



New 2018 Picture please Mike!!!

# Medium Term Transport Action Plan 2019-2023

SOLOMON ISLANDS NATIONAL TRANSPORT PLAN

## ACRONYMS

ADB	Asian Development Bank
AWP	Annual Work Plan
CPG	Choiseul Provincial Government
CPIU	Central Project Implementation Unit of MID
DCCG	Democratic Coalition for Change Government
DFAT	Department of Foreign Affairs and Trade - Government of Australia
DLI	Development Linked Indicator
FFS	Franchise Shipping Scheme
GOA	Government of Australia
GIS	Geographic information System
HCC	Honiara City Council
IPG	Isabel Provincial Government
JICA	Japan International Cooperation Agency
M&E	Monitoring and Evaluation
MCA	Ministry of Communications and Aviation
M-CA	Multi-Criteria Analysis
MDPAC	Ministry of Development Planning and Aid Coordination
MECDM	Ministry of Environment Climate Change Disaster Management and Meteorology
MFAT	Ministry of Foreign Affairs and Trade – Government of New Zealand
MID	Ministry of Infrastructure Development
MLHS	Ministry of Lands, Housing and Surveys
MoA	Memorandum of Agreement
MOFT	Ministry of Finance and Treasury
MoU	Memorandum of Understanding
MPGIS	Ministry of Provincial Government and Institutional Strengthening
MTBF	Medium Term Budget Framework
MTTAP	Medium Term Transport Action Plan
NDMO	National Disaster Management Office
NDS 2016	National Development Strategy 2016-2035
NGO	Non-Government Organisation
NIIP	National Infrastructure Investment Plan
NSO	National Statistical Office
NTF	National Transport Fund
NTP 2017	National Transport Plan 2017-2036
NZAID	New Zealand Agency for International Development
OPMC	Office of the Prime Minister and Cabinet
PRIF	Pacific Region Infrastructure Facility
RTIP	Rural Transport Improvement Program
SIG	Solomon Islands Government
SIMSA	Solomon Islands Maritime Safety Administration of MID
SITAMS	Solomon Islands Transport Asset Management System
STIIP	Sustainable Transport Infrastructure Improvement Program (2016-2020)
TBD	To be determined
TIMS	Transport Infrastructure Management Services (Division) of MID
TWG	Technical Working Group of NTF
WB	World Bank

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## CONTEXT

### INTRODUCTION

This document presents the Medium-Term Transport Action Plan (MTTAP) of SIG.

The MTTAP initially outlines MID's and MCA's approach to transport infrastructure management.

The main purpose of MTTAP is to define the transport infrastructure programmes for MID and MCA for the five years from 2019 to 2023.

The MTTAP includes projects funded by SIG expenditure and those funded with the assistance of several key donors. Many projects are funded and delivered by way of jointly funded initiatives such as the NTF framework.

The MTTAP is presented to share SIG's plans to build and maintain transport infrastructure for air, land and sea for the 5 years ahead.

### RELATIONSHIP TO NATIONAL TRANSPORT PLAN

This document forms part of the National Transport Plan 2017-2036 (NTP).

The NTP provides the policy and strategic guidance for the transport sector and provides a master list of transport infrastructure improvement projects.

### RELATIONSHIP TO NATIONAL DEVELOPMENT STRATEGY

The National Development Strategy (NDS) provides a 20-year strategic framework to guide development in the Solomon Islands.

The NDS highlights government priorities and provides development strategies to achieve the NDS objectives. The NDS requires Strategic Plans to be produced for each Sector. The NTP is an example of a Sector Strategic Plan.

The NDS also requires the translation of Sector Strategic Plans down into implementable policies, programs and projects by way of a Medium-Term Development Plan (MTDP). MTDPs are national five-year plans defining projects, budgets and programmes.

This Medium-Term Transport Action Plan 2019-2023 (MTTAP) is the five-year phased plan required, under the NDS, for the transport sector. This MTTAP document includes both new "development" and maintenance projects.

## MTTAP PROCESS

### MTTAP FORMAT

This MTTAP document sets out the rationale behind the 2019 -2023 action plan, defines projects and provides budget estimates for the civil works.

### MTTAP UPDATES

The MTTAP defines MID's infrastructure management plans for a 5-year period. However, the intention is to refresh those plans at least every two years, i.e. to create plans that are ready to commence in 2019, 2021, 2023 and so on.

This MTTAP 2019 will be approved in late 2018, to come into effect in 2019, to provide a programme to guide the 5 years from 2019 to 2023 inclusive. The next MTTAP is to be drafted and approved before the end of 2020, so as to come into effect for the period 2021 to 2025 inclusive.

The Secretariat of the National Transport Fund is responsible for updating the MTTAP.

This MTTAP 2019 Update sought the transport infrastructure plans of the Government of Solomon Islands and those of all development partners. Projects were typically shortlisted on the basis of higher ranking NTP Project Scores. MID and MCA senior management guided the inclusion and phasing of projects in the MTTAP 2019 Air, Land and Sea Project Programmes. Development Partners have been invited to define their commitments to the MTTAP Programmes through SIG, and where available those responses have also helped shape this programme.

### MTTAP CABINET APPROVAL

Cabinet approval is required in order to make MTTAP's operative.

Once approved by Cabinet, the MTTAP becomes a directive from Cabinet to the executing agencies MID and MCA to implement the specified works subject to funding availability.

MTTAP project updates may be reported to Cabinet for information, but do not require Cabinet approval.

## INFRASTRUCTURE INVESTMENT PRIORITIES

### RECURRENT BUDGET VERSUS DEVELOPMENT

The SIG Recurrent Budget provides for basic government services and operating expenses, for example government staff salaries and building maintenance. Such expenses recur annually and typically only grow slowly. MoFT's usual approach is to increase Recurrent Budget allocations by 3% p.a. to account for typical annual price increases.

The SIG Development Budget is intended to provide for "one off" capital expenditures, such as the development of new infrastructure.

The adequate maintenance of transport infrastructure is important for national progress, however the funding available to do so has been inadequate to properly maintain transport infrastructure for some time. As a consequence there are many airports, roads and wharves in need of work.

Ideally the maintenance of transport infrastructure is recurrent in nature and should therefore be funded entirely under SIG's recurrent budget. However, even though funds available for maintenance have increased somewhat over recent years, a significant proportion of that additional maintenance has been funded by way of the development budget. The total funds available for transport infrastructure maintenance may therefore fluctuate significantly and unpredictably from year to year. This contrasts with recurrent budgets which generally increase slowly with inflation, so ministries can plan work and award contracts with the confidence that funding will remain available.

Stability in budget allocations makes managing the funding of infrastructure a lot simpler, more reliable and improves both the standard of infrastructure and ultimately the quality of the contractor pool in the longer term.

Later sections outline the scale of funding required.

### TRANSPORT SECTOR FUNDING

#### Funds Available

Current estimates for the next five years suggest the following annual amounts should be available for the development and maintenance of transport infrastructure in Solomon Islands.

SBD 110m p.a.	STIIP loan/grant program to NTF - SIG/ADB/GoA Fund
SBD 100m p.a.	SIG RTIP Development Budget
SBD 20m p.a.	SIG MCA Recurrent and Development Budget (estimated)
<hr/>	
SBD 230m p.a.	Total
<hr/>	

This total sum represents the total funds available for transport infrastructure under SIG-controlled processes, i.e. SIG funds + NTF Funds.

Other projects will be funded through bilateral arrangements between SIG and individual donors e.g. GoA, JICA, NZ MFAT, World Bank, EU).

It is also anticipated that a proportion of SIG Constituency Development Funds, estimated at SBD 426m in 2019 might also be spent in support of transport infrastructure.

This SBD 230m total available to transport infrastructure has to cover all transport infrastructure expenses that are not funded through bilateral arrangements.

For the five years covered by this MTTAP it is assumed that SBD 210m p.a. will be available for road and wharf projects implemented by MID, and SBD 20m p.a. will be available for airport projects managed by MCA.

Additional projects expected to be funded through bilateral aid agreements have been identified separately.

## TRANSPORT SECTOR PRIORITIES

SIG's policy is to assign various priorities to the following classes of activities under MTTAP, as follows:

- High Priority – Maintenance of maintainable roads, wharves and airstrips. Includes capacity building in MID & MCA to enable these to be accomplished
- Medium Priority – Rehabilitation of roads, rehabilitation of wharves, construction of selected new wharves and rehabilitation of non-functioning airfields where operation otherwise viable
- Low Priority – Limited sections of new roads and selected airfield expansion works - provided these can be accomplished largely through bilateral aid e.g. Munda Airport Phase 3, Henderson International Upgrade

Detailed priority scores for most potential development projects are presented in the NTP Project Master List Updated for 2019.

## PROVINCIAL EQUITY

A key principle of the MTTAP is that of provincial equity, i.e. the sharing of transport infrastructure funds and benefits between the provinces. While larger population bases typically have more pressing infrastructure needs and projects that tend to offer large economic benefits, the MTTAP also aims to provide for the lower populated more remote parts of the country.

## PROJECT SELECTION

The mix of maintenance and development projects put forward in this MTTAP seeks to maximise achievement of the following objectives:

- All maintainable existing transport infrastructure to be sustained through routine and periodic maintenance
- All non-maintainable roads, wharves and airfields to be rehabilitated over time, where economically justified in light of NTP priority scores.
- At least one wharf rehabilitation and one new wharf or ramp development project in each province.
- At least one road rehabilitation or new road development project in each province.
- Airport projects with bilateral support to complete Munda Airfield Upgrade Phase 3 and Henderson Apron Upgrade
- Accomplishment of STIIP DLIs to assure their linked funding to NTF.

## PROJECT SCORE METHODOLOGY

The relative benefits offered by candidate transport Infrastructure projects in Solomon Islands is assessed using criteria initially developed under an ADB initiative called the Pacific Region Infrastructure Facility (PRIF).

The PRIF team developed a very useful document prioritising various infrastructure projects across a wide range of infrastructure investment classes. The summation of this work culminated in a summary document called the National Infrastructure Investment Plan (NIIP).

The PRIF team developed a simple project multi-criteria assessment tool, that was based on a similar mechanism developed by the World Bank and used it to evaluate and prioritise the nation's infrastructure to develop the NIIP. The NIIP ranking tool uses 14 criteria with at least one of those being aligned to each of the eight objectives of NDS 2011. The tool is still valid as it also conforms with the criteria of the NDS 2016.



It was relatively easy to apply and the consensus was that it gave reasonably sensible results, so it has been informally adopted as the default project ranking tool for transport infrastructure since then.

Project scores referred to in the infrastructure development programmes within this document have been assessed in accordance with that criteria.

Projects prioritised within the development programmes may not be the very highest scoring projects but the majority have been assessed to have high (NIIP) project ranking scores.

### MINOR WORKS POLICY

Minor works are small scale transport infrastructure projects, typically under SBD 350,000 in value. They are not individually listed in the NTP or MTTAP 2019 but contribute to SIG's goal of improving the transport network.

The following categories of minor works may be implemented as part of this action plan:

- Road Safety Improvements – eg. provision of pedestrian facilities/road crossings, local area traffic management, traffic signs and pavement markings.
- Small Craft Berthing Facilities – eg. platforms/structures built, or added to community wharves, to enable their use by small water craft such as outboard motor boats.
- Gender Sensitive Design Features – eg. construction of laundry pads, toilets and bus shelters in conjunction with transport infrastructure such as roads, bridges, wharves and airfields.
- Design Features for People with Disabilities – Minor works that facilitate movement of people with disabilities eg. curb drop crossings, pedestrian ramps, tactile surfacing (for visually impaired) and flush crossings of raised road medians.
- Maritime Nav aids – eg. lights, buoys and signs that facilitate operations of vessels and small craft.

### TECHNICAL ASSISTANCE POLICY

Technical assistance or consulting services (e.g. surveys, designs, supervision services) will be required for many projects this plan identifies. These are implemented as part of the project and may be staged over multiple years.

## AIR INFRASTRUCTURE PLAN

### AIR INFRASTRUCTURE INVESTMENT PLAN FOR 2019-2023

#### MAINTENANCE OF AIRPORTS

All government airfields that are currently operational in the Solomon Islands are to be maintained through programs of routine and periodic maintenance.

It is proposed to improve the management, operation and maintenance of airports in Solomon Islands via a proposed SOE known as the Solomon Islands Airport Corporation Limited (SIACL). This is currently scheduled for September 2018.

Maintenance of runways and all related airfield infrastructure is required, including line markings, drains, fences, terminal buildings, car parks, roads and any other assets on airport land.

Wharves that exist solely to provide access to island airstrips also require maintenance under the airport maintenance budget.

In recent years airport maintenance activity has focused largely on vegetation control (grass cutting) on and around runways. Consideration is being given to offering this service via Labour Based Equipment Supported (LBES) methods to improve community support especially in situations where land tensions are a reality. The plan for future years is that this maintenance be broadened to include the maintenance of all infrastructure related to the air transport facility concerned.

The maintenance status of Airports managed by MCA are identified in TABLE 1.

Table 1 – Airport Maintenance Status

Air Infrastructure Facilities - Under Maintenance					
Guadal	Honiara Airport (HIR) <sup>3</sup>	Westn	Ballalae Airfield (BAS)	Isabel	Buala-Fera Airfield (FRE)
Guadal	Marau Airfield (RUS) <sup>2</sup>	Westn	Gizo-Nusatupe (GZO)	Isabel	Suavanao Airfield (VAO)
Malait	Atoifi Airfield (ATD)	Westn	Mono Airfield (MNY)	Makira	Santa Anna Airfield (NNB)
Malait	Auki-Gwaunaruu (AKS)	Westn	Munda Airfield (MUA)	Temotu	Lata Airfield (SCZ)
Malait	Manaoba Airfield. Closed	Westn	Seghe Airfield (EGM)	Temotu	Lomlom Airfield Closed
Makira	Arona Airfield (RNA), Ulawa <sup>2</sup>	Chois	Choiseul Bay-Taro (CHY)	Renbel	Anua Airfield (BNY) Bellona
Makira	Kirakira Airfield (IRA) <sup>2</sup>	Westn	Ramata Airfield (RBV)	Renbel	Tinggoa Airstrip (RNL)
Air Infrastructure Facilities - Not Under Maintenance					
Malait	<i>Ontong Java (OTV) Closed</i>	Chois	<i>Kagau Airfield (KGE) Closed</i>	Centr	<i>Yandina Airfield (XYA) Closed</i>

## AIRPORT MAINTENANCE COST

The actual cost of properly maintaining the many infrastructure elements that comprise air services infrastructure in the Solomon Islands is still being determined by the new management team at MCA. Until such time as those budgets are more fully developed, it is important for MTTAP to make several assumptions to allow airfield maintenance budget allocations to be forecast for the years ahead. The assumptions in the Airfield Maintenance Budget Spreadsheet attached below as Table 1 are as follows:

- 1) Airfield maintenance allocations for SIG-funded airports only
- 2) Allocations for 2018 are also provided for comparison
- 3) Annual cost escalation of 3% p.a. has been applied
- 4) Asset growth cost increase of 2% p.a. has been applied
- 5) An additional 25% is added to basic airfield maintenance cost to cover the cost of all ancillary infrastructure, such as line marking, pathways, retaining etc.

The cost projections for maintaining airport infrastructure in the medium term are identified in Table 2.

Table 2 - Airfield Maintenance Cost Projections - 2019-2023

Air Infrastructure Maintenance Expenditure Forecast - By Year						
Year:	2018	2019	2020	2021	2022	2023
Airfield (Only) Mtce Total (Millions SBD):	15.0	15.8	16.5	17.4	18.2	19.1
Air Infrastructure (All) Mtce TOTAL (SBD M):	18.8	19.7	20.7	21.7	22.8	23.9

*Note: These summary programme expenditure forecasts developed with assistance of MCA Management*

As alluded to in assumptions above, additional funds are required for the routine maintenance of non-runway assets, and for periodic maintenance of all airport assets. In the absence of more specific data, MID Management estimate that a full program of recurrent routine and periodic maintenance of all operating SIG airports would add approximately 25% on top of the cost of routine airfield maintenance. This figure is included in the bottom line figures in Table 2 above, i.e. the "Air Infrastructure (All) Mtce TOTAL (SBD M)" line item.

The new management at MCA advise that it is planned to grow and enhance the accuracy of data in relation to the broader operating costs of airports in Solomon Islands for inclusion in subsequent medium-term management plans. In time it is proposed to develop more detailed cost estimates that accurately identify the specific maintenance needs of each airport.

## DEVELOPMENT OF AIRPORTS

Airfield rehabilitation works are classified as high priority projects. Historically, and generally as a consequence of the very constrained national budgets available, projects to expand existing airfields and develop new and development of new airports have been classified as low priority projects. However, we must also balance this general priority mantra with the very real need to develop new air infrastructure wherever we can deliver significant strategic and user benefits from doing so. From this perspective the sustained development of new air infrastructure is essential at this early stage of development of the country's air transport network. Given the financial and logistical challenges of delivering these relatively expensive infrastructure projects, specific donor project development support is invaluable.

## STRATEGIC NETWORK PLAN

In the very near future MCA on behalf of SIG also needs to step back and take a fresh look at the provision of air services more broadly. This will be undertaken by way of a comprehensive strategic study which considers what the appropriate density, location and scale of future airport facilities should be to both stimulate and to meet future service demand.

In order to responsibly manage air infrastructure in future, it will be required that new infrastructure be more strategically and rationally developed into a satisfactory national air transport infrastructure network. In essence this will be comprised of an air transport infrastructure development plan for each province and these plans will take aim at the provision of agreed access service levels for air (and mixed) transport trips. This work is now urgently required so plans should be made and funding identified to commence this work in 2019. Initial tasks will be to analyse each province, define target service levels, and generate the draft air network plan to a concept level with additional communication materials to support consultation. It is envisaged that specific projects developed through this process will be included in future versions of MTTAP.

Note that *Appendix 1* shows the list of top ranked airports in each province based on NTP priority scores.

## SIGNIFICANT AIRPORT DEVELOPMENT PROJECTS

The Project for the Improvement of the Honiara International Airport (JICA) – An extensive JICA airport improvement project, the objective of which is to improve airport safety and operations by enhancing and improving airport infrastructure. The project's major components are summarized into three areas: Component I: The expansion and rehabilitation of buildings. A new international departure terminal building is to be constructed, while the existing international passenger building will be renovated to accommodate a domestic passenger terminal and an international arrival terminal. Component II: The provision of special equipment and facilities necessary for the improvement of airport operation and safety. Component III: Civil work in which the current aprons will be expanded to provide 4 international aircraft apron parking locations and 6 domestic aircraft apron parking locations. A new taxiway is also to be constructed and the existing taxiway is to be renovated, meaning that the improved airport will feature 2 taxiways. The project is scheduled to commence construction in 2019.

Munda Airport Phase 3 - Project to include the construction of a tower and improved terminal facilities. This upgrade is intended to allow Munda Airport to accommodate full international flight operations. Debt ceiling to be raised to enable SIG to co-fund the project. World Bank forward assessment team arranged and due to deploy later 2018. Project budget projections not available as required in order to add this project to the Air Infrastructure Development Project List at time of writing MTTAP 2019.

Honiara International Airport Upgrade (World Bank) - World Bank also to assist with the upgrade of Henderson International Airport, including projects to provide control tower and improved fire-fighting facilities. Project budget projections not available for this project at time of writing, so this project not itemised on the MTTAP 2019 Air Infrastructure Development Programme.

NZ MFAT Various - Numerous airfields are to be upgraded as priorities for Dash 8 operations, with extensive programme support from NZ MFAT. A SIG contribution is also required for these facilities. Airfields proposed for work in the near future under this initiative include:

- Seghe Airfield (EGM)
- Suavanao Airfield (VAO)
- Choiseul Bay-Taro (CHY)
- Lata Airfield (SCZ)

The Airports 5 Year Development Plan is shown in **Table 3** overleaf.

Table 3: Airports Development Plan 2019-2023

Ref.	Prov.	Name	Type	Proj \$	Score	2019	2020	2021	2022	2023	Funder
NIPA3	Guad	Honiara International Airport (HIR) Upgrade	S	307,000,000	31	86,000,000	147,000,000	74,000,000			JICA
2011NTP AP36	West	Seghe Airfield (EGM)	U	40,000,000	24	25,000,000	15,000,000				NZMFAT
2011NTP AP46	Isab	Suavanao Airfield (VAO)	U	40,000,000	22	15,000,000	15,000,000				NZMFAT
2011NTP AP42	Chois	Choiseul Bay-Taro (CHY)	U	40,000,000	30		20,000,000	10,000,000	10,000,000		NZMFAT
2011NTP AP32	Temo	Lata Airfield (SCZ), Santa Cruz Islands.	U	60,000,000	29			30,000,000	30,000,000		NZMFAT
Totals (SBD) Millions:						126,000,000	197,000,000	114,000,000	40,000,000		

MCA also have a second tier of projects under consideration for subsequent years, i.e. a short list of higher priority airfields that are likely to be included as development projects in the medium term.

Once NZ MFAT funding and programme have been confirmed MCA will finalise their second-tier programme.

Candidate airfields for inclusion in MCA's second tier medium-term plan include:

- Kirakira Airfield (IRA)
- Ballalae Airfield (BAS)
- Auki-Gwaunaruu Airfield (AKS)
- Mono Airfield (MNY)
- Buala-Fera Airfield (FRE)
- Marau Airfield (RUS)

## ROAD INFRASTRUCTURE PLAN

### ROAD INFRASTRUCTURE INVESTMENT PLAN FOR 2019-2023

#### MAINTENANCE OF ROAD INFRASTRUCTURE

##### *Maintainable Roads*

All maintainable roads require a programme of routine and periodic maintenance.

The Solomon Islands Transport Asset Management System (SITAMS) is used to store asset data which is used to guide the prioritisation of maintenance. SITAMS defines maintainable roads as having a SITAMS condition rating of 1, 2 or 3.

##### *Cost of Road Maintenance*

The typical costs of maintaining the various classes of road in the Solomon Islands in 2019 are estimated in the tables below:

Table 4: Unsealed Roads - Maintenance Cost Rates

		Routine		Periodic	
<i>Unsealed Main Roads Maintenance Cost</i> <i>(Based on a July 2018 MID rate estimate for 2019/2020 assuming 6m unsealed road width)</i>	<i>Annual Factor</i>	SBD/km	SBD/km /year	SBD/km	SBD/km /year
Labour-based equipment-supported (LBES) routine maintenance Continuous treatment every year	1.000	60,000	60,000		
Grading, once per year (minimum)	1.000	18,000	18,000		
Machine-based maintenance - Patch repairs, re-sheeting, shape correction, culvert repairs. Assume required on 5% of road length each year – 1/20 years	0.050			500,000	25,000
<b>Average cost (Unsealed Main Roads)</b>	□		<b>78,000</b>		<b>25,000</b>

Table 5: Sealed Roads - Maintenance Cost Rates

□ <i>Sealed Main Roads Maintenance Cost (Based on a July 2018 MID rate estimate for 2019/2020 assuming 7m sealed road width)</i>	<i>Annual Factor</i>	Routine		Periodic	
		SBD/km	SBD/km /year	SBD/km	SBD/km /year
Machine-based routine maintenance including pothole patching, edge break repairs, drain cleaning and vegetation control, continuous treatment every year		100,000	100,000		
Shoulder grading, once per year		10,000	10,000		
Reseal, once every 7 years	0.143			1,200,000	171,429
Rip, reconstruct/shape correction, 2% of road length every year	0.020			2,500,000	50,000
□ Average cost (Sealed Main Roads)	□		<b>110,000</b>		<b>222,000</b>

### *Bridge Maintenance Cost*

The typical cost of lower order bridge maintenance in Solomon Islands has been estimated by MID staff to be in the order of \$100,000. This includes an allowance for inspections and bridge maintenance including, re-decking, damage repairs, repainting steel work, improvements to river training and replacing missing Bailey bridge parts. It is planned to inspect bridges at least every two years and that bridges, from experience, require some significant maintenance on average every third year and for this reason the annualised maintenance cost per structure assumed for budgeting purposes is \$33,333 per bridge per year.

### *Road Maintenance Budget*

Average national cost rates have been used to develop budget estimates for main roads. Maintenance costs rates for feeder and access roads are slightly less, but they only comprise a small proportion of the network. Similarly, there is also significant regional variation in cost rate, as works in some more remote locations are more expensive, however the volumes of these works are low and so the effect on average budget allocation is negligible. The rates used for this calculation are representative of Guadalcanal and Malaita, where a high proportion of roads and road contracts are.

SITAMS data indicates that some 147km (85%) of sealed roads and 693km (55%) of unsealed roads have been rated as being in maintainable condition. Of the larger bridges, i.e. those in excess of 6m span, an estimated 259 structures (as of July 2018) are estimated to be in maintainable condition. Using the cost rates identified above, the budget has



been estimated to sustainably maintain these existing road assets over the longer term and this is reflected in the calculations shown in **Table 5**, **Table 6** and **Table 7** below.

Table 6: Annual Maintenance of Sealed Roads

Province	Road Condition - Sealed		Total km	Routine (SBD)	Periodic (SBD)
	Maintainable km	Not Maintainable			
Choiseul	0.0	0.0	0.0	-	-
Western	27.3	3.1	30.4	3,003,000	688,200
Isabel	0.0	0.0	0.0	-	-
Central	0.0	0.0	0.0	-	-
Renbel	0.0	0.0	0.0	-	-
Guadalcanal	78	6.3	84.3	8,580,000	1,398,000
Malaita	6.4	10.9	17.3	704,000	2,419,800
Makira	0.0	0.0	0.0	-	-
Temotu	0.0	0.0	0.0	-	-
Honiara	34.7	6.6	41.3	3,817,000	1,465,200
<b>Total km - Sealed</b>	<b>147.3</b>	<b>26.0</b>	<b>173.3</b>	<b>16,104,000</b>	<b>5,719,200</b>
<i>Percent of Total</i>	<i>85%</i>	<i>15%</i>	<i>100%</i>		

Table 7: Annual Maintenance of Unsealed Roads

Province	Road Condition - Unsealed		Total	Routine (SBD)	Periodic (SBD)
	Maintainable km	Not Maintainable			
Choiseul	13.1	9.2	22.3	760,000	231,000
Western	49.7	54.6	104.3	2,885,000	1,365,000
Isabel	54.5	9.4	63.9	3,164,000	235,000
Central	7.4	0.0	7.4	427,000	-
Renbel	50.6	21.5	72.1	2,932,000	539,000
Guadalcanal	144.0	194.7	338.7	8,354,000	4,867,000
Malaita	186.1	185.4	371.4	10,792,000	4,635,000
Makira	86.1	44.5	130.6	4,993,000	1,112,000
Temotu	59.0	10.0	69.0	3,420,000	251,000
Honiara	55.8	26.0	81.8	3,237,000	651,000
<b>Total km - Sealed</b>	<b>706.2</b>	<b>555.3</b>	<b>1,261.5</b>	<b>40,964,000</b>	<b>13,886,000</b>
<i>Percent of Total</i>	<i>56%</i>	<i>44%</i>	<i>100%</i>		

Table 8: Annual Maintenance of Bridges

Description	Maintainable Bridges	Bridges Not Maintainable	Total	Routine (SBD)	Periodic (SBD)
Estimated number of bridges >6m span	259	106	365		8,633,333
<i>Percent</i>	<i>71%</i>	<i>29%</i>	<i>100%</i>		

The tables above indicate the minimum number of sealed and unsealed road kilometres in each province, and the number of larger bridges nationwide. Both of these classes of road asset require continuous maintenance through planned routine and periodic maintenance activities. Smaller bridges and culverts are to be included in contractual scope and maintained under general road maintenance contracts.

### Road Maintenance Notes

- The tables show maintenance cost estimates only for existing road and bridge infrastructure that has been assessed as being in average or better condition and capable of being maintained through standard maintenance treatments.
- Asset data capture has fallen behind during the STIP era and is now no longer reliable enough to use without a major asset data capture exercise. However, all bridges known to have been upgraded and all known to have fallen into disrepair have been added to the MTTAP 2017 numbers to provide a best estimate of bridge asset condition for MTTAP 2019 – 2023.
- A substantial contract was drafted and proposed to be let to capture fresh SITAMS Asset Management Data at the time of writing this MTTAP (July 2018)
- Some anecdotal evidence from MID Engineers has been used to update the old MTTAP 2017 data for MTTAP 2019. Sealed roads and bridges are asset classes that are significantly less prone to degradation over time, and for this reason various anecdotal accounts have been added to update this data. However, this approach is not possible with unsealed roads, as they change character rapidly, especially during protracted bouts of wet weather. For this reason, regular asset data capture is essential for the rational and responsive prioritisation of unsealed road works, especially through Annual Work Plans. Note that in the absence of up-to-date information on unsealed roads it was thought best to simply sustain the data from MTTAP 2017, at least until such time as new improved asset data is available from the imminent asset data capture contract.
- Only 71% of large bridges and 56% of unsealed roads are rated as maintainable. A significant proportion of the existing transport assets therefore require

rehabilitation works. The annual maintenance burden, i.e. the work required and the expense of those works, both increase significantly as the percentage of asset requiring rehabilitation increases. This presents one of the strongest cases for the importance of prioritising effective maintenance.

- Very little planned bridge maintenance is currently undertaken, although reactive bridge repairs (e.g. re-decking) are done in urgent situations, when structures are at risk of becoming impassable or dangerous. Regular (annual) bridge inspections and planned remedial works are required to ensure the safety of the travelling public and to sustain vital transport connections.

## ROAD ASSET MAINTENANCE COST

Table 9 below summarises the total annual budget requirement for maintaining existing roads and bridges. In other words, this is the estimated expenditure required in 2019 to maintain the maintainable roads and maintainable bridges that existed at the end of 2018.

Table 9: Annual Maintenance Budget for Existing Roads and Bridges 2019

Asset Class	Routine (SBD p.a.)	Periodic (SBD p.a.)
Sealed Roads	16,104,000	5,719,200
Unsealed Roads	40,964,000	13,886,000
Bridges (>6m span)		8,633,000
Totals - Routine and Periodic Road/Bridge Maintenance	57,068,000	28,238,533
Grand Total - Annual Road/Bridge Maintenance	<b>85, 307,000 p.a.</b>	

However, it is planned that by the end of 2019 some lengths of “unmaintainable” road will have been rehabilitated and so will be added to the inventory of roads and bridges requiring maintenance in 2020, and so on. Previous attempts to itemise the specific additional increments of maintenance liability by individual project and by year have not generated accurate forecasts of demand for several reasons. One reason is that maintenance is actually unlikely on brand new assets of any kind in Solomon Islands simply because there are always other projects of greater need. In light of this reality we are increasingly seeing donors factor some initial maintenance support into the early years of new projects effectively as an element of the project design. Another reason is that project delivery in the Solomon Islands is relatively volatile when compared with more developed countries. Given these difficulties that essentially invalidates a more calculated approach, a 2% factor has been applied to allow for the increasing asset

liability that arises as a consequence of the new asset being created as a consequence of development projects.

The assumptions in the Road Infrastructure Maintenance Budget Table attached below as Table 10 are as follows:

- 1) Annual cost escalation of 3% p.a. has been applied
- 2) Asset growth cost increase of 2% p.a. has been applied

Taking these cost increases into account, the total annual budget required for maintaining roads and bridges throughout the planning period is as shown in Table 10 below.

Table 10: Road and Bridge Maintenance Allocations for 2019-2023

	2019	2020	2021	2022	2023
ROAD INFRASTRUCTURE MAINTENANCE COST	85,307,000	89,572,350	94,050,968	98,753,516	103,691,192

## ROAD DEVELOPMENT PLANS

High priority road projects have been selected for inclusion in the MTTAP 5 Year Road Development Programme for each province. The programme of proposed road development projects is specified in Table 11 below.

Selected high scoring national priority road projects are also briefly described, as follows:

**Kukum Highway Improvements – Phase 2.** Phase 2 is the potential second stage of an existing JICA grant project to upgrade Honiara’s one and only arterial road route to the east of Honiara City under the Phase 1 Project. The highway component of Phase 1 extends approximately 3 kilometres, from Town Council Roundabout to Vura Rd/Ministry of Fisheries and Marine Resource, and provides a high-quality reconstruction of the entire old four lane arterial highway and all associated infrastructure and access arrangements. The bridge component is comprised of two high integrity bridges at the Mataniko River. This Phase 1 project is on schedule for completion late in 2018.

Phase 2 is the section of Kukum Highway between Vura Rd/MFMR and Honiara International Airport. The Phase 2 project has been applied for by MID and has initially received a positive and warm response from the JICA Solomon Islands team.

However, the request from SIG is currently formally Under Consideration by the Government of Japan. As such it is inappropriate to presume the future of this project, at

least until such time as an official response is received from the Government of Japan. For this reason, this project is not programmed in the MTTAP Land Infrastructure Development Programme.

**Solomon Islands Urban Centres Footpath Upgrade Programme Stage 1.** The first stage of a programme to upgrade the footpaths of the main urban areas of Solomon Islands. Starting with the 3 main centres of Honiara, Auki and Gizo. Footpath program to be preceded by some prioritisation work, route planning, public transport integration and basic capacity considerations and to incorporate urban design and the integration of green elements. The project objective is to improve the climate resilience of all heavily used walking and footpath facilities, to promote active transport and to also provide a significant boost to the visual amenity of these important tourist areas

**Malaita Road Improvement and Maintenance Program - Component B of the World Bank's Solomon Islands Road and Aviation Project (SIRAP)** – SIG has accepted a co-funded loan from the World Bank to deliver the following projects: (i) sealing of Auki-Dala gravel road section (17 km); (ii) routine maintenance of the resulting Auki-Dala sealed sections (17 km) for a period of 5 years; (iii) upgrading of the existing 3 log bridges on the Auki-Dala section to modular bridges; and, (iv) annual grading and routine maintenance of the remaining unsealed sections of the main road network (200 km) for a period of 4 years. The funds borrowed would also pay for road surveys (mobile mapping survey, pavement structure and drainage investigations) and design and supervision of road work. It is noted that all these works aim to improve climate resilience of infrastructure.

**National Bridge Improvement Program** – Substantial national program to inspect, prioritise, repair and/or replace substandard road bridges. First stage to procure comprehensive and current national bridge asset data underway in 2018.

**Honiara Inner Bypass** - It is proposed that studies, modelling at appropriate scales, design and land acquisition for the Honiara Inner Bypass be undertaken during this planning period, with a view to completing construction of the road link (Town Ground/Rove to Lawson Tama) prior to Honiara hosting the South Pacific Games in 2023. Some preliminary alignments have been developed by MID for the eastern part of this route (known as the Holy Cross Bypass). Considerable additional study will be necessary to complete a satisfactory design for this route.

**Honiara Outer Ring Road** - The Honiara Outer Ring Road (Honiara Back Road) is regarded as a high national priority so as to enable planned expansion of the national

capital and greater Honiara area. It has been planned with limited funding only for preparatory studies during this planning period. Depending on results of the studies, it would be desirable to commence advance land purchase before the end of this planning period, but this has not been costed in the Action Plan.

**Solomon Islands Bus Hut Programme Phase 1** – Programme to provide significant improvements for the higher volume public transport facilities in Solomon Islands. Starting with the main centre i.e. Greater Honiara Area and extending to other areas in due course. First stage of Phase 1 to consult with all affected parties to develop a sensible generic shelter that is cost effective, highly resilient and light in maintenance requirements for use as a modular generic system that can be readily and efficiently adapted and properly and carefully orientated to reliably provide shelter from both Sun and Rain. Second stage of Phase 1 will be to determine areas of greatest need, design facilities and procure implementation.

**East Guadalcanal Bridges** – Construction of Mongga Bridge scheduled for 2019.

**Seal Extensions** – Approximately 10km of new road sealing has been planned each year, in accordance with STIIP objectives and DLIs.

It is noted that the cost of even the relatively few selected high priority road projects exceeds the funds expected to be available. For this reason, many of the projects listed will be built in multiple stages, with preparatory studies and initial construction of only parts of each road being completed by 2023.

Donor support, and SIG/NTF funding splits are yet to be finalised but will be determined on a project by project basis. In some cases, additional funds will be required for SIG's contribution to donor-funded road projects once their scope has been better defined.

The Road Infrastructure 5 Year Development Programme is shown in **Table 11** overleaf.

Table 11: Road Development Plan 2019-2023 (by Province)

Ref.	Prov.	Name	km	\$ SBD	Score	2019	2020	2021	2022	2023	2024+	Funder
CPIU	Various	SI Urban Traffic Safety		12,000,000	45		3,000,000	3,000,000	3,000,000	3,000,000		SIG/NTF
MID20	Various	Bridge Improvement Program		234,000,000	37	2,500,000	15,000,000	15,000,000	15,000,000	15,000,000	15,000,000	SIG/NTF
MID11	Various	Sol Urban Footpaths Stg 1	-	19,500,000	26	1,000,000	5,500,000	6,500,000	6,500,000			TBD
CPIU	Various	Sol Bus Hut Program Stage 1		2,500,000	37		1,000,000	1,500,000				
MID12	Various	Footbridges Program		20,000,000	25	1,000,000	4,000,000	5,000,000	5,000,000	5,000,000		TBD
CPIU15b	Various	Prov Town Drain&Sealing Works	30	37,000,000	25	5,000,000	8,000,000	8,000,000	8,000,000	8,000,000		SIG/NTF
CPIU	Honiara	Honiara PT Improvements		8,000,000	42		2,000,000	2,000,000	2,000,000	2,000,000		SIG/NTF
TA9331	Honiara	Honiara Hwy TA 9331 SOL6 Honiara Inner Bypass	13	48,000,000	36					48,000,000		SIG/NTF
CPIU	Honiara	Urban Access Infrastructure		8,000,000	35		2,000,000	2,000,000	2,000,000	2,000,000		SIG/NTF
TA9331	Honiara	Honiara Hwy TA 9331 SOL1 Town Ground to White River	3	208,000,000	35		80,000,000	128,000,000				SIG/NTF
LPS01	Honiara	Honiara EW Link-Inner Bypass	4	40,00,000	33	1,000,000		4,000,000	20,000,000	10,000,000	5,000,000	SIG/NTF
		Tanahua Rd a.k.a. "Vura Kukum Bypass"	v	8,000,000				4,000,000	4,000,000			SIG/NTF
CPIU02a	Honiara	Honiara Hwy East	1	5,000,000	32	5,000,000						SIG/NTF
CPIU03	Honiara	Honiara Hwy West	5	18,120,000	32			9,000,000	9,120,000			SIG/NTF
CPIU15a	Honiara	Honiara Drainage Works	-	4,000,000	32	2,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	SIG/NTF
LPS02	Honiara	Honiara Outer Ring Road	24	240,000,000	32					2,000,000	238,000,000	SIG/NTF
NIIPR20	Choiseul	Choiseul Bay Connectivity Rd	78	450,000,000	31	2,000,000	4,000,000	10,000,000	30,000,000	40,000,000	364,000,000	SIG/NTF
CPIU37	Western	Ghizo Island Roads (Inland Rd +)	17	43,000,000	31	12,000,000	22,000,000	9,000,000				SIG/NTF
CPIU23a	Western	Munda-South New Georgia S1	50	100,000,000	30					25,000,000	75,000,000	SIG/NTF
DCC17	Isabel	Tatamba Bay Roads	20	40,000,000	31			10,000,000	10,000,000	10,000,000	10,000,000	SIG/NTF
IPG01d	Isabel	Hokokama Bridge (New)	1	10,000,000	28		5,000,000	5,000,000				SIG/NTF
CPIU26	Isabel	Buala Town Rd Rehab & Seal	3	12,800,000	26	6,000,000	6,000,000					SIG/NTF
DCC22	Central	Tulagi "Ring" Rd Rehab	9	36,000,000	30	6,000,000	25,000,000	4,000,000				SIG/NTF

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DCC12	Renbel	Tiggoa to Lake Tengano Rehab - Stg 1	16	40,000,000	31		20,000,000	20,000,000			Stg 2 & 3 (37km)	SIG/NTF
RPG01	Renbel	Bellona Roads rehab	12	30,000,000	28						30,000,000	SIG/NTF
NIIPR08	Guadal	East G Bridges -Mongga		24,000,000	41	5,000,000	19,000,000					GoA
TA9335	Guadal	Honiara Hwy TA 9331 SOL5 Honiara Airport to Mberande	32	48,000,000	40				48,000,000			SIG/NTF
NIIPR07	Guadal	Mbokokimbo-Aola Road Rehab	28	90,000,000	32		45,000,000	45,000,000				SIG/NTF
TA9332	Guadal	Honiara Hwy TA 9331 SOL2 White River to Ndoma	20	72,000,000	32			72,000,000				SIG/NTF
TA9333	Guadal	Honiara Hwy TA 9331 SOL3 Tambea to Naro	13	56,000,000	30			56,000,000				SIG/NTF
CPIU18	Guadal	Marau Bridges (2 No) Reconstruct	2	40,000,000	29		20,000,000	20,000,000				SIG/NTF
TA9334	Guadal	Honiara Hwy TA 9331 SOL4 Naro to Lambi	14	64,000,000	28			40,000,000	24,000,000			SIG/NTF
CPIU17	Malaita	Malaita Bridges (5 No)	5	70,000,000	38		10,000,000	20,000,000	20,000,000	20,000,000		SIG/NTF
DCC09	Malaita	Okwala to Kwaibaita	30	34,000,000	32			8,000,000	22,000,000	4,000,000		SIG/NTF
WB 166 622	Malaita	SIRAP Malaita Roads by World Bank	200	120,000,000	32							WB TBA
DCC10	Malaita	Auki Town Roads Phase 4	6	24,000,000	35	5,000,000	5,000,000					SIG/NTF
MID02	Malaita	Malaita Short Term Rooding Contracts	57	40,000,000	33	10,000,000	15,000,000	15,000,000				SIG/NTF
NIIPR36	Makira	Warahito - Namuga East Makira Bridge + Road	55	110,000,000	31				20,000,000	30,000,000	60,000,000	SIG/NTF
MID15	Makira	Ravo & Warahito Bridges		80,000,000	29				20,000,000	20,000,000	40,000,000	TBD
MID06	Makira	Wango-Marou Bay (W) Rd	40	52,000,000	29			15,000,000	30,000,000	7,000,000	-	SIG/NTF
CPIU19	Makira	Bwara Bridge Reconstruct	1	?	26		5,000,000	5,000,000				
TPG02	Temotu	Nendo NE Rd On Hold – Safeguards..	46	115,000,000	37				5,000,000	30,000,000	80,000,000	SIG/NTF
		<b>Totals (SBD)</b>	<b>823</b>			63,500,000	320,000,000	539,500,000	301,120,000	285,000,000	921,000,000	



# MARITIME INFRASTRUCTURE PLAN

## MARITIME INFRASTRUCTURE INVESTMENT PLAN FOR 2019-2023

### CONTEXT

The term Maritime Infrastructure refers mainly to Wharves and Ramps but also to minor infrastructure such as Navigational Aids.

There are two main classes of maritime infrastructure in Solomon Islands:

1) International sea ports – There are two of these. One in Honiara and the other in Noro, Western Province. They are both operated and funded by the Solomon Islands Ports Authority (SIPA).

2) Community wharves and ramps - Some community wharf assets are privately owned, e.g. wharves owned by missions or private companies. The remainder of community wharf assets are owned and managed by Solomon Islands Government.

Honiara and Noro International Port Upgrades and SIG-owned maritime infrastructure assets are the subject of this Action Plan.

### MAINTENANCE OF MARITIME INFRASTRUCTURE

Existing maritime infrastructure assets which are in maintainable condition require annual inspection and minor repairs to prevent deterioration over time. Although SITAMS does not contain recent wharf condition data, anecdotal evidence has been applied to older SITAMS data and it is estimated that 41 community wharves (as of July 2018) are currently deemed to be in satisfactory condition and can therefore be sustained through routine inspection and minor repairs. Routine wharf maintenance may typically include minor concrete patch repairs, repainting steel work, replacing fenders and repairing coastal protection works (eg. damaged gabions).

MID management advise that for budgeting purposes, their recent experience suggests that an appropriate average annual cost for the maintenance of all maintainable wharves in Solomon Islands is \$86,000 per wharf for 2019, increasing at 3% p.a.

Apart from annual inspection costs most maintainable wharves should not require annual maintenance. The frequency with which minor wharf repairs have typically been found to be required is approximately once every three to five years, depending on design and usage. Repair works for wharves should generally be grouped into suitable contract packages.

**Table 12** provides a summary projection of estimated average annual budget for maintenance of all maintainable wharf structures including ramps. The annual budgets shown have been escalated by 3% p.a. after 2019 to account for inflation and MID's recent experience suggests that the total number of wharf assets has been increasing at a net rate of 2 additional facilities per year on average.

Table 12: Wharves Maintenance Plan Summary 2019-2023

Parameter/Year	2019	2020	2021	2022	2023
Number of Maintainable Wharves (Average gained less those lost)	41	43	45	47	49
Average Mtce Cost (SBD)	86,000	88,580	91,237	93,975	96,794
Total Wharves Mtce Cost	3,526,000	3,808,000	4,105,000	4,416,000	4,742,906

## PROVINCIAL SPLIT OF MARITIME INFRASTRUCTURE MAINTENANCE

The current split of wharf maintenance effort to a large degree reflects the split of provincial transport limitations of the various provinces. It also reflects some very challenging geographical realities, but also the broader lack of transport alternatives experienced by some provinces and this has implications for MID.

The number of maintainable wharves - by province - is as follows:

- Western (18 No): *Ringi Wharf, Enoghae Inlet, Goldie College Wharf, Keru, Munda Lambete Wharf, Munda UC Wharf, Mbunikalo, Nusatupe, Ughele Wharf, Korovou, Maleai Pier, Lengana Wharf, Chea, Ngasini Wharf, Patutiva Wharf, Lambulambu Wharf, Vonunu Wharf, Koriovuku Wharf*
- Malaita (6 No): *Ato'ifi (Uru Harbour), Auki Wharf, Su'u Wharf, Uhu, Arabala, Nu'usi*
- Choiseul (5 No): *Panggoe, Vurango, Katurasele, Taro, Nuatambu*
- Isabel (5 No): *Allardyce, Susubona, Tatamba Wharf, Kaevanga Wharf, Ghojururu Wharf*
- Temotu (3 No): *Carlisle/Karlise Bay (Kala), Nangu, Nialo*
- Makira (2 No): *Maevo, Onebia*

- Central (1 No): *Siota (Niumara/Leitongo)*
- Guadalcanal (1 No): *Manikaraku*
- Renbel (0 No): *N/A*

## DEVELOPMENT OF MARITIME INFRASTRUCTURE

Based on NTP priority scores first and second ranked wharf/ramp rehab/new projects were selected in each province (except Honiara, which has no recorded community wharves). This list of provincial priority wharves is shown in **Table 13**. Note that projects would tend to be combined in type and/or location for natural cost efficiencies at the construction stage.

ADB are also undertaking design for numerous wharf projects which are scheduled for construction in 2019 and beyond. The following wharves are proposed to be delivered:

- Honiara International Port Upgrade
- Noro International Port Rehabilitation and Extension
- Kirakira Wharf, Makira
- Buala Wharf, Isabel
- Waisisi, Malaita
- Moli, Choiseul
- Viru Harbour, New Georgia, Western
- Ahanga Ramp, Bellona

STIIP has completed designs and plans to commence construction of the following wharves in the period 2019 to 2021:

- Kirakira Ramp, Makira
- Tulagi Public Wharf, Central
- Malu'u Public Wharf, Malaita

STIIP is yet to design the following wharves and so plans to commence construction of the following wharves in the period 2020 to 2022:

- Lata Wharf, Nendo, Temotu
- Tarekukure, Choiseul
- Zinoa, Choiseul

New DCC Wharves: Ugi Wharf, Makira and Dovele Wharf, Vella La Vella, Western. Both have been designed and contracts awarded. It is proposed to construct these wharves in 2019.

Rennell and Bellona are proposed to have one new boat ramp each, with Aghana Ramp in Bellona currently being designed for delivery through ADBs PDF facility.

Table 13: Wharf Development Plan 2019-2023

Ref.	Prov	Name	Type	\$ SBD	Score	2019	2020	2021	2022	2023	2024+	Funder	
W033	Chois	Tarekukure	R	2,000,000	30		1,000,000	1,000,000				SIG/NTF	
W058	Chois	Zinoa (Ghinoa) Island	R	2,000,000	27		1,000,000	1,000,000				SIG/NTF	
W119	Chois	Moli	R	10,000,000	24		5,000,000	5,000,000				SIG/NTF	
W071	West	Ghizo Main Wharf	U	10,000,000	39	5,000,000	5,000,000					SIG/NTF	
W022	West	Seghe	R	2,000,000	34		1,000,000	1,000,000				SIG/NTF	
ADB PDF1	West	Noro International Wharf Upgrade	R	280,000,000	33	56,000,000	56,000,000	56,000,000	56,000,000	56,000,000		SIG/NTF	
W041	West	Tusumine	R	2,000,000	27		1,000,000	1,000,000				SIG/NTF	
W048	West	Viru Harbour	N	10,000,000	23			5,000,000	5,000,000			SIG/NTF	
W048	West	Dovele	N	10,000,000	22	10,000,000						SIG	
W083	Isab	Kia Wharf	R	2,000,000	32			1,000,000	1,000,000			SIG/NTF	
W054	Isab	Buala Wharf	N	11,000,000	28		6,000,000	5,000,000				SIG/NTF	
W019	Isab	Samasodu	N	10,000,000	21						10,000,000	SIG/NTF	
S100	Honia	Honiara Domestic Wharf Upgrade	R	2,500,000	41		800000	1700000				SIG/NTF	
ADB PDF2	Honia	Honiara International Wharf Upgrade	R	120,000,000	36	24,000,000	24,000,000	24,000,000	24,000,000	24,000,000		SIG/NTF	
W040	Centr	Tulagi Public Wharf	N	12,000,000	29	4,000,000	8,000,000					SIG/NTF	
W057	Centr	Yandina Wharf	N	20,000,000	28						20,000,000	SIG/NTF	
W114	Centr	Savo	N	10,000,000	23						10,000,000	SIG/NTF	
W002	Renbl	Ahangha Ramp	N	1,000,000	30		1,000,000					SIG/NTF	
W098	Renbl	Lughughi Bay Ramp	N	1,000,000	27		1,000,000					SIG/NTF	
W005	Guadl	Aola Wharf	N	10,000,000	27						10,000,000	SIG/NTF	
W109	Guadl	Marau	N	10,000,000	27						10,000,000	SIG/NTF	
W099	Malta	Ma'asupa Wharf	R	2,000,000	34		1,000,000	1,000,000				SIG/NTF	
W025	Malta	Malu'u	N	10,000,000	30	5,000,000	5,000,000					SIG/NTF	
W030	Malta	Takwa	N	10,000,000	30						10,000,000	SIG/NTF	
W138	Malta	Onepusu	R	2,000,000	30						2,000,000	SIG/NTF	
W055	Malta	Waisisi	N	40,000,000	26	15,000,000	25,000,000					SIG/NTF	
W084	Makra	Kirakira Port Dvlpmnt	N	30,000,000	36	3,000,000	19,000,000	8,000,000				SIG/NTF	
W029	Makra	Su'umoli	R	3,000,000	31						3,000,000	SIG/NTF	
W037	Makra	Ugi	N	10,000,000	22	10,000,000						SIG	
W093	Temo	Lata	N	10,000,000	33	5,000,000	5,000,000					SIG/NTF	
W144	Temo	Temotu Intl Sea Port	N	30,000,000	32						30,000,000	SIG/NTF	
NIIPS15	Varis	Maritime Nav Aids	N	10,000,000	23	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000		SIG/NTF	
Totals (SBD)							142,000,000	170,800,000	115,700,000	91,000,000	85,000,000	105,000,000	

## MTTAP FINANCIAL SUMMARY

### MTTAP TRANSPORT ACTION PLAN SUMMARY FINANCIAL INFORMATION

The summary financial requirements to deliver the MTTAP Action Plan proposed under this programme are summarised in **Table 14** below.

Table 14: Consolidated Transport Action Plan

Transport Infrastructure Maintenance Plan - Recurrent							
Budget Year	Qty	2019	2020	2021	2022	2023	Agency
Airports Maintenance	21 Airports Maintained	19,700,000	20,700,000	21,700,000	11,400,00	40,000,000	MCA
Roads & Bridges Maintenance	850 kms of Road Maintained	85,300,000	89,600,000	94,100,000	98,900,000	103,700,000	MID
Wharves & Ramps Maintenance	41 Wharves & Ramps Maintained	3,600,000	3,800,000	4,100,000	4,400,000	4,800,000	MID
Infrastructure Maintenance Total	Air, Land & Sea	108,600,000	114,100,000	119,000,000	114,700,000	148,500,000	ALL
Transport Infrastructure Development Plan							
Budget Year		2019	2020	2021	2022	2023	Agency
Airports Development	5 Airports Upgraded	126,000,000	197,000,000	114,000,000	40,000,000		MCA
Roads & Bridges Development	597 kms Built or Rehabilitated	64,000,000	320,000,000	540,000,000	300,000,000	285,000,000	MID
Wharves & Ramps Development	32 Wharves Replaced or Upgraded	142,000,000	171,000,000	116,000,000	91,000,000	85,000,000	MID
Infrastructure Development Total	Air, Land & Sea	332,000,000	688,000,000	770,000,000	431,000,000	370,000,000	ALL
All Transport Infrastructure - Maintenance & Development							
All Infrastructure Grand Total (SBD)	Air, Land & Sea	441,000,000	802,000,000	889,000,000	546,000,000	519,000,000	ALL

## APPENDIX

Appendix 1	Air Infrastructure Master Project List – Prioritised
Appendix 2	Land Infrastructure Master Project List – Prioritised
Appendix 3	Maritime Infrastructure Master Project List – Prioritised
Appendix 4	Notes for Future Updates of the NTP/MTTAP

## Appendix 1

### Air Infrastructure Master Project List - Prioritised



## Appendix 2

### Land Infrastructure Master Project List - Prioritised

## Appendix 3

### Maritime Infrastructure Master Project List - Prioritised

## Appendix 4

### Notes for Future Updates of the NTP/MTTAP

## APPENDIX 4 – NOTES FOR FUTURE UPDATES OF MTTAP

The following ideas are offered as opportunities to improve the way we produce future updates of the MTTAP.

1. **Place Names** – A place naming convention would make it easier to find projects.
2. **Locations of Schools and Health Facilities** – It would be useful to have education and health facilities maps and lists that also utilise the naming convention sought above
3. **Project Data Sheets** – It is recommended that a Project Data Sheet (PDS) be developed to define basic project parameters. Those parameters to include:
  - a. Simplified location map with names and coordinates
  - b. Project description and purpose – Include road length etc
  - c. Cost estimate

The data fields for each project should be populated by the sponsoring agency.

4. **Island/Province Transport Plans** - Provincial Transport Plans should be developed for each province, using a standardised format as follows:
  - a. Consultation with all affected groups
  - b. Utilising all available population and economic activity data

Preparation of future MTTAPs would be greatly simplified if these plans were available as resources.

5. **Sub-Sector Infrastructure Development Plans/Criteria** – It would be helpful to set down a guiding strategy of principles that define where, and for what access/economic reason and to what land uses that airfields, wharves and roads should be built.
6. **Geographic Information System (GIS)** - With appropriate GIS resources, all project data could be analysed, reported and presented using GIS. MID's Asset Management Unit (AMU) is starting to build GIS capacity as it develops its SITAMS infrastructure data base. With the necessary technical assistance and consultant operational inputs it is recommended that technical tasks for future NTP/MTTAPs be moved to a fully GIS platform.