



# Dogura | Taurama

Background Report and Contextual  
Information

Prepared for the National Capital District Commission

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# Table of Contents

<b>1</b>	<b>Acknowledgements</b>	<b>9</b>
<b>2</b>	<b>Introduction</b>	<b>10</b>
2.1	Scope of the Plan Area	11
2.2	Terms of Reference	11
2.3	Objectives of the Study	12
2.4	Methodology	13
2.4.1	Inception	13
2.4.2	Site Visits	13
2.4.3	Public Consultation	13
2.4.4	Alternative Zoning Concepts	13
2.4.5	Local Development Plan	13
2.4.6	Implementation Strategies	13
<b>3</b>	<b>Background</b>	<b>14</b>
3.1	Planning Approach	14
3.2	The Site	14
3.3	Physical and Environmental Considerations	14
3.3.1	Geology	15
3.3.2	Topography	15
3.3.3	Streams and Creeks	15
3.3.4	Soil	15
3.3.5	Vegetation	16
3.3.6	Biodiversity within Bootless Bay	16
3.3.7	Archaeological Considerations	16
3.3.8	Lands above the 90 Metre Contour	17
3.3.9	Risks Arising from Development in General	17
3.4	History of Development	17
3.5	Urban Expansion	18
3.6	Rural Villages	18
3.7	Historic and Cultural Landmarks	19

<b>4</b>	<b>Land Use, Tenure and Population</b> .....	<b>20</b>
4.1	Existing Land Use.....	20
4.2	Land Tenure .....	20
4.3	Stakeholders.....	20
4.4	Carrying Capacity of the Land .....	20
4.5	Critical Services Needs Analysis.....	21
4.5.1	Police .....	21
4.5.2	Fire Stations.....	21
4.5.3	Health Centres & Services .....	21
4.5.4	Schools .....	21
4.5.5	Public Utilities and Institutional Lands .....	22

## Appendices

### Appendix A: Local Development Plan Maps



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## 2 Executive Summary

Every large scale development should have a guiding vision that shows a clear pathway to realization. The Dogura and Taurama Background and Contextual Report is a summary document which synthesizes both the site observations of the project's planners as well as a series of preliminary environmental reports which were initiated by the Project's environmental teams.

The preliminary reports conducted within the Planning Area included:

- Study 1: Archaeological Assessment Report
- Study 2: Floor and Fauna Assessment Report
- Study 3: Rapid Hydrological Assessment Report
- Study 4: Marine Biodiversity Assessment Report

Each of these reports was completed by Eco Care Engineering Limited, a port Moresby based environmental consultancy.

The results of these reports has been summarised herein and utilised in conjunction with the observations of the Project's planners to prepare a Local Development Plan for the Dogura and Taurama Areas.

## 3 Introduction

### 3.1 Scope of the Plan Area

In 1996, the National Capital District Commission (NCDC) commissioned an Urban Development and Services Study which provided a framework for development of properties falling within the District's jurisdiction. This existing zoning system adequately covers the majority of the built up areas of the National Capital District (NCD) however, the peripheral areas, including the Dogura | Taurama area have not yet been zoned for development. Although an indicative infrastructure and development guide plan has been prepared within the NCD Urban Development Plan for the Dogura | Taurama area, the area clearly calls for a refined and detailed investigation into the development potential of the plan area as part of a refined Local Development Plan.

### 3.2 Terms of Reference

In order to prepare the required Local Development Plan for the Dogura | Taurama Planning Area, Cardno PNG Ltd was commissioned through a public bid and selection process carried out by the NCDC. The principal objectives of the Local Development Plan are summarised as follows:

- Give effect to the recommendations of the NCD Urban Development Plan,
- Stimulate and encourage development where appropriate,
- Give clear location reference to control policies for the development, change of use or conservation of land, and to proposals for development,
- Provide an adequate basis for development control,
- Indicate the intended future pattern of land use and development in the area,
- Provide recommendations for the optimisation of the preservation of the natural environment whilst deriving benefit.

The Local Development Plan has been delivered through a phased approach, comprised of the following phases:

Phase 1 - Context of the Plan to be presented upon the completion of this stage together with:

- Plan of Existing Land Use, and
- Plan of Service Infrastructure Network

Phase 2 - Analysis and Plan Report to be presented upon completion of this stage together with completed plans comprising:

- Factors Affecting Development,
- Preferred Development Strategy,
- Zoning Map, and
- Programme Map.

Phase 3 - Implementation Strategy Report



### 3.3 Objectives of the Study

The proposed goals for the Dogura/Taurama Local Development Plan are as follows:

- Promote the highest and best use of land within the Plan Area, balancing social objectives, economic advancement and environmental sustainability against development pressures,
- Define the vision for the future of the planning area,
- Define preferred development zones, outlining physical form and land use functions to control and guide land use and development,
- Identify areas of significant ecological importance which should be retained and protected, and provide recommendations for the optimisation and preservation of the overall ecological integrity of the Planning Area,
- Provide a development framework that builds upon the goals and recommendations of the NCD Urban Development Plan and other relevant statutory planning policies,
- Provide a contextual background to inform and support the Local Development Plan, detailing the local policy framework; site features and analysis; environmental study; and existing infrastructure plan,
- Support the creation of great neighbourhoods and community facilities within the Planning Area,
- Integrate the Planning Area seamlessly into the existing developments for neighbouring built up areas,
- Assure the efficient and cost effective provision of Infrastructure,
- Provide a framework plan for the orderly transition of rural land to urban land,
- Recognise and plan for a variety of transportation alternatives,
- Encourage partnerships, investment, and success within the precinct, and
- Facilitate meaningful dialogue and Input from Stakeholders within the Planning Area.

## **3.4 Methodology**

### **3.4.1 Inception**

Upon commissioning of the Dogura | Taurama Local Development Plan (LDP), the project team conducted an extensive review of background and supporting materials regarding the development of the plan area. The framework for this effort is guided by Part VI of the Physical Planning Act 1989 and Part V of the Physical Planning Regulation 2005. The planning effort compliments the Building Act and Regulations (Chapter 301) 1994, Land Act 1996, and the National Capital District Act 2001. In addition to a review of the physical planning framework, the Consultant team also undertook a review of the National Capital District Commission's Urban Development Plan (UDP) and the recently drafted 8/9 Mile Local Development Plan.

### **3.4.2 Site Visits**

Cardno undertook a series of visits to the project site. The first site visits occurred on September 15, 2010, the second occurred during the week of December 7, 2010. During the site visits, ground conditions and significant site details were observed and recorded. A photographic record of the site was also prepared.

### **3.4.3 Public Consultation**

A total of two early public consultations were held during the planning process. The goals of the public involvement campaign were to make the public and stakeholders aware of the project and to solicit comments and feedback regarding the development plans. A stakeholder and public involvement charrette occurred in November of 2010 and again in September of 2011. Consultation with traditional landowners and stakeholders should continue prior to the adoption of a final Local Development Plan (LDP).

### **3.4.4 Alternative Zoning Concepts**

In January of 2011, Cardno prepared a series of conceptual zoning and development plans for the Local Development Plan area. Plans were circulated to the officers of the National Capital District Commission. The input received from the three different zoning plans led to the creation of a preliminary zoning and development plan for the development area.

### **3.4.5 Local Development Plan**

Following the completion of this report and consultation with the various stakeholder groups within the planning area, Cardno will produce a Local Development Plan (LDP) and a Development Control Manual which will be used to guide and give form to development within the planning area.

### **3.4.6 Implementation Strategies**

In order to assist with the implementation of the findings of the Local Development Plan, a detailed list of implementation strategies will be incorporated into the Local Development Plan and Report. The analysis will suggest the role that the National Capital District Commission should play in implementing the plan and identifies strategies for accomplishing the goals which are identified as central to the Local Development Plan.

## 4 Background

### 4.1 Planning Approach

The Local Development Plan has been proposed in order to provide a refined analysis and plan for future land uses and infrastructure within the Dogura | Taurama Local Planning Area. This task was accomplished through refinement of the conceptual developments and the creation of a Preferred Land Use Plan, Zoning Plan, several Infrastructure Master Plans, and an Implementation Strategy for development within the planning area.

The LDP aims to guide the future expansion of Port Moresby through providing a framework for the sustainable development of the Dogura | Taurama Planning area. The successful zoning and development of this substantial land area will play a key role in the future of the National Capital District and Port Moresby. It is therefore vital that a high-quality, appropriately considered LDP be created to ensure the best possible outcome for the region at this pivotal time in the City's growth and development.

The LDP has been developed with consideration given to the National Capital District's Urban Development plan (UDP) as well as the site's key natural features, ecological systems, physical and topographical constraints, access to utilities and infrastructure, and the existing patterns of settlement. The underlying principle of the LDP is one of sustainable development, with a strong emphasis on ensuring that future development is undertaken in an economically and socially equitable manner whilst safeguarding the region's rich ecological assets for future generations.

### 4.2 The Site

Located south-east of Port Moresby proper, the Dogura and Taurama planning area extends from the Pari Village and Taurama Bay in the south-west to the area south of Mt. Eriama. The project area is bordered by the Air Transport Squadron to the north. Old Rigo Road forms the eastern boundary of the planning area as it progresses south along Bootless Bay until it reaches Taurama Bay. The plan area includes the Taurama Military Barracks, the Customary Land Project Pilot Subdivision, Pari Village, Bootless Bay and the 6 Mile Dump. Aside from the areas owned by the government or the already subdivided portions of the area, the plan area is under customary ownership, is undeveloped and is for the most part located within an environmental protection area as described by the NCD Zoning Plan.

Topography and environmental considerations play a major role in determining the future development plan for the Dogura | Taurama area. The Dogura peninsula rises almost 200 metres above the ocean and the Bootless Bay delta is comprised of several wetlands and mangrove swamps that extend north from Bootless Bay. The lack of development in the Dogura | Taurama Local Planning Area to date can be attributed in part to the difficult topographical conditions.

### 4.3 Physical and Environmental Considerations

As part of the background report, EcoCare Engineering was engaged to evaluate the environmental values present within the Planning Precinct. The following sub-sections provide a summary of the findings of EcoCare's investigations and analysis. Copies of the full report are on file with the National Capital District Commission.

### 4.3.1 Geology

Late to Middle Eocene Port Moresby Beds are common throughout the proposed project area. Port Moresby Beds are separated into Paga beds, Baruni Limestone, and Nebiri Limestone. Paga Beds are common throughout the project area.

### 4.3.2 Topography

The sites of assessment are generally within a denudational landform, mainly characterized by undulating hills, ridges, and lower coastal plains.

Slopes: The sites are generally flat to gently sloping. Some hills and ridges, mainly directly inland of Pari, Taurama, and Gerega are have more relief. Elevations throughout the planning area range generally from 0 to 120 metres.

### 4.3.3 Streams and Creeks

Several existing creeks and waterways have been identified within the precinct area through a series of map reviews, aerial photography, and on-the-ground investigations. Streams within the precinct function both ecologically as well as physically to remove rainwater from the site. As these streams drain the basin, they gather sediments and debris, often carrying human pollutants outward towards the sea and the bay.

The Pari Village area has several minor stormwater drains but no major consolidated streams or watercourses. The Taurama area has one major drainage that runs from the Vada Vada Settlement at East Boroko south through the Taurama Defence Force Barracks and into Taurama Beach. A year round creek runs through this drainage which collects several seasonal drainages.

The Dogura and Gerega areas have two major drainage systems which run year round. These are the Dogura and Bautama Creeks.

Streams and offshore waterways face threats from development in two principal ways:

- Erosion from storm runoff is exacerbated by grading and an increase the amount of impervious areas arising from development activities, and
- The release of chemicals, pollutants, and debris into streams and waterways from cars and trash created by users within the precinct.

The identified streams, creeks and waterways within the precinct have been provided with a recommended 20 metre non-developable buffer in order to provide protection and habitat for marine and mammal species from the effects of the direct release of sediments into the water system. These buffers are indented to prevent direct erosion by excluding development activities within 20 metres of existing streams. The proposed buffers will provide a physical barrier to separate uses which may accidentally or intentionally allow for the introduction of toxins into the site's water system. The protection of the bays and the critical habitat areas starts up stream and therefore the implementation of this protective buffer network will help prevent erosion and the release of untreated pollutants and toxins directly into the watershed.

### 4.3.4 Soil

The project area is characterized by low mountains and hills as well as plains and valleys with differing soil compositions in each landform. The hilled areas of the project area have a *Ustorhents* soil. This is a typical soil of relatively dry and strongly seasonal climate areas. This soil consists of black, dark grey or greyish brown sandy loams and clays. The plains and valley sites of the project

area are dominated by *Tropopsammets*. This is a well drained soil with thin dark topsoil. These soils are generally poorly graded, and sometimes contain moderate amounts of weatherable materials.

#### **4.3.5 Vegetation**

The project area features generally extensive tracks of somewhat disturbed savannah grassland vegetation. Plants are predominantly secondary regrowth dominated by fire resistant ferns, cycads, shrubs and eucalyptus trees and pockets of subsistence garden plots with banana, coconut, mango and cassava. Immediately along the shoreline, highly degraded mangrove patches are predominantly comprised of *rhizophora* and *avicenia* species.

#### **4.3.6 Biodiversity within Bootless Bay**

As indicated within the environmental reports which were created to inform and support the project, several regionally significant plant and animal species exist within Bootless Bay and the waters located just off-shore from the planning precinct. The marine area inside Bootless Bay is one of the more well-researched areas along the south-eastern coast of Port Moresby. Many publications in terms of scientific papers, underwater photographs, films, and recordings have illustrated that the area is of a high biological significance as it contains high marine biota, some of which are endangered, threatened, and endemic. Bootless Bay displays a wide range of major marine habitats including, mangrove forests, seagrass beds, sandy beaches, rocky shores, and fringing coral reefs. These different habitats make Bootless Bay an ideal living laboratory for scientific study and a must see destination for local and international diving enthusiasts.

The proposed expansion of the City of Port Moresby must take into consideration the high value of habitats within Bootless Bay and take specific actions to prevent spoilage of this cultural and environmental asset due to erosion and pollution generated by urban development. The bay and ocean front environments are highly susceptible to damage from on-shore developments, particularly when sediment discharges and pollutants are not properly managed. Given that the development of the Dogura and Taurama planning areas has been limited at this point, strategies for management of the potential impacts to off-shore marine life needs to be carefully considered and implemented as development within the planning area intensifies.

The level of impact from development within the precinct cannot be predicted at this stage, however it is evident that any level of impacts will cause alterations to the current state of the environment. Waste Management should be treated as a high priority and should be planned for in the earliest stages of development. Considerations for an effective control system for both solid and chemical wastes during site construction and from household use during settlement will help manage and reduce impacts inside Bootless Bay.

#### **4.3.7 Archaeological Considerations**

Traditional dwellers have clearly inhabited several portions of the Dogura and Taurama peninsula for thousands of years. The two main linguistic groups identified within the area are the Motu and the Koita peoples, many of whom still occupy traditional villages within the local planning area. ECO Care Engineering Limited was commissioned to prepare an archaeological survey of the planning area and was able to identify several potentially significant sites which will require due consideration prior to any development activities.

The ECO Care investigation revealed several sites of potential archaeological significance. These include cemeteries and potential burial sites, aircraft crash sites, rock art sites, old wharves and jetties, railway tracks, and remnants from traditional villages. A high potential for the location of

unexploded WWII ordinance was also raised within the archaeological survey due to the site's proximity to the airport and recent reports of other ordinance caches found within the vicinity of the planning area. No ordinance was discovered through the course of site investigations.

Due to the presence of significant cultural and historic sites within the planning area, these areas should be carefully mapped to determine their exact boundaries prior to development. Consultations with traditional owners and stewards of these sites should also be undertaken as a pre-cursor to the development of lands within close proximity to these areas so as to avoid impacts to significant sites during development activities. As some significant sites, such as burial sites, may be difficult to locate until construction activities have commenced, any construction which encounter potentially significant sites should be halted until review by the relevant authorities can be completed.

#### 4.3.8 Lands above the 90 Metre Contour

As described within the NCD Urban Development Plan, land areas above the 90 metre contour are considered to be unsuitable for development. Several areas above the 90 metre contour exist within the planning study area. These areas have been identified within the Environmentally Sensitive Areas Plan. Development of these areas is considered undesirable due to the importance of maintaining the visual integrity of Port Moresby's hillsides and ridgelines and because of the difficulty in delivering urban services to these areas.

#### 4.3.9 Risks Arising from Development in General

As part of the project, ECO Care Engineering was commissioned to prepare a landform assessment as part of their overall environmental assessment program for the project. The project area is characterized by low, flat lying areas, small mountains, hills, and valleys. The soils within the project area are described as being well drained, sandy loams within some clays.

The ECO Care Landform Assessment report identifies three primary risks for development within the planning area. **Among these risks are:**

- Sea Level Rise and Coastal Inundation - These concerns apply to developments which are to be located near to the shoreline. While no impending disaster or change to current sea levels are described within the report, caution is expressed in locating significant businesses or public infrastructure near to the existing coast line. The implementation of a significant buffer between most forms of development and the sea should help to alleviate and prevent conflicts in addition to preserving habitat and buffering wastes.
- Seasonal Flooding - the plans and valleys of the planning area are occasionally subject to king tides and seasonal flooding during wet seasons. Care should be taken when developing within the low-lying areas of the planning area to ensure that businesses and residences will be constructed with sufficient protection against seasonal or tidal inundation.
- Customary Ownership - The vast majority of lands within the local planning area are under customary ownership. The land release process will need to be carefully managed to ensure proper consultation and arrangement with the traditional owners of the land.

## 4.4 History of Development

Development within the Dogura | Taurama area has been very limited to date. The site is physically removed from the Port Moresby City Centre and urban services are not readily available. Several existing small villages on public and private lands have traditionally been located in the Dogura and Taurama areas. A number of both arranged and undocumented settlements have also occurred

within the planning area. In the past two years, the amount of development within the Taurama area has intensified as several hectares of land have been made available for development of single family homes, commercial uses, and industrial complexes. It has been noted that no planning approvals have been sought by many of the developments within this area and that the NCDC has not pursued or implemented development controls within these areas.

The Taurama Barracks are the largest existing development within the Local Development Plan Area. Built out to house and serve the needs of numerous soldiers, family members, and support staff, the Barracks are a part of the Papua New Guinea Defence Force establishment. It is likely that the Department of Defence may eventually seek to expand both within the area identified as the Taurama Barracks on the existing conditions map but expansion may also occur within adjoining areas.

The Jackson International Airport is located just north of the Local Development Area. While not located within the Local Development Plan Area, the flight path for the runway travels directly over Bootless Bay and the land between the Bay and the edge of the Airport's property. The Airport has recently undergone a master planning effort and has indicated that an expansion southward into the project area is currently underway. The Airport has reported that they will be extending their existing boundary line by two kilometres to the south in order to allow for a runway extension and the installation of additional infrastructure. This expansion and the adjoining uses should be considered in the concept planning for the area. Developments proposed to the south of the airport's expansion zone should be limited in height to no more than three storeys in order to avoid potential conflicts with the approach and departure pathways of commercial and military aircraft.

Currently, several medium scaled housing developments are in various stages of construction within the Taurama Valley, just south of the Taurama Barracks complex. It is understood that these settlements are generally unplanned and unserved by public utilities. It is further understood that these properties are being made available through a leasehold arrangement which is being facilitated by members of the traditional ownership group. It is not clear whether these leases are legal or whether the lease provider has the full authorisation to grant leases.

## **4.5 Urban Expansion**

To date, urban expansion within the precinct has primarily taken the form of informal settlements. These types of settlements seem a natural alternative to paying high prices for housing within the City, however these types of settlements are illegal and act as a threat to investment in formal development within the area. The goal for this area, as reiterated by several stakeholders and members of the public, should be to include these marginalised populations within the Dogura | Taurama Planning Framework while creating a sustainable community with thriving services and centres.

## **4.6 Rural Villages**

A series of rural traditional villages are located at various points along the ocean and bays within the planning precinct. The westernmost village is known as the Pari Taurama village. Seaward facing, the Pari Taurama village has the largest population and development footprint. Several of the existing structures within the village have been constructed on stilts and are perched above the ocean in a shallow cove. The Gereka Village/Settlement is located along the southern point of the Taurama Peninsula, this smaller village faces due south and consists of a cluster of approximately 15 to 25 structures both on land and over water. The village is located within an inlet in Bootless Bay and is the smallest of the traditional settlements.

For the most part, the rural villages are not served by the full range of urban services. While some homes have access to electricity, most structures are not equipped with running water or sewer.

Several buildings located on land may be utilising make-shift septic systems or pit latrines however the majority of structures release sewage directly into the ocean. The presence of these rural villages represents a traditional way of living within the Bootless Bay watershed and the Dogura | Taurama sub-region. Preservation of these villages should be a priority throughout the planning and urbanisation process for the peninsula. Additionally, buffering of more intense land uses in order to avoid encroachment into these areas should be considered prior to the approval of development proposals.

Because of the impacts of the release of untreated wastes into the ocean immediately surrounding the several of the village sites, urban services should be extended to these rural villages at an opportune time during the development of the precinct. Plans within the precinct to extend sewer and water lines to adjacent properties within the precinct should include extensions to serve existing residences and facilities.

#### **4.7 Settlements within the Taurama Peninsula**

Throughout the course of the Planning process, a series of intense land clearing and residential developments have occurred within the Taurama Peninsula, south of the Taurama Barracks. Our understanding is that one or more of the traditional owners of this customary land area have been issuing leasehold agreements to settlers who then build homes on plots laid out by the owners. These settlements are currently not served by a full range of urban services and have no organized water delivery system, no access to sewer, and limited access to power.

Several stakeholders consulted throughout the information gathering process indicated concerns about the unregulated, unapproved, and unplanned development of these areas. Concerns were also expressed about the viability of the leasing instruments used to convey entitlement to leaseholders.

#### **4.8 Historic and Cultural Landmarks**

As shown within the environmental report which was commissioned for the local development plan area, several culturally significant and historic landmarks exist on the property. EcoCare Engineering, as part of their investigation of the site area identified several spots where rare and unique shells can be found. Also identified was a World War II plane wreck site off the southern coast of the Taurama Peninsula.

The islands surrounding Bootless Bay and the Taurama Peninsula have a long history of settlement by the Motu and Koita peoples. It is possible that a number of sites within the Local Development Plan area hold cultural significance. One known potentially significant archaeological site was identified along the southern end of the Taurama Peninsula and is described at greater detail within the Rapid Archaeological Assessment performed by Eco Care Engineering. It is clear from discussions with traditional owners of the property, that several other culturally significant and historic sites existing within the plan area. Discussions with traditional owners to identify key sites of significance are on-going.



## 5 Land Use, Tenure and Population

### 5.1 Existing Land Use

The project site, with some noted exceptions, consists mainly of White Land with no zone designation. Some land uses currently exist within the NCD General Land Use Plan, these include the Taurama Barracks, the Traditional Villages and the informal settlements located throughout the precinct.

### 5.2 Land Tenure

Almost 78 percent of the land within the development area is currently under customary ownership. A series of parcels created near Bootless Bay and Taurama Road are currently under state ownership and may be subject to long term lease agreements. Additionally, several ad hoc land dealings within the Taurama area have recently resulted in several new leaseholders who's leases may or may not be legal and/or binding. As the majority of lands within the planning area are under customary ownership, significant consultations with customary owners may be required prior to development.

### 5.3 Stakeholders

Stakeholders consulted during the preparation of the Plan include the following organisations and individuals:

- PNG Power,
- National Airports Corporation,
- Eda Ranu,
- Office of Urbanisation,
- NCDC Physical Planning Office
- NCDC Department of Environment & Conservation
- Port Moresby Chamber of Commerce and Industry, and
- Seseka Consultants on behalf of Local Leaseholders for Portion 878

Additional Stakeholders within the planning area include:

- Department of Defence,
- University of Port Moresby Environmental Department,
- Various Landowners within the Planning Precinct,
- Motu Kotibu Assembly, and
- Pari Village Representatives.

### 5.4 Carrying Capacity of the Land

The total site area for the Dogura | Taurama Study is approximately 6,614 Hectares. This area has several constraints which will prevent the full development of the study area. Among these constraints are:

- Lands above the 90 Meter Contour,
- Mangrove Areas along Bootless Bay,
- Existing Traditional Villages,
- Existing Waterways and Streams, and
- Existing Road Reserves.

With constrained or previously developed areas removed from the planning area, the remaining possible area for development is approximately 4,851 Hectares.

## **5.5 Critical Services Needs Analysis**

### **5.5.1 Police**

In accordance with the NCDC UDP, police stations should be provided throughout the local planning area at a rate of no fewer than 1 station for every 30,000 residents. At full build-out of the plan area, as many as five new stations may therefore be required. Additionally, given the presence of two or three new commercial areas, several smaller facilities may be beneficial in establishing a lawful presence within each of the commercial precincts. New stations should be coordinated with the Royal PNG Constabulary.

### **5.5.2 Fire Stations**

In accordance with the NCDC UDP, fire stations should be provided throughout the local planning area at a rate of no more than 1 station for every 10,000 residents. At the prescribed rate, a minimum of seven fire stations will be required within the local planning area at full build out. Stations should be constructed in association with individual developments in consultation with PNG Fire Service.

All significant proposals for development should also be required to provide sufficient water volumes and pressures to support fire fighting services. PNG Fire Service should be provided with an opportunity to comment on any proposals for new development within the local planning area.

### **5.5.3 Health Centres & Services**

There are currently no known health clinics within the Dogura and Taurama areas. With populations rapidly expanding into these areas, the need for human health and wellness services will be paramount. It is recommended that areas for health centres and localized clinics be included within the refined development plans for each of the three major commercial nodes within the plan area. As the commercial nodes will serve as centres for urban services for the accompanying residential neighbourhoods, the provision of health services within these centres makes a natural complement to the retail and public service oriented offerings.

Clinics should be established to provide medical and clinical services in consultation with the Department of Health to ensure that applicable standards for sizing and operational capacity are met. Services should be tailored to the needs of the community.

### **5.5.4 Schools**

Schools within the project area should be incorporated into the plan in accordance with the requirements of the National Department of Education. As the residential population at full build out of the local planning area could potentially be more than 70,000 persons, the provision of significant lands for all levels of education will be required. At least one existing school is located near to the Gereka Settlement.

Given that several unique and diverse ecological landscapes exist along the Bootless Bay inlet, it may be appropriate for one or more of the local universities to also establish teaching or potentially research sub-stations along the bay front.

### **5.5.5 Public Utilities and Institutional Lands**

While the majority of the lands within the Planning area will likely be zoned for residential or commercial purposes, it is noted that several properties will be either needed for the placement of key components of public infrastructure. It is also known that several adjoining uses may need to expand into the local planning area with adjoining Institutional Uses. Among the expansions into the planning area is the Jackson International Airport. The National Airports Corporation has just finished a master plan for the expansion and redevelopment of the Airport which includes the expansion of the existing runway and the aerial farms by approximately 2 kilometres. This expansion will project significantly into the planning area and has been accounted for within the Local Development Plan.

Other Public Institutional uses within the local planning area include the Taurama Barracks. While this use currently exists within the planning area, the LDP has been updated to include the boundaries of the property used by the Department of Defence for its operations within the area.

## **6 Conclusion**

### **6.1 Basis for Planning of the Dogura | Taurama Local Development Planning Area**

Using the information gathered within the initial phases of development. This document has been prepared in order to summarise the issues which bear relevance to the local planning area.

Appendix A

# Local Development Plan Maps

DOGURA | TAURAMA  
LOCAL DEVELOPMENT PLAN



NATIONAL CAPITAL DISTRICT  
COMMISSION - PORT MORESBY

LEGEND



PLANNING AREA  
BOUNDARY







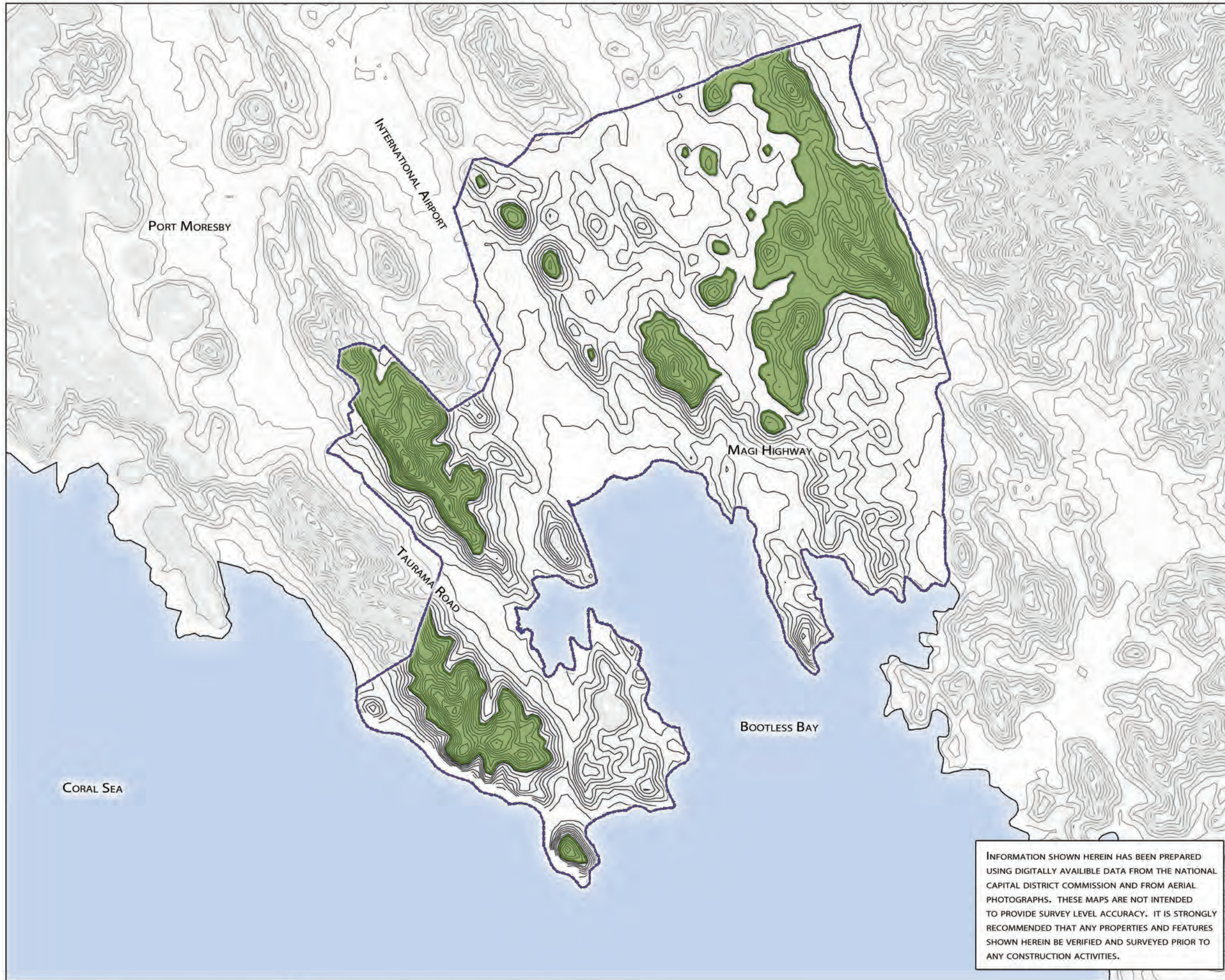
INFORMATION SHOWN HEREIN HAS BEEN PREPARED USING DIGITALLY AVAILABLE DATA FROM THE NATIONAL CAPITAL DISTRICT COMMISSION AND FROM AERIAL PHOTOGRAPHS. THESE MAPS ARE NOT INTENDED TO PROVIDE SURVEY LEVEL ACCURACY. IT IS STRONGLY RECOMMENDED THAT ANY PROPERTIES AND FEATURES SHOWN HEREIN BE VERIFIED AND SURVEYED PRIOR TO ANY CONSTRUCTION ACTIVITIES.





LEGEND

-  PLANNING AREA BOUNDARY
-  10 METRE CONTOURS
-  2 METRE CONTOURS
-  AREA ABOVE THE 90 METRE CONTOUR



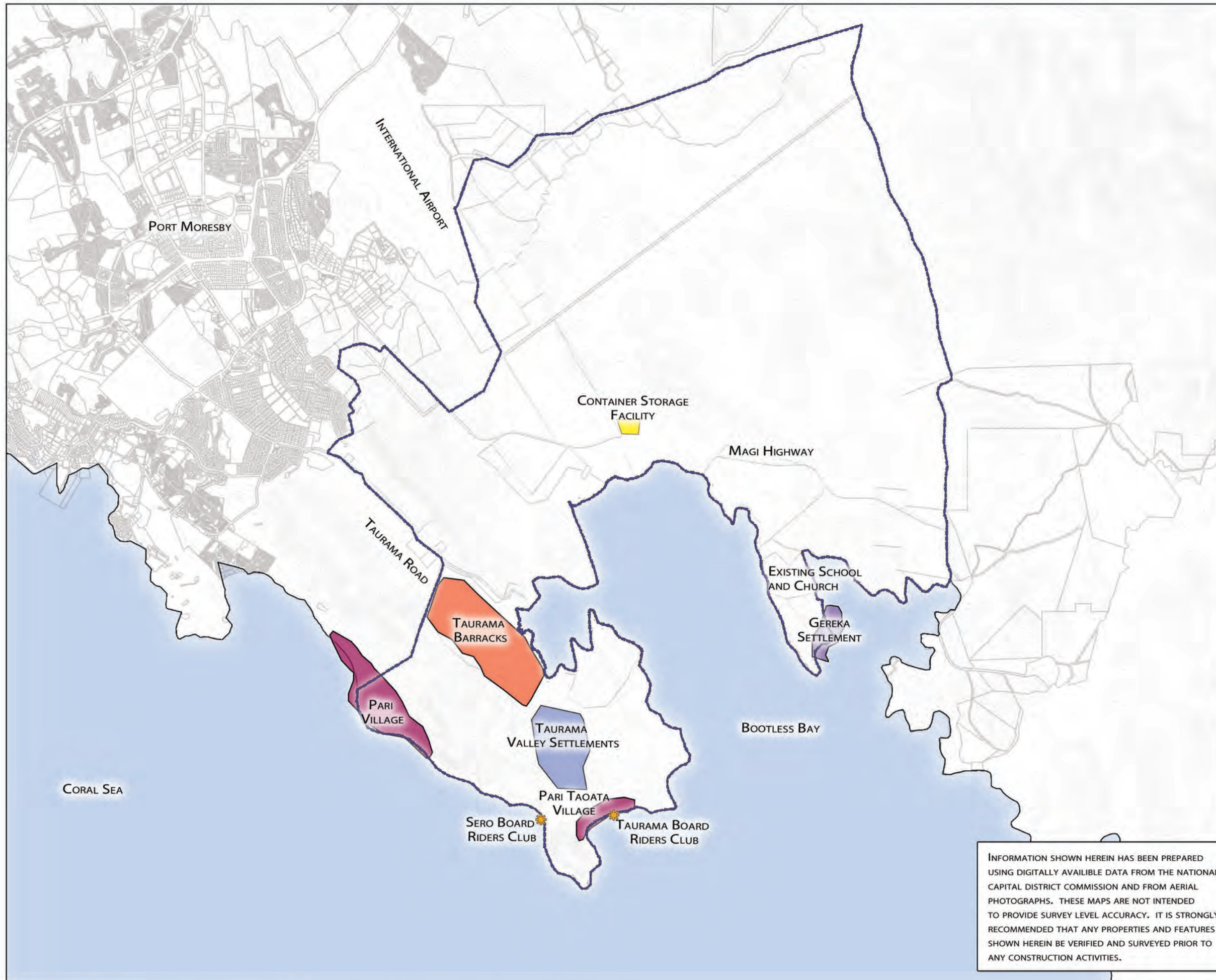
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LEGEND

-  PLANNING AREA BOUNDARY
-  TAURAMA BARRACKS
-  TRADITIONAL VILLAGES
-  SETTLEMENTS






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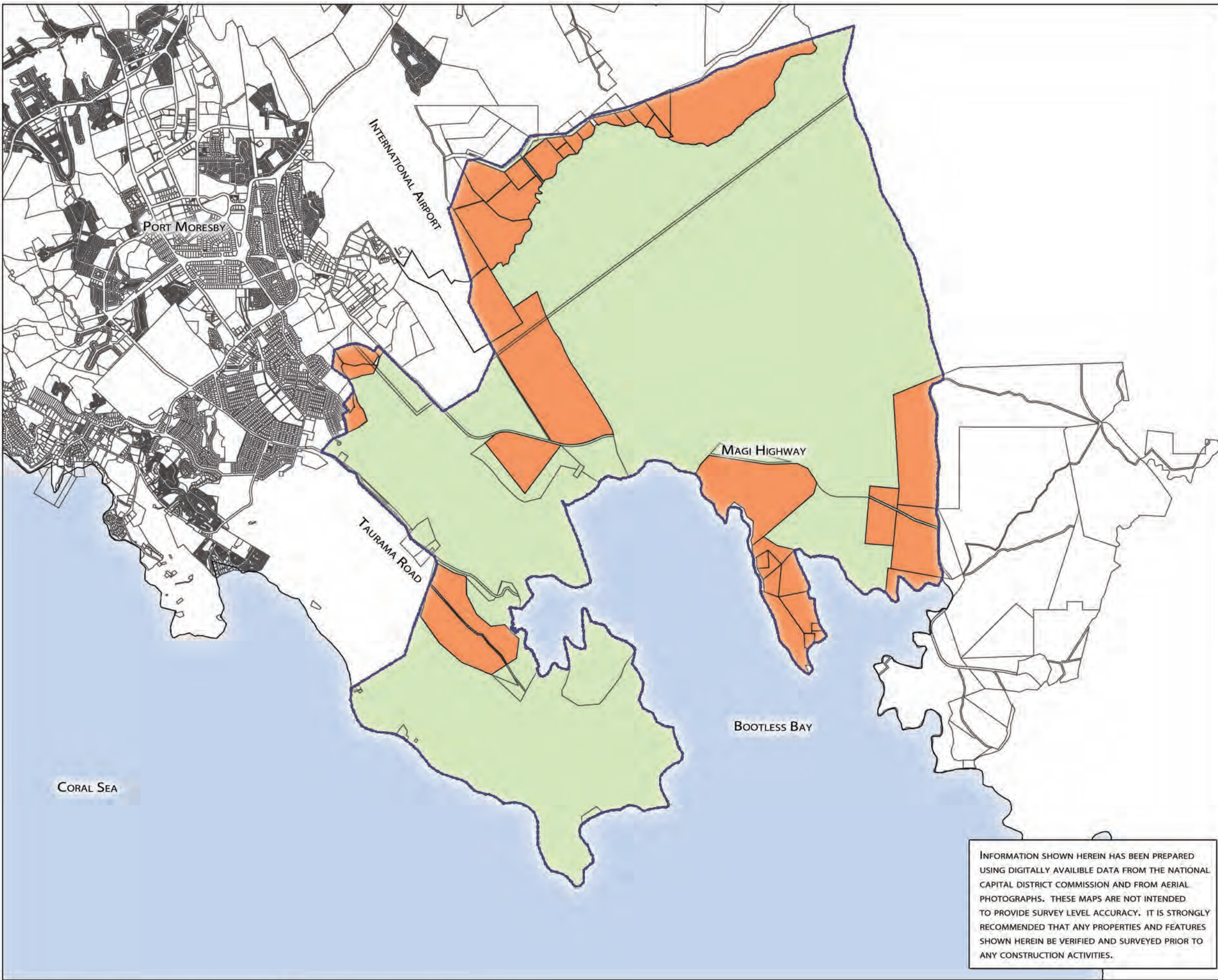






LEGEND

-  PLANNING AREA BOUNDARY
-  CUSTOMARY TITLE
-  STATE LANDS


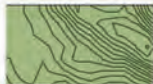

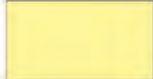


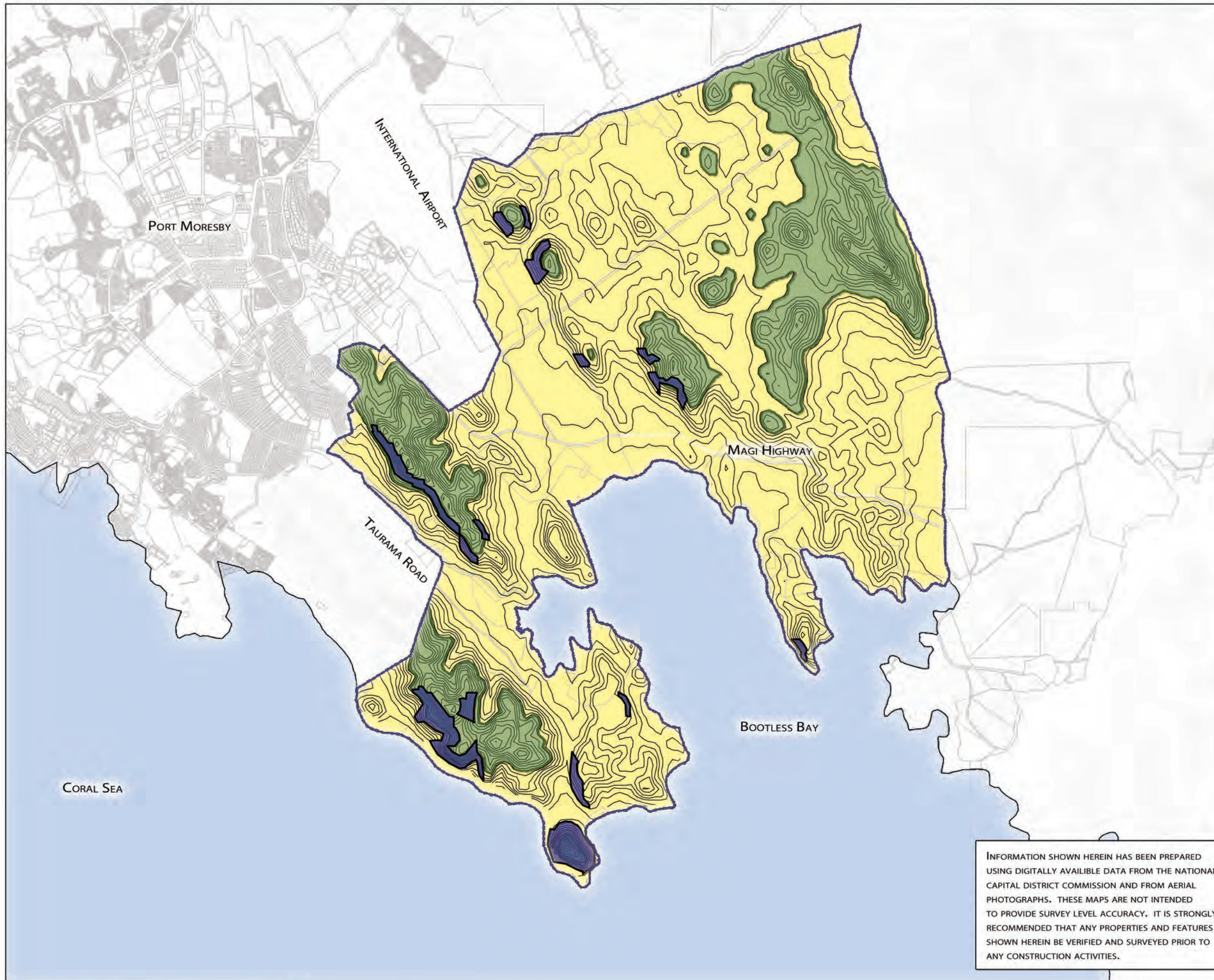
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LEGEND

-  PLANNING AREA BOUNDARY
-  AREA ABOVE THE 90 METRE CONTOUR
-  SLOPES > 30%
-  SLOPES BELOW 30%



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DOGURA | TAURAMA  
LOCAL DEVELOPMENT PLAN



NATIONAL CAPITAL DISTRICT  
COMMISSION - PORT MORESBY

LEGEND



-  PLANNING AREA BOUNDARY
-  AREA ABOVE THE 90 METRE CONTOUR
-  RIDGELINES
-  WATERWAYS
-  MANGROVE STANDS

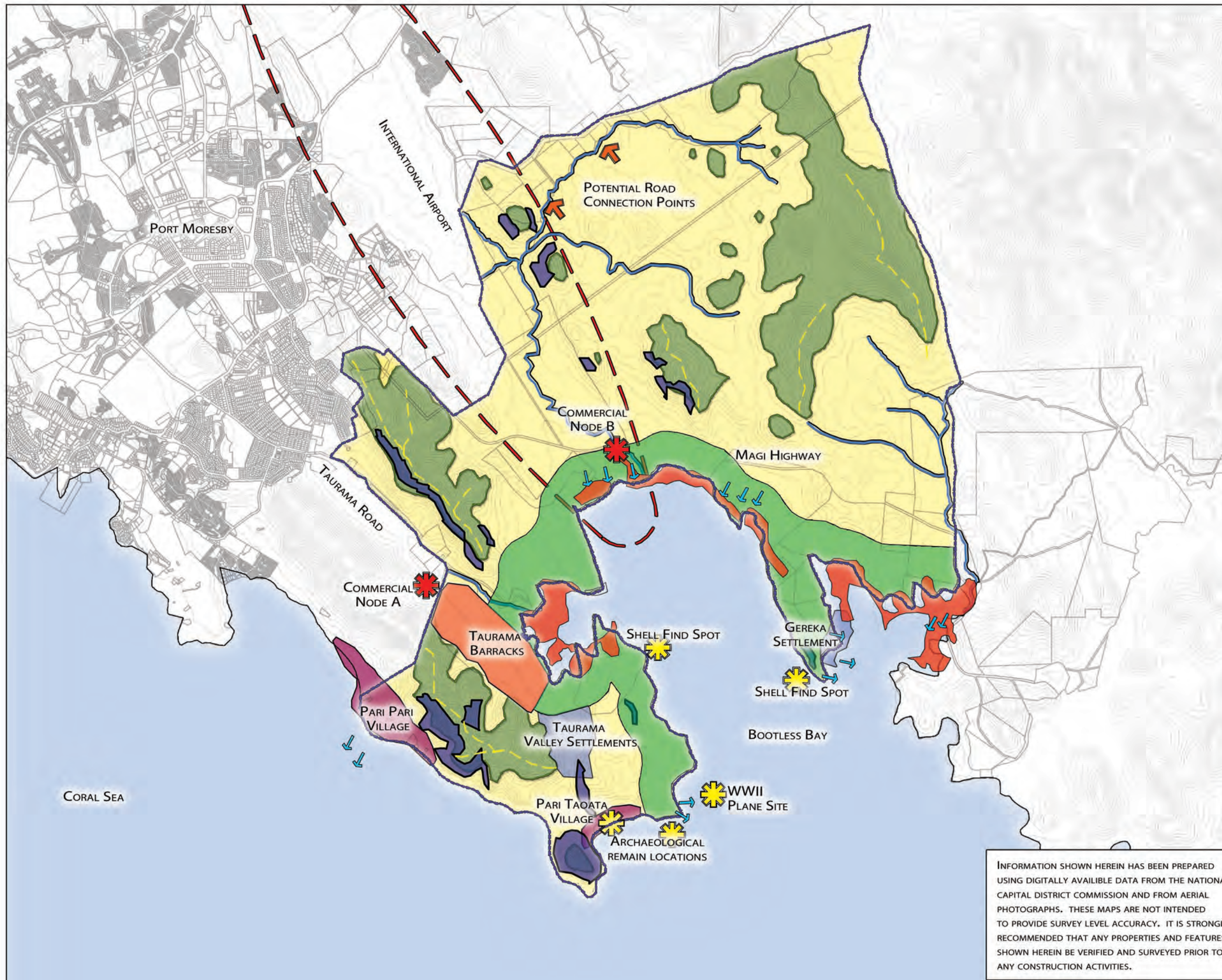


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LEGEND

-  PLANNING AREA BOUNDARY
-  AREA ABOVE THE 90 METRE CONTOUR
-  RIDGELINES
-  WATERWAYS
-  MANGROVE STANDS
-  500M BAY PROTECTION ZONE
-  SLOPES >30%
-  VIEWSHEDS
-  CULTURAL AND HISTORICAL SITES
-  POTENTIAL COMMERCIAL NODES
-  NOISE EMISSION ZONE
-  POTENTIAL DEVELOPMENT LAND



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