doing, the plan is based upon a number of key Principles briefly described below:

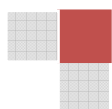
A-5-1 SICHE/SINU to retain existing campuses

The PMP will maintain the present three campuses in Honiara, with a total land area of 106.7ha. As much as possible this will not change over the 20 year period of the PMP. The SICHE/SINU will take stock of what needs to be placed in each of the following three Honiara based campuses, namely:

- Kukum Campus to hold the *SBH*, *SNRAS*, *STMS*, and *SNHS*
- Panatina Campus to hold the *SEH*
- Ranadi Campus to hold the Department of Marine under the *STMS*

The Campuses are all situated in the Eastern part of Honiara. At present, the Panatina Campus houses the School of Education. The School of Industrial Development, School of Finance and Administration, School of Nursing and Health Studies, School of Humanities, Science and Media and School of Natural Resources and the newly School of Tourism and Hospitality (which is still under construction) are all located at Kukum Campus. Besides all these schools, Academic and Non-Academic Divisions are all situated at Kukum Campus. Ranadi Campus houses the School of Marine and Fisheries Studies, which is the smallest Campus of SICHE.

Kukum campus houses the current Directorate office and most of the Schools. It has enough vacant land for future expansion and development of SINU. Panatina campus holds the second biggest school which is the School of Education. The physical size and location is conducive to that of a



learning and academic environment. It has enough land for future expansion and valuable recreational open spaces at the northern side frontage to the Prince Philip Highway.

Ranadi site is unique. It is the smallest of the three campuses based in Honiara, with sea frontage to the north and Prince Philip Highway to the south and Ranadi Industrial estate to the east forming a triangular shape. There is sufficient land space within for both academic and recreational. The lovely sandy beach provides students an environment of sea going affinity and a well secured campus. The residential space will be taken over by academic use.

A-5-2 Mature the Academic Plan

The PMP will provide students with the best possible educational environment by simultaneously advancing the continued development of academic programs and steady enrolment growth. This entails the improvement and provision of academic spaces, teaching facilities, infrastructures, and recreational facilities of SICHE/SINU targeting at a proper calculated growth for the next 20 years. The facilities will be pitched at a higher standard over the period of time to ensure the achievement of academic qualifications at certificate, diploma, degrees, masters, post-graduates and PhD levels.

A-5-3 Ensure the three Campuses Maintain their Physical Form

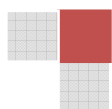
The PMP integrates components of the campuses' plans and housing needs, which is developed to define a physical form for all the campuses that will support SICHE/SINU Academic Excellence. The PMP will strengthen this campus form by :

- Emphasising the development of academically focused campus core in Kukum and Panatina campuses.
- Strengthening the academic setting with buildings that frame classrooms, lecture theatres, malls, student centres, cover-walkways and footpaths.
- Enhance vistas and their relationships to the natural environment especially for the two bigger campuses and coastal areas and beach frontages of Ranadi campus.
- Maintain a defined Physical boundary for each campus by construction of security fencing.
- Continue to improve the overall quality of the built environment of the three campuses.

A-5-4 House Students, Faculty, and Staff

More students and staff would require more housing plan for Panatina and Kukum to:

- House all staff from Ranadi campus at Panatina campus.
- House 100% of additional students (50% of total students) on campus.
- Carry out a maintenance programme for all dormitories and staff quarters.
- Build about 281 additional units for faculty and staff.
- Develop a series of housing estate at kukum and Panatina vacant land, and ensure as far as possible staff are housed according to place of work.
- Build married quarters for students at Kukum and Panatina Campuses.



- Relocate students and staff from dormitories and quarters identified for academic usage at all three campuses.
- Change of land use from opens pace to academic, and school farms to recreation grounds at Kukum campus.

A-5-5 Integrate Sustainable Practices

The campuses will minimise their impact on environment by:

- Reducing vehicular use by building more housing on or near campuses.
- Defining and protecting environmentally sensitive areas on all campuses.
- Introduce solid protective wall at Ranadi beach frontage for protection from sea-level rise.

A-6 Planning Process

The PMP cannot be prepared unless there is a thorough assessment and investigation of the focal stakeholders. It must be appreciated that SICHE/SINU as an academic institution is a complex web of interdependent and interrelated programs, departments, individuals and communities of students, schools, staff, administrators and all centres to some extent on the institutional mission. At the core is searching for knowledge - learning, acquiring, creating, sharing, transferring, translating, transforming and storing it. The planning process involved the assessment of relationships between Students, Staff and Facilities or environment (Figure A-3).

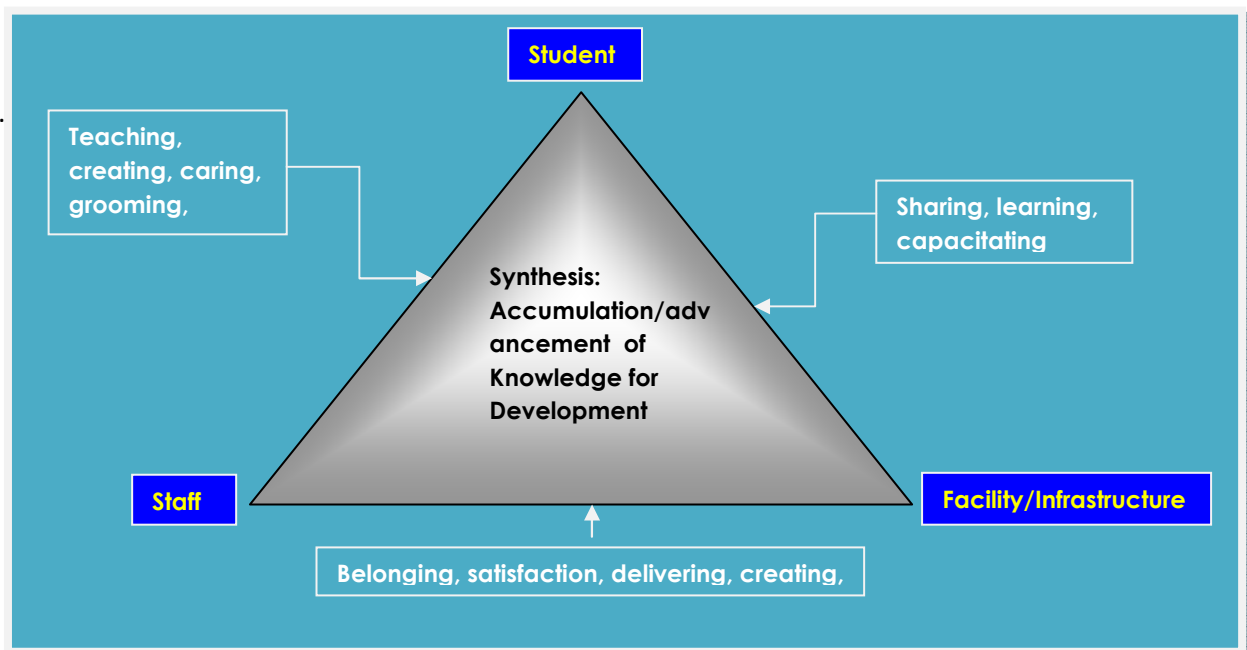
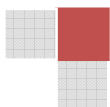


Figure A-3: Physical Master Plan Relationships

The formulation of PMP demands a decision making process - within SICHE/SINU with the emphasis that it should be an on-going and continuous activity. Often, it is seen as a one-time event. The SICHE PMP will be less effective if it is perceived as final - it is not that simple. All plans should be



capable of changing as assumptions, circumstances, resources, and priorities change. The design of a building should anticipate change as well – for example a science building at Panatina campus where changes in the disciplines and the knowledge of how students learn has had and is likely to continue to have a dramatic impact on facilities. Planning for a new lecture theatre at Kukum should not be considered an independent event, but should be done in the broader context of institutional planning. It is in this context that the PMP is being prepared.

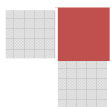
The PMP is the culmination of extensive planning and review by the office of the Director, planning office, staff and students and representatives of SIG and Honiara City Council (HCC). A working group – campus planning committee appointed by the Director and chaired by the Deputy Director guided its preparation. The consulting group – DCG – who prepared the plan consulted the Ministry of Education and Training and other citizen groups.

Both the campus Long Term Plan – PMP – and the individual schools’ physical development needs solicited broad campus and community participation, including:

- Series of meeting with management at school level.
- Holding public meetings with Heads of Schools together for a SWOT analysis group discussion.
- Distributing questionnaires to both students and staff for written responses and analysis.
- General discussion, one by one on specific issues of the plan.

The result of the review process are approved by the planning team and discussed with Directorate office before incorporated in the PMP. Presented below is the step-by-step approach carried out by the planning team in conducting the study and preparation of the Physical Master Plan:

- Prior to Field Work.
 - Obtained topographical maps, and survey control information from survey and mapping section of the Ministry of Lands, Housing and Survey, and revised and updated the base information. Talked to the SICHE and obtained proper briefing from the client. Also discussed the issues raised in the ToR and Pre-Feasibility report previously done, especially the scope of work envisaged.
- Obtained briefing from SICHE, Ministry of Education, HCC, SIWA, SIEA, MID, and public. This was necessary to obtain the following information:
 - Current students’ enrolment and staffing for the next 20 years and forecast population expected to have impact on the development of SICHE.
 - List of facilities – SICHE and take a proper physical audit.
 - Accessibility to the sites, especially by motorised vehicle, or by footpaths.
 - Special problems or development constrain issues.



- Name of key staff of SICHE, wardens, students and teachers leaders – contact numbers, etc.
 - Letter of introduction from SICHE if necessary for purpose of PR and conduct of surveys.
 - A desk review based on reports especially Strategic Plans and plans done previously by the SICHE and also the academic scoping report currently in prepared for the transition period to University.
- During the assessment period the following activities were undertaken:
 - Took note of recent events especially rehabilitation work conducted by FOPA, issues or problem not included in earlier briefs, then conducted a detail topographical survey of all campus sites. Boundaries and sites were identified and new sites proposed for future housing development, academic use, commercial and recreational. The surveyor, town planner and engineer led the team, using notes, GPS and total station. Sketch maps were produced, as well as maps showing “present land use and Physical condition”.
 - Physically visited and conducted a thorough conditional survey of all buildings and facilities of the three SICHE campuses and produced a report on their current conditions.
 - Major soil types were observed and recorded, topographical features, ridges, depression, valleys, drainage pattern.
 - Assessment of utility services especially water supply reticulation, pipelines, pressure and possible easement were assessed.
 - Assessment of power supply from the town and distribution as well as cost for any major repair were assessed and presented in a brief report.
 - Location of footpaths, road for entrances and exits, as well as security plan for all sites were examined and proposed in the PMP.
 - Major social issues such as squatter settlements and other illegal development were assessed and incorporated in the PMP.
 - Major environmental issues to be addressed in the plan are identified and assessed.

A summary of findings through the consultation processes is presented in Table A-2.

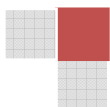
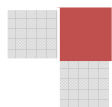


Table A-2: Project Description Summary

Summary of Physical Master Plan 2012-2032 Objectives			
	Current 2011	2012-2032 PMP period	Total
Student Enrolment	2,411 face to face mode	Additional 3,955 growing @ 4.7% pa	6,326 face to face mode
	DFL mode	Additional 3,123 growing @ 4.7% pa	3,163 on DFL Mode
	Total 2,411 student	Additional 7,078 students growing at 4.7% pa.	9,489 total students
Faculty and Staff Population	121 Academic staff	197 Additional academic staff	318 Total Academic staff
	164 Support Staff	85 Additional support staff	249 Total Support staff
	285 Total Staff	282 Additional staff growing at 2% pa.	567 Total staff members
Instruction, Research, and Academic space	.16,703.51sq m	8,341.91 sq.m additional academic space	25,045.42 sq.m total academic space avail.
Student, faculty, and supporting staff Housing Units	Student Beds 601	Additional beds 651	Total student beds 1,252
	Staff housing unit 113	Additional units 281	Total housing Units 394
Athletic/Recreational Fields	5 recreation fields	Additional 1 field	Total 6 fields
Parking Spaces	170 Spaces	70 Additional spaces	240 Total spaces



Chapter B Context

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B CONTEXT

The development of SICHE/SINU has been principally shaped by the characteristics that distinguished the institution as the top-tier higher education institution and provider of academic and technical manpower needs of the country. The setting of all campus within Solomon Islands, Guadalcanal province and Honiara city especially, is also important in understanding the relationship of SICHE/SINU to its surroundings. The Planning context for SICHE/SINU is further shaped by the local planning Scheme for Honiara and the national and regional governments' development strategies.

B-1 Regional Setting

Solomon Island is situated within the Melanesian block of independent states. Papua New Guinea to the west, Vanuatu, New Caledonia and Fiji to the south-east. All can be reached within less than four hour of direct flight by regional airlines, except New Caledonia, which relies on connection from Vanuatu. All countries within the Melanesian block have universities except Solomon Islands. However, Solomon Islands is a member of the USP based in Suva, and depends on this institution as the main provider of tertiary academic education. PNG universities also provide higher academic and professional training to Solomon Islands. New Zealand and Australia provide scholarship training for Solomon Islanders in their institutions and assisted in shaping educational policies and strategies.

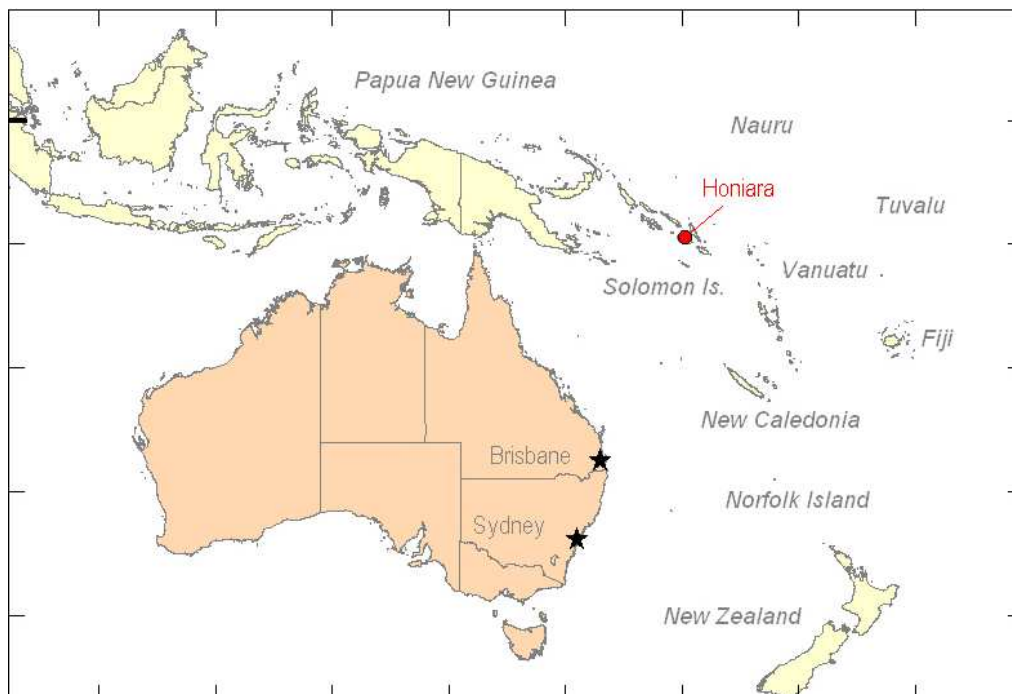
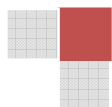


Figure B-1 Solomon Islands within the Pacific Melanesian Block.



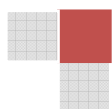
On the regional setting, Education in the Solomon Islands, while an important national priority, is also linked to global international goals for education and to our broader regional context in the Pacific. In accordance with the Education Strategic Framework (2007-2015), the government has lodged an education strategic framework for the Solomon Islands that is directly associated with the Millennium Development Goals adopted at the turn of the century by the United Nations. One of the most important strategic goals is the emphasis on achieving access to universal basic education for all Solomon Islands children which is also derived directly from the second Millennium Development goal. It is the Millennium Development Goal No 2 that sets out an aim of achieving universal primary education. The role played by SICHE/SINU is a very important one especially in terms of producing teachers for all schools. The MDG target is to ensure that all boys and girls complete primary school. The target date to achieve the Millennium Development Goals is 2015, and the period covered by the Solomon Islands Education Strategic Framework (2007-2015) is therefore aligned with this target date. The first SICHE Strategic Plan has also been targeted to the same period. The first phase of this PMP covers the same time frame 2012-2015.

The country has also been very much in tuned to the UNESCO sponsored *Asia and Pacific Regional Framework for Action: Education for All* which sets out guiding principles, specific goals and targets for 2015. The SICHE/SINU Physical Master Plan stresses the importance of providing an enabling environment that will create training of teachers and skilled workers to meet the MDG targets. It must be noted that the education strategy of the Solomon Islands is linked to and is consistent with this international and regional development.

The national strategic goals are also linked with the regional goals for education adopted by the Pacific Education Forum. These regional goals for education focus on the Pacific Islands Forum Basic Education Action Plan., and on the regional initiatives sponsored by the Pacific Regional Initiative for the Development of (basic) Education (PRIDE). There is an emphasis on supporting basic education in the Pacific Islands Forum Basic Education Action Plan, and in the PRIDE initiatives, which is consistent with the strategic direction adopted by the Solomon Islands education system. According to the country's ESP the PRIDE Project is also supporting the development of education strategic planning in Pacific countries. All in all, the Pacific Plan is based on the concept of regionalism which promotes countries working together for their joint and individual benefit. It must be emphasised here that regionalism under the Pacific Plan does not limit national sovereignty. Therefore the growth of SICHE/SINU will need to be seen in this context. It is not intended to replace national programmes, only to support and complement them. This Pacific regional approach is supported because it adds value to our own national efforts in the education sector here in the Solomon Islands.

B-2 Honiara City Plan and Development

SICHE/SINU is within the jurisdiction of Honiara, the national capital of Solomon Islands. The city of Honiara is located on 22.73 square kilometres of land, acquired by the Colonial administration after the second World War when the capital was moved from Tulagi to Honiara. Out of the 22.73 sq.km, an estimated 20% is unsuitable for future growth due to topographical and environmental



constraints. About 65% of the city's developable lands are fully developed, 1.5% is held by private developers (still undeveloped) and 13.5% are occupied by informal settlements. SICHE/SINU holds about 106.7ha which is 5% of the Honiara total land area, or 26% of the suitable and developable land (Figure B-2).

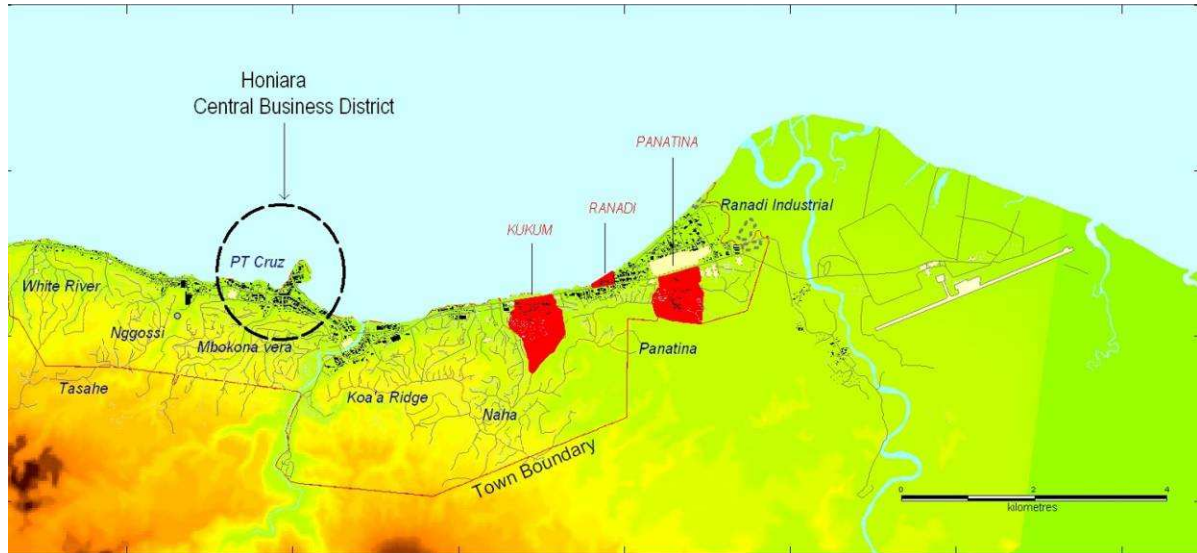


Figure B-2: Honiara – location of three campuses (Panatina, Ranadi and Kukum)

Being the capital of Solomon Islands, Honiara serves as the main administration, education and economic centre for the country. It is the nation's gateway to the world and has a population of 64,600 during the 2009 national census and a population density of 2,953 people per square kilometre and has grown rapidly over the years to become the primary city in the country. The city is growing at a rate of 2.7% per annum (SIG, 2011) with a doubling time of 25 years. Honiara city is made up of the diverse ethnic groups and indigenous people from the nine provinces, expatriates, mixed descendants and a large Chinese community. SICHE/SINU presence in Honiara is an attractive force that draws population to the city.

Honiara is the Centre for social, financial and economic development therefore attracts major infrastructure investments in recent years, making the city an attractive place to live for more so than elsewhere in the provinces. This has resulted in an influx of rural-urban migration to Honiara which contributed to the rise in informal settlements. Over the years this has added to the formidable challenge the HCC, MLHS national planners and SIG have in providing for a healthy and economically vibrant city. An example of this pressure of land is to the southern side of the Kukum campus where one of the most populated squatter settlements of Honiara is situated. This poses a threat to the development of the University Campus.

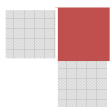




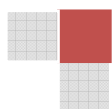
Plate B-1: Honiara Central Business District – Point Cruz

B-2-1 Administration of Honiara City

SICHE/SINU relies very much on the services provided by the City authority. However on certain service deliveries, SICHE/SINU relies on its own capacity to deliver services due to the inability of HCC on certain fronts. The HCC is mandated to deliver a range of basic municipal services such as garbage collection, drainage clearance and improvement, provision of public sanitation, improvements of feeder roads, planning and development control as well as the responsibilities for education and primary health care to the city. In executing these duties the HCC has been greatly affected with historically bad governance, weak administrative and technical capacity which has resulted in poor delivery of services to city residents. But, following the operations of the HCC¹ Institutional Strengthening project, service delivery to the city and internal revenue collection has improved, leading to improve work ethics and work outputs (HCC, 2010). There is a new project funded under NZAid (2012) for further extension of capacity building and economic development of the HCC.

All plans and development needs approval by the Honiara City Council. In this regards, the development of SICHE for any new building or amenity will need planning approval from HCC. Any planning will need to adhere to the local planning scheme of Honiara especially the approved zoning plan. HCC has a Corporate Plan (2010-2012) but there is little linkage made to the strategic physical and land-use plans, national development strategies or social policies and programmes.

¹ CLGF coordinated a five year project (2006 to mid June 2011) funded by NZAid (NZ\$5.4 million) to improve and strengthen the capacity of the HCC.



B-2-2 Basic Urban Services

SICHE/SINU being within Honiara township means that it will rely on all urban services for its livelihood and development. With the rapid growth of Honiara, solid wastes generated from households, shops, offices, markets and coastal pollution also increases. With the new influx of population from rural areas and a general high urban growth rate comes the demands for spaces and facilities for urban services. On the whole, the growing pressure on facilities such as entertainment and recreation centres, sports fields, and social amenities are in short supply in Honiara. This shortage has resulted in public demands on the recreational fields at both Panatina and Kukum campuses. This puts the development of land within SICHE/SINU campuses on tight radar for public demands. Care must be taken so that whatever land belongs to SICHE/SINU is safeguarded and protected for future university needs. The current capacity of the water and sewerage systems (designed for a population of 30,000 people in the 1970s) cannot cope with the present demands as well. The city has since grown by about 100% (64,600 in 2009).

B-2-3 Solid Waste Management

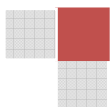
SICHE/SINU makes use of the main solid waste dump at KGVI. The open dump is the main solid waste disposal site for Honiara. Recent Urbanization study by UN Habitat revealed that the open dumping and burning of solid wastes, the lack of regular garbage collection, littering are common features of the city. It was revealed that the HCC has five compactor trucks and a bin vehicle (to carry waste bins) for garbage collection and hires six private contractors for weekly collection in the suburbs. Poor garbage collection has led to people dumping solid wastes on the shorelines, polluting the coastal and marine environments. The common landfill is located approximately 3km from the city and is likely to run out of space within the next six years. A loader is often used to push garbage further into the swampy area and buried with compacted gravel.

Honiara's CBD (central business district) and along the feeder roads leading to suburbs have become visibly cleaner with the implementation of the Rapid Employment Project² (REP), which employs more than 300 casual workers (youths and women) from the 12 wards in Honiara for footpath and drain clearing and garbage collection. To sustain and improve current services will require additional resources and community partnerships.

B-2-4 Water

SICHE/SINU gets water from the city's reticulation system. At certain time, and place within the campuses, residents experience water shortages. The Solomon Islands Water Authority (SIWA) provides water to 77% of 8,981 households in the city (18% of which are located in the informal settlements). SIWA has 9 boreholes located in different locations within the town boundary; but these sources are failing to meet the increasing demand of the city due to lack of adequate financial

² REP is funded by the World Bank, NZAid to provide employment opportunities for the unemployed people in the city to do general cleaning in the city and is administered by the HCC. It is a five year project (2010-14) and intends to employ up to 7,500 workers.



resources to repair the aged system and to address ongoing illegal connections. SIWA relies mostly on the Kongulai water source, (acquired by the government from the customary landowners). The water authority faces excessive demands (more than SB\$1 million) for land rent payment from the landowners. The ongoing delay to resolve land disputes at Kongulai, together with excessive land lease demands has led to the Japanese Government suspending its SB\$90 million project for Honiara water improvement (Solomon Star, 15/4/11). This has seriously impacted SIWA's efforts to improve Honiara water supply. SIWA has formed a team to identify and disconnect or charge illegal water connectors, but whether it will deal effectively with this issue is a matter that only time will tell. Despite these hurdles, SIWA has undertaken a reform programme, and has shown drastic improvement over the past twelve months.



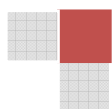
Plate B-2: A water tank at the back of Honiara

B-2-5 Sanitation

An estimated 30% of all households in the city are connected to fourteen (deteriorating) sewerage lines whose outlets flow directly into the sea from the central market and King George VI area, polluting the coastal environment and raising health concerns for coastal settlements and ocean-users. This is particularly a problem facing Ranadi campus which is fronting the Ranadi beach. While many new buildings have septic tanks, the low lying residential areas within the campuses are likely to face difficulties in areas where water table is high. Littering, especially in the drains and lack of public amenities (sanitation in particular) are serious environmental concerns for the HCC authorities.

B-2-6 Education

The HCC provides 14 primary and secondary schools that are distributed according to the main population catchment areas of Honiara. However, students and teachers are often late to school due to traffic-congestion and unreliable public transportation. The student ratio to teacher in most schools is higher than 40 with schools lacking adequate space and resources. Secondary schools in particular lack adequate facilities such as offices, libraries, classrooms, playing grounds and



laboratories. Upgrading the existing school facilities and building decent houses for teachers are the key challenges for the HCC authorities.

The Central Government has implemented a free education policy³ since 2009 as a measure to relieve parents from the burden of paying school fees and to increase access to basic education for all children (Solomon Times, 30/9/08). However, the HCC schools impose enrolment and development fees to students, which are often higher than the original school fees, making it difficult for the poor families to send their children to schools.

B-2-7 Health

Honiara residents are served by the national hospital and 9 clinics (funded by the HCC) distributed in the suburbs. These clinics are manned by 74 registered nurses, which is inadequate to provide quality services to the residents. SICHE/SINU is served by a clinic based at Panatina campus. The clinic is specifically to serve students and staff and their families. The private clinics in the city provide a better service than the HCC and the state hospital but are affordable only by a small proportion of the city's population. Poor delivery of health services are linked to inadequate health facilities, lack of resources, poor working environment and the non-provision of staff housing. Malaria, diarrhoea and pneumonia are the most common disease experienced in Honiara. As Honiara's population continues to rise, it is critical that the existing clinics are upgraded and to build new ones to cater for the current and future needs. As the SICHE/SINU population grows, a second clinic will need to be set up at Kukum.

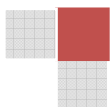
B-2-8 Energy

SICHE/SINU gets its power supply from the Town supply grid therefore relies on the efficient and effectiveness of the supply system. The Solomon Islands Electricity Authority (SIEA) powers 72% of 8,981 households in Honiara of which 7% are located in the informal settlements. Most of the households in informal settlements use kerosene lamps; fire and candles as their main light sources. SIEA struggles to provide reliable power to meet the present demands due to regular break-downs and load shedding, leading to frequent power black-outs. The Institution's administration therefore has a small stand-by gen-set for such occurrences. Given the recent rise in development activities in and around the city recently, there is a need for the SIEA to upgrade its generators to be able to supply reliable power supply for current and future development needs.

B-2-9 Public transport

Most if not all of staff and students travel to SICHE/SINU by public transport. Buses, taxi and pick-up trucks provide public transportation in the city. However, public transport is yet to be formalized in Honiara. Students travelling to all the campuses have no problem in catching buses or taxis. At \$3

³ Free education policy means that children will attend school from standard 1 to form 3 without paying school fees. The central government will meet this cost. School Heads are allowed to charge other fees, like a development fee, but must be approved by the Minister for Education (CNURA, 2008).

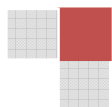


per trip, buses are reliable throughout the city's main road. The only problem often encountered by travelling public is that bus operators design their own routes, which reduces availability in some parts of the city. Public buses operate until 8pm, while some taxi fleets provide a 24-hour service. Transport providers cooperate informally to set fares, providing some uniformity in rates. Public buses and taxi tend to ignore designated pick-up and drop-off bays especially at the main market, increasing road safety risks for both vehicles and pedestrians. There is a need to regulate public transports to improve urban transportation planning and management in the city.



Plate- B-3: Central markets - Honiara

There is one main central market operated by the HCC at Point Cruz, and a couple of satellite mini-markets but a lot more street markets which are informal but thriving throughout the city. The one serving SICHE/SINU is the Fishing village market, which is considered by HCC authority as not a suitable location because of its closeness to the major highway and problem of congestion and parking, it still thrives defying all odds and orders for a closure. The central market provides many varieties of tradable items such as building materials, clothing, shell money, fresh root crops, vegetables, fish, firewood and household effects. Vendors come from rural Guadalcanal as well as nearby islands in the Central province, Malaita, Isabel and Western Province. It is the local central hub for the trading of perishable as well as non-perishable items, and also serves as a central meeting place for locals.



B-2-10 Road networks

The main road that connects all SICHE/SINU campuses with Honiara is the Prince Philip Highway. This main road is well served with public transport. The dual carriage highway runs through the city (from White River to Burns Creek) approximately 15 km and some feeder roads leading to suburbs in Honiara are tar-sealed. The remaining roads (serving suburbs, informal settlements in Honiara and to rural settlements of Guadalcanal) are gravel sealed but are not properly maintained. There is only one main road running through Honiara and in the absence of other lateral or parallel routes, leads to traffic congestion and increased safety risks in the city. Roads are not marked clearly to show the direction of moving vehicles, posing risks for pedestrians and drivers at times.



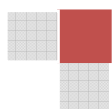
Plate B-4: Round-about at the main road at the Town Ground

B-2-11 Banking and communication

The banking services are provided by the Australia and New Zealand Bank (ANZ), Westpac and Bank of the South Pacific (BSP). They provide personal; property and school fees loans for the general public but, accessing these services requires capital and collateral items for security, making accessing loans from these banks often impossible for the urban poor and low-mid income earners in Honiara. The closest to Kukum campus is the ANZ bank at the Panatina Plaza, and the ones closest to Ranadi and Panatina campuses is the Ranadi branch of the BSP.

B-2-12 Telecommunication

The Solomon Telekom and B-Mobile companies provide telecommunications in the country as well as their mobile services which have been extended throughout the islands and into the rural villages with a great deal of improvement in coverage since 2010.



B-2-13 Airport

The SICHE/SINU campuses will be relying on the main airport at Henderson for all local and international travel. Honiara is the only gateway to the nine provinces and is home to the only international airport. Solomon Airlines provides daily flights to outer islands, making inter-island travelling easier, but is unaffordable for many families. Solomon Airlines, Air Niugini and Air Pacific provide weekly international flight services. Kukum campus being the furthest away is only 10 minutes drive to the airport.

B-2-14 Ports

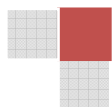
Point Cruz port Honiara is the only seaport in the country and serves as the main link between the international and domestic routes (see photo 4). During holidays, staff and students need to travel back to their homes. Everybody has to board ships via Point Cruz Port area. The main wharf at the Point Cruz provides for export and imports of goods (consumer and non-consumers goods) from international trading partners. The only problem with the port is that it has limited storage area for containers, making it a daunting job for importers to clear their containers or goods out as soon as they arrived at the wharf.



Plate B-5: Point Cruz main wharf at Honiara unloading market produce

B-2-15 Making land available to public

On behalf of the government, the Commissioner of Lands is responsible for all public land in the Solomon Islands. All SICHE/SINU land are transacted and held in perpetuity by the Commissioner of Lands. SICHE/SINU holds the FTE titles. For a private person to get land, a certain process is



required. Until 1990, all state lands were subdivided and allocated by public tender providing new residents with the option to purchase a fixed term estate (FTE).⁴ A Site Development Fund (SDF) was set up to provide water, power and roads to these sites and costs were partly recovered from the payment of land premiums from the previous tender. While the SDF system operated relatively well for many years, the MLHS and HCC planners however were unable to keep up with the pace of urban growth resulting in increasing numbers of 'low and medium income residents' living in informal settlements poorly served with power, roads and garbage collection. In the early 1990's the SDF was bought back into consolidated revenue and funding ceased thereby ending the tender process due to the lack of a budget. This move effectively stopped proper subdivision planning and gave rise to direct land allocation by the CoL, which accelerated the growth and expansion in informal settlements and pockets of unplanned houses in the city. The allocation process of state land is often lengthy and vulnerable to corruption as the power to allocate land is vested only with the Commissioner of Lands (CoL).

An assessment by the MLHS in urbanization profiling revealed that Honiara is facing problems with land to meet future road needs and alignment as all the suitable land have already been acquired and developed. The CoL therefore needs to re-acquire back those portions of land if new roads are going to be built in the future to reduce road congestions and traffic jam in the city. Lack of effective town planning is resulting in increased land use conflict at the centre of the city. This will affect the future development and growth of the city. The HCC and the MLHS physical planners and policy makers need to better manage and control the development of available land within the city area.

The same assessment report revealed that Honiara cannot expand its physical boundaries without negotiation with customary landowners. In April 2011 the Guadalcanal Provincial Government (GPG) are not favouring any city expansion into their jurisdiction (Solomon Star, 12/4/11). The Chairman of the tribal groups (Tandai, Malango and Ghaobata) that owned Honiara and surrounding lands expressed an interest in fair representation in land negotiation processes and not to be represented by the GPG or other bodies (Solomon Star, 19/4/11). This situation highlights the need for the inclusion of landowners in the development planning processes.

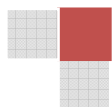
There is a critical need to work together with the GPG and the indigenous landowners associations in discussions for accessing land for development of new satellite towns beyond the current city boundaries.

B-3 Planning issues

Honiara city relies on an approved Local Planning Scheme (LPS).⁵ The major challenge for the HCC and MLHS physical planners and policy makers in Honiara is to improve the technical capacity of the planners so that they are able to systematically address planning issues such as informal settlements

⁴ The Grant conditions included a no sale clause within a certain period and a development clause (normally erection of a substantive dwelling within 18 months).

⁵ The LPS intends to control planning requirements (road design, types of buildings, site yards, parking areas, etc).



and ensure that urban issues are factored in their overall corporate plan for the city as it continues to grow.

Abbreviated note of the requirement of the approved Local Planning Scheme (LPS) for Honiara as is applicable to Educational Institution is presented below in Box B-1 (an extract from Honiara Local Planning Scheme):

Box B-1

1. Introduction

This plan has been prepared to satisfy a pressing need to provide controls and guidance for all physical development in Honiara City. Prior to the formulation of this plan, the only such control relating to the physical development in Honiara was Plan 1676A. Physical planning is needed, particularly in the context of Honiara to guide and control development in a way that protects and enhances people's living and working environments. Proper planning can ensure that land prone to flooding, landslides and cyclones remains undeveloped. Proper planning can promote design guidelines that discourage and prevent criminal behavior in public spaces and private properties. Proper planning can channel commercial development towards specific geographical locations to create neighborhood centers for ease of access.

2. Definitions

2.1 General Definitions

"Act"	Means the Town & Country Planning Act 1980 as amended.
"Excavation"	Means land forming, embankments, raised access roads, building pads, Channel banks and drain banks and associated structures.
"Frontage"	Means a property boundary that abuts a road. If a lot abuts two or more Roads, then the frontage relates to the boundary abutting the primary road.
"Gross floor area"	Means the total floor area of a building, measured from the outside of External walls or the centre of party walls, and includes all roofed areas.
"Plan"	Means the Honiara Local Planning Scheme 2008.
"Setback"	Means the distance between two structures or boundaries, as specified in each context.

3. Vision and Objectives

Vision

The vision of land use development in Honiara is: "To create a city that enhances the welfare of people who live, work and visit Honiara while protecting the physical, natural and cultural qualities of the environment".

Objectives

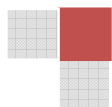
The above vision is to be achieved through a combination of more specific objectives as follows:

- To provide for the fair, orderly, economic and sustainable use and development of land by balancing the present and future interests of the people of Honiara.
- To secure a pleasant, efficient, clean and safe working, living and recreational environment for all people who live and work in Honiara.
- To promote a more prosperous Honiara through particular support to locally-owned businesses.
- To conserve and enhance those buildings, areas, trees and items which are of special cultural or historical value.
- To facilitate the effective planning, implementation and maintenance of public utilities, services and other infrastructure for the benefit of the communities and businesses of Honiara.

The policies presented in this plan aim to achieve the Vision and Objectives above.

4. Policies

Policy 1: General Considerations.



Box B-1 cont.

When considering an application for planning permission the board and its technical staff shall consider the wider impact of the development on its environment.

The following assessment rules shall be applied when considering a planning application:

- 1) The development proposal shall not conflict with the Town and Country Planning Act and any policy Directions and Regulations issued by the Minister in accordance with the act provided.
- 2) Compliance with the Environment Health Act where relevant;
- 3) The impact of the development on the environment and, where harm to the environment is likely to be caused, any means that are proposed to be employed to protect the environment or to reduce that harm.
- 4) The social and economic impact of the development;
- 5) The effect of the development on the amenity of the site and surrounding areas, including consideration of the character, location, bulk, scale, size, height and density of the development;
- 6) The site and area to be occupied by a development in relation to the size and shape of land which is proposed to be developed and the relationship to develop on any adjacent or nearby land;
- 7) The suitability of the development in relation to the risk of flooding, tidal inundation, subsidence, slip, bushfire, earthquake, or any other natural or manmade risk;
- 8) The adequacy of proposed access to and from the development;
- 9) The adequacy of proposed areas for loading, unloading, parking and internal maneuvering of vehicles for the development;
- 10) The amount of traffic likely to be generated by the development, particularly in relation to the capacity of the adjacent road system to cope with the increase in traffic movement;
- 11) Whether public transport services are available, adequate and relevant to the development;
- 12) Whether utility services are available, adequate and relevant to development;
- 13) Whether the development will affect the approach to Henderson Airport or Honiara port or any other facilities used by these facilities;
- 14) The existing and proposed provision of landscaping, planting and retention of trees on the site with the development;
- 15) Representations made by a government authority or government appointed service provider in relation to the development, including their rights and needs;
- 16) Representations on physical planning grounds made by a member of the public; and
- 17) Any other matters which can be considered reasonably relevant to physical planning.

Important Note:

Development proposals that require a permit must be assessed on their merits, and will not be necessarily be approved by the board.

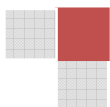
Policy 2.3: Education Zone

The purpose of the Education Zone is to facilitate the orderly development of land primarily for education purposes, in order to facilitate the continued presence and development of educational institutions.

Current educational facilities require protection from non-educational development. Many educational facilities are in need for more classrooms. Therefore land zoned for education should not be sacrificed for other activities unless these activities contribute to the value of the school.

Permitted Activities:

- Fences, gates, felling of trees, excavation, subdivision, consolidation and adjustment of lots.
- Child care centers
- Education centers
- Office uses, but only where associated with and ancillary to an education facility.
- Places of worship, but only where associated with and ancillary to an education facility.
- Public services, but only where associated with and ancillary to an education facility.
- Recreation, but only where associated with and ancillary to an education facility.



Box B-1 cont.

- Residential uses, but only where associated with and ancillary to an education facility.
- Serviced accommodation, but only where associated with and ancillary to an education facility (boarding school)
- Retail uses, but only where the gross retail floor area does not exceed 50 square meters.

Prohibited Activities:

- Agriculture
- Cemetery
- Light or Heavy industrial uses
- Office uses other than as described above
- Residential uses other than as described above
- Retail uses other than as described above
- Hospitality uses other than as described above
- Warehouse uses
- Any other developments or uses not described above.

Some important points to note from the above script are as follows:

- All application will need approval by the Honiara Town and Country Planning Board.
- There is zone named Education zone which all SICHE campus fall under.
- There are specified permitted as well as prohibited activities within the Education zone.

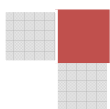
SINU will need to make firm decision to move the agriculture farm to Aruligo, as agriculture is one of the prohibited activities under the educational zone in Honiara. In this respect SINU will need to move to Aruligo land and develop its farm and agricultural activities.

B-4 SICHE Campus

B-4-1 Panatina campus

The Panatina campus is located in the East Honiara constituency. It occupies two plots of land (parcel number **191-002-131** and **192-007-031**), with a total land area of 49.9ha. The campus borders with the Solomon Island Football Federation (SIFF) and the King George Sixth National Secondary in the east, the Kukum High Way and the golf course in the north, Our Telekom Recreational Centre in the west, and a creek in the south (Figure B-8). A number of individual residential quarters are also bordering the campus.

The topography of the Panatina campus is best described as flat in the lower segment, with gradual rise towards southern end of the campus. Narrow to medium ridges and valleys spread within the entire landscape throughout the campus. At the central south of the campus is a deep fall towards a creek flowing through a section of the southern boundary. In the eastern end is also a creek which appears to connect with the southern creek. These wetland areas are deemed environmental



sensitive. A detailed assessment of the creek's potential should be made before undertaking any major development that may affect it.



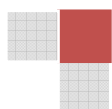
Plate B-6: Location of Panatina Campus within Honiara City

Vegetation cover of the campus is largely degraded, and mostly vegetated with grasses and undergrowths, ornamental plants and patches of rain trees spreading throughout and interspersed with food gardens. Where there are no food gardens, the area is regenerating shrubs. The food gardens usually comprise stands of bananas (*Musa sp*), swamp taro (*Cyrtosperma johnstonii*), cassava (*Manihot esculenta*), pawpaw (*Carica papaya*) and species of sweet potato (*Ipomea batatas*) and vegetable plots. Current land use within the campus is shown in Table B-1 below.

Table B-1: Panatina current landuse

ID	Landuse type	Area (Ha)	% of land area
1	Recreation	4.27	9.0
2	Environmental Sensitive Area	3.82	8.1
3	Academic Space	3.13	6.6
4	Staff Housing	7.89	16.7
5	NOT Designated	12.3	26.0
6	Open Space	13.49	28.5
7	Student Housing	2.36	5.0
Total area:		47.26	100.0

The campus provides accommodation for students and staff, classrooms, a medical clinic, a kitchen and dining facilities for students, administrative buildings and training facilities including a library. A



security fence has been installed at the lower campus and a management plan to fence the entire campus has received support from the Council. A security guard is employed to watch over the campus on a daily basis. The campus is connected to the rest of Honiara township with a bitumen sealed road. Within the campus, the road network is unsealed gravel in most areas. There is no proper drainage system put in place to channel out excess water. The campus receives water supply from SIWA and electricity from SIEA. Telecommunication network is provided by Our Telekom Ltd., while mobile services is also provided by the BeMobile Ltd.

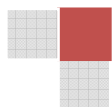
B-4-2 Ranadi campus

The Ranadi campus is located on a coastal strip of land that is surely vulnerable to climate change hazards (Figure B-7). Already, there are evidences of coastal erosion in certain sections of the campus, sea level rise and intrusion, and with the combined effects of seasonal storms, high tides and storm surges associated with tropical cyclones. This campus is located in the East Honiara Constituency and on a FTE land under parcel number **191-041-230**, with a total area of 2.3ha. The campus is at the seaward side of the Kukum High Way, and borders with the Carpenters Warehouse to the east and is directly opposite the Kukum High Way road junction towards Panatina and Baranaba suburbs in the south (Figure B-2).



Plate B-7: Location of Ranadi Campus within Honiara City

The topography of the Ranadi campus is flat and low lying, with approximately 2-3m above sea level. At the far western end of the campus boundary is illegal sand mining intermittently carried out by certain individuals, which has rendered the area prone to coastal flooding and inundation. A ship wreckage partly hinders a good coastal view in the northward direction to Gela and Malaita islands.



There is little vegetation cover within the surroundings of the campus. Regenerating plant species on campus ground include; beach morning glory, *Barringtonia asiatica*, *Morinda citrifolia* (or noni), *Terminalia catappa*, *Calophyllum inophyllum* and other salt-tolerant shrubs and grasses. Cultivated plant species include frangipani trees and fruit trees, e.g. mango, which are randomly planted within the campus. Current land use within the campus is shown in Table B-2 below.

Table B-2: Ranadi current landuse

ID	Landuse type	Area (Ha)	% of land area
1	Open Space	0.21	7.5
2	Residential	0.37	13.3
3	Recreation	0.37	13.3
4	Administration & Support	0.24	8.6
5	Academic Space	0.56	20.1
6	Residential	0.07	2.5
7	Recreation	0.06	2.2
8	Protected	0.5	17.9
9	Not Designated	0.41	14.7
Total area:		2.79	100.0

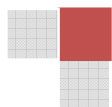
The campus provides accommodation for staff and students, classrooms, a kitchen and dining facilities for students meals, administrative buildings and training facilities including a small library. A security fence has been installed, and a security guard is employed to watch over the campus on a daily basis. There is also a drainage which is adjacent to the school fence and flows out into the beach area at the western of the campus boundary.

The campus is connected to the rest of Honiara township with a bitumen sealed road. There is no substantial road network within the campus and no proper drainage system put in place to channel out excess water. The campus received water supply from SIWA and electricity from SIEA. Telecommunication network is provided by Our Telekom Ltd. while mobile services is also provided by the BeMobile Ltd.

B-4-3 Kukum campus

Kukum campus occupies an area of 49.9ha of FTE land on parcel number **191-038-084**, and is located in the East Honiara Constituency (Figure B-8), and on landward side of the Kukum High Way. At the eastern end of the campus boundary is the downstream of Lio creek and at its western end is the Woodford International School. Bordering its southern boundary is the Lau Valley suburb.

The topography of the campus is comprising mainly narrow to medium ridges and valleys intersected by streams, creeks and seasonal watercourses. Hill slopes are covered with grasses and shrubs, and cultivated agricultural crops. Flat land is limited, but sections of flat areas are found



mainly towards the coastal front of the campus, as well as along the basin of the valleys. Certain areas within the campus, especially around SNR is apparently waterlogged due to the presence of a couple of creeks / streams. Consequently, the site is deemed vulnerable to local pooling during heavy rains. A school farm, mainly engaging in vegetable production is located within this area. Table B-3 shows current land use within the campus.

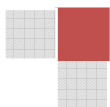


Plate B-8: Location of Kukum Campus within Honiara City

Vegetation cover of the campus is quite similar to that of the Panatina campus, whereby due to urban development, the natural vegetation has been largely degraded, leaving grasses and under-growths, ornamental plants and patches of rain trees spreading throughout and interspersed with food gardens. Where there are no food gardens, the area is regenerating shrubs. The food gardens usually comprise stands of bananas (*Musa sp*), swamp taro (*Cyrtosperma johnstonii*), cassava (*Manihot esculenta*), pawpaw (*Carica papaya*) and species of sweet potato (*Ipomea batatas*) and vegetable plots.

Table B-3: Kukum current landuse

No	Land Use Type	Area (Ha)	% Of land area
1	Open Space	1.46	2.6
2	Agrucultural Area	4.71	8.3
3	Academic Uses	8.62	15.3
4	Recreation	2.11	3.7
5	Environmental Sensitive Areas	6.31	11.2
6	Staff Housing	9.78	17.3
7	Student Housing	1.44	2.5
8	Not Designated	22.10	39.1
Total area:		56.54	100.0



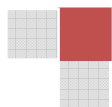
The campus provides accommodation for students and staff, classrooms, a kitchen and dining facilities for students catering, administrative buildings and training facilities including a library and ITC house. There is no security fencing of the campus, but a plan to fence the entire campus has been approved by the Council. Security guards are employed to watch over the campus on a daily basis.

The campus is connected to the rest of Honiara township with a bitumen sealed road. There is no substantial road network within the campus and no proper drainage system put in place to channel out excess water. The campus received water supply from SIWA and electricity from SIEA. Telecommunication network is provided by Our Telekom Ltd. while mobile services is also provided by the BeMobile Ltd.

B-5 Social issues and challenges

Issues and challenges confronting SICHE at the present time will have adverse impacts on this PMP, and will certainly result in poor academic performance due to insecurity and interference of external factors into the affairs of SICHE. It is important, therefore to resolve these issues in order to create an enabling environment for both physical and academic development of SICHE. These issues are not new because it was already put to the attention of the College previously by the AGE Consulting in 2003, including:-

- **Legal Agreements:** SICHE has entered into a number of MOUs with various government agencies and private sector entities, e.g. Malaria Training & Research Institute (SIMTRI), Commonwealth Youth Program (CYP), Ministry of Commerce and Trade and Disable Centre. Most of these MOUs have adverse implications to the physical development of SICHE/SINU. A review of these MOUs would allow SICHE to take appropriate actions, and ensure to safeguard its interest to be upgraded to SINU.
- **Illegal settlement and squatters:** At Panatina campus, ten buildings owned by Mr. Tavake on parcel 192-007-31 is illegal. This land belongs to SICHE. Lower Panatina towards northeast boundary is also illegal settlements, with approximately four buildings. One building owned by a staff member of SICHE is also constructed on SICHE land. At the southern boundary of Kukum campus are a couple of buildings illegally constructed on site.
- **Illegal food gardens:** Active agricultural activities, mainly food gardens were noted in Panatina and Kukum campuses. Some of these food gardens belong to people within the surroundings of SICHE property, and are illegally occupying the area.
- **Encroachment and trespasses:** The public have been using footpaths that passed through college properties. These footpaths are unauthorized and therefore illegal. Public access to SICHE campuses puts college properties and facilities at high risk of vandalism and abuse, e.g.

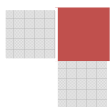


sports ground. Female students and staff have also been reported to be victim of abuse, intimidation and violence by outsiders.

- **Theft:** Cases of theft have been reported to the police in the past and is a current problem still. Facilities and assets of the College are vulnerable to theft due to insufficient security measures put in place.

Table B-4: Summary of illegal settlements

No	Campus	Permanent Buildings	Temporary Buildings
1	Kukum	4	2
2	Panatina	15	5
3	Ranadi	0	0
Total		19	7



B-6 Mitigation measures and Process

The college must act responsibly by adopting measures to mitigate impacts and effects of social issues identified in section B-5 above. The following suggestions are made for consideration by SICHE/SINU:-

- **Review, Repeal and / or Amend legal Agreements:** SICHE should commence reviewing of legal MOUs between its partners, and appropriately deal with the situation, taking into account the changing status of SICHE into SINU.
- **Legal proceedings:** Commence legal processes to evict illegal settlers or squatters who have defiled reasonable notices and consultation given to them to vacate the land they occupy. Similarly, commence legal processes to evict owners of illegal agricultural activities (food gardens) on SICHE land. This action should be immediately followed with fencing of the entire property.
- **Encroachment and trespasses:** Closed off the entire college property from the public by fencing. This should be done after due notices given out to the public for information. Fencing should limit public access to the campuses, hence enables the management to put in place a workable security measures, to minimize theft incidences and other forms of abuse.

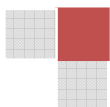
B-7 SICHE Priorities and Plans

B-7-1 General

The Solomon Islands College of Higher Education has evolved over more than a quarter of a century. Over these years, new buildings are added in a way that expressed their particular time. As a result, there is not really an overriding building style and many different materials may be found side by side. Nonetheless, SICHE has acquired a special character: it is an “academic crossroads” where people from eight schools and various divisions of support services interact and share ideas. Its character is set by the density of schools and buildings, the scale, materials and the green matrix of its landscape presented by its four campuses – Panatina, Ranadi, Kukum and Poitete.

Campus plan for the three Honiara based campuses namely; Panatina, Ranadi and Kukum is discussed here. The Panatina and Ranadi campuses hosted the School of Education (SOE), and the School of Marine and Fisheries (SMF) respectively. The Kukum campus is hosting six schools including; the School of Industrial Development (SID); School of Humanities, Science and Media (SHSM); School of Finance and Administration (SFA); School of Natural Resources (SNR); School of Nursing and Health Studies (SNHS); and the School of Tourism and Hospitality (STH).

Apparently, the current campus plan for SICHE does not really reflect much of a design that provides for future long term academic growth and development. This is reflected on its lacking of a Physical Master Plan (PMP) and moreover the absence of an Academic Master Plan (AMP). The missing



element is therefore, an understanding of the purpose of a campus. A campus does exist to bring together diverse people and their ideas in an environment that creates potential for intellectual and social exchange. In this respect, while the physical character and quality of a campus is defined by both its buildings and its open space, it is the open space which has the greatest potential for unifying and equalizing the shared space of the campus. The open space can promote the sense of community derived from actively shared space and provide for the enriching experiences of both planned and chance encounter.

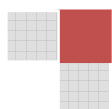
The open space is consists of streets, walkways, greens, courtyards, plazas, gardens and playfields; these have the potential to knit together the diverse elements of the campus in a coherent way. A rapid assessment of the three campuses on their facilities, assets and space has indicated the need to improve the campus plan of SICHE (Table B-5). A 'yes' against an item does not mean its current condition and quantity meets any specific standards.

Table B-5: Assessment of the availability of some key assets on each campus

	Panatina	Ranadi	Kukum
Classrooms	Yes	Yes	Yes
Special laboratories	No	No	Yes
Library	Yes	Yes	Yes
Medical clinic	Yes	No	No
Public amenities	No	No	No
Designed Walkways	No	No	No
Landscaped Greens	No	No	No
Courtyards	No	No	No
Gardens	No	No	No
Sports ground	Yes	Yes	Yes
Students accommodation	Yes	Yes	Yes
Students canteen	No	No	Yes

B-7-2 Size of schools and support service divisions

The schools and different divisions of the support services vary in size. The size of schools and divisions is expected to increase in the future. Demand for the programs / courses offered at the SNR and SNHS is currently high and expected to increase significantly in the future. Similarly, increase in workload is expected to increase exponentially in various divisions in the support services sector. This increase is in response to increased academic activities. Academic and Registry division normally have peak workload at the start and end of the year, especially during registration and graduation of students. Compilation and production of course materials to meet standard academic requirements is the main responsibility of the Curriculum and Standard Unit and the workload for CSU is expected to increase as well. The ICT division is also expecting an increase in demand for its services from both staff and students.

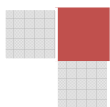


B-7-3 Needs assessment of SICHE

Four approaches were taken to assess the needs of SICHE. The first approach is a focus group consultation, involving mainly the HOS, HOD and students representatives. The second approach involves staff and students of SICHE, whereby a set of questionnaires was given out to them to answer. SWOT analysis was used as the third approach, mainly involving senior staff of SICHE and is tailored to understand key areas in the strategic action plan 2011-2015 of SICHE. The fourth approach is one-on-one consultation, which was an on-going activity for the duration of the project. The following areas of need (Table B-6) were identified through various consultations been conducted:

Table B-6 Summary of Staff and Students' requirements

Staff requirements	Students requirement	Key requirements by students not being provided
<ul style="list-style-type: none"> Need of more classrooms, lecture theatre, and facilities, e.g. specialized laboratories, etc. Initiatives, such as converting of staff recreation hut and nutritional laboratory into teaching classrooms occurred at SNR. Teaching facilities, e.g. equipment, consumable resources, library, computers are insufficient, and below standard requirements. Initiatives, e.g. downloading information in a flash drive for student occurred in SNHS. Increase office space for comfort at workplace, store and process materials and provide required services to students. Improvement on the conditions of employment, especially salaries and compensation package. Improve and increase variety of recreational facilities for staff and their families. 	<ul style="list-style-type: none"> Provide adequate academic space including classrooms and lecture theatre. Apparently, the students do not quite enjoy present classroom due to overcrowding Provide proper public amenities including toilet facilities for students Learning environment – the location is fine although some areas are waterlogged and require proper drainage system. Improve facilities for students practical, e.g. laboratory, space for farming, forestry. Increase field days for students to have 'look and learn' visits outside. Improve capacity and install quality facilities to provide for courses on demand. Efficient, effective and better service delivery. The physical infrastructures required to meet such expectation is currently weak and / or lacking. 	<ul style="list-style-type: none"> Sports and recreational facilities. ITC - Computers / access to internet services. CSU – relevant course materials as advised by Schools. Academic– The system is currently manual, need to upgrade for electronic system to work more efficiently. Students are disappointed with the practice of 'come back tomorrow.'



B-7-4 SWOT analysis of SICHE

SWOT analysis is a valuable exercise in the comprehensive planning process to identify the strengths, weaknesses, opportunities and threats facing the SICHE's operations, progress and future development plan. In other words, the analysis examines the opinions and perspectives of relevant stakeholders with aim to provide informed scenarios for better understanding of the College.

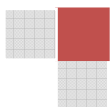
For the purpose of this study, strengths are those positive attributes or things seen of the College as being good and benefiting. Weaknesses are negative things, issues or characteristics that limit the current or future growth opportunities for the College. Opportunities are positive things or areas where the College can attempt to remedy its weaknesses and bring about goodness or benefits. Threats are negative things and trends that threaten the College's future and attractiveness as a learning institution.

To further understanding the SICHE campus plan and as part of designing the PMP, this SWOT analysis is structured to align with the SICHE's Strategic Plan 2011 – 2015 and is drawing attention to the seven strategic priorities of the College, as described below.

- **Priority 1: SICHE's Strategic Direction**
 - **Strategic Goal 1:** *As the national tertiary institution in Solomon Islands, SICHE is to be an institution of choice by students, staff and other stakeholders; to be an innovative and responsive institution offering high quality courses from certificate to degree levels in areas vital to the economic, social and personal development of Solomon Islands and its citizens.*
 - **Focus area of analysis:** competitiveness / innovativeness / responsiveness / academic level of courses / development need of Solomon Islands.

Ref.	Strengths	Weaknesses	Opportunities	Threats
1	Increase annual student intake	Low teaching quality	Increase level of academic courses	Lack of qualified teachers / lecturers
2	Local tertiary institution	Monopoly / lack competitiveness	Ownership by government with strong support base.	Competition from other tertiary education providers
3	Training tailored to meet local demand	High staff turnover (brain draining)	Upgrade to University	SIG cash flow
4	Well established institution	No well articulated academic master plan	Affordability / accessibility for local student	Change in SIG policy
5	Capacity to response emerging need			

- **Priority 2: Teaching and Learning**
 - **Strategic Goal 2:** *SICHE will lift the quality and relevancy of its courses contributing to improve student satisfaction and success and with the skills and attributes of SICHE*



graduates and the SICHE qualifications being held in high regard by employers and the community.

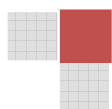
- **Focus area of analysis:** quality and relevance of courses / students satisfaction and success / reputation of SICHE.

Ref.	Strengths	Weaknesses	Opportunities	Threats
1	Track record of successes	Irrelevance of courses	Upgrading of campuses	Lack of innovations
2	Courses are tailored to local need and demand	Availability of quality teaching staff	Staff development / upgrading salary scheme	Commitment and dedication of staff
3	Existing policy on quality and relevance of courses	Lack of quality assurance mechanism	Institutional partnership and linkages	Tolerance to unaccepted behavior
4	High demand for a range of courses	Poor quality of course materials	Improvement through transition process to University.	Staff lack of performance to expected standard – capability / innovation
5		Lack of effective academic support services, e.g. counseling.		

- **Priority 3: The Learning and Living Environment**

- **Strategic Goal 3:** The learning and living environment (physical and academic) within SICHE to be safe for students and staff and with facilities and infrastructure that are conducive to quality teaching and learning.
- **Focus area of analysis:** safety (security issue) / facilities and infrastructure / quality teaching and learning.

Ref.	Strengths	Weaknesses	Opportunities	Threats
1	Availability of land	Inadequate facilities and infrastructures	Expand and upgrade facilities and infrastructures	Illegal settlements
2	Existing infrastructures (e.g. classrooms, accommodation)	Spread of campuses	Develop PMP and audit infrastructures and assets	Encroachments to SICHE land
3	Available space for expansion	Lack of proper planning, e.g. PMP	Fencing / security arrangements	Unsecured boundaries and ease public access / urbanization impacts. Lack of funds to implement PMP
4	Land title secure	Unavailability of student / staff support services on campus	Establish a commercial centre on campus	Lack of assessment of buildings for occupation thus compromise safety and health of occupants
5	A strongly defined setting of the SICHE Campuses and internal network of physical infrastructures	Inadequate supply of essential services, e.g. water, energy	SICHE to provide own services, e.g. bore hall.	COL giving away land to third party.

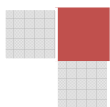


6	A large portion of the Kukum Campus is undeveloped but has potential for major developments	Road network within the Kukum Campus and Panatina Campuses are generally poor	Significant capacity exists for infill and increased density to support business, increase local employment	Under utility of the sites available within the Honiara campuses
7	Landscape and topography of the Kukum Campus and Panatina Campus are suitable for future expansion	Building orientation does not capture the sceneries to the campuses	Utilize the potential areas of the campuses and develop a satellite urban development	Restrictions and enforcements not properly administered
8	Location of the campuses in relation to the main highway and services and amenities	Real developments congested in the front areas of the Kukum Campus	Real estate developments and investment envisaged on potentially unused areas of the campuses for example Kukum and Panatina campuses such as the current Festival Of Arts site	Unruly behaviour of students which results in damages to school properties
9		Lack of improved and proper drainages in the campuses		Sexually transmitted diseases and health risks in the absence of public awareness
10		Congested car parking areas		Invasion of illegal settlers especially along the boundaries of the Kukum and Panatina campus
11		Poor street addresses and pedestrian walkway		
12		Accessibility for the disadvantages is not available in the campuses		

- **Priority 4: SICHE's Human Resources**

- **Strategic Goal 4:** *To recruit and retain the best available staff from Solomon Islands and the region; to nurture a caring and responsible working environment for staff which encourages commitment, creativity, innovation and a caring attitude towards students and the human and physical resources and assets of the college.*
- **Focus area of analysis:** recruitment and retaining of staff / ability to nurture attitude for caring and responsibility.

Ref.	Strengths	Weaknesses	Opportunities	Threats
1	SICHE a premier institution	Non-systematic staff upgrading and specialized training	Virtual infrastructure basis for innovation	Outside lucrative job opportunity
2	Pool of qualified staff	Lack of staff work commitment	Recruitment of a Research Manager	High staff turnover
3	Revised staff compensation / salary scheme	Lack of proper and regular staff performance appraisal	Transition to University to upgrade qualification and increase recruitment	Limited labour market
4	Staff privilege / fringe benefits	Lack of a clear staff professional development plan	Recruit from overseas qualified staff	Lack of collegial working relations



5	Staff employed on contractual basis	Lack of drive for development of professional academic culture, e.g. research, consultancy	Application of research policy	Lack of interest / initiative / motivation / direction
6	Staff manual policy / Code of Conduct	Lack of discipline / reprimand for abuse of office / conflict of interest.		Insecurity of job
7		Lack of enforcement of rules		
8		Lack of confidence to undertake research.		
9		Recruitment of under qualified staff	Staff development plan	
10		Lack of interest / initiative / motivation / direction		
11		Lack of a clear collective approach to research and consultancy		Conflict of interest

- **Priority 5: Governance and Relationships Stakeholders**

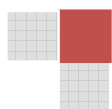
- **Strategic Goal 5:** *To respect institutional stakeholders through a renewed program of engagement and to work in partnership with a wider group of stakeholders in developing the strategic direction of the institution and its fields of study.*
- **Focus area of analysis:** stakeholders participation / partnership arrangements

Ref.	Strengths	Weaknesses	Opportunities	Threats
1	Government ownership	Inadequate strategic support and unclear intentions	Partnerships with local and regional institutions	Ineffective leadership
2	Council full representation	Members commitment / composition of members	Increase / fair representation	Political interference
3	Scholarship support from stakeholders including government and private sector	Delay of payment	SIG support for scholarship	External interest
4	MOU signed with government ministries / other stakeholders	Failure by partners to honour MOU	Create more partnership / professional development	Tendency to control SICHE
5	Legislative arrangement on training (Apprenticeship Board)	SIG, Industry and SICHE – no proper coordination between these parties	Review and strengthen the partnership	

- **Priority 6: Management Structures, Policies, Systems and Processes**

- **Strategic Goal 6:** *To improve institutional productivity through an overhaul and modernization of management systems and processes.*
- **Area of analysis:** productivity / management systems and processes

Ref.	Strengths	Weaknesses	Opportunities	Threats
1	SICHE Council members committed and focused	Unclear organizational structure	Capacity building in institutional and management systems and processes	Lack of political will and directives
2	Governing legislation	Outdated legislations	New legislation	Political instability
3	Management /	Lack of understanding	Awareness and education	Different

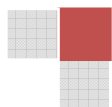


	Academic manual and policies	of policy and processes		interpretation of functions
4	ICT system in place connecting campuses	Management structure not finalized – operate under an interim structure	Review of current management structure	Insecurity of job
5	System in place allows effective checks / balances	Systems manipulated and abused		
6	Directorate - regular management meetings			

- **Priority 7: Sustainable Finance**

- **Strategic Goal 7:** *To convince stakeholders of the value of investing in the future development of the institution; to be an effective steward of institutional funds through adaption of modern budget management practices.*
- **Area of analysis:** value of investment / effective stewardship of funds

Ref.	Strengths	Weaknesses	Opportunities	Threats
1	Donor financial assistance	Inefficient financial management system	Improve financial accountability and reporting	Withdrawal of donor funding commitment
2	Government / donor support	Comply with donor policy / conditions	Proper financial plan	Sponsor's interest
3	Increase revenue (school fees)	Slow / delay financial reporting	Transparency / accountability	Under duress
4	Improved fee payment system	Lack of knowledge / information on financial instructions	Management style	Acceptability of unaccepted behavior
5	Financial control and management system in place	Lack of master financial plan	Review financial instruction	
6		Lack of discipline for abuse of office / conflict of interest		



Chapter C Framework

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C FRAMEWORK

C-1 Academic

The SCHE/SINU Academic Master Plan will be the foundation for the Long Term Physical Master Plan. The Academic Master Plan and this Physical Master Plan as well as the reliance on SICHE's tremendous progress over the past twenty-seven years, will create an institutional development for the period 2012-2032, in a well calculated planning processes.

C-1-1 Current

SICHE/SINU has become the only government higher education institution in the country that produces teachers, tradesman, accountants, seamen, nurses and other skilled manpower, and its programmes are consistently strong across a broad spectrum of technical and academic disciplines and most relevant to the country's manpower needs. Even students from other Pacific islands such as Vanuatu, Kiribati, Tuvalu and Nauru are attracted and have been attending SICHE since its establishment. Majority of graduates find employment in government, private sectors and NGOs.

C-1-2 Future

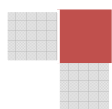
It needs to be emphasised that continued advancement of the three campuses require both building upon established strengths and engaging new opportunities brought about by the newly established University status. These will require managed growth and strategic responses to schools establishment in all the campuses. Planning for the gradual increase in managed growth is essential. SICHE/SINU anticipates the turn-over of well over half of its staff over the 2012-2032 PMP planning horizon, mostly from retirement and redundancies. The following themes must be allowed to evolve over the years in order to maintain the University's inter-disciplinary and collaborative environment.

C-1-2-1 Vision

The vision for SICHE/SINU is to set standards of excellence in learning, deliverance, and engagement. Building on distinguished track record of achievement of SICHE as a higher institute of excellence and potential, the three campuses will continue to nurture a culture of creativity, accountability, and collaboration. SICHE/SINU will honour and meet its responsibilities as the national and regional institution by strengthening its partnerships with scholars and institutions around the region, and enhancing the diversity that enriches its living and learning environment.

C-1-2-2 Mission

SICHE/SINU is both a leading technical and academic institution in the country and also provides an advanced educational training for teachers. Under the Learning and Living Environment priority of SICHE Action Plan 2011-2013, the goal is that the learning and living environment (physical and



academic) within SICHE to be safe for students and staff and with facilities and infrastructure that are conducive to quality teaching and learning. For SICHE to achieve such goal, it will commit to a major refurbishment and improvement of the condition of the physical infrastructure supporting student learning and other aspects of campus life.

C-2 Approach

SICHE/SINU will incrementally manage its enrolment by considering both local factors and broader country and regional context. The three campuses will remain committed to increasing diversity and will strategically plan for faculty and staff growth and renewal as SICHE/SINU population inevitably matures and changes. All future growth will be based on this comprehensive approach.

C-2-1 Managed growth

From SICHE records obtained, the growth in student enrolment since 2002 has been steadily increasing, although sporadic between years (Figure C-1). The annual average growth rate for the past nine years until 2011 is 8.92 %. Table C-1 shows the student enrolment and Table C-2 shows the growth in academic staff over the past 10 year period since 2002.

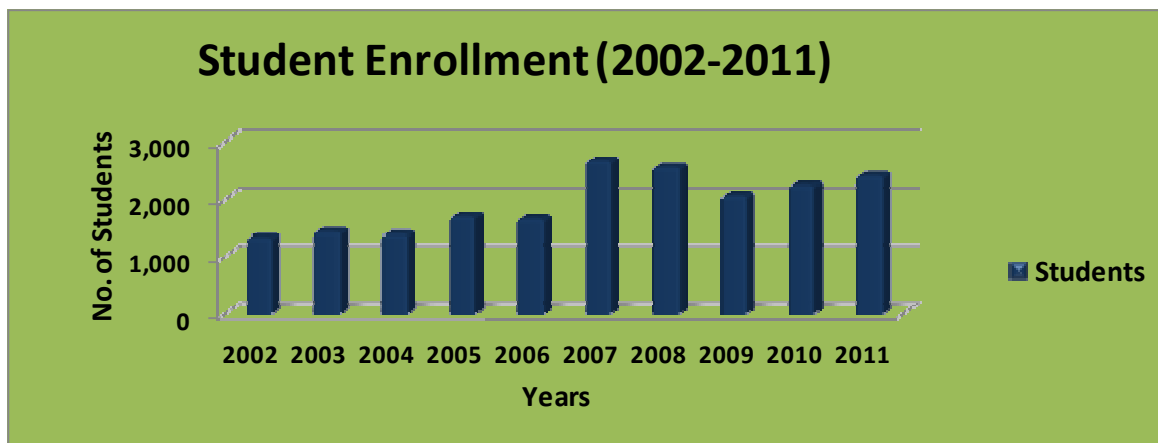
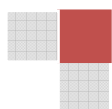


Figure C-1: Students growth at SICHE, 2002-2011

The growth in enrolment for the past ten years showed a trend pattern that is sporadic. There were peaks and troughs. However, in general the graph shows an increase in enrolment overall. The highest positive growth was between 2006 and 2007 when the absolute annual increment registered an additional 1,017 students, which was 60.4% and brought the total enrolment in 2007 to 2,673. This figure was the highest enrolment figure during the past 10 years. However, the graph showed a down turn the following 2 years then settled at 2,411 in 2011. The average annual growth rate for the period from 2002 to 2011 was 8.92% which is considered a very high growth – almost doubling in the ten year period between 2002 and 2011. An obvious explanation to this sudden growth was the impact or result of the law and order recovery programme after the arrival of RAMSI, which then



led to educational institutions back to normal. Under the present circumstances, it is neither possible nor reasonable to expect a similar high growth rate during the PMP period.

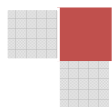
Table C-1: Student Enrolment and absolute growth from 2002 to 2011

Academic Year	Student No. Enrolment	Absolute Annual Growth	Annual Growth %
2002	1,337	0	0
2003	1,439	102	7.6
2004	1,392	-47	-3.3
2005	1,703	311	22.3
2006	1,656	-47	-2.8
2007	2,673	1017	61.4
2008	2,557	-116	-4.3
2009	2,073	-484	-18.9
2010	2,246	173	8.3
2011	2,411	165	7.3
Ave Growth rate for 9yr		119.33	8.92

Table C-2 Academic Staff employment from 2002 to 2011

Academic Year	No. of Academic Staff Members	Absolute Annual Growth	% Growth annual
2002	120	0	0
2003	116	-4	-3.3
2004	119	3	3
2005	107	-12	-10
2006	112	5	5
2007	124	12	11
2008	122	-2	-2
2009	123	1	1
2010	122	-1	-1
2011	121	-1	-1
Average growth rate for 9 yrs		1	0.83

It is hereby noted that the growth in the number of academic staff has been minimal during the same period with an average annual growth rate of 0.83% over the period from 2002 to 2011. With the introduction of more courses, favourable employment conditions for teachers and new and improved facilities such as housing under SINU, it is expected that a higher growth will be realised for the period of the PMP.



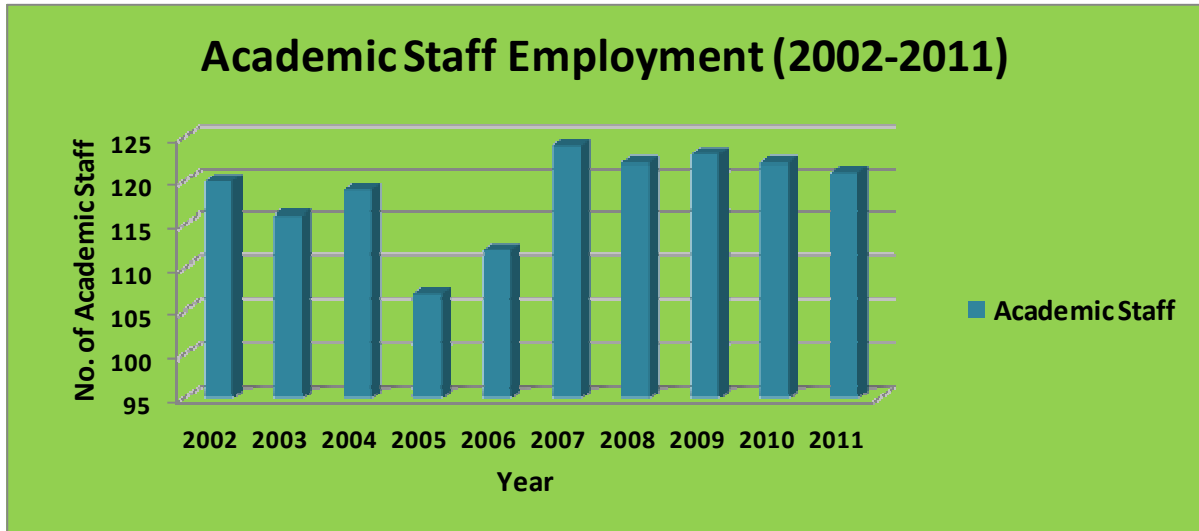


Figure C-2: Academic staff employment at SICHE, 2002-2011

C-2-2 Student enrolment projection

In order to forecast student enrolment for the PMP 20 year period, one has to look carefully at a number of factors that will influence growth rate. One of the important factors is the capacity, and competitiveness of SINU to attract students. There will be a strong competition from other tertiary institutions established in the country. This include: USP forth campus and UPNG extension which are expected to increase their enrolment in the future and are be firmly established in the country. Secondly, the regional universities based in Fiji and PNG, as well as Australia and New Zealand universities and technical institutes will still attract the best students in the country.

Other donor organizations and countries who normally place education as top priority in their development assistance programme, will still offer tertiary or higher education under their bi-lateral agreement with SIG. This leaves SINU with a great challenge of competition in recruiting eligible students. The aim is to attract students for SINU under equal competitive footing and not only as second grade left-overs. Other important as well as influencing factors include Government's Scholarship Recruitment Policy, and the availability of sponsors at national level. The bottom line is how attractive, responsive and appropriate are SINU graduates to the demands of the national labour-force and employment market in the country. Given the above scenarios, it is reasonable to expect the growth rate in enrolment to be within the national urban growth rate of no higher than 4.70%.

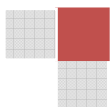


Table C-3 Comparative national population and Student enrolment projections.

POPULATION PROJECTIONS					
	2009	Pop. Growth Rate %	PROJECTIONS		
			End 1st Phase-2015	End 2nd Phase-2020	End 3rd Phase-2032
National	515,870	2.30%	591,281	662,479	870,321
Urban	102,030	4.70%	241,228	169,099	293,428
Honlara	64,609	2.70%	75,808	86,610	119,238
SICHE(2011)	2,411	4.70%	2,898	3,646	6,326
SICHE DFL		Ratio 1:2 Face to Face:DFL	1,449	1,823	3,163
SICHE TOTAL			4,347	5,469	9,489

The highest growth rate experienced in the country according to the latest National Census is the National Urban growth which was estimated to be 4.7% per annum. The PMP considers this growth to be on the upper limit, but acceptable and can be applied in the forecasting of student enrolment and the design of infrastructure as well as calculation of all required facilities for SINU. The formula used for calculating the growth rate is the exponential growth formulae as follows:

$$P_{t+n} = P_t(1 + r)^n$$

$$r \% = \left(n \sqrt[n]{\frac{P_{t+n}}{P_t}} - 1 \right) \times 100$$

where

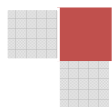
p = population

t = a time index (for instance, years, or decades)

P_{t+n} = population (n) units of time from (t)

n = number of units of time (in years, decades, etc.)

In addition, one of the higher growth areas is the demand for on-line studies, and those using DFL as the mode of study. School of Education has already offered courses on-line, School of Finance and

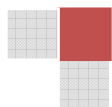


Administration is following shortly and others are going toward that direction. It is anticipated that this will be the fastest growing mode of teaching SINU will experience in the future. At this early stage it has been difficult to forecast the number of students likely to register under DFL. However, some assumption can be made following discussion with SICHE staff and analysis of what has happened in other institutions with high intake of DFL students. For all design purposes the PMP assumes DFL adds a further 50% of the student enrolment at the end of each phase. The annual growth rate is fixed at 4.7 %.

Table C-4 Student Enrolment Projection 2012-2032

Academic Year	Student No. Enrolment	% Growth Annual	Student No. DFL Enrolment	% Growth Annual	Total Enrolment
2011	2,411	7.3			
Ave Growth rate for 9yr		8.92%			
PROJECTION (using 2011 as base year)			DFL student	30	
2012	2,525	4.70%			
2013	2,643	4.70%			
2014	2,768	4.70%			
2015	2,898	4.70%	1,449		4,347
2016	3,034	4.70%			
2017	3,176	4.70%			
2018	3,326	4.70%			
2019	3,482	4.70%			
2020	3,646	4.70%	1,823	4.7	5,469
2021	3,817	4.70%			
2022	3,996	4.70%			
2023	4,184	4.70%			
2024	4,381	4.70%			
2025	4,587	4.70%			
2026	4,802	4.70%			
2027	5,028	4.70%			
2028	5,264	4.70%			
2029	5,512	4.70%			
2030	5,771	4.70%			
2031	6,042	4.70%			
2032	6,326	4.70%	3,163	4.7	9,489

The expected growth in student enrolment is 9,489 by 2032. This also includes the number of students forecasted to be enrolled in DFL mode. Since DFL will be considered as the fast growing mode of teaching in the future, for purpose of design forecasting, PMP adopts the assumption that for every three students enrolled at SINU, two will be on face to face lecture mode, and one will be on DFL mode of teaching. For purpose of design of facility and infrastructure requirement, the



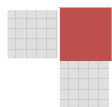
critical dependent variable will be the number of face to face student enrolment and on campus residents and less on the off campus residents or DFL student enrolment. **Applied Ratio for purpose of design:** Face to face student enrolment: Distant and Flexible Learning (DFL) 2:1.

C-2-3 Faculty staff growth and renewal

The expected growth in student enrolment is forecasted to reach 9,489 by 2032, coupled with a corresponding growth in number of introduced and upgraded courses which would require an increase to about 318 faculty (academic) members. The annual growth rate of faculty staff over the PMP period is fixed and expects to be the same as the Student Enrolment at 4.7%. This is designed to safeguard the ratio of staff to student over the 20 year-period, and ensure quality academic standards are maintained. Over the next 20 years, SINU would add approximately 197 faculty (academic) members, or an average of about 10 members per year. In addition, well over half of the current faculty members will be replaced over the PMP planning horizon. Combining the projected additional of new positions with the need for replacement, almost 300 new appointments will be needed during the PMP period. The staff (faculty) to student ration during the last 10 years was 1:20. By 2032 the ratio is expected to be 1:30, due to a slight faster growth of student in comparison to staff. This includes the students on DFL as well. This ratio is considered to be adequate, and in line with other international and regional institution, therefore all effort must be made to maintain this distribution throughout the PMP period to ensure that the campuses are adequately staffed to provide the services needed to support this growth.

Table C-5 Staff growth for PMP period 2012-2032

Academic	No. of Academic	% Growth	No of Support	% Growth	TOTAL
Year	Academic staff	GrowthRate	Support Staff	Rate	Total staff
2011	121	1.7	164	2%	285
Ave Growth rate for 9yr		0.24%			
PROJECTION (using 2011 as base year)				2	
2012	127	4.70%	168	2%	295
2013	133	4.70%	171	2%	304
2014	139	4.70%	175	2%	314
2015	146	4.70%	178	2%	324
2016	153	4.70%	182	2%	335
2017	160	4.70%	185	2%	345
2018	167	4.70%	189	2%	356
2019	175	4.70%	193	2%	368
2020	183	4.70%	196	2%	379
2021	192	4.70%	200	2%	392
2022	201	4.70%	204	2%	405
2023	210	4.70%	208	2%	418
2024	220	4.70%	213	2%	433



2025	231	4.70%	217	2%	448
2026	241	4.70%	221	2%	462
2027	253	4.70%	226	2%	479
2028	265	4.70%	230	2%	495
2029	277	4.70%	235	2%	512
2030	290	4.70%	239	2%	529
2031	304	4.70%	244	2%	548
2032	318	4.70%	249	2%	567

C-2-4 Supporting staff growth and renewal

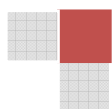
Staff are absolutely essential to the successful operation of the university. All staff in the schools have many critical and distinct responsibilities that enhance the university's reputation and national standing. While faculty growth has kept pace with student growth over the last 10 years, supporting staff growth has been slower or stagnant. However, it is expected that about 85 additional supporting staff will be recruited over the PMP period, and a further 43 be recruited due to retirement and redundancies. The annual growth rate forecasted for supporting staff for the period of the PMP period is 2%. This is considered adequate and within the range of national average growth rate. A total of about 85 additional support staff are expected to be on the establishment roll throughout the PMP period, making a total of 249 at the end of the planned period.

C-3 Planning

The effort to prepare SINU long range PMP to meet the future higher educational needs of the country over the next two decades is entitled **Vision 2032**. As part of this "visioning" process, the PMP 2012-2032 and Infrastructure conditional Survey have formed the core strategy of the Long Term Development Plan.

In addition to the identification of academic and space needs, the PMP embodied several key elements for changes to the physical development of Panatina, Ranadi and Kukum campuses. Some of the common ideas adopted for the PMP vision that emerged from its consensus-building process include:

- The most highly valued asset of the campuses are their magnificent natural setting, which should be the focus of campus spaces and their pattern of circulation and use.
- Views of the mountain and countryside by Panatina and Kukum campuses, and sea by Ranadi campus should be an integral part of the design of both indoor and outdoor spaces.
- All the campuses' academic disciplines and activities should be bundled together in a coherent and logical system of open space and circulation. This is essential for promoting a campus-wide interdisciplinary awareness and connecting the various components of campus life.
- The pedestrian environment depends upon the efficient use of central and perimeter parking and pedestrian circulation should be well connected to destinations.



- The design of buildings should make the campuses a more pleasant and easily understandable place for visitors.
- All the campuses' spectacular natural setting and views, should not be compromised by inefficient buildings, old conset-buildings, temporary structures, or surface parking.
- The campuses should have a positive relationship with Honiara Township and near-by residential, and commercial development such as that of Panatina plaza, and natural areas such as the golf course fronting Panatina campus.

Through this visioning process, it is concluded that most of existing campuses' development does not accurately reflect these values, in many cases funding from donors and implementation processes focus so narrowly on individual buildings that important overarching goals are either ignored or forgotten. The inevitable result has been a collection of individual structures with little overall order or consistent quality.

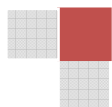
This PMP therefore reflects a design strategy featuring clear patterns of common open space that serve as the framework within which individual building projects are subsequently developed. Kukum and Panatina campuses will each have a central administrative focal point, surrounded by a series of school buildings that define the academic needs of each school. Future buildings will create strong, orderly public spaces that will accommodate both academic and support functions. Development limits such as regulating lines will define public spaces and building locations, frame views, and interconnect individual buildings through covered walkways in a coherent campus design. In this way, each development will incrementally contribute to a common vision for the campus.

C-3.1 Current Student Housing

The provision of student housing in all the campus will be an important undertaking by SINU over the period of PMP. Currently, the occupancy rate for all available student beds have been low - estimated at 60% overall. Reason being that very few sponsors agreed to pay for boarding fees as well as tuition. Only school of Education has higher occupancy rate for in-campus students. Available student bed in all campus are as follows: kukum 200, Panatina 505, Ranadi 96. Assessment of all students hostels and dormitories are as follows:

- **Kukum: 200 student beds.**

	Buildin	Occupants	BLD_CLASS	Location	Uses	Area	Perimeter	Description	
1	K2-05	Boys Dormitory	2	Kukum	Residentia	626.779	117.297	Low Concrete	
2	K2-10	Girls Domitory	2	Kukum	Residentia	857.105	181.528	Low Concrete	
3	K2-13	Girls HOSTEL	2	Kukum	Residentia	269.052	70.0027	Concrete foundation, Wall	
4	K2-13	Girls HOSTEL	2	Kukum	Residentia	552.751	119.003	Concrete foundation, Wall	
5	K2-14	Boys Domitory	2	Kukum	Residentia	511.9	122.544	Low Concrete	
6	K2-14	Boys Domitory	2	Kukum	Residentia	588.987	115.153	Low Concrete	



- **Panatina : 505 student beds**

	Build_No	Build_Clas	Uses	Occupants	Location	Area_m	Perimeter	Description
1	P2-03	2	Residence	Girls Domitory	SICHE	588.893	149.597	Low concrete/2level
2	P2-03	2	Residence	Girls Domitory	SICHE	230.918	68.9904	Low concrete/2level
3	P2-04	2	Residence	Girls Domitory	SICHE	272.013	72.7277	Low concrete/2level
4	P2-05	2	Residence	Girls Domitory	SICHE	327.715	77.1455	Lowconcrete/2level
5	P2-06	2	Residence	Girls Domitory	SICHE	285.914	73.5801	Lowconcrete/2level
6	P2-08	2	Residence	Boys Domitory	SICHE	251.295	70.3411	concrete post timber wall 2L
7	P2-09	1	Residence	Boys Domitory	SICHE	268.569	72.0831	Low concrete/2level
8	P2-10	1	Residence	Boys Domitory	SICHE	272.013	72.5876	Low concrete/2level
9	P2-11	2	Residence	Boys Domitory	SICHE	282.814	74.0204	Low concrete/2level
10	P2-12	2	Residence	Boys Domitory	SICHE	241.552	69.9516	Low concrete/2level
11	P2-14	2	Residence	Boys Domitory	SICHE	269.41	83.3396	concrete post timber wall 2L
12	P2-25	2	Residence	Boys Domitory	SICHE	273.832	71.7304	concrete post timbe wall 2L
13	P2-26	2	Residence	Boys Domitory	SICHE	275.871	86.6152	concrete post timbe wall 2L
14	P2-28	2	Residence	Girls Domitory	SICHE	320.433	86.0119	Lowconcrete/2level

- **Ranadi : 96 student beds**

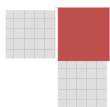
	Code	Occupants	Type	Location	Area	Perimeter	Bld_Type
1	R2-10	Boys Dormitory	11	Ranadi	300.295	82.6982	Residence
2	R2-11	Boys Dormitory	11	Ranadi	245.443	74.879	Residence

C-3-2 Current Housing for Staff

Currently, there are 161 housing units provided by SICHE in the campus. The middle management housing commands the highest share with 37 % or 59 units. Following closely is the junior staff housing category with 19% share or a total of 31 units. The distribution of housing throughout the three campuses shows that Kukum campus commands more than half of the total stock with 55% or 89 units, followed by Panatina with 40% or 65 units, and being smallest with a single department, the Ranadi commands 5% or 7 units of the total housing stock. For the PMP housing needs, it is anticipated that all staff residential requirement will be located at Kukum and Panatina campuses.

Table C-6: SICHE Housing Pool Current (Summary)

Category	Kukum		Patinina		Ranadi		TOTAL
	Total	Classes	Total	Classes	Total	Classes	
Senior Houses	8 Units K3-01 to K3-08	1×Class3 7×Class4	3 Units P3-01 to P3-03	3×Class4	2 Units R3-20 to R3-21	1×Class4 1×Class6	13 8%
Middle Management	25 Units K3-20 to K3-44	17×Class5 3×Class6 4×Class7 1×Class8	34 Units P3-20 to P3-53	31×Class5 1×Class4 2×Class7			59 37%
Junior Staff Houses. (For Ranadi, junior staff	19 Units K3-50 to	5×Class7 3×Class8	7 Units P3-71 to	4×Class8	5 Units R3-40 to	1×Class7 1×Class9	31 19%



and Servants Qtrs)	K3-68	11×Class9	P3-77	3×Class9	R3-44	3×Class10	
Flats, Apartments, Duplexes	8 Units K3-69 to K3-76	8×Class8					8 5%
Labour line Quarters	8 Units K3-81 to K3-88	2×Class9 6×Class10					8 5%
Servants Quarters	20 Units K3-100 to K3-119	3×Class9 17×Class10	19 Units P3-101 to P3-119	4×Class9 15×Class10			39 24%
Transits	1 Unit	1×Class3					1 1%
Science Project Houses			2 Units P3-54 to P3-55	2×Class5			2 1%
TOTAL	89 Units 55%		65 Units 40%		7 Units 5%		161 100%

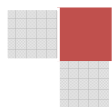
Source: SICHE record

C-3-3 Student Housing programme for the PMP Period 2012-2032

The provision of housing for students for the period of the PMP is dependent on the overall volume of student recruitment, the likely level of sponsorship to take up residency on-campus, and the number of students taking DFL study mode.

Table C-7: Student Housing Need and Construction Phases

STUDENT HOUSING NEEDS AND PHASES								
	Calculation of Housing needs:			Student Beds	Development Phases			
1	Total No. of on-campus students in PMP period (50% day-students)			3163		Period	Development focus	
2	On-campus resident 70% (30% off-campus)			2,214	Phase 1	2012-2015	Transition/takeoff	
3	Total affected by PMP			460				
4	Married quarters (K12, P12.)			24	Phase 2	2015-2020	Full construction & Development	
5	International Students K10,P10			20				
6	Total students housing needs (ultimate)			2,947	Phase3	2020-2032	Full Maturity & Consolidation	
7	Available student beds (K 0, P505, R96)			601	Note:			
8	Need gap in student housing stock Target for PMP (50% of need Gap)			2,346 1,173	Construction is targeted to commence at the beginnings of each phase.			
Distribution based on 2011 enrolment								
9	Panatina (29%)	0.29		340				
10	Ranadi (7%)	0.07		82				
11	Kukum (64%)	0.64		751				
DISTRIBUTION OF DORMS TO CAMPUSES					PROGRAMME FOR CONSTRUCTION OF DORMITORIES			
		No. dorm	Room	Stud/Rms	Total Beds	Phase 1	Phase 2	Phase3
	Panatina	2	24	4	192 B	1		1



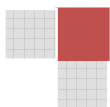
	2	10	4	80	G	1	1	
	6	10	2	120	B/G	1	2	3
	2	10	1	20	IH		1	1
	2	6	1	12	MQ		1	1
TOTAL	14	60		424		3	5	6
Ranadi	1	20	4	80				1
TOTAL	1			80				1
Kukum	4	24	4	384	B		2	2
	4	24	2	192	G	1	1	2
	2	24	1	48		1	1	
	2	16	1	32			1	1
	2	10	2	40	IH		1	1
	2	6	1	12	MQ		1	1
	2	10	2	40		1	1	
TOTAL	18			748		3	8	7
GRAND TOTAL	33			1,252	Stud. Bed	6	13	14
				33	Dormitories			

C-3-4 Current Staff Housing

Currently, there are 161 housing units provided by SICHE in the campus. The middle management housing commands the highest share with 37 % or 59 units. Following closely is the junior staff housing category with 19% share or a total of 31 units. The distribution of housing throughout the three campuses shows that Kukum campus commands more than half of the total stock with 55% or 89 units, followed by Panatina with 40% or 65 units, and being smallest with a single department, the Ranadi commands 5% or 7 units of the total housing stock. 65 staff members occupy rental accommodation in town. For the PMP housing needs, it is anticipated that all residential requirement will be located at Kukum and Panatina campuses. Table C-3 shows the SICHE current housing stock.

Table C-8: SICHE Housing Pool Current (Summary)

Category	Kukum		Patinata		Ranadi		TOTAL
	Total	Classes	Total	Classes	Total	Classes	
Senior Houses	8 Units	1×Class3 7×Class4	3 Units P3-01 to P3-03	3×Class4	2 Units R3-20 to R3-21	1×Class4 1×Class6	13 8%
Middle Management	25 Units	17×Class5 3×Class6 4×Class7 1×Class8	34 Units P3-20 to P3-53	31×Class5 1×Class4 2×Class7			59 37%
Junior Staff Houses. (For Ranadi, junior staff and Servants Qtrs)	19 Units	5×Class7 3×Class8 11×Class9	7 Units P3-71 to P3-77	4×Class8 3×Class9	5 Units R3-40 to R3-44	1×Class7 1×Class9 3×Class10	31 19%
Flats, Apartments, Duplexes	8 Units	8×Class8					8 5%
Labour line Quarters	8 Units	2×Class9 6×Class10					8 5%
Servants Quarters	20 Units	3×Class9 17×Class10	19 Units P3-101 to	4×Class9 15×Class10			39 24%



	K3-100 to K3-119		P3-119			
Transits	1 Unit	1×Class3				1 1%
Science Project Houses			2 Units P3-54 to P3-55	2×Class5		2 1%
TOTAL	89 Units 55%		65 Units 40%		7 Units 5%	161 100%

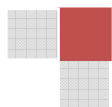
The PMP takes the view that the following strategy for staff Housing will be adopted:

- All staff Housing Development will be constructed at Kukum and Panatina Campuses only. Ranadi residences will be relocated at Panatina campus.
- As far as possible, all staff must be housed in their respective campus place of work, in order to lessen the journey to work place.

C-3-5 Proposed Staff Houses under PMP. Period 2012-2032

Table C-9: Staff Housing Needs and Construction Phases

Needs:								Staff Units
1	Total additional staff target in PMP period							282
2	Total staff on rental off campus							65
3	Total affected by PMP							47
	Total							394
Current stock of Housing:								
4	Available staff units (K 70, P 42, R 1)							113
5	Additional Staff Housing Stock needed (units)							281
6	Total additional forecasted Housing unit. under PMP							281
Distribution based on 2011 staff distribution								
7	Panatina (45%) 0.45						127	
8	Kukum (55%) 0.55						154	
Distribution of Class of staff units based on 2011 classification								
	Total: 281 units	Senior House	Mid Mang	Junior Houses	Flat/apart	Labour Line	Ser. Qtr	
	Total	8%	37%	19%	5%	5%	26%	Total
	Panatina 45%	10	47	25	6	6	33	127
	Kukum 55%	12	56	30	7	8	41	154
	Total units	22	103	55	13	14	74	281
PROGRAMME FOR CONSTRUCTION OF HOUSING UNIT:								
Panatina:								
	Phase 1	3	15	8	2	2	11	41
	Phase 2	3	15	8	2	2	11	41
	Phase 3	4	17	9	2	2	11	45
Kukum:								
	Phase 1	4	18	10	2	2	13	49
	Phase 2	4	18	10	2	2	13	49
	Phase 3	4	20	10	3	4	15	56
154								
Note: All construction work is targeted to commence at the beginning of each phase.								

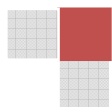


C-3-6 Classrooms and Academic Spaces

The PMP envisages that throughout the 20 year time-frame the university will add about 8,350 sq.m of new classrooms, workshop and laboratories, which is about 50% of the current total area. Table C-6 shows the current and proposed distribution of academic spaces to the three campuses.

Table C-10: Summary classrooms and academic space needs for the PMP period

Campus	Current available net usable floor area (sq.m)	2012-2032 additional effective space requirement (sq.m)	Total (sq.m)
Panatina campus	6,065.14	3,201.21	9,266.35
Ranadi campus	1,720.70	1,780.70	3,501.40
Kukum campus	8,917.67	3,360.00	12,277.67
Total	16,703.51	8,341.91	25,045.42
Summary of Class room Development			
School of Education and Humanity	<ul style="list-style-type: none"> • Dept. of Education -2 more classroom blocks, and Lecture theatre. • Dept of Arts and culture – 2 lecture rooms, one arts room, one amphitheater. • Dept. of Communication & Media, One classroom and a media centre. 		
School of Nursing and Health Science	<ul style="list-style-type: none"> • Dept. of Nursing will need to convert 2 dormitories to classroom block 2 levels • Dept. of Public health will convert 1 dormitory to classroom block 2 level 		
School of Technology and Mari-time Studies	<ul style="list-style-type: none"> • Dept. of Trade will build 4 classroom blocks and admin centre. • Dept. of Marine will build a workshop for Marine engineering & a classroom block for Fisheries study. 		
School of Natural Resources and Applied Science	<ul style="list-style-type: none"> • The school will build a classroom block to house environment, fisheries and agriculture (2 level) • A science lab will be constructed • A computer lab be constructed • A staff office block to contain 12 offices be constructed. • Renovation of all classrooms and tutorial rooms and building. • Environment and science department to responsible for setting up a botanical garden at the back of the school. • Commence investing in the development of Aruligo farm site. 		
School of Business and Hospitality	<ul style="list-style-type: none"> • Dept. of Finance and administration to have another classroom equivalent to the current one. • Dept. of Tourism to complete new building construction and run courses, It is considered that the academic space is adequate for the PMP period. 		
General	<ul style="list-style-type: none"> • Another lecture theater will be constructed • A new library be constructed, • New renovation of old library to be used for IT centre. • New administration block for the Directorate. 		



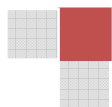
The programme for construction of classrooms and other academic spaces will be worked out under a development programme for each School following the approval of this PMP, plus a budget framework for each project component. A shorter version of the implementation of the PMP is to be formulated as part of the strategic plan for the next three years. As an example of this methodological approach, presented below for School of Natural Resources and Applied Science (Table C-7 and Table C-8) below, is series of listing of building programme for the school. Proper listing and prioritization of development programme, to be in tuned with the academic plan for the school is crucial. It is important the each school work out the component under the PMP, spread the development programme over the 3 phases, properly costed work plan and an implementation plan.

Table C-11: List of School Facilities – Classrooms & Offices SNRAS Current

Facilities	Number	Capacity	Status/Condition
Class/Tutorial Room	9	400 Students	Leaf house need maintenance
Computer Laboratory	1	10 Students	Too small
Office Rooms	13	16	Some need repairs
Store Rooms	2	Adequate space	Need repair
Leaf Huts	3	30 students	New
Nursery Shed	1	inadequate	Need repair
Poultry House	2	600 birds	Need repair
Goat shed	1	15goats	Need repair

Table C-12: Future Needs for Facilities for SNRAS (Kukum Campus)

Facilities	Number	Capacity	Status/Condition
Class/Tutorial Room	3	180 students	Need 3 new classrooms
Computer Laboratory	1	60 students	Need a new computer laboratory
Science Laboratory	1	60 students	Need a new science laboratory
Office Rooms	12	12 staff	Need 12 new staff offices
Leaf Huts	7	70 students	Need 7 additional leaf huts
Students Resources Centre (Mini-library)	1	60 students	Need a new students resource centre
Slaughter & Clinical Room	1	25 students	Need a new slaughter and clinical Room for paravet students
Staff Tea Room	1	25 Staff	Need a new staff tea room
Poultry House	1	800 birds	Need one new poultry house.
Goat House	1	15 goats	Need a new goat house
Piggery House	1	10 Sows and a breeding boar	Need a new piggery house
Sheep Shed	1	40 sheep	Need a new sheep house
Nursery Shed	2	4,000 vegetables and crops seedlings	Need a new nursery shed



Store Rooms	2	Adequate	Need to renovate the store rooms
Demonstration Room	1	60 students	Need a new demonstration room
Workshop Room	1	50 students	Need a new workshop room
Abolition Block with Shower Rooms	2	20 students at one time	Need two new abolition blocks
Kitchen	1	6 cooking pots with an Owen	Renovate current kitchen

C-4 Building and Open space guidelines

C-4-1 Building Heights

It is perceived that the building Heights for academic especially classroom blocks should be 2 stories have to be arranged to create a coherent pattern among all campus buildings with the idea to create a sense of hierarchy to the buildings.

The 3 storey Finance and Administration Classroom block is tallest Building at the Kukum Campus. New construction should be maintained at no higher than this building to safeguard a building line which maintain prominence and aesthetic view from the main road and coastal area of Kukum campus.

C-4-2 Critical Areas

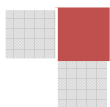
The Physical Master Plan aims to minimize the effects of new construction on neighboring areas off campus. Within the campus, special attention has been given to creating appropriately scaled open spaces and relationships between new and existing buildings. Areas of significant attention to scale issues include:

- the Central Pedestrian Concourse;
- the Campus Entry;
- the student Center.

C-4-3 Ground Level Activity and Reflection to Cultural Heritage

The campus buildings should present an accessible appearance at ground level. Building entries should be oriented to address streets or major spaces. In particular, ground level activities and uses are encouraged around the Central Pedestrian Concourse.

This area should become the campus' central meeting place for large outdoor gatherings. Creating new or enhancing existing building entries and ground level activities that open to the Concourse will aid in creating this sense of vitality and centrality.



Pedestrian movement can also add to the vitality of public spaces on campus. Spaces should be designed to accommodate and encourage pedestrians comfortably.

Walkways within the major open spaces should be of high quality materials, shaded where practical, and equipped with seating and furnishings where appropriate.

Buildings around the major open spaces should also include sheltered pedestrian walkways.

C-4-4 Density and Bulk

Maintaining a “campus” character and image for the site is an important aspect of the Master Plan and the manner in which open space is arranged on the campus is critical in establishing the image to reflect the rich cultures of the country. To ensure that an appropriate proportion of open space and landscape is maintained, it is important to control the density of buildings on campus. At present all campuses have a low density development, and in view of sufficient land availability surrounding the present sites it is envisaged that the current density be maintained, but properly consolidated.

It is important that the Physical Master Plan discourages densification of the whole campus environment as this may diminish the character and quality of prime open spaces, as well as impede views and light available to other buildings.

C-4-5 Rooftop Elements

Rooftop elements such as parapets, and antennas should be carefully designed to ensure architectural compatibility to minimize their visual impact on the skyline. These elements should be integrated into the architectural expression of the building.

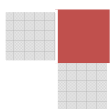
Installation of rooftop antennas, including satellite and microwave dishes, should be carefully considered for location and visual impact. Antennas should be installed at the lowest possible elevation above the roofline, and screened to the extent practicable from public view. Antennas should be set back as far as possible from all edges of the roof.

Antenna and mounting materials should be unobtrusive and of a color that blends with surrounding buildings.

C-4-6 Circulation Guidelines

C-4-6-1 Vehicular

Vehicular access to the Campus is currently achieved by means of two existing entrances; the staff and visitor entrance located along the main highway. None of these entrances are anticipated to require traffic signals to control traffic flow to and from the campus.



C-4-6-2 Parking

The existing parking areas will be maintained and new parking areas will be distributed within the campuses. At the moment the level of car ownership is low, thus available car space is sufficient. In anticipation of university status and the higher caliber staff it is expected that car ownership will increase.

Parking for the campus population anticipated by the Master Plan should be properly identified and accommodated in the properties that are planned to be acquired to enhance security. As a general rule, the minimum standard ratio will be 1 parking space per 5 staff. For students it will be 1 car parking space per 50 students. Provision of car parking lot will be targeted to this minimum standard ratio.

Planting areas should be located between parking rows and interspersed between parking spaces to provide visual relief and create shade where possible.

C-4-6-3 Service

Some commercial trucks would be allowed to enter the site through the service roads which may be closed off to general public. This is where they would drop off deliveries and/or pick up materials from buildings such as the IT building and libraries.

C-4-6-4 Emergency Vehicle Access

All campus buildings should be accessible for emergency vehicles, like the fire department vehicles, thus road and parking design must also facilitate this requirement,

- ⇒ the Pedestrian Concourse shall be designed to allow emergency vehicle traffic. Other landscape elements or covered walks shall not impede emergency vehicle access.

C-4-6-5 Access for Persons With Disabilities

This has to comply with international standards.

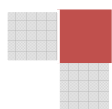
C-5 Site performance guidelines

C-5-1 Building Character/Materials

Future development should exclude prefabricated buildings and exterior metal siding, as these promote an industrial impression that is contrary to the academic institutional setting noted above.

C-5-2 Landscape Design and Planting Criteria

Shows the proposed Landscape Concepts and Planting Patterns for the SICHE/SINU .Campus. Landscaping for the campus should be developed to enhance the basic goals of the Physical Master Plan.



C-5-3 Planting Patterns and Scale

The size of trees, shrubs, and plant beds should be considered with respect to their scale relationship to the campus buildings, roads, and spaces. In general, plantings should be simple and conceived in broad masses.

In addition, there should be a hierarchy of plantings, ranging from tree and/or shrub massing along roads, entries and in parking areas, down to small garden scale plantings and floral display beds in courtyards and pedestrian gathering areas.

Plants selected for use should be of indigenous or native species, possess appropriately long-lived characteristics and have visual traits that offer refined intrinsic beauty to reflect the enduring quality of the institution. The overall design of the campus planting should be simple and seek to evoke a mood of tranquility to complement the existing natural and surrounding plantings. It is also recommended that the use of fruit trees be encouraged to create an uplifting campus environment for visitors and employees. important when considering shrubs. Shrubs should be planted in arrangements that allow for their natural shape to be retained through periodic renewal pruning.

Tree pruning should start early in the life of campus trees to ensure that a proper form is established and that the canopy is promoted and trained to a sufficient height to provide clear visibility beneath trees for autos and pedestrians and adequate light to lawn areas.

C-5-4 Buffers and Perimeter Screening

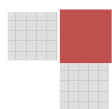
The long term objective for improving the perimeter landscape areas should be to enhance the campus' relationship to the surrounding . Perimeter shrubs and grasses can help to mediate the uninviting qualities of perimeter fences and crash barriers required by current security standards. At the same time these plantings would provide environmental benefits including enhanced storm water management, erosion control and increased species diversity. Any landscaping in the perimeter areas would require careful study to ensure that campus safety and security is maintained.

C-5-5 Exterior Signage

Most buildings at the campuses are identified by a signs bearing their building number. comprehensive signage and way-finding plan should be developed for the campus, including recommendations for the upgrade or replacement of the existing signage system according to sign type, location, graphic quality, physical condition and maintenance, accuracy of information and adequacy of the amount of signage.

The categories of signage which should be addressed include the following:

- **Orientation** - site maps near the campus entry and area maps in the core of the campus.



- **Direction** - to major campus buildings and areas, both for vehicles and pedestrians. Notations of accessible routes for persons with disabilities.
- **Identification** - campus entry signage and exterior building and place signage.
- **Regulatory/Safety** - traffic and parking control, safety, and warning signage.
- **Information** - public announcements, etc.
- **Interpretive** - campus tour signage, plant species signage, etc.

Signage character should be clearly legible and should be of a quality that reflects the institution and culture of the country. There should be design consistency between all campus sign types. Signage placement should also be carefully considered to avoid visual clutter. Regulatory and traffic signage should be reviewed to determine if more compatible signage designs can be implemented rather than the standard uniform roadway signs which are now used.

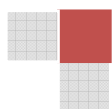
C-5-6 Exterior Lighting

The campus lacks a coordinated lighting scheme. A Street lighting system is to be installed as recommended by the electrical engineer. All general campus lighting (at the major pedestrian framework and entries) should be of a single fixture type. Individual building projects may continue to differentiate fixture types for buildings and surrounding area lighting, within a style complementary to other campus lighting. Consideration should be given to including solar powered fixtures where practical. Categories of lighting which should be addressed include the following.

- **Street** - *for vehicular safety and general campus illumination.*
- **Pedestrian** - *for pedestrian safety and path marking.*
- **Building** - *to identify building entries and provide security.*
- **Safety/Security** - *for areas of the campus that pose danger or require surveillance.*
- **Signage** - *at major entry locations and for key directional and orientation signage.*
- **Special Features** – *for building or landscape highlighting at special outdoor spaces or monuments.*

C-6 Environment Policy

The Solomon Islands Government is aware of the benefits derived from protecting and managing its environment in a manner that is productive and sustainable. Thus, its environment policy is anchored in the Environment Act 1998, which makes provision for the conservation and protection of the environment. In December 2007, the government created the then Ministry of Environment, Conservation and Meteorology to be responsible for environmental concerns. Increase environmental responsibility has broaden the scope and functions of the Ministry leading to its renaming in 2010, as being the Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM).



The Environmental Act 1998 has supremacy over other Acts as stipulated in article 4 (1) that, *“In the event of any conflict between the provisions of this Act and the provisions of any other Act the provisions of this Act shall, to the extent of any inconsistency prevail.”* Furthermore, the Act as clearly stated in article 3, provides for (a) an integrated system of development control, environmental impact assessment (EIA) and pollution control; (b) the prevention, control and monitoring of pollution; (c) the reduction of human health and prevention of degraded environment by regulating discharge of pollutants to air, water or land, the transport, collection, treatment, storage and disposal of waste and promoting recycling, re-use and recovery of materials in an economically viable manner; and (d) complying with, and giving effect to, regional and international conventions and obligations relating to the environment.

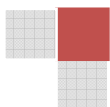
On international front, the Solomon Islands is either a party, or adheres, to a number of multi-lateral environmental agreements that commit the country to various obligations for safeguarding the environment and sustainable resource use including; Convention on Biological Diversity; United Nations Framework Convention on Climate Change; The World Heritage Convention; Convention on International Trade in Endangered Species (CITES); Stockholm Convention on Persistent Organic Pollutants; and, United Nations Convention to Combat Desertification.

The status of Solomon Islands, as a Pacific Islands Forum country (PIFCs), in respect of various key regional conventions and treaties is stated below:

- South Pacific Forum Fisheries Agency Convention 1979;
- South Pacific Nuclear Free Treaty 1985;
- Convention for the Protection of Natural Resources & Environment of South Pacific Region Entry into force 1990;
- Kyoto Protocol on Limiting Greenhouse Gas Emissions 1992;
- UN Framework Convention on Climate Change 1992;
- UN Convention on the Law of the Sea 1994;
- Agreement for the implementation of the provisions of the Convention relating to conservation and management of straddling fish stocks and highly migratory fish stocks 1994;
- Waigani Convention on Hazardous & Radioactive Wastes 1995; and
- Convention for the Conservation and Management of Highly Migratory Fish Stocks in Western and Central Pacific Ocean 2000.

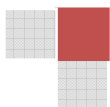
At the national level, the Solomon Islands has completed a number of studies, reviews and assessments on different areas of environmental concerns, with aim to strengthen its capacity and create an enabling environment to better manage and protect its environmental resources; these studies and reviews includes but not limited to the following:-

- Initial National Communication 2004;
- National Transport Plan 2006-2007;
- National Capacity Self Assessment 2007;
- Solomon Islands Protected Area System 2008;
- National Adaptation Program of Action 2008;



- National Biodiversity Strategic and Actions Plan 2009;
- National Environmental Management Strategy 2009;
- National Disaster Risk Management Plan 2010;
- National Waste Management Strategy 2010;
- National Authority for the Clean Development Mechanism (Cabinet endorsed) 2011;
- Second National Communication 2011; and
- Solomon Islands National Climate Change Policy 2012.

Fundamental to this PMP is the need to comply with the environmental policy of the government. It is highly recommended that SICHE / SINU do pay a special attention to the provisions in the Environmental Act and its Regulations, as well as related legislations, conventions and studies the government has established. Central to this recommendation is the environmental sustainability of PMP in providing an enabling environment for students and staff within the campus.



Chapter D Land Use and Development Vision - 2032

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D LAND USE AND DEVELOPMENT VISION 2032

D-1 Land Use and Development

The SICHE/SINU Long Range Development Plan -PMP encompasses the physical development, Land use, transportation systems, open space areas and infrastructure needed to achieve the academic goals of the three campuses through the year 2032. This anticipated need for buildings and facilities total 8,342 sq.m, 973 additional bed spaces for students and 386 housing units for staff. Transportation improvements include about 2 km new road segments for Kukum and Panatina campuses and new surface lots for parking. Open space and recreational facilities would be improved and expanded including major civic space improvements on Panatina and Kukum campuses, two new fields and a couple of new recreational facilities on Kukum campus. As the campuses grow, utilities and infrastructure would be expanded and improved, including upgrading the surface storm-water management at Kukum.

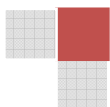
Each section of this development plan addresses the consistency of campus development with the policies spelt out in the framework, and requirements of legislations especially the Town and Country planning Act, and the Environment Act, demonstrate that applicable legislations and policies are consistent.

The Long Term Development Plan – PMP supports the academic goals of the SINU by providing the physical framework for academic planning, space management, physical planning, and sustainability. This framework is also the basis for the development of basic land use categories and their location across campus properties.

D-2 Vision 2032

The vision for the campus in 2032, shown in all the proposed campuses' proposed land use plans, is one illustration of how SICHE can develop a great physical campus. The underlying grid of buildings and open spaces is aligned with major view corridors and more efficient building sites are created by removing old and outdated temporary buildings. This allows for more coherent system of open space based on hierarchy of major and minor public spaces with buildings carefully arranged along major pedestrian corridors and walkways. Clearly defined development zones are created by combining the campus grid, open spaces and areas for circulation and parking. Each building project would add elements of the plan to incrementally implement the overall vision.

Important land use activities on the three SICHE campuses can be best described under five categories including academic, social, residential, livelihoods and greens. Overall, these main groups of land use activities are presently established randomly in all three campuses. The following sections describes current land use activities as well highlighting the proposed activities deemed potentially possible as improvements.



D-3 Existing land use activities

D-3-1 Academic

Land use activities under academic category include classrooms, lecture theater, library, offices of directorate, schools and support services, farmland, workshops and special structures, e.g. wharf, nursery, copra and cocoa dryers and other teaching aid. Each school has been allocated an area on which certain number of classrooms, offices and specialized structures to aid teaching were built. There is no particular standard design of buildings to reflect on the status of a high learning institution, nor is any arrangement or physical planning of the campuses that would really show off this effect.

D-3-2 Social

Under the social category, land use activities include sports fields, medical clinic, kitchen and dining facilities, amenities, recreational centre (pavilion), security fencing and road infrastructures. These land use activities vary between campus in terms of their size, number and availability. For example, a medical clinic and a pavilion is only available at the Panatina campus, and while Ranadi campus is fenced, Panatina is partly done but Kukum campus is not fenced. Panatina campus has two sports fields, while Ranadi and Kukum have one each. Network of local roads are more extensive at Kukum and Panatina than Ranadi. Further, there is virtually no designed footpath or walkway from one building to another nor an overhead cover between buildings to provide protection from rain.

D-3-3 Residential

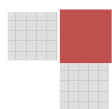
This category involves mainly land use activities such as students accommodation complexes, staff residential buildings and backyard activities such as local kitchen, recreational hut and food and ornamental gardens. Each school has students accommodation complexes and residential quarters. Most staff residential quarters and backyard food and ornamental gardens are located at Panatina and Kukum campuses and also interspersed with academic compound.

D-3-4 Livelihoods

This category of land use activities include food gardens and other income generating activities to sustain peoples' livelihoods such as small scale poultry farming either operated by SICHE staff or illegal settlers and surrounding settlements. These activities are scattered throughout, are especially extensive at Panatina and Kukum campuses and appear to be uncontrolled at the present time.

D-3-5 Greens

These are the vacant spaces or undeveloped areas within the campus. Approximately more than 60 % of the total land area of SICHE is undeveloped. Prior to developing the PMP, there is no known plan by SICHE to fully utilize the vacant space it has.



D-4 Panatina Campus Propose Physical Development

The propose land use development will ensure improvements in the existing land use activities discussed under section D3. Improvement plan will be implemented under three areas: (a) maintaining and renovation; (b) conversion, demolition and relocation; and (c) new designation and construction.

D-4-1 General land use attributes

The following improvements is considered for Panatina campus, refer to layout details in Figure D-1:-

- *Maintaining and renovation* – the following structures will be maintained in their current location, and where appropriate should undergo renovation work.
 - ⇒ Except where identified all classrooms will be maintained at their present locations and renovated where appropriate.
 - ⇒ Except where identified all residential quarters will be maintained at their present locations and renovated where appropriate.
 - ⇒ Except where identified, all local road networks will be maintained at their present location and rehabilitated where appropriate.
 - ⇒ Maintain environmental sensitive areas including creeks and steep slopes
- *Conversion, demolition and relocation* – the following structures will be demolished and relocated from their current location.
 - ⇒ Demolition and relocation of staff quarters at the western end of the pavilion
 - ⇒ Closure of certain section of local roads.
- *New designation and construction* – the following structures will be a new designation and construction within the campus.
 - ⇒ CSU to be relocated to MEHRD and building allocated to DFL
 - ⇒ New local road network and drainage system to be constructed.
 - ⇒ Open theatre.
 - ⇒ New classrooms constructed.
 - ⇒ New office buildings constructed
 - ⇒ New residential buildings.
 - ⇒ New walkways constructed.
 - ⇒ New fencing constructed.
 - ⇒ Car parking area constructed
 - ⇒ New commercial centre established.
 - ⇒ Green park to be established.
 - ⇒ Swimming pool constructed

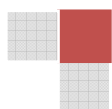


Table D-1: Panatina propose landuse plan

No.	Landuse type	Area (ha)	% of land area
1	Recreation	4.68	9.91
2	Staff Housing	13.26	28.06
3	Student Housing	3.17	6.70
4	Academic Space	6.43	13.61
5	Environmental Sensitive Area	6.72	14.22
6	Open Space	5.37	11.37
7	NOT Designated	7.63	16.14
Total area:		47.26	100.0

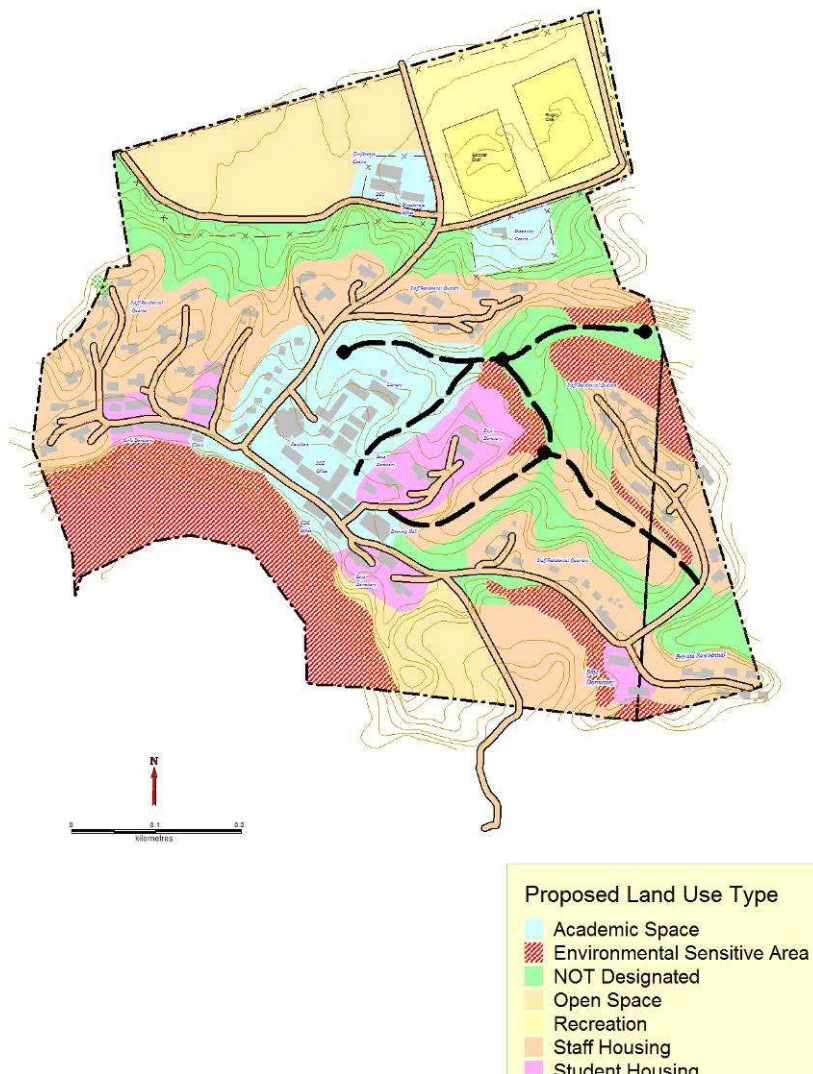
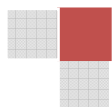


Figure D-1: Propose Land Use zoning at Panatina campus



D-4-2 Student centre

The site chosen for the student centre at Panatina campus is the most prominent site on the campus. It is going to be the centre for attraction for both staff and students with all necessary facilities. The centre will create a grand entrance from the road. It is going to be designed as a mall with two corridors becoming a pedestrian street facing the central open space. The centre will have a cafeteria or small restaurant, a small shop, a conference facility, an outlet for ATM machine, a bookshop, an amusement centre, an internet café and a clinic. It is expected that properly selected client to run each specialised facility.

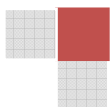
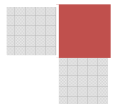




Figure D-2: Proposed Physical Master Plan for Panatina campus



D-5 Ranadi Campus Propose Physical Development

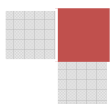
D-5-1 General land use attributes

The following improvements is considered for Ranadi campus, refer to layout details in Figure D-2:-

- *Maintaining and renovation* – the following structures will be maintained in their current location and where appropriate should undergo renovation work.
 - ⇒ Maintain and renovate wharf as appropriate.
 - ⇒ Maintain staff recreational area and facilities and renovate as appropriate.
 - ⇒ Maintain residential quarters at the western end of the campus.
 - ⇒ Maintain environmental sensitive areas including coastal strip.
- *Conversion, demolition and relocation* – the following structures will be demolished and relocated from their current location.
 - ⇒ Demolition and relocation of staff quarters at the southeast end of the campus
- *New designation and construction* – the following structures will be a new designation and construction within the campus.
 - ⇒ New classroom fisheries program
 - ⇒ Install new marine engineering facilities
 - ⇒ New entry and exit within campus
 - ⇒ Local road network and drainage system to be constructed
 - ⇒ Upgrade exist classroom into two storey
 - ⇒ Construct permanent coastal protection including greenbelt
 - ⇒ New walkways constructed
 - ⇒ Green park to be established.

Table D-2: Ranadi propose landuse plan

ID	Landuse type	Area (Ha)	% of land area
1	Sports and Recreation	0.63	22.7
2	Staff Housing	0.25	9.1
3	Environmental Sensitive Ar	0.42	15.2
4	Academic Space	1.48	53.0
Total area:		2.79	100.0



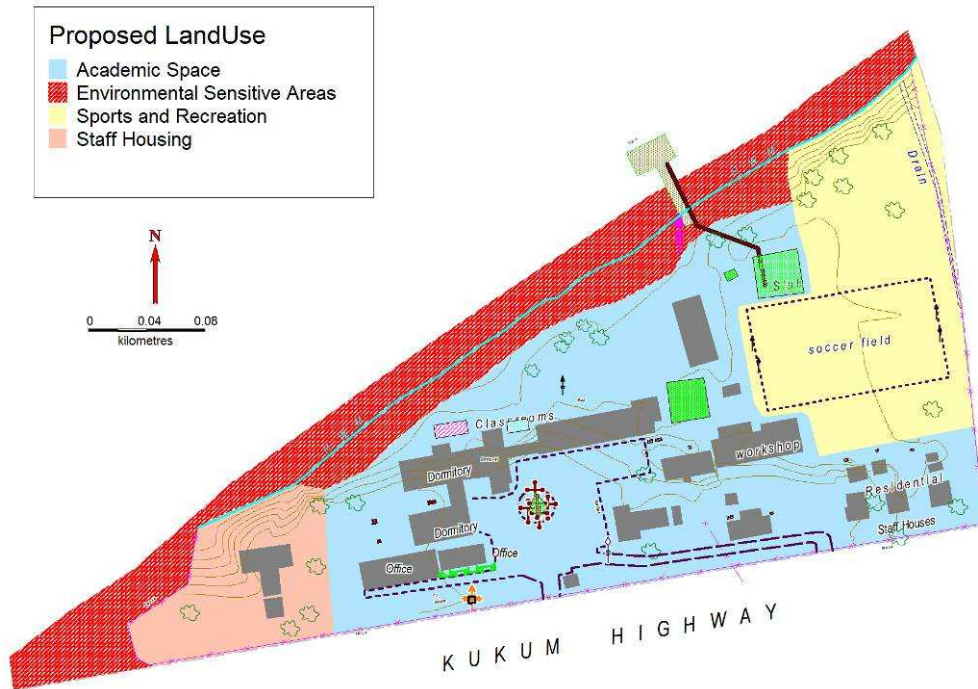
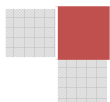


Figure D-4: Propose Land Use zoning at Ranadi campus

D-5-2 Student centre

The site chosen for the student centre at Ranadi campus is at the sea frontage of the campus. It is going to be the centre of attraction for both staff and students, but more towards recreational and leisure than any normal centre activities. At the moment it has a series of small huts and an outlet packed in a clustered development, centred around beach attraction and the lovely scenery of Honiara and the Iron Bottom Sound. The lovely beach at the front provides a sense of relaxation with nature. The centre will provide a centre where students and staff mix after hours. The centre will have a barbeque shed, a bar, a series of entertainment and amusement facilities and seats. It is expected that staff and students from the other two campuses will use the student centre.



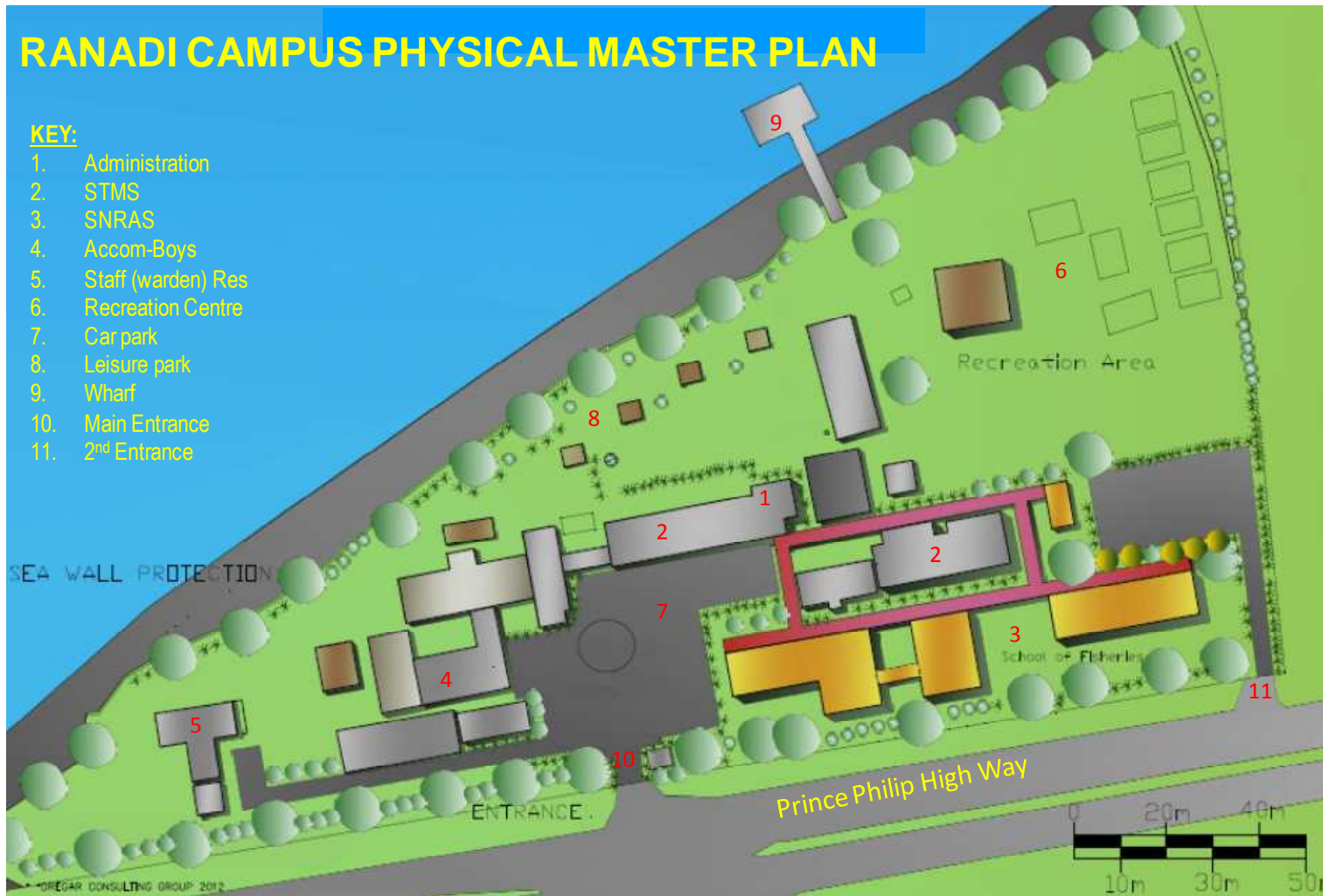
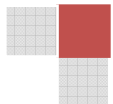


Figure D-5: Proposed Physical Master Plan for Ranadi campus

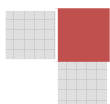


D-6 Kukum Campus Propose Physical Development

D-6-1 General land use attributes

The following improvements is considered for Kukum campus, refer to layout details in Figure D-3:-

- *Maintaining and renovation* – the following structures will be maintained in their current location and where appropriate, should undergo renovation work.
 - ⇒ Except where identified all classrooms will be maintained at their present locations and renovated where appropriate.
 - ⇒ Except where identified, all residential quarters will be maintained at their present locations and renovated where appropriate.
 - ⇒ Except where identified, all local road networks will be maintained at their present location and rehabilitated where appropriate.
 - ⇒ Except where identified, all classrooms will be maintained at their present locations and renovated where appropriate.
 - ⇒ Maintain environmentally sensitive areas including creeks and steep slopes
- *Conversion, demolition and relocation* – the following structures will be demolished and relocated from their current location.
 - ⇒ Demolition and relocation of staff quarters between SHSM and SCHS, and that of SID.
 - ⇒ Relocation of students accommodation.
 - ⇒ Conversion of students accommodation into classrooms.
 - ⇒ Conversion of existing library building to ICT house.
 - ⇒ Diversion and closure of certain section of local roads.
 - ⇒ SNR farm to be relocated further inland.
 - ⇒ Existing malaria staff house to be transferred to SICHE.
- *New designation and construction* – the following structures will be a new designation and construction within the campus.
 - ⇒ New library to be constructed.
 - ⇒ Second lecture theatre to be constructed.
 - ⇒ New classrooms constructed.
 - ⇒ New Office buildings constructed.
 - ⇒ New residential buildings constructed.
 - ⇒ Student center to be constructed.
 - ⇒ New Administration Complex to be constructed.
 - ⇒ Shopping mall to be constructed.
 - ⇒ Sports facilities including fields, gymnasium and lawn tennis court to be constructed.
 - ⇒ Local road network and drainage system to be constructed.



- ⇒ Relocation of marine school residences.
- ⇒ New entry into campus.
- ⇒ Green park to be established.
- ⇒ New walkways constructed.
- ⇒ New fencing constructed.
- ⇒ Car parking area constructed.
- ⇒ Swimming pool constructed.

Table D-3: Kukum propose landuse

ID	LandUse Type	Area (Ha)	% of land area
1	Open Space	3.14	5.6
2	Recreation	3.05	5.4
3	Not Designated	4.97	8.8
4	Student Housing	1.67	2.9
5	Staff Housing	18.46	32.7
6	Academic Uses	12.61	22.3
7	Environmental Sensitive Areas	12.66	22.4
Total area:		56.56	100.0

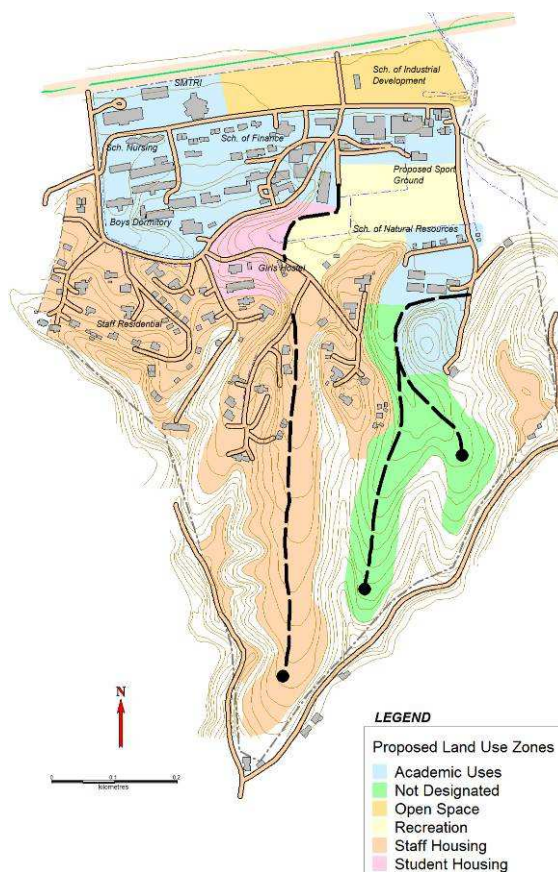
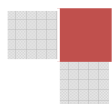


Figure D-6: Propose landuse at Kukum campus



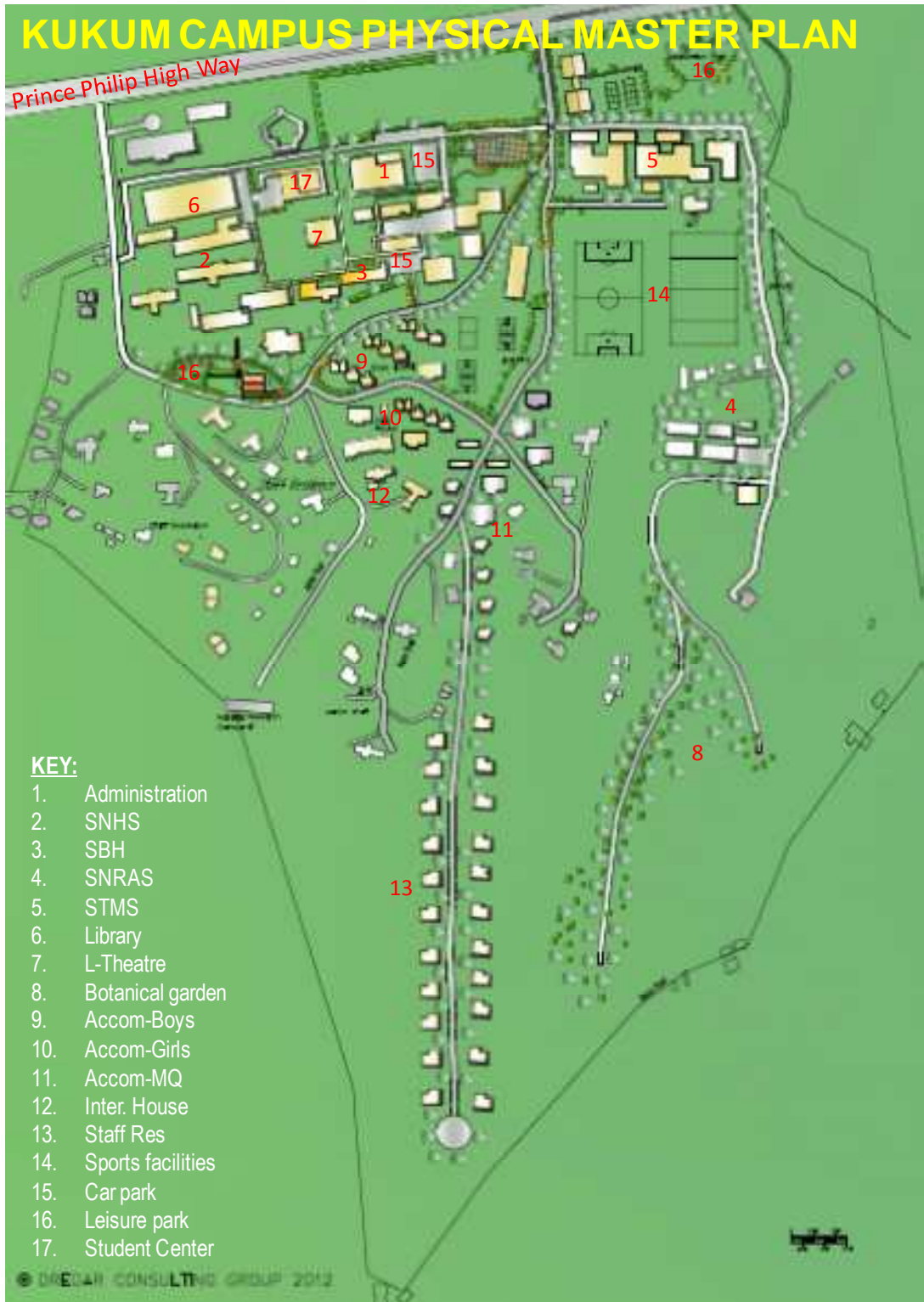
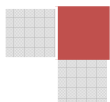


Figure D-7: Proposed Physical Master Plan for Kukum campus



D-6-2 Student centre

The site chosen for the student centre at Kukum campus is one of the most prominent sites on the campus. It situated at the lower part of the campus and on the same road frontage as the administration and the library. It is going to be the centre for attraction for both staff and students with all necessary facilities. The centre will create a grand entrance from both entrances. It is going to be designed as a mall with a pedestrian walkway at the centre. The centre will have a cafeteria or small restaurant, a small shop, a conference facility, an outlet for ATM machine, a bookshop, an amusement centre, an internet café and a clinic. It is expected that properly selected clients will run each specialised facility.

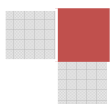
D-7 Environmentally Sensitive Habitat Areas

Solomon Islands is characterized by a high level of biodiversity of flora and fauna. Guadalcanal has two types of forests: lowland rain forests and seasonally dry forest not found in other provinces, in addition to grasslands. The grasslands on north and northwest Guadalcanal including parts of Honiara township appear to be the result of repeated burning preventing the reestablishment of secondary forest; although some locals claimed it to have been present since the time of discovery.

The physical environment of Panatina, Ranadi and Kukum campuses is affected by various development activities occurring in the Honiara township. Consequently, streams, creeks, landscapes, topography, soils and vegetation have been largely disturbed and degraded. Within these three campuses, there are specific features that are environmentally sensitive and require some form of protection to prevent further damage.

At Ranadi campus, there is a heavily degraded lowland coastal forest along the coastline, with few trees of species such as *Calophyllum inophyllum*, *Barringtonia asiatica*, *Terminalia catappa* and *Morinda citrifolia* (or noni) remain standing. Creepers such as morning glory are also found in parts of the coastline. There is need to revegetate and enrich the coastal strip as a measure to protect the campus from coastal flooding and storm surges. Sand mining, which is apparently active at the western end of the campus boundary has resulted in coastal erosion. This activity is of a concern and appropriate measures to stop it immediately should be taken.

A creek is flowing through sections of the southern and eastern boundary of the Panatina campus. In spite of the lack of studies of faunas on this creek, the potential aquatic fauna likely to be present would include species such as the prawns (*Macrobracium rosenbergii*), eels (*Anguilla marmorata*), and fishes (tilapia). Dominant aquatic flora of the creek are water spinach (kang kong), water lilies, *Terminalia* spp., and *Barringtonia racemosa* and other waterlogged-tolerant species such as *Hibicus tiliacea* and mangroves. Human activities are visible including settlements, food gardens and hunting

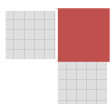


tracks or footpaths; these have already exposed the creek and its resources to undesirable conditions with potential loss of biodiversity and the existing ecosystems.

The environmentally sensitive area at Kukum campus also includes creeks and streams. A stream which flows from the upper Lio creek is adjacent to the campus on its eastern boundary. Two creeks / streams are found within the farmland of the School of Natural Resources. These creeks / streams are useful for agricultural and research purposes and must be protected from abuse and the negative impacts of major construction works in the future.

Other physical environmental features of the three campuses that are sensitive and need care and protection during and after implementing the PMP, include; slopes and ridges. Mitigation measures are necessary to address any arising issues; the following is suggested:-

- Ensure all measures incorporated in specific detail design are implemented;
- Establish coastal protection such as construction of seawalls, embankments and the planting of appropriate salt –tolerant trees;
- All wastes from work sites to be disposed of in approved landfill / areas;
- No wastes to be dumped in or stored close to streams, creeks or the coastline;
- Construction works in areas of creeks / streams and the coast to be undertaken with extreme care;
- Contractor to ensure waste is not discharged to water bodies or streams and that all wastes are disposed of in proper areas;
- Ensure adequate drainage and proper handling of sewage and other liquid wastes to prevent pools that could encourage disease vectors;
- Ensure that any water supply pipelines or other infrastructure services likely to be affected by any form of development be re-routed and/or reinstated;
- If water tables are exposed during construction they must be rehabilitated;
- Avoid clearing activities during rainy season where possible;
- Ensure the use of heavy machinery in aquatic environments is minimized;
- No discharges to streams / creeks, surface waters, intertidal or coastal areas;
- Ensure not to station spoils and stockpiles near the coast, on slopes or within 15m of stream and creeks;
- Emergency Response Plan (as part of EMP) must be prepared by Contractor to cover hazardous materials/oil storage, spills and accidents;
- Ensure chemicals are stored in secure containers away from the coast, surface waters or streams / creeks.

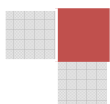


D-8 Requirement of Environmental Act

The compulsory requirement of an Environmental Assessment in the form of an EIA is provided for in article 17 (2b) and article 23 of the Environment Act 1998, generally describing a process of decision making involving environmental consideration. Thus, an EIA forms an integral part of the environmental protection and conservation system. The Solomon Islands EIA Guidelines for Planners and Developers, which was first produced in May 1996, pre-dates the Environment Act and is not legally binding then. However, the guidelines were subsequently revised in 2008 with further revision and subsequently adopted in April 2010. The guidelines are focused on the processes and procedures involved in the EIA and providing explanations of step and responsibilities. While the guidelines attempt to serve as a stand-alone reference document for handling EIA, it does not attempt to address or discuss the full range of issues potentially involved with EIA.

An EIA is mandatory for the prescribed developments listed in the Second Schedule of the Act. All prescribed projects require a simple assessment through a “screening” or “scoping” to see what form of additional assessment is required. Most prescribed projects require a public environmental report (PER), while many major projects such as logging, mining, large scale tourism developments and infrastructure projects will also need a second stage of appraisal which include; technical, economical, environmental and social investigations presented in an EIAS or environmental impact statement (EIS) report.

In respect to the physical development of SICHE / SINU, the expected activities will include potentially all forms of developments that were listed in the Second Schedule of the Environment Act. Because the PMP has various major subprojects, there would be need (if any) to carry out a specific EIA for each subproject.



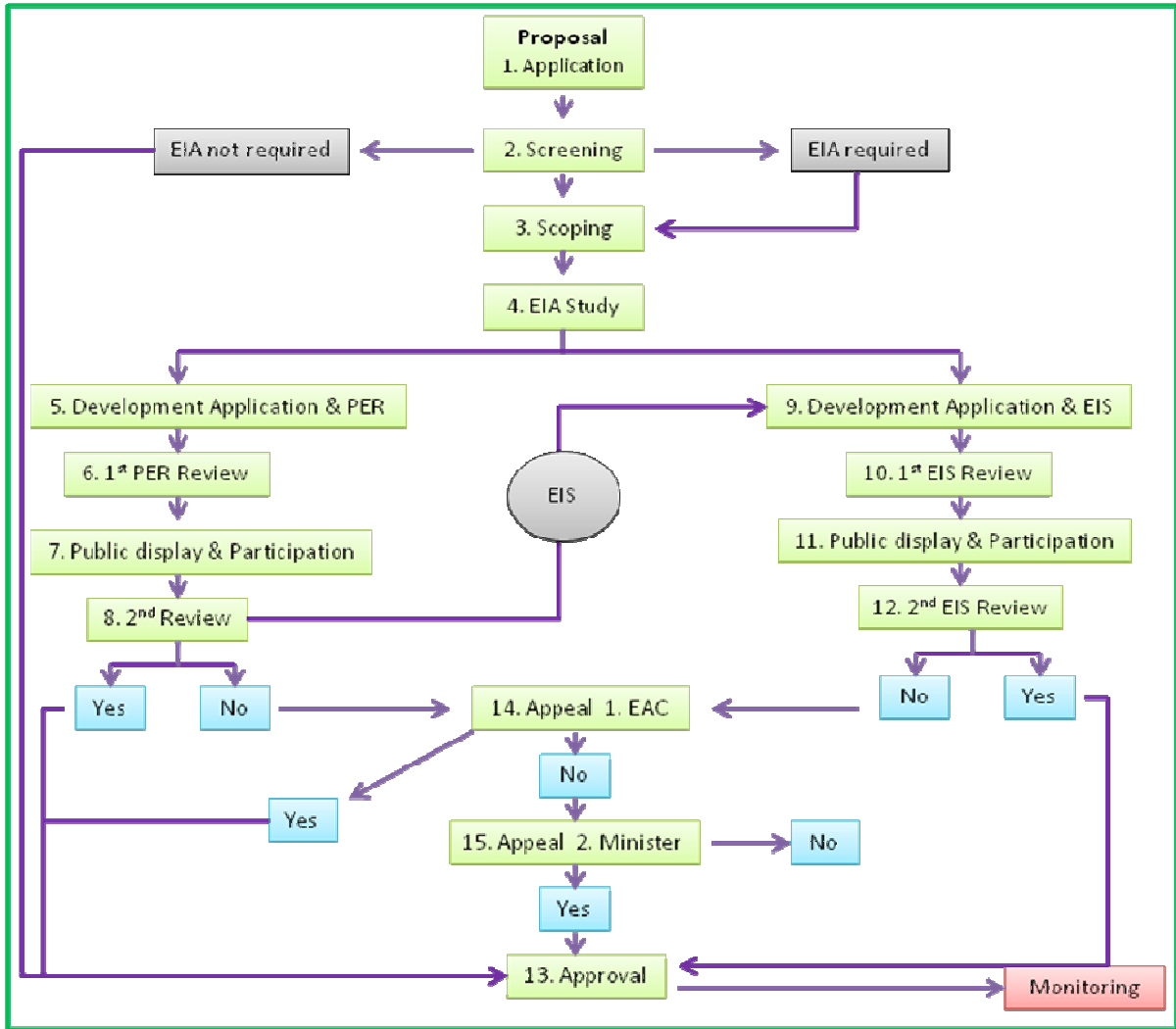
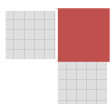


Figure D-8: EIA steps and procedures

As initial requirement under the Environmental Act, SICHE / SINU will need to carry out an IEE to provide a snapshot assessment of potential environmental impacts of the proposed physical development and ensures that any potential impacts of major physical developmental activities are managed at acceptable standards to avoid, minimize or mitigate real and potential negative impacts with the purpose of maximizing positive environmental effects.

In addition to the Act, there are provisions in the Environment Regulations 2008 which require developers to comply with. For instance, Regulation 12 (1) stipulates the “Criteria for issuing a Development Consent” to any developer. And in Regulation 12 (2) stated that no development consent will be issued if all of the criteria specified in Regulation 12 (1) are not met. One of the criteria specified in Regulation 12 (1) is the need for an EIA on prescribed developments as contained in the Second Schedule, Section 16 of the Act. There is also provincial regulation promulgated under the Provincial Government Act 1997 that provides for provinces to create their own legislation in



respect of environment and conservation; as well as the provisions of the Town and Country Planning Act.

D-9 Requirement of Town and Country Planning Act

The Town and Country Planning Act (Cap 154) is the primary legal mechanism for the regulation of planning matters at both the national and provincial level. The objective of the Act is to provide for the control and management on planning for urban area development. The Act provides for the following:-

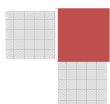
- ensuring that land in Solomon Islands is developed and used in accordance with properly considered policies based on sufficient information to promote the welfare of the inhabitants of Solomon Islands and others who resort thereto;
- promoting the welfare of people including the preservation or creation of an environment proper for their needs; and
- ensuring that there is proper integration and coordination in the development of land in Solomon Islands.

The Act is administered through the Physical Planning Division of the Ministry of Lands, Housing and Survey. The Act was amended in 1982 to devolve the physical function to the Provincial Assemblies and the Honiara City Council. Under the amendment, each province is to have its own Town and Country Planning Board. Besides being responsible for the preparation of a local Planning Scheme, the Board has wide powers to control development of land in its area.

Development is defined in the Act as the carrying out of building, engineering, mining or other operations in, over or under any land, or the making of any material change in the use of any buildings or other land. The Board does not have any power over customary lands. The powers of the Minister are prescribed, one is his power to give general direction to the Board. There is a right of appeal from the Board to the Minister.

Part III of the Act provides for a Local Planning Scheme with purpose to:-

- assist in securing orderly development in the interests of the health, amenity, convenience and general welfare of the community;
- indicate the general principles upon which development in the area will be promoted and controlled;
- assist in the selection of, or to define sites for particular purposes, whether by the carrying out of development thereon or otherwise;
- protect features or areas of social, historical, scenic or architectural importance;
- safeguard routes for highways, pipelines and other services; and
- indicate the stages by which development should be carried out.



A number of physical and infrastructure development proposed for the SICHE is subject to the Town and Country Planning Act and may well fall under the local planning scheme, which would require the Minister, on the request of the Honiara City Council or its Town and Country Board to act on the provisions under Part III and Part IV of the Act.

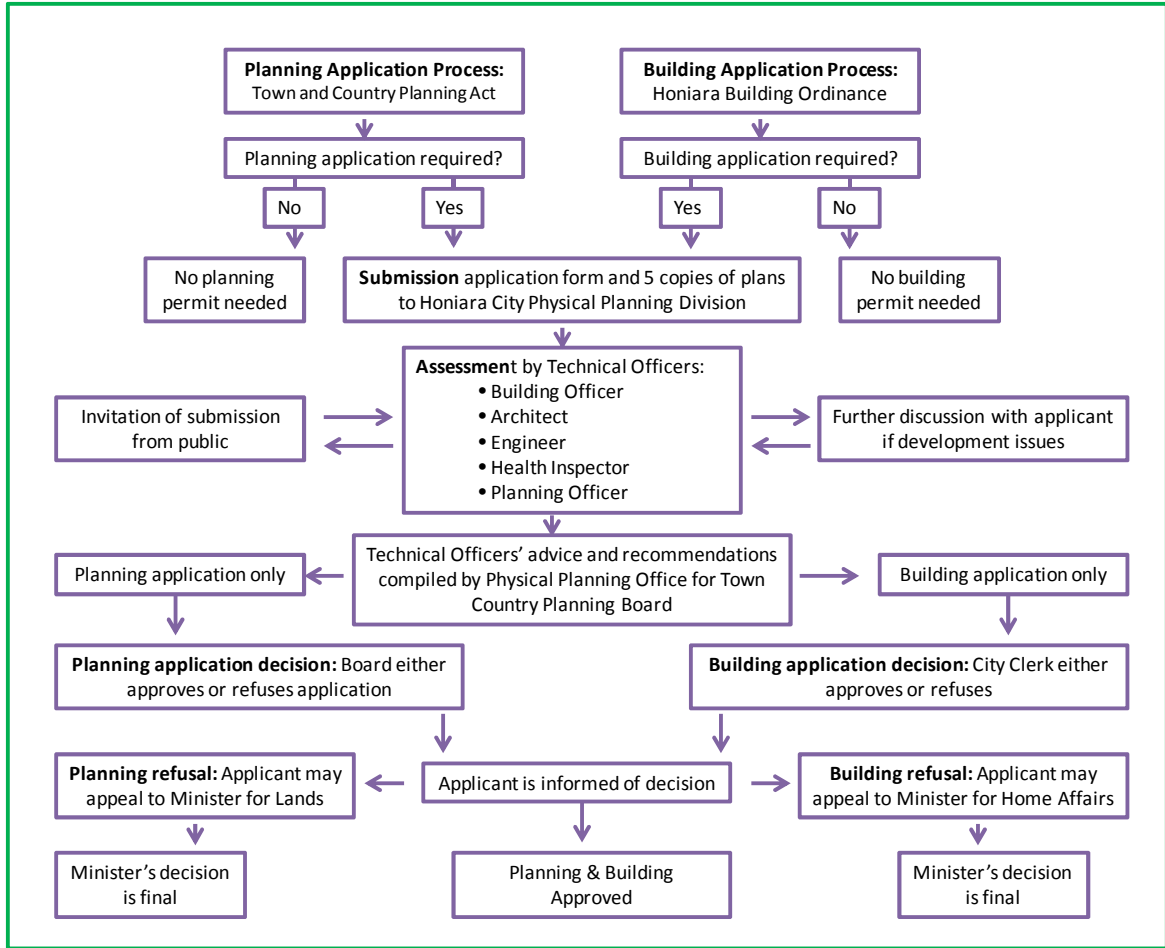
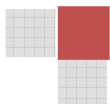


Figure D-9: Application process at Honiara City Council

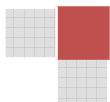
D-10 The management of FOPA Development at Panatina Campus

The 11th Festival of Pacific Arts (FOPA) in Solomon Islands from 1st – 14th July has left a landmark at the Panatina campus. At the western end of the campus field is a number of artificial structures including a cave, a lake, a waterfall, traditional houses, and utility assets such as SIWA pipelines, SIEA power lines and Telekom communication cables. The on-site arrangement of these structures is an attraction of its own and has been proven so during the festival. However, the fate and final destiny of these structures and site must be determined after the FOPA ceases. Obviously, the site, in



addition to the existing structures, has the potential to increase the academic and socio-economic value of SICHE once properly developed.

Ideally, this space should be allocated for business activities of the new university. Among other options considered, perhaps the best one would be to convert the area into a real estate, with high covenant houses for long term lease arrangement. This should generate a steady income for SINU to support its annual budget. The local scenario is appealing, with golf course in the northern end, this would be an attraction for people to stay and enjoy the landscape and vista. The area is also secure, safe and would ensure privacy, with a swimming pool and well maintained leisure park at the southern end of the compound. A shopping mall will be established on the eastern end, providing most household requirements and basic necessities for the tenants.



Chapter E Utilities and Infrastructure

Inside this chapter:

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E UTILITIES AND INFRASTRUCTURE

E-1 Public Utilities and Infrastructures

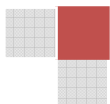
Implementing the SINU's academic plan and the PMP requires new utilities and infrastructure as well as new and expanded academic buildings, housing, road and parking. SINU's public work infrastructure within the confinement of its boundaries include utility lines and related facilities like electric transmission lines and facilities. Portable water, storm drains, roadways and parking lots. Installation of new and replacement of old infrastructures and utility lines are necessary to improve on-campus distribution and reliability. Utility lines are generally located in existing roadways, parking lots, pedestrian corridors, or landscaped areas of the main campus. The main campuses at present are Kukum and Panatina. In addition to replacing and installing utility lines, it will be necessary to replace some of the lateral lines that connect existing building to the trunk system.

E-2 Power supply

Power supply to SINU is through the Solomon Islands Electricity Authority (SIEA). The experience of frequent power cuts in Honiara suggests that SIEA needs a massive reform and rejuvenation in its operation to make it a viable State Owned Enterprise and deliver the demands of Honiara consumers. SINU currently has a small generator with a limited capacity at Kukum but none in Ranadi or Panatina. As part of the PMP, assessment is carried out to determine what requirements are there for maintenance and upgrading of power supplies to all the three campuses. Below is a set of required actions under Table G-1.

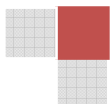
Table E-1 Summary of Upgrade and Maintenance required for all SINU Campuses

1) All Panatina Residential Houses needs upgrading of earthing system
2) SIEA open line at Panatina Campus along Sasake Road needs upgrading as it is very low and needs changing to ABC LV XLPE conductor
3) House N0. K3-100 new lighting required, new GPO outlets required
4) K3-02 new earthing to be installed, new Main switchboard (MSB) required, new lights
5) K3-81 MSB required, new earthing
6) R3-42 New Entry Point required
7) R3-44 New Entry point required
8) P3-27 Rusty Meter Box
9) Dinning Mess Upgrade Main Aerial Service Line to 25sq.mm Three Phase Main Cable
10) K3-25 Change Entry Point, New Fuse or circuit breaker for Meter Box, Change MSB, New Lights required, New Fans
11) K3-33 Change Entry point, Change MSB,, New Lights, New Fans
12) K3-06 Change MSB, New Lights, New fans
13) K3-66 Change MSB, New Lights
14) K3-67 change MSB, New Lights, New Fans required



15) K3-110 Change Entry Point, new lights, safety standard poor
16) K3-109 Change lights, wiring cable damaged
17) K3-113 Change entry point
18) P3-72 Meter hanging loose
19) P3-29 New Entry Point needed, Meter Box no cover and not safe
20) P3-75 Need new entry point
21) P2-08 Change MSB
22) School of Education Building needs upgrade of Mains cable to 25sq.mm three phase XLPE conductor
23) Art & Craft Room needs new entry point
24) P3-112 Needs new entry point
25) P3-48 Needs new entry point
26) P3-36 New Earthing required not safe
27) P2-09 Change MSB
28) P2-10 Change MSB
29) P3-34 Change entry point
30) P3-49 Replace meter box and entry point
31) Upgrade meter box and entry point
32) P3-47 change entry box, change fans
33) P3-109 needs new entry point
34) P3-41 needs meter box, rusty and no cover
35) P3-32 Entry Box needed
36) P3-33 Entry box needed
37) P3-45 Meter box rusty and no earthing, needs replacement
38) P3-36 Needs new entry point
39) P2-04 No earthing thus needs replacement
40) Hostel P2-14 Needs new entry point
41) P3-74 needs new meter box
42) P3-101 New earthing system required
43) P3-58 Unsafe wiring and needs new earthing
44) SID - Kukum Marine Engineering GPO Fixtures too old, Air-con to be replaced, Safety Standards needs upgrading as too old building roof leaking, tools too old
45) SID – Kukum Carpentry/Joinery GPO too old needs replacement, Standard of wiring needs upgrading.

The costing of all the actions will need to be made at the time of implementation. Budget under the capital budget proposed and need to be proposed and approved preferably under Phase 1 of the PMP.



E-3 Water

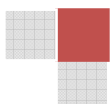
E-3-1 Current Situation

The conclusions derived from the conditional assessment are as follows:

1. The water demand of Honiara city in total out-matches the current water supply capacity SIWA is able to provide through its current water sources and network. While the current Honiara water demand (design) is now 30,587m³/day, the current SIWA water sources are only capable of supplying 27,241m³/day. With every good operating water supply system, yet there will be a quantity of non revenue water. A maximum acceptable level of non revenue water is within the vicinity of 20% which reduces the effective water availability to 21,973M³/day. To meet the current Honiara water supply demand, with a good operating water supply system, SIWA would need an additional 8,614M³/day. It is clear that the need to develop new water sources is now long overdue.
2. It has been proven that the current water supply system, mainly the pipeline network infrastructure is in very poor condition. From this water supply operation system the non revenue water (water loss) account to a total of 40% of the piped water. The total current piped water, is the total SIWA capacity less the capacity of White-river bore-hole field, which is said to be on standby. Therefore the total piped water is (27,241-4,320) 22,921 m³/day, and the revenue-water (received by consumers) is only 60% of this total, which is 13,753m³/day. This is the major contributing reason for the current water shortage in Honiara.
3. A more localised view of water-source to a supply zone system, which is the normal SIWA system-operation, and that which directly affects SICHE is that the Kombito bore-holes, Panatina bore-holes and the Kombito springs, have insufficient capacity (7,265m³/day) to meet the current water demands imposed on these systems (10,602m³/day from the above table). It is clear that the current supply capacities from these water sources are highly insufficient to meet the water demands of the local distribution areas and that of SICHE.

E-3-2 Forecast

It is estimated by SIWA that the increase of service connections is at the rate of 3.4% per annum for the next 3 years. SIWA's plans for rehabilitation of the existing and further bore-hole development projected a total potential supply of 33,150m³/day. This just meets the total demand (30,587m³/day). SIWA also plans to upgrade its pipeline network infrastructure to reduce non revenue water to the acceptable level of 20% of the total generated water. However these rehabilitation and development plans have not been fully achieved and the situation for Honiara and therefore for SICHE will remain the same at least for Phase 1 of the PMP.



E-3-3 Recommendations for PMP

1. All house connections from SIWA main lines and especially from meter boxes to house entry, including internal house fixtures should be programmed for R&M in Phase 1 of the PMP in order to maintain the water bill.
2. SICHE considers increased harvesting of rainwater from roof catchments.
3. SICHE to liaise with SIWA for the extension of water mains and distribution network for planned development areas during Phase 2 of the PMP. Considerations for special requirements such as fire fighting requirements for densely populated and high risk areas, additional tee-off points for farm area, etc should be given.
4. SICHE to monitor SIWA progress and ensure planned additional boreholes for the Panatina and Kombito sources constructed by Phase 3 of the PMP.

E-4 Sanitation

E-4-1 Current Situation

The legal authority responsible for urban sewerage systems is again SIWA. SIWA currently operates 10 sewerage systems in Honiara. These systems outfall either into the coast or to large communal septic tanks. Only 13% of the total population of Honiara have connection to SIWA registered sewerage systems. The other 87% of the population have septic tanks.

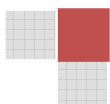
None of the SICHE campuses are connected to SIWA registered sewerage systems. All campuses use septic tanks.

E-4-2 SIWA Policy

SIWA has no plans to expand sewer systems in the short and medium term because wastewater treatment cannot be realised under its small investment budget. Any expansion of sewer network will result in the increase of pollutants in the public water body.

Existing sewer outfalls have been badly damaged by re-occurring cyclones. SIWA priority will be to rehabilitate or restructure these outfalls.

Desludging of septic tanks is currently carried out by private contractors of the Honiara City Council. These contractors however cannot cope with the requirements from the population because of lack of manpower and equipment. Sewage is therefore flooding from the septic tanks into drains, rivers and stream systems.



In the immediate and medium term, SIWA plans to address the problems with sewerage systems and septic tanks by taking over the desludging operation and carrying out proper treatment in their sludge treatment facility to be constructed at Alligator Creek.

E-4-2 SICHE Situation

All campuses currently use septic tanks. Most buildings at the Kukum and Panatina campuses are located on high ground or along ridges which have adequately porous or coral underlay which allows good seepage. Blocked soakaways should therefore be of a lesser problem than that for other populated areas of Honiara. With the planned takeover of desludging operation by SIWA, the two campuses can cope with the current use of septic tanks provided that the desludging operation is managed and implemented adequately. Ranadi being a comparatively smaller campus can cope with the current use of septic tanks.

E-4-2 Recommendations for PMP

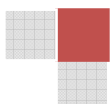
1. Septic tanks, soak aways, and internal house fixtures be programmed for R&M in Phase 1 of the PMP.
2. Improve design to increase capacity and life span of septic tanks and soak aways for high populated areas.
3. Monitor SIWA progress with upgrading of sludge collection and treatment facilities. Consider for the longer term the viability, advantages/disadvantages of sewerage system(s) together with its environmental impacts.

E-5 Drainage

E-5-1 Classification

Drainage classifications fall into the main types of drainage currently existing. These include:

1. *Road Drainage* – unlined shallow shoulder drains, unlined ditch drains, and concrete box drains. These are either well defined exiting into the major road drainage systems and water ways, or are undefined and dispersing storm water into the surrounding areas which then finds its way into either the major road systems and water ways.
2. *Stormwater* – other storm water drainage catching and carrying storm water from the general areas to the drainage exit points. Where provided, these are generally unlined ditch drains. Where drains are not provided, the natural slopes carry stormwater to the drainage exit points. Where there are no natural slopes in particularly low areas, storm water aggregates and constraints drainage of the wet areas.



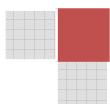
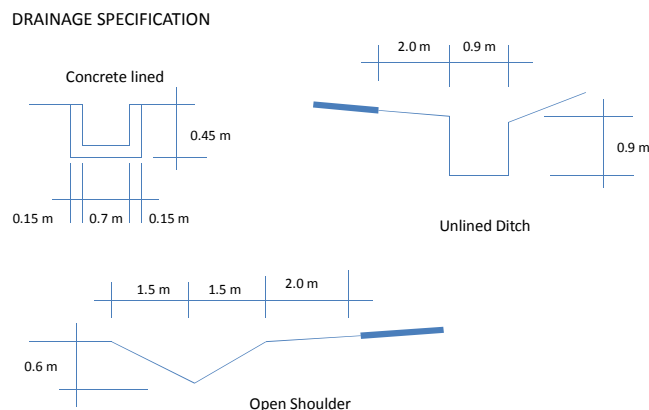
3. *Natural Water Ways, Streams and Sub-surface Water* – Natural water ways, streams and saturated wet areas are common in the lower areas and valleys. In Panatina these exist on the low north eastern side of the campus and naturally exit into the swamp on the eastern boundary. In Kukum these also exist on the north eastern side of the campus (example the Farm Area) and naturally exit into the Lio Creek on the eastern boundary.

E-5-2 Current drainage problems

1. *Road Drainage* – Concrete lined drains and shoulder drains within the main academic areas are in fair condition and functional. Most road drainage in the residential areas and the lower areas are either non-existent, blocked or overgrown. Culverts where provided are generally blocked with debris and overgrowth. Other road drainage has been blocked where access ways provided do not include culverts.
2. *Stormwater* - most ditch drains which were provided are blocked with debris and overgrowth.
3. *Problem Areas* – a major drainage problem area is the farm area and vicinity of the School of Natural Resources at the Kukum Campus. Most drains in the valleys or lower areas carry surface runoff or are natural water ways and streams which disperse their load onto this problem area. Other runoff is from ground water again occurring or following into this area. The area is therefore saturated with a high water table. Although ditch drains are provided, there is no surface slope and therefore there is inadequate surface flow into the ditch drains. New and well defined ditch drains and subsoil drains will need to be provided. Initial filling of the area designated for sports facilities should commence in the immediate term so as to create surcharge, reduce the water table and improve drainage.

E-5-3 Typical Specification

The following specifications are derived from the drainage types currently existing.



E-5-2 Drainage Improvement

All drainage shall be improved or reinstated in accordance with the typical specifications given above.

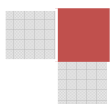
1. *Road Drainage* - Concrete lined drains are in fair condition and functional. Apart from routine cleaning out, they only require minimum repair. Other road drainage requires major rehabilitation and routine cleaning out. Blocked culverts require cleaning out and flushing. Where culverts have not been provided at road junctions, new units need to be installed.
2. *Stormwater* – Most ditch drains are blocked and require rehabilitation and routine cleaning out.
3. *Natural Water Ways, Streams and Sub-surface Water* - a major drainage problem area is the farm area and vicinity of the School of Natural Resources at the Kukum Campus. Most drains in the valleys or lower areas area carry surface runoff or are natural water ways and streams which disperse their load onto this problem area. Other runoff is from ground water again occurring or flowing into this area. The area is therefore saturated with high water table. Although ditch drains are provided, there is no surface slope and therefore there is inadequate surface flow into the ditch drains. New and well defined ditch drains and subsoil drains will need to be provided. Initial land fill of the area designated for sports fields will provide surcharge and improve both drainage and subgrade characteristics.

E-6 Transportation and Parking Plan

E-6-1 Road classification

There are 4 classes of roads discussed in this report.

1. **Major Roads** provide efficient routes from point to point in the greater community. These provide external access to the campuses. Kukum Highway and Prince Philip Highway fall under this classification. All campuses have accesses from these 2 major roads.
2. **Local Roads** serve as distribution roads within the campuses; connecting to the major roads and linking development areas, schools and controlled parking areas.
3. **Feeder Roads** link more directly with the local roads the development areas they serve.
4. **Access Roads or Driveways** link with the feeder roads individual or up to 2 residential houses they serve.



E-6-2 Typical specification

1. Local Roads

- a. **Base** – Good coral or gravel base
- b. **Surface** – Sealed
- c. **Typical Section** – Overall road formation 10m to 12m width with 2m shoulder width each side and a pavement width of 6m to 6.5m
- d. **Drainage** – Road drainage to concrete lined box or vee drains

2. Feeder Roads

- a. **Base** – Coral or gravel base
- b. **Surface** – similar coral or gravel surface
- c. **Typical Section** - Overall road formation 6m width with 1m shoulder width each side and a pavement width of 3.5m
- d. **Drainage System** - Road drainage to comprise shallow shoulder drains or lined/unlined ditch drains

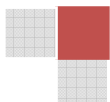
3. Access Roads or Driveways

- a. **Base** – Coral or gravel **Surface** – similar coral or gravel surface
- b. **Typical Section** - Overall road formation 3.5m with 2m pavement width.
- c. **Drainage System** – Shallow surface drains

E-6-3 Planned Improvements & Development

Considerations are as follows:-

1. **Improvements** – All roads need to be improved to the above specifications.
2. **New Roads** – All new roads planned for Kukum and Panatina new development areas are also to be provided to the above specifications.

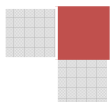
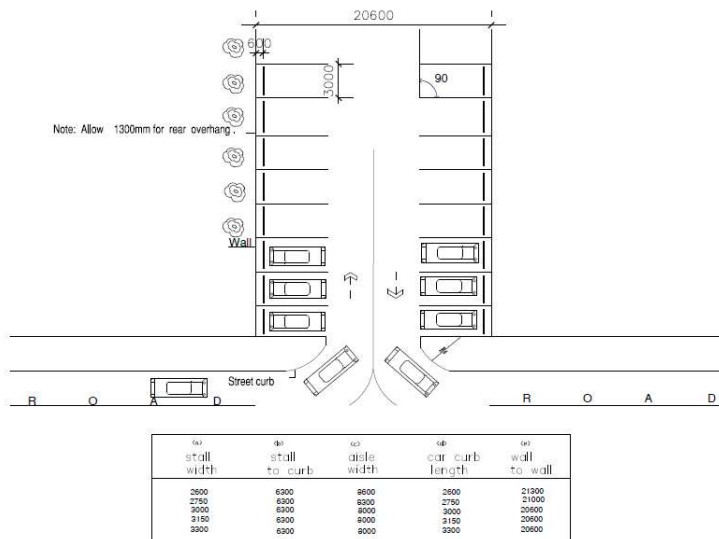


ROAD IMPROVEMENTS AND DEVELOPMENT														
RECOMMENDED ACTION ANALYSIS														
RECOMMENDED ACTION	KUKUM						PANATINA						Total No Rd	Total Km
	Local		Feeder		Access		Local		Feeder		Access			
	No	Km	No	Km	No	Km	No	Km	No	Km	No	Km		
Reconstruct			4										4	
				1.22										1.22
Maintain road structure, drainage or reseal			10		7				9				26	
				0.95	0.30				1.77					3.02
Minor maintenance, drainage	2				19		1				17		39	
		1.01				0.60		0.54			0.70			2.85
no maintenance, clean out drainage	1						4						5	
		0.83						1.53						2.36
Total No Roads for Improvement	3		14		26		5		9		17		74	
Total Km for improvement		1.84		2.17	0.90		2.07		1.77		0.7			9.45
New Roads				1.3	0.20					1.3	0.20			3.0

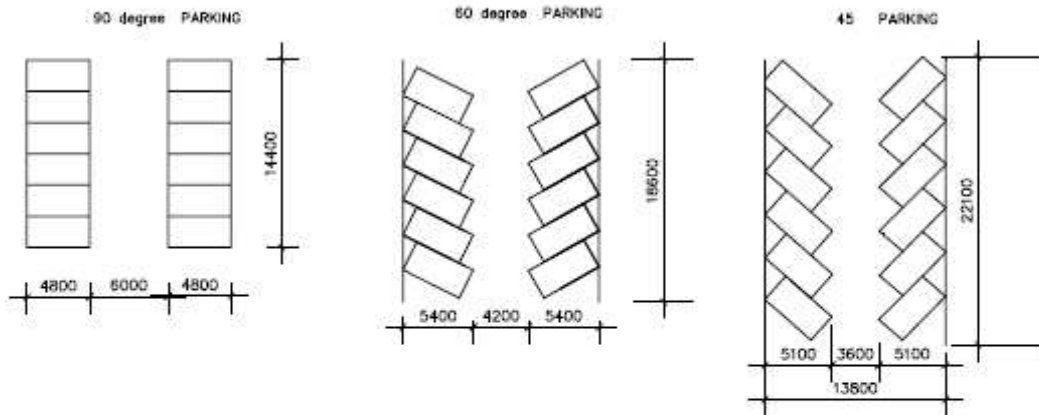
 Figures included in the PMP Programme and Budget Framework

E-6-4 Parking Plan

The total existing parking space available (at all campuses together) provides approximately 170 car parks based on the standard car park unit size of 12 sq metres. The parameter for calculating car park requirement is 1 car park per 20 students and 1 car park per 5 staff. Given the current student enrolment and number of staff, the number of car parks required is calculated at approximately 140. In reality the number of car ownership is very low and therefore the current car parking space available is more than adequate. A questionnaire survey conducted by DCG showed that most students and staff used public transport. Additional space for car parking has been allocated in the PMP. Specifications of propose car parking is demonstrated on two diagrams below.



L A Y O U T S F O R C A R P A R K I N G .

DIMENSION AND LAYOUTS OF VEHICLE PARKING SPACES.

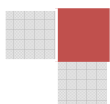
- i. All car parking spaces shall be not less than 4.8m by 2.4m. The car parking spaces shall be laid out in such a manner that they are readily accessible. In grouped parking areas the average requirement for manoeuvring space is 20m² per space. Minimum aisle widths for 90, 60 and 45 angle parking areas indicated in the following diagram.
- ii. Where commercial vehical parking is required to be provided the spaces shall be in accordance with the following dimensions :
 - (a) If one space is to be provided that space shall be capable of accommodating an articulated vehicle 15m x 2.5m.
 - (b) Where more than one space is to be provided ,not less than one third of the spaces shall be capable of accommodating a vehical 15m x 2.5m. The balance of the spaces shall be of sufficient size to accommodate a vehical 6m x 2.5m.
 - (c) all spaces shall provide clearance of 0.5m on each side and at each end of the vehicle.
 - (d) all spaces shall be provided with sufficient turning space to enable the vehical to enter and leave the site in forward gear-----for example an 11m x 2.5m rigid vehical requires an absolute minimum of 75m² to achieve this.

E-6-4 Ranadi Wharf

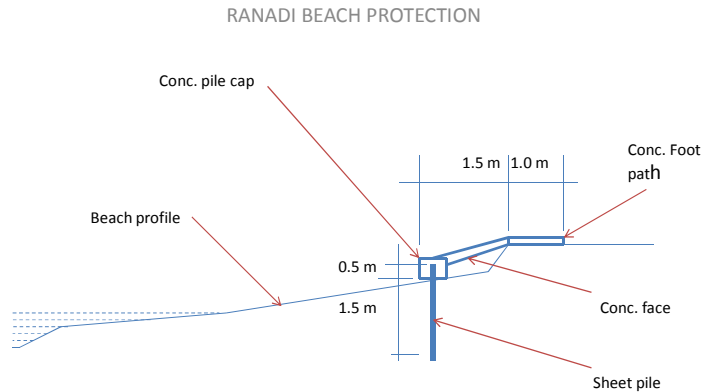
While the condition of the wharf has been rated fair, the underside of the concrete decking is starting to spall and if not repaired soon enough, the decking will deteriorate more rapidly. The conditional assessment record in the Infrastructure and Facilities Stock-take and Audit report gives a list and specification for the recommended repairs.

E-7 Ranadi Coastal Erosion

The seafront on the north western boundary has over the years been eroded shifting the shoreline to some 10 - 20 metres. The MV Ramos wreck directly adjacent and some sand mining activity on the junction with the south western boundary has accelerated the situation with the shoreline having shifted up to 25 metres posing threat to some residences which are now only 2.5 - 3.0 metres for the current shoreline. Immediate remedial works have been recommended for inclusion in Phase 1 of the PMP while other further works in Phase 3.



1. Immediate removal of the MV Ramos wreck
2. Installation of a concrete retaining wall with piled toe and footpath as a buffer
3. Installation of a granular groin with rock armour stretching perpendicular to the shoreline at the junction with the south western boundary to help rebuild the beach

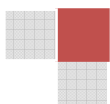


E-8 Fencing and Gates

There is no security fencing at all the campuses except at Panatina approximately 600m of picket fencing along the Prince Philip Highway frontage was installed recently by FOPA. The lack of security fencing give rise to lack of security in all the campuses and a major problem for Kukum and Panatina is the illegal access through or trespassing by outsiders. Outsiders are also entering and using campus facilities such as sports grounds at will.

Security fencing is required at all the campuses. At Kukum consideration should be given to providing an easement between the fence line and the boundary along the eastern boundary to prevent forced entry as this is a heavily accessed area by Panatina school students and the public. Based on the topographical survey; the total fencing along campus perimeters is as follows; Kukum (3.5 km), Ranadi (0.5 km), and Panatina (3.8 km)

Manned gates will be provided at the main entrance/exit gates only.



Chapter F Implementation

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F IMPLEMENTATION

F-1 Change from SICHE to SINU

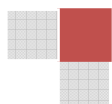
The National Coalition for Reform and Advancement (NCRA) Government of the Solomon Islands is committed to ensure that all Solomon Islanders have equal access to quality education from Primary to Tertiary levels. Therefore, the Government's intention to establish a National University for the Solomon Islands is a fulfillment of such commitment, with the aim to serve the educational needs and interest of the country and its rapidly growing population. It was also viewed that Solomon Islands cannot continue to depend on international and regional universities to meet all its specific higher education needs. Past experiences have shown that limited scholarships have been awarded to only a privileged few, leaving many qualified students unplaced for university entry and the opportunity to pursue their interest and career paths.

Converting and upgrading SICHE to University was then deemed by the government as the most appropriate action to undertake. It is hoped that by establishing its own National University, tertiary education expenditures overseas will be reduced, and saved funds will be diverted into developing the national tertiary institution. On the 8th day of December 2011, the SICHE Council convened an extra-ordinary meeting and unanimously resolved to endorse the government's intention. Accordingly, the Honorable Minister for Education and Human Resources Development was then requested to facilitate the change of name, from SICHE to the Solomon Islands National University (SINU).

In pursuant to this undertaking, there is need to develop a Transition and Implementation Action Plan (TIAP) for the new university. TIAP will ensure an orderly implementation process is achieved and in particular paving the way for SINU to commence in 2013. Both the government and SICHE recognise that this is a major undertaking, which will involve nationwide consultations as well as seeking relevant technical assistance from the region and internationally.

Clearly, the bottom line is to identify the core business of the new university, which understandably should be to (a) provide teaching and training, and (b) provide research and consultancy. Furthermore, the characteristics of the new university must also be defined and this would be related to the academic programmes of the new university. Work to develop degree programmes to reflect on the change to a university is currently underway. Initially, there is a possibility for the new university to offer the following degree programmes: **Bachelor of Teaching, Bachelor of Education, Bachelor of Nursing (midwifery), Bachelor of Science, and Bachelor of Nursing** (this is currently offered by SICHE).

The development of various physical infrastructure and resources to support the implementation of these academic programmes is vital, and this PMP is contributing towards this effect.



F-2 Development Phases

SICHE / SINU will undergo three Development Phases as shown in the Table F-1.

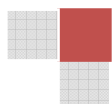
Table F-1: SICHE / SINU Development Phases

Phases	Period	Development Focus for PMP
Phase 1	2012 - 2015	Transitional period from SICHE to SINU. Implementation of the SICHE Strategic Plan and Action Plan. Programme formulation and capacity building. Seek and secure long term funding for SINU. Concentrate on repair and maintenance of physical assets. Ensure staff to implement PMP.
Phase 2	2015 - 2020	Full operational SI National University, and ensure most infrastructure and facilities are put in place. Continue infrastructure and amenity development based on the PMP and annual review.
Phase 3	2020 - 2032	Sustainable operation of all functioning physical infrastructure and focus on maintaining a viable environment for SINU. Ensuring demand meet supply and campus planning is well integrated into the Master Academic Plan.

It is expected that there will be a lot of overlapping in terms of focused attention between the three phases. However, the thrush of development especially the physical development will need to be properly targeted and adhere to a set of priority required under each phase, so that the PMP is implemented and SINU vision is accomplished.

F-3 Programme Implementation

The implementation of the PMP depends very much on the capacity of SINU in terms of human and financial resources, assuming there is a political will by government to get the university take of the ground. Further there is a need for SINU management to properly execute the approved policy, programme and budget framework in a transparent and accountable manner. In order to fully operationalize what is required under the PMP it is hereby recommended that the Property Unit, the Planning unit, and the Campus Planning Committee be strengthened to handle the demand and intensity of work required. In this respect it is hereby recommended under this PMP that an external TA be recruited and an office set up within the Property unity to manage the implementation of the long term plan and build capacity within SINU to handle this important technical area. Below is a terms of reference for such Technical Assistance.



Box F-1**Solomon Islands National University: Support for the Implementation of the Physical Master Plan
PROJECT PLANNING SPECIALIST TERMS OF REFERENCE (TOR)****1. BACKGROUND INFORMATION**

The Project Planning Specialist is to support the Solomon Island National University (SINU) and the Campus Planning Committee for the implementation of the Physical Master Plan for 2012-2032. The TA aims to support the University in implementing a long-term Planning Vision and the Academic Goals by ensuring for the provision of a physical environment that is conducive to higher academic learning and development. The TA will help translate the vision of the PMP into results-oriented objectives and targets within SINU Action Plan, and the annual capital budgets. The TA will also improve capacity of SINU Management especially the Property Unit in the preparation of a detail development plan for each campus, programming and asset management, procurement and contract management of the physical development of SICHE/SINU. The TA will be responsible for implementing the programme as identified in the PMP and continue to develop detail campus plans and programme and ensure that policy through planning processes are carried out as directed in the PMP. The TA will entail the following key components:

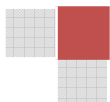
- a. **Strengthen monitoring and evaluation of PMP implementation** by (a) developing databases and templates to track progress against the indicators of the PMP, and (b) producing an annual progress report on PMP implementation via the execution of the annual capital budget which will feed into the rolling three-year implementation plans; and
- b. **Enhance the capacity of Property Unit staff and Head of Schools**, including Planning Office with regard to Project Management and implementation and procurement process by (a) providing mentoring and skills transfer through on-the-job training, (b) designing and implementing short-term training as well as a medium-term training program for skills retention.

The impact of the TA is the achievement of the outputs expected of the PMP. Secondly, the properly managed capital expenditures and policies as a result of a strengthened project management, implementation and procurement process.

2. SCOPE OF WORK AND QUALIFICATIONS OF CANDIDATE

The engagement of a Planning Specialist for an initial period of 12 months is required to working under the guidance of the Head of Property Unit and the Planning office of the Directorate. The Planning Specialist will undertake the tasks of:

- a. Work closely with the Campus Planning Committee and Property Unit to develop and implement detail campus Plans for each campus, as directed by the PMP and the Academic Plan for SINU and other important development as directed by the Campus Planning Committee;
- b. Administer workshops and training programme to be liquidated under the SINU capital Budget;
- c. Assist Property Unit and the Campus Planning Committee in managing and liquidating funds for procurement of contracts and ensure rules of procurement of supply, work and service contracts are managed properly.
- d. Assist SINU in liaising and consulting with stakeholders including donors on the implementation of the PMP.
- e. Support Campus Planning Committee and the Directorate Office in preparing the implementation plans through:
 - ⇒ Preparing monitoring, procurement and evaluation reports
 - ⇒ Coordinating inputs from the annual capital budget, and action plans;
 - ⇒ Assisting in the drafting of sections of the campus implementation plans as necessary.
- f. Liaise with and assist Schools in the production of Action plans; and.
- g. Provide ground support to the Campus Planning Committee and Directorate office in implementing the PMP and each Campus detail plan.



Box F-1 cont.

The **Project Planning Specialist** should possess qualification in Development Planning or related disciplines such as economics, architecture, civil engineering, public administration urban and regional planning or Project Planning and evaluation with extensive experience (more than 10 years) in a public finance role and be experienced in budget formulation, project implementation, and monitoring. Experience gained from working in a ministry of planning, Physical Planning section, finance (or equivalent) in a capacity development role is highly desirable. The specialists will be required to work closely with Property Unit and Planning Unit at the Director's office and Ministry of Education and Training to enhance the budget process.

3. DELIVERABLES AND REPORTING

The Planning Specialist will work together with the Property Unit, the Directorate office as well as Heads of School to deliver the Following::

- a. Training programs including conducting a training needs assessment;
- b. Implementation plans of PMP of the three campuses which are incorporated into the action plan and the annual capital budget.
- c. Monitoring and evaluation reports;
- d. Contribute information and inputs to other documentations, reports, proposals when required.

4. SUBMISSION OF APPLICATIONS

Interested applicants are request to email their application letter and CV through Director, at :director@siche.edu.sb. or ppo@siche.edu.sb

Time Frame: Beginning on 1 September 2012 and end 30th September 2013.

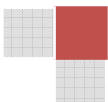
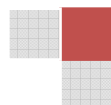
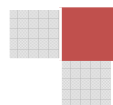


Table F-2: PMP Programme and Budget Framework

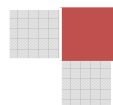
	Activities/Programme	Target/Output	Period	Phase 1 2012-15 Budget Allocation	Phase 2 2016-20 Budget Allocation	Phase 3 2021-32) Budget Allocation
			20 Years	4 YRS	5 YRS	12 YRS
1	Housing Development					
1.1	Construction of new dormitories and hostels	Kukum: 18 dorms or 748 student beds Panatina: 14 dorms or 424 student beds Ranadi: 1 dorm or 80 student beds	All phases	9,000,000 9,000,000	24,000,000 15,000,000	21,000,000 18,000,000 1,500,000
1.2	Construction of new housing units for Staff	Kukum:154 housing units Panatina: 127 housing units Ranadi:	All Phases	29,400,000 24,600,000	29,400,000 24,600,000	33,600,000 27,000,000
1.3	Construction of new International Houses	Kukum:2 dorms or 40 units Panatina:2 dorms or 20 units	Phase 2 & 3 Phase 2 &3		1,500,000 1,500,000	1,500,000 1,500,000
1.4	Construction of student married quarters	Kukum: 2 dorms or 12 units Panatina: 2 dorms or 12 units	Phase 2 & 3 Phase 2 & 3		1,500,000 1,500,000	1,500,000 1,500,000
1.5	Conversion of dormitories to Classroom blocks	Kukum: 4 dorms to be converted	Phase 1 & 2	2,000,000	2,000,000	
1.6	Relocation of existing residences affected by PMP	Kukum 19 staff res.unit relocated Panatina 15 staff res. units relocated Ranadi 7 staff res. Units relocated to Panatina	Phase 1 Phase 2 & 3 Phase 2	950,000 375,000	375,000 350,000	
1.7	Repair and maintenance existing student dormitories	Kukum Panatina Ranadi	Phase 1 & 2 Phase 1 & 2 Phase 1 & 2	41,000 63,000 64,000	66,000 101,000 102,000	
1.8	Repair and maintenance of existing staff houses	Kukum at least 15 houses are repaired p.a Panatina at least 15 houses are repaired p.a Ranadi at least 1 house is repaired p.a	Phase 1 & 2 Phase 1 & 2 Phase 1 & 2	375,000 375,000 25,000	375,000 375,000 25,000	



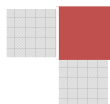
	Activities/Programme (cont.)	Target/Output	Period	Phase 1 2012-15 Budget Allocation	Phase 2 2016-20 Budget Allocation	Phase 3 2021-32) Budget Allocation
			20 Years	4 YRS	5 YRS	12 YRS
2	Infrastructure Development					
2.1	Construction of new roads/drainage	Kukum 1.5 km constructed (sealed) Panatina 1.5 km constructed (sealed)	Phase 1 Phase 1	4,500,000 4,500,000		
2.2	Resurfacing and tarseal of roads	Kukum 2 km upgraded & paved Panatina 2 km upgraded & paved	Phase 2 & 3 Phase 2 & 3		6,000,000 6,000,000	
2.3	Power improvement and new connection	Kukum power instal/upgraded Panatina power instal/graded Ranadi power upgraded Power connection to new sites	Phase 1 Phase 1 Phase 1 All Phases	1,790,000 1,750,000 150,000 1,500,000	1,500,000	1,500,000
2.4	Water supply	Kukum: connection to new sites Panatina: connection to new sites General maintenance	Phase 1 & 2 Phase 1 & 2 All Phases	300,000 300,000 100,000	100,000	100,000
2.5	Fencing and Gates	Kukum gates & fencing 3,300m erected Panatina gate & fencing 3,000m erected Ranadi gate & fencing 500m erected	Phase 1 Phase 2 Phase 3	4,950,000	4,500,000	750,000
2.6	Car parks	Kukum: 120 car space built Panatina: 100 car space built Ranadi: 20 car space built	Phase 2 Phase 2 Phase 2		960,000 800,000 160,000	
2.7	Beach retaining wall	Ranadi: A retaining wall built.	Phase 1 & 3	1,000,000		1,100,000
2.8	Covered walkways	Kukum: 330m of covered walkway built Panatina: 150m of covered walk way blt. Ranadi: 192m of covered walkway built	Phase 1 Phase 1 Phase 1	165,000 75,000 96,000		
2.9	Repair of Wharf (Ranadi)	Ranadi wharf is repaired	Phase 2		800,000	



	Activities/Programme (cont.)	Target/Output	Period	Phase 1 2012-15 Budget Allocation	Phase 2 2016-20 Budget Allocation	Phase 3 2021-32) Budget Allocation
			20 Years	4 YRS	5 YRS	12 YRS
3	Academic spaces and facilities					
3.1	New Classrooms	Kukum: 10 classroom blocks/workshop Panatina:5 Classroom blocks Ranadi: 3 classrooms blocks & W shop	All Phases	10,000,000 5,000,000 9,000,000	10,000,000 5,000,000	10,000,000 5,000,000
3.2	Conversion Dorms to Classrooms	Kukum: 4 dormitories converted to classroom blocks	Phase 1 & 2	2,000,000	2,000,000	
3.3	Lecture theatre new	Kukum lecture theatre completed Kukum new lecture theatre built Panatina new lecture theatre built	Phase 1 Phase 3 Phase 2	4,000,000	10,000,000	10,000,000
3.4	Library new	Kukum: new library constructed Panatina: new library constructed Ranadi: new library established	Phase 1 Phase 2 Phase 2	12,000,000	12,000,000 1,000,000	
3.5	Amphitheatre	Panatina: a new amphitheatre constructed close to the pavilion.	Phase 3			2,000,000
3.6	Conversion of Current Library to IT Centre	Kukum: the current library converted to IT Centre.	Phase 1	1,000,000		
4	Recreation and Sports fields					
4.1	Soccer and Rugby pitches	Kukum:standard 1 rugby & 1 soccer field constructed.	Phase 3			10,000,000
4.2	Multi-purpose sports centre	Kukum 1 multipurpose sports hall constructed	Phase 3			20,000,000
4.3	Other Sports facility	Kukum: 2 tennis courts constructed Kukum : 1 netball & 1 basketball courts Panatina: 2 tennis and 1 basketball courts	Phase 2 Phase 3 Phase 3		225,000 120,000 337,500	
5	Others					



	Activities/Programme (cont.)	Target/Output	Period	Phase 1 2012-15 Budget Allocation	Phase 2 2016-20 Budget Allocation	Phase 3 2021-32) Budget Allocation
			20 Years	4 YRS	5 YRS	12 YRS
5.1	Student Centres	Kukum: a student Centre constructed Panatina: a Student centre constructed	Phase 2 Phase 1	1,000,000	1,000,000	
5.2	University Chapels	Kukum: a chapel is built Panatina: a chapel is built	Phase 2 Phase 2		800,000 800,000	
5.3	Parks & Botanical garden	Kukum: 2 parks and a botanical garden established. Panatina: a park established	Phase 2 &3 Phase 3		500,000	500,000 500,000
	Landscaping	All campuses are landscaped	Phase 1 & 3	100,000		100,000
	TOTAL			141,544,000	167,371,500	168,550,000



F-4 Monitoring and Evaluation

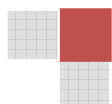
The application of a Monitoring and Evaluation (M & E) system is vital to determine the progress, and verify the benefits from the improvements of the physical infrastructure and resources generated by and through the implementation of PMP. Without M & E, there would be no means of knowing the status and performance of the developmental activities undertaken. Ideally, a M & E should be carried out to assist the SICHE/SINU management when implementing this PMP. Thus, M & E is a crucial tool in project management during pre-construction, construction and operation stages of the project to ensure transparency and accountability, as well as generating informed decisions to stakeholders. As an example of the M & E perspective, the following criteria may be used, including:

- **Relevance:** examines the extent to which the project is suited to the priorities and policies of the SICHE / SINU.
- **Effectiveness:** measures the extent to which a project attains its objectives.
- **Efficiency:** measures the outputs in relation to the inputs to determine whether the project uses the least costly resources possible to achieve the desired results.
- **Impact:** examines positive and negative changes as a result of the project. This includes direct and indirect effects and expected and unexpected effects.
- **Sustainability:** relates to whether the benefits of the project are likely to continue after the closure of the intervention.

The PMP is comprising various subprojects such as the construction of roads, culverts, protective wall, buildings, fencing, etc., which must be developed. Development of these subprojects will require the services of different contractors. The input by the contractors and the progress of work must also be monitored and evaluated against the Terms of References (ToR) and the scope of work they have been assigned to undertake.

SICHE/SINU through its Property division should be responsible for the overall and entire implementation program of PMP and should provide, or where necessary outsource technical assistance to ensuring an effective implementation during the pre-construction, construction and operation stages of the PMP. Environmental concerns are also important considerations and SICHE/SINU must ensure development consent from the MECDM and the HCC Town and Country Planning Board is sought and secured.

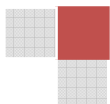
Figure F-1 below provides a guide to implementation arrangement of PMP and the M & E process. It is important to recognise three levels of input, namely; governance, management and



implementation. A Project Management Unit (PMU) should be established within the Property division to be made responsible for the implementation of PMP including the execution of M & E program. PMU will be supported by a TA, who will be outsourced.

The SICHE / SINU Council through its Campus Planning Committee will oversee the general governance of the implementation of PMP. The Directorate who is directly responsible for overall management of SICHE / SINU affairs is also responsible for the management of PMP, and will report to the Council through its Campus Planning Committee regarding the progress on the implementation of PMP.

The PMU is required to produce an annual work plan based on the PMP three proposed phases of development (see Tables F-1 and F-2 above) and any arising needs of urgency. The work plan should be costed out and form part of the annual development or Capex (Capital expenditure) budgets. The PMU is also responsible for the preparations of tenders and contracts relevant to the construction work as deemed appropriate within the period of implementation. Similarly, the PMU is also responsible for M & E program during PMP implementation.



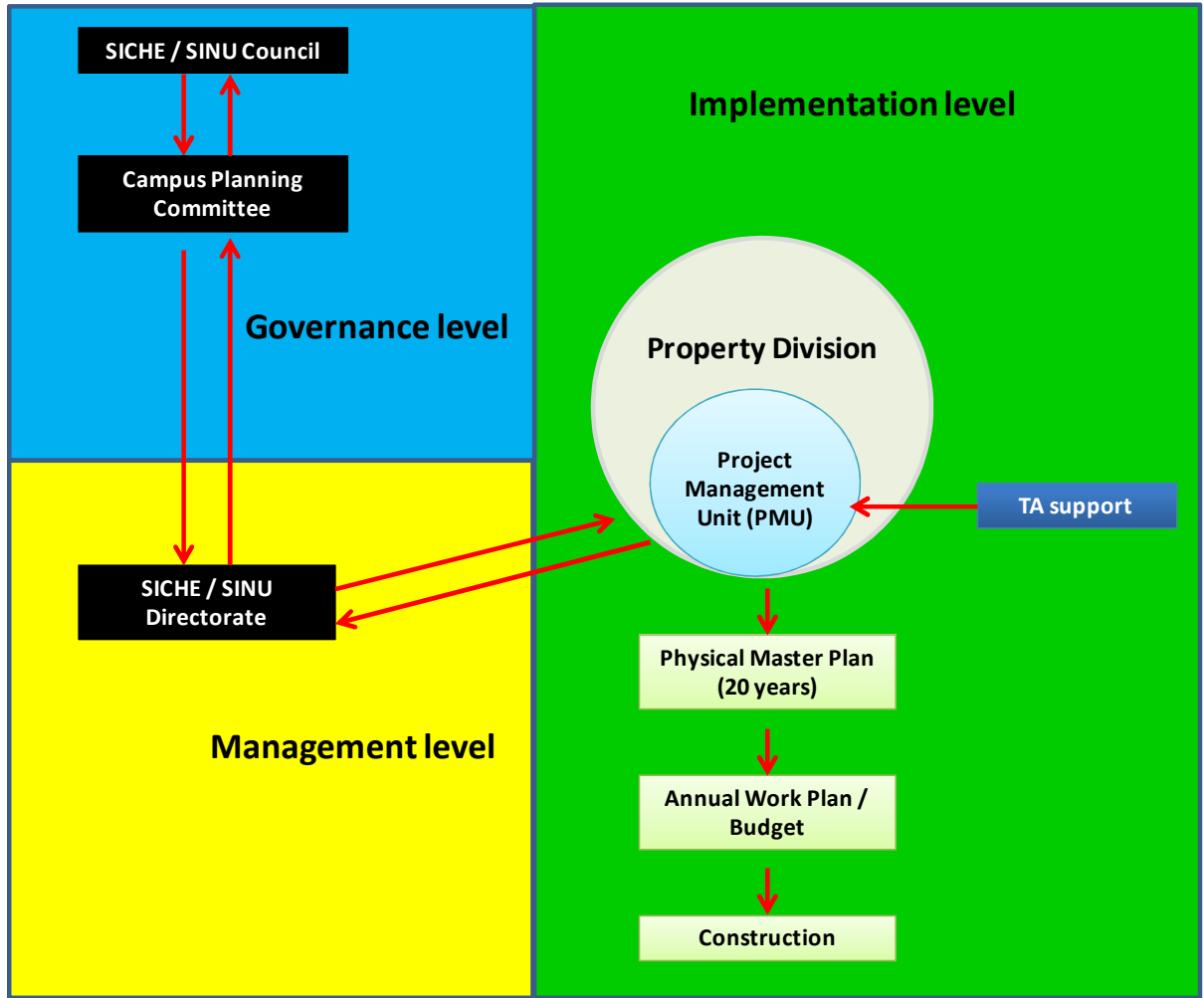
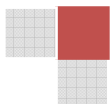


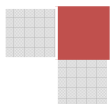
Figure F-1: Implementation arrangement of PMP



G PREPARERS

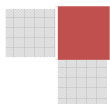
This Physical Master Plan was prepared by the DREGAR Consulting Group (DCG) for the Solomon Islands College of Higher Education (SICHE). Consultants of DCG involved in this project are listed below.

Director Development Planner / Team Leader	Mr. Donald Kudu
Director Engineer	Mr. Ronald Ivupitu
Director Land Manager	Mr. Eric Gorapava
Director Architect	Mr. Aubrey Zeke
Director Surveyor	Mr. Gilmour Pio
Director Natural Scientist	Dr. Richard Pauku



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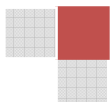
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I TERMS OF REFERENCE

SOLOMON ISLANDS COLLEGE OF HIGHER EDUCATION DIRECTORATE Short Term Technical Assistance for Solomon Islands College of Higher Education (SICHE Physical Master Plan)

1 Objective

The objective of the technical assistance is to enable the College to have a complete Physical Master Plan (PMS), which will encompass all its campuses.

2 Background

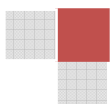
In 1984 the Solomon Islands Government through an Act of Parliament established the Solomon Islands College of Higher Education (SICHE). It started formal operation in 1985 following an amalgamation of a number of training institutions, which were established in the colonial period. Since its establishment SICHE has played a major role in developing the human resources of the country, and its challenges are always on the rise given the ever-growing needs of the country.

SICHE is a dual-sector institution. Its courses straddle technical and vocational training, and higher education. For instance, courses offered by the School of Industrial Development are technical-vocational oriented, and courses offered by the School of Finance and Administration, the School of Education, and the School of Nursing and Health Studies are academic oriented and pitched at the higher education levels.

SICHE is also a multi-discipline institution. It operates six Schools and there are plans to fully establish two more Schools by 2012. The current and fully established Schools are the: School of Education, School of Finance and Administration, School of Industrial Development, School of Natural Resources, School of Nursing and Health Studies, and the School of Marine and Fisheries Studies. The proposed two new additional schools are the School of Tourism and Hospitality, and the School of Humanities, Science and Media. SICHE also hosts a Distance Education Centre and a Curriculum Standards Unit.

SICHE through its Schools offer programmes at Diploma and Certificate levels in teacher education, administration, finance and banking, nursing, agriculture and forestry, and in technical trades such as marine engineering, carpentry and plumbing, electrical and vehicle maintenance, tourism and journalism. The demand for SICHE courses is very high. This is evident by the fact that each year the application for placements at the various Schools has been very high. For instance, in 2010 a total of 5,500 applications were received and only 1,270 students were accepted as intake that year.

Since its establishment, SICHE has graduated over 12,000 students with certificates and diplomas and many more have attended various community outreach courses. These graduates are serving the country in government and private sector organisations, and in non-government organisations (NGOs). 2



The School of Nursing has recently introduced a degree programme in nursing and plans are underway for the School of Education and the School of Finance and Administration to offer degree programmes in the not too distant future. The School of Natural Resources is also planning to introduce new programmes in 2012. Given the diversity and increase of its programmes, and the increasing intake of students each year, SICHE certainly needs to develop its physical infrastructure well beyond its current level and capacity.

SICHE is also a multi-campus institution. It has three campuses in Honiara, namely Panatina, Ranadi and Kukum. The School of Education is located at Panatina, the School of Marine is located at Ranadi, and the rest of the Schools are located at the Kukum Campus. The Kukum Campus also hosts the office of the Director and all the administrative and supporting divisions, such as Finance, Human Resources, Student Welfare Services, Library, Distance Education Centre, Curriculum Standards Unit, Academic Registry, and Property Division. The Kukum Farm which is attached to the School of Natural Resources is also at Kukum. SICHE also has a fourth campus at Poitete in the Western Province.

Panatina and Kukum are the bigger campuses with substantial land areas for future infrastructure expansion and development.

Since its establishment, SICHE has grown and it is undergoing many changes, yet its buildings and physical landscape has remained unchanged over the years. In the SICHE Strategic Plan 2011 – 2015, further growth and expansion are anticipated in SICHE’s academic programmes and institutional status.

These anticipated academic and institutional developments will certainly require further infrastructure expansion and development. It is in this context that the SICHE management sees the definite need to have a detailed Physical Master Plan (PMS) for its all its campuses. This is in order to have and maintain a proper and high quality campus environment, and to ensure that future infrastructure expansion and development are part of a coherent and integrated overall plan.

3 Scope of Work

The range of activities to be undertaken will include, but not limited to, the following:

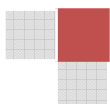
To review existing plans of the college campuses (if any) taking into account the developments since 1985.

Profile the landscape and the extent of SICHE land on all campuses, especially, in Honiara,

To consult with appropriate key stakeholders including, the SICHE Council, Management, staff and student representatives, the Ministry of Education, the Ministry of Infrastructure Development, the Honiara City Council, and other statutory and professional bodies.

To establish the preferred locations for buildings (lecture theatres, classrooms, office blocks, sport facilities, commercial centres, etc) currently being proposed by the College.

To identify the preferred locations for building and facility developments in the longer term, and to indicate in broad terms the type of buildings and activities envisaged in each location. 3



To identify issues associated with the further development of campus open spaces, and where appropriate to suggest open space design objectives and/or design features.

To evaluate existing provisions for pedestrian circulation within each campus, and to identify issues and design objectives in respect of future provisions for pedestrian movement.

To evaluate existing patterns of roads and car parking, including car parking standards and where appropriate to identify issues and/or features in respect of future provisions for vehicle movements and parking.

The above activities should also take account of or reflect a number of institutionally determined or agreed considerations. These include:

The anticipated focus and direction of SICHE's academic programmes.

The projected growth in student and staff numbers, and hence the extent of accommodation eventually required.

The effective use of existing facilities, and project short/medium term accommodation requirements.

Issues related to sports recreation and other leisure activities and other student amenities.

Issues relating to the use and maintenance of campus open spaces and associated planting, particularly the desirability of the Campus to be a natural arboretum and a showcase for indigenous flora.

The views of the SICHE-wide community in respect of the physical environment of the existing campus, its strengths and weaknesses.

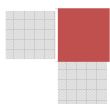
4 Deliverables

The Consultant's Output should include:

A plan or plans at 1:1000 scale indicating the existing development and proposed future development of the campuses. Plans should be presented in both hard and soft copies, with soft copies to be in Autocad format, preferably geo-referenced.

A design report in A3 format, with text and supporting diagrams as appropriate, with both hard and soft copies provided by the Consultant. These must be reproduced into three copies. The content of the report should include the following:

Statements of the key issues addressed in undertaking the Master plan review, and the response to these issues in the new Physical Master Plan.



A review of pedestrian and service vehicle access to each of the existing buildings, in the context of the revised Physical Master Plan.

Complete a detailed draft Physical Master Plan and have it presented to the SICHE Director, Management, and Council for reviewing and endorsing.

