Government of Nauru

NATIONAL INTEGRATED INFRASTRUCTURE STRATEGIC PLAN

Appendix B

Public Sector Infrastructure

Asset Register Updates

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1. Asset Register Introduction

The infrastructure asset register for Nauru public sector infrastructure assets was initially created in 2019, to support the development of 2019 Nauru Integrated Infrastructure Strategic Plan (NIISP) and it contains pertinent information required for making asset management and investment decisions, for infrastructure assets employed for providing public services in Nauru, including the following categories of assets:

- buildings;
- sealed roads;
- unsealed roads;
- footpaths;
- airstrip and navigation aids;
- wharfs and boat ramps;
- telecommunication plant;
- solid waste management assets; and
- coast protection assets.

The electricity and fresh-water production and distribution in Nauru are managed by Nauru Utilities Corporation (NUC). More recently, NUC has also been given the mandate to manage sewage treatment plant infrastructure. Through a technical assistance (TA) initiative financed by ADB, NUC developed an infrastructure asset register in 2018 for its corporate assets, in which pertinent information required for asset management of the infrastructure employed for production and distribution of electricity and water are recorded. Infrastructure assets at the fuel storage facility are also under NUC corporate control and the management of these assets has been contracted to an international professional company - Vital Group, with expertise in managing such assets. Therefore, to avoid duplication, infrastructure assets managed by NUC and Vital Group are not included in Nauru public sector asset register.

The asset register updates completed in 2023 include:

- addition to the asset register of new infrastructure assets, which have been constructed during the last five years, since the development of the asset register in 2018;
- removal from the asset register those infrastructure assets, which have been retired from service during the past five years, since the development of the asset register in 2018;
- Update of financial information, including accumulated depreciation, current book value, gross replacement cost and annual maintenance cost allowance for each infrastructure asset; and
- Update of the physical and functional performance ratings of assets and assets' major components and calculation of asset condition index, to support investment decisions into infrastructure asset repairs, renewal and replacement.

2. Asset Register Hierarchy:

Asset register hierarchy plays an important role in improving the effectiveness of asset management practices within an organization. It defines which service sector, or department is responsible for making asset management and investment decisions with respect to a certain asset, and also identifies the services impacted by those decisions. Systematic relationships between facilities, assets and their components and subcomponents, allow accurate roll up of component and subcomponent operating condition or costs to determine the condition or costs at the facility or the asset level, as illustrated in Figure 1.

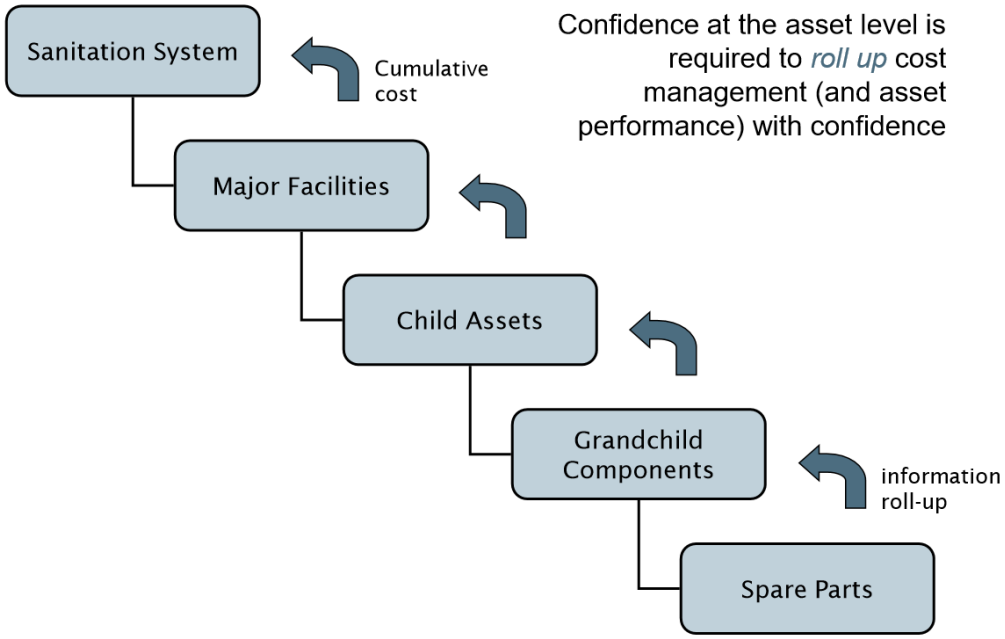

Figure 1: Systematic Relationships between Facilities, Assets and their Components

(Source: Nauru Infrastructure Strategic Investment Plan 2019 – PRIF)

In case of those assets, where the typical useful life for some components is significantly different than the parent asset and where such components can be independently replaced, resulting in asset renewal and life extension, systematic hierarchy definitions lead to informed asset management decisions and help improve the economic efficiency of investments. The Nauru infrastructure asset register hierarchy has five levels, as shown in Table 1, to provide the required information to make informed decisions, without unduly burdening the relatively weak capacities available in the country for managing information.

Table 1: Nauru Asset Register Hierarchy

Hierarchy Level 1	Hierarchy Level 2	Hierarchy Level 3	Hierarchy Level 4	Hierarchy Level 5
Service Sector	System Category	Asset Class	Asset Type	Asset Components

In the asset register, complex assets, i.e. buildings, roads, air strip and wharf are broken into components, with the type, subtype, condition rating and renewal cost of each component accurately captured in the asset register. The first worksheet in the asset register workbook defines asset register hierarchy, followed by a standalone worksheet for each asset category belonging to different service sectors, containing detailed asset information about asset's components, their size and specifications, the initial installation cost, accumulated depreciation, current blook value, gross replacement cost and annual maintenance cost of the assets, as well as the physical condition ratings of assets' major components and overall asset condition index.

3. Asset Attributes:

The asset register attributes have been selected to capture information for three distinct stakeholder needs:

(a) Data required for asset management decisions. and these includes asset installation location – operating district, asset dimensional details and ratings, types and subtypes of components. Asset installation locations for each asset is recorded in the asset register in form of GPS coordinates – longitude and latitude. For coastal protection assets, aside from the GPS coordinates, chainage reference is also recorded for each seawall, indicating distance in meters along the coastline, starting at the eastern edge of the airport and running in a clockwise direction around the island, as shown in Figure 2. The condition rating of asset at component level, and asset condition index, which provides indicative information about asset's remaining useful life, asset replacement cost and asset annual maintenance cost are also recorded in the asset register.

(b) Data required for financial controls, including, the year in which an asset was acquired and placed in service, typical useful life of asset, initial book value, accumulated depreciation and current book value of asset, all based on historic costs. In cases where initial cost of acquisition was not known, it has been estimated from the current replacement cost of asset, by applying adjustments for inflation.

(c) Data required by PCRAFI, including construction details for buildings are also recorded in the asset register.

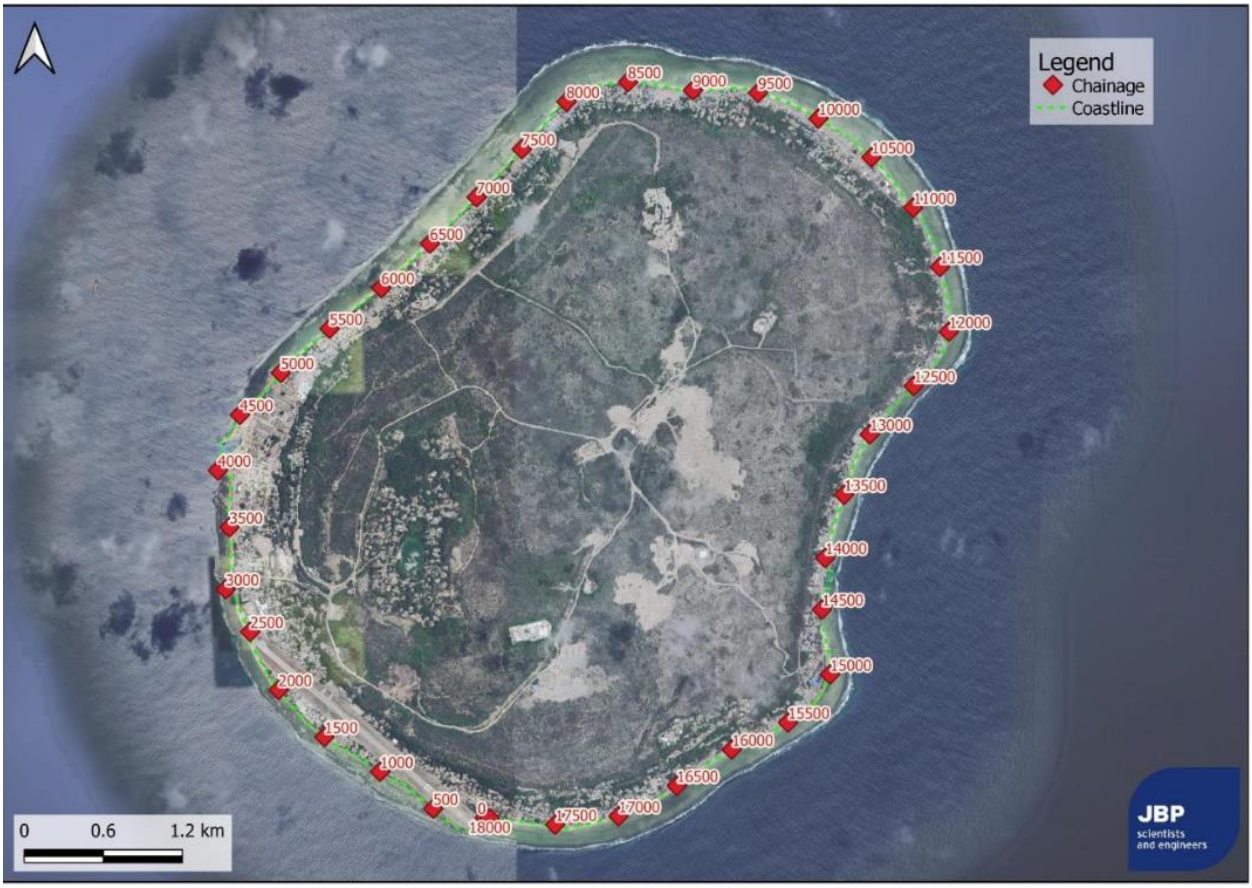

Figure 2: Chainage Reference Diagram for Coast Protection Assets

(Source: Nauru Seawall and Road Drainage Condition Assessment – JBP Scientists & Engineers)

4. Financial Information:

The asset register contains the following financial information attributes with respect to every asset:

Gross Replacement Cost (GRC):

Gross replacement cost is the estimated replacement cost for an asset, during the current year, using like for like specifications. The cost estimates for GRC meet Class 3 accuracy (-20%, +30%), suitable for budgetary approvals.

Annual Maintenance Funding Needs:

Maintenance funding needs for each asset have been calculated as percentage of Gross Replacement Cost, in accordance with the maintenance cost assumptions, shown in Table 2. The indicated costs represent strictly the preventive maintenance cost, including emergency repair costs, but do not include asset operating costs and capital renewal costs for asset components.

Initial Book Value:

This is the actual or estimated asset procurement cost, during the year the asset was procured. Because many assets were received as a donation rather than procured, actual procurement cost is not known in respect of most assets and has been calculated from GRC, by applying adjustments for inflation. The inflation data is tabulated in the worksheet titled "Inflation adjustments".

Accumulated Depreciation:

Accumulated depreciation represents the accumulated depreciation allowance for the number of years an asset has been service, by using straight line depreciation method. For simple assets, identified in the asset hierarchy as "Whole of Asset" under hierarchy level 5, the deprecation rate is based on the typical useful life of the asset. But for complex assets, where assets components are identified in hierarchy level 5, depreciation has been calculated at the component level.

Net Book Value:

Net book value is provided at the beginning and end of a year and is calculated by subtracting the depreciation allowance from the initial book value.

Table 2: Infrastructure Asset Annual Maintenance Cost

Asset Type	Avg Annual Mtc. Cost as % of Gross Repacement Cost	Comments
Buildings	0.50%	
Unsealed Roads (Base)	5.00%	Do not include formation in replacent cost
Sealed Roads (Surface, Curb&Gutter, Sumps and Soak pits	1.00%	Do not include formation & base in replacement cost
Runway	2.00%	Do not include formation & base in replacement cost
Telecom/electronics assets	2.00%	
Ripraps	2.00%	
Masonry sea walls/wharfs	1.00%	
Concrete sea walls	0.50%	
Footpaths	1.00%	
Solid Waste	2.00%	
Sewage Waste	2.00%	
Miscel Assets	2.00%	

5. Assets Added to the Asset Register During Current Update:

Buildings:

The following infrastructure assets have been added to the asset register, during the current update:

Table 3: New Buildings Added to Asset Register in 2023

Asset ID	Asset name	Asset Class	Asset Location	Latitude	Longitude
BGJB-307	Dept of Justice Building	Buildings	Yaren	-0.54777	166.9169
BGPS-416	Govt Administration Office Building - Extension (2nd Floor Added)	Buildings	Yaren	-0.54733	166.91759
BGPS-417	Education Scholarship office	Buildings	Yaren	-0.54729	166.91705
BGPS-418	Multi-cultural affairs (MCA) office	Buildings	Yaren	-0.54777	166.91718
BGFM-606	Two story fisheries building	Buildings	Anibare	-0.53631	166.95032
BGDD-161	Dept of Infrastructure office	Buildings	AIWO	-0.52945	166.91307
BGNM-821	Nauru Media Building	Buildings	Yaren	S 0.54725	E166.91650
BGMC-851	Multi-cultural affairs (MCA) office	Buildings	High Ground	-0.55698	166.93431
BGMC-852	Multi-cultural affairs (MCA) office	Buildings	High Ground	-0.55725	166.93431
BGMC-853	Multi-cultural affairs (MCA) office	Buildings	High Ground	-0.55738	166.9342
BGMC-854	Multi-cultural affairs (MCA) office	Buildings	High Ground	-0.55727	166.9342

Coastal Protection Assets:

The following coastal protection assets (seawalls) have been added to the asset register, during current update:

Table 4: New Seawalls Added to Asset Register in 2023

Asset ID	Asset name	Asset Type	Asset Location	Chainage	Latitude Begin	Longitude Begin
SWCP-013	Riprap protecting an industrial open space in NE orientation	Rip rap	Denig	5340	-0.52068	166.9156
SWCP-014	Riprap protecting an open space in NE orientation	Rip rap	Baitsi	7390	-0.50814	166.9291
SWCP-015	Riprap near Kapelle Supermarket	Rip rap	Ewa	8130	-0.50352	166.9338
SWCP-016	Riprap in Anetan	Rip rap	Anetan	8640	-0.50288	166.9382
SWCP-017	Riprap protecting bus stop on ring road in Anetan	Rip rap	Anetan	9540	-0.50361	166.9462
SWCP-018	Riprap protecting tennis court in Anabar	Rip rap	Anabar	10300	-0.50675	166.9522
SWCP-019	Riprap protecting residential buildings in Anabar	Rip rap	Anabar	10510	-0.50798	166.9536
SWCP-020	Riprap protecting ring road in Anibare	Rip rap	Anibare	12800	-0.5254	166.9545
SWCP-021	Riprap protecting northern Anibare harbour	Rip rap	Anibare	14030	-0.53561	166.9505
SWCP-022	Riprap protecting southern Anibare harbour	Rip rap	Anibare	14270	-0.53723	166.9503
SWCP-025	Riprap in Meneng District	Rip rap	Meneng	15730	-0.54766	166.9461
SWCP-026	Riprap in Meneng District protecting ring road and residences	Rip rap	Meneng	16310	-0.54996	166.9417
SWCP-027	Riprap in Meneng District protecting ring road and residences	Rip rap	Meneng	16380	-0.55032	166.9411

6. Assets Removed from the Asset Register During Current Update:

The following infrastructure assets have been removed from the asset register, during the current update, because these buildings are no longer in service:

Table 5: Infrastructure Assets Removed from the Asset Register in 2023

Asset ID	Asset name	Asset Class	Asset Location	Latitude	Longitude
BGJB-303 Demollshed	Jail House - Two story building	Buildings	Yaren	-0.5476	166.91682
BGJB-304 Demolished	Jail House - One story building	Buildings	Yaren	-0.5476	166.91682
BGJB-305 Demolished	Jail House - Admin Building	Buildings	Yaren	-0.54756	166.91685
BGDH-505	Nauru Public Health Building - Destroyed by Fire Demolished	Buildings	Denig	-0.52026	166.91721
BGDH-509	Clinic - Building removed from service	Buildings	Meneng	-0.55175	166.93876
BGIT-812 (Demolished)	Old Media Building	Buildings	Yaren	-0.54794	166.91728

7. Financial Summary of Infrastructure Assets Currently in Use:

Table 6 provides a summary of the public sector infrastructure assets, in use at the end of 2023 in Nauru.

Table 6: Nauru Asset Register Summary

Assets	Initial Book Value	Accum. Depreciation	Net Book Value	Gross Replacement Cost	Annual Maintenance Allowance
Buildings:					
Education Buildings	$ 24,490,020	$ 8,395,497	$ 16,094,523	$ 53,417,379	$ 267,087
Justrice and Border Control Bldgs	$ 8,336,179	$ 1,356,705	$ 6,979,474	$ 14,855,446	$ 74,277
Public Service Admin Bldgs	$ 15,936,473	$ 3,903,950	$ 12,032,523	$ 37,815,306	$ 189,077
Multi Culture Affairs Bldgs	$ 871,779	$ -	$ 871,779	$ 1,002,546	$ 5,013
Nauru Media Bldg	$ 1,308,620	$ -	$ 1,308,620	$ 1,389,912	$ 6,950
Police service Bulding	$ 2,514,591	$ 651,931	$ 1,862,660	$ 4,635,057	$ 23,175
Emergenecy Services	$ 233,743	$ 199,078	$ 34,665	$ 1,481,203	$ 7,406
Dept of Infrastructure building	$ 518,096	$ 22,688	$ 495,408	$ 685,182	$ 3,426
ICT Buildings	$ 249,476	$ 130,044	$ 119,432	$ 1,259,526	$ 6,298
Health Buildings	$ 7,515,854	$ 3,181,893	$ 4,333,961	$ 16,139,984	$ 80,700
Fisheries and Marine Resources Buildings	$ 2,065,814	$ 624,325	$ 1,441,489	$ 4,221,512	$ 21,108
Civil Aviation Buildings	$ 3,740,979	$ 2,507,884	$ 1,233,095	$ 15,729,098	$ 78,645
Port Authority Buildings	$ -	$ -	$ -	$ -	$ -
CIE Buildings	$ 63,317	$ 39,705	$ 23,612	$ 153,158	$ 766
Total Buildings	$ 67,844,941	$ 21,013,700	$ 46,831,240	$ 152,785,310	$ 763,927
Coastal Protection:					
Total Seawalls & ripraps	$ 15,291,617	$ 4,509,945	$ 10,781,672	$ 40,564,000	$ 717,000
Land Transport:					
Sealed Roads	$ 7,439,739	$ 5,739,358	$ 1,700,382	$ 41,110,000	$ 148,000
Footpaths	$ 490,807	$ 490,807	$ -	$ 4,652,000	$ 47,000
Total Land Transport	$ 7,930,546	$ 6,230,165	$ 1,700,382	$ 45,762,000	$ 195,000
Civil Aviation Assets:					
Runway, Taxiways and Hard stop Areas	$ 9,502,331	$ 6,385,286	$ 3,117,045	$ 51,561,000	$ 128,000
Other navigation assets	$ 1,715,420	$ 364,751	$ 1,350,669	$ 2,978,000	$ 60,000
Total Civil Aviation Assets	$ 11,217,751	$ 6,750,038	$ 4,467,713	$ 54,539,000	$ 188,000
Port Authorigy Assets:					
Port Authority Assets:					
NRC Assets:					
Unsealed Roads	$ 1,856,602	$ 1,168,455	$ 688,147	$ 8,801,000	$ 440,000
ICT Assets:					
Antenna Towers & IT equipment	$ 483,587	$ 274,289	$ 209,299	$ 958,000	$ 19,000
Total ICT Assets	$ 483,587	$ 274,289	$ 209,299	$ 958,000	$ 19,000
NUC Assets:					
Fuel Storage Farm Assets (approx)	$ 19,000,000	$ 4,200,000	$ 14,800,000	$ 40,000,000	$ 800,000
Electricity Sector Assets (approx)	$ 60,000,000	$ 29,500,000	$ 30,500,000	$ 80,000,000	$ 1,600,000
Water Sector Assets (approx)	$ 6,000,000	$ 4,100,000	$ 1,900,000	$ 8,000,000	$ 160,000
Total GON Infrastructure Assets	**$ 189,141,457**	**$ 77,472,304**	**$ 111,669,153**	**$ 430,451,310**	**$ 4,863,927**