



2

Strategic Policies

This section includes island-wide strategic policies that have been organised into the policy areas of: Promoting Sustainable Development, Protecting Core Assets, The Green and Blue Economy, Advancing Mobility and Accessibility and Planning for National Infrastructure.

➔ 2.1

Promoting Sustainable Development

Current forecast rates indicate that Barbados' population growth over the next 10 years will remain at approximately 1%, after which it is expected to decline. Should these trends continue, the existing supply of available residential land is likely to be sufficient over the next several decades. Given the ongoing work of the National Population Commission, the Government of Barbados may develop new population forecasts, managed immigration strategies and supporting policy to plan for economic prosperity, resilience and sustainable growth over the next 10-20 years.

Planning for future population and settlement in Barbados will require an enhanced focus on sustainable and resilient development. An emphasis on optimising existing settlement areas and efficient provision of infrastructure is needed to respond to key imperatives of the New Urban Agenda, including: adapting to the climate crisis and building resiliency, promoting healthy communities, planning for an aging community, and addressing the challenges of Barbados as a Small Island Developing State.

The policies in this section will guide development and investment decisions through the application of an island-wide growth management framework and a settlement structure that directs growth in a logical, efficient and compact manner. The framework respects the outward growth that has occurred over the past 20 years but supports a transformation shift towards reinvestment and a focus of growth on existing areas of urban settlement within the current urban core. This framework defines the community cores and refined urban boundary where growth and urban development are to be focused, stable suburban areas which call for infill and completion of existing communities, and a rural working landscape within and outside of the National Park where food and agriculture, environmental restoration, natural resources and supporting rural settlements are prioritised. The growth management framework protects Core Assets and responds to the climate crisis while providing for increased resiliency, healthy communities, a prosperous and green and blue economy, efficient infrastructure and transportation services, and local food security and sovereignty.

This chapter is comprised of three sections:

- **Managing Population Growth**
- **Communities and Housing**
- **Social and Community Facilities**



➤ Swan Street, Bridgetown

Policies

Managing Population Growth

1. The Government will plan for population growth for Barbados over the next 10 years.
 - a) In the context of a continued low rate of growth and eventual population decline, and given the existing supply of vacant lots and vacant and derelict buildings, significant new land supply for residential development is not required and will not be designated.
 - b) The protection of core assets and the efficient use of land and existing infrastructure will be a priority in planning and public investment decisions.
 - c) The Government will consider the final recommendations of the National Population Commission regarding the strategic growth of the population, including but not limited to developing a managed migration policy and programme, and setting annual population growth targets.
2. The Government will promote a sustainable development pattern that minimises the footprint of urban development, increases resiliency, improves mobility and accessibility and optimises existing and planned infrastructure.
3. The Growth Management Framework supports sustainable development by identifying five distinct areas across the island based on their characteristics and primary roles in managing sustainable and resilient growth. The distinguishing characteristics, the nature of sustainable development and the type of growth each will be planned to achieve are outlined in Figure 1: Growth Management Framework Components. Each of these components will be planned in the following manner:
 - a) The **Community Cores** will continue to play a key role as the heart of communities with the highest levels of service, offering daily amenities, heritage assets and infrastructure. As a result, reinvestment will be the focus in historic cores and reurbanisation and infill in emerging cores.
 - b) **The Urban Corridor**, refined to reflect 2016 settlement patterns, will be the focus for new development and growth, recognising that this is where the greatest existing and planned concentration of population and jobs, infrastructure and development exists.
 - c) **Stable Suburban Areas** will be the focus for infill or completion of existing neighbourhoods and approved development with an emphasis on introducing more locally based amenity and mobility options.
 - d) The **Rural Working Landscape** will continue to function as a predominantly rural stable area dominated by food, agriculture, natural resources and pockets of rural settlements.
 - e) The **Barbados National Park** will continue to be conserved for its distinct characteristic of eco-systems, agriculture and rural settlements that exist within the protected landscape.
4. The Island Settlement Structure defines different types of structural elements across the island including centres, nodes and corridors to promote efficient, compact, and orderly development. Development will be planned and developed in accordance with Map 2: Island Settlement Structure.

Key Concepts

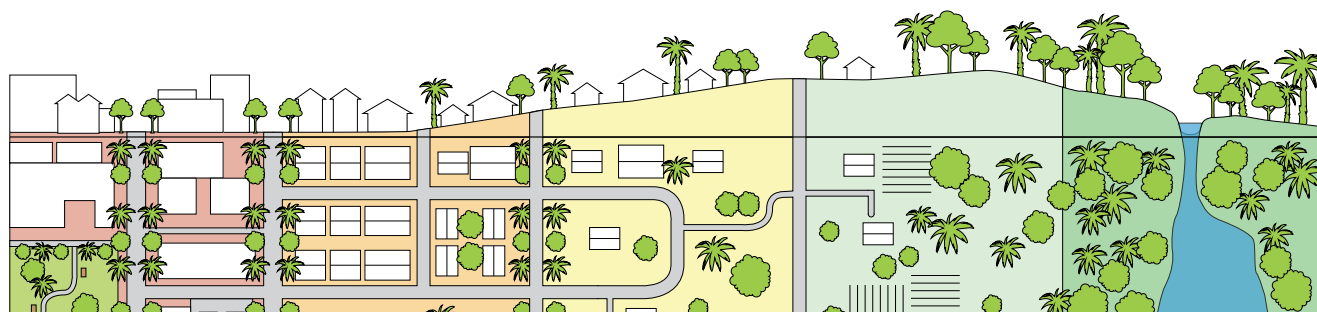
Sustainable development: is about ensuring long term environmental, economic, and community health and wellbeing. It means finding more efficient ways to use land and scarce resources, clustering and connecting the places people live, work, shop and play, ensuring efficient use of infrastructure and protecting the core assets that are the heart of Barbados' capacity to support a prosperous population.

Core assets: valued and irreplaceable places, elements and resources that are key to the long term prosperity of the island. In Barbados these include: fresh water, areas best suited to produce food and agriculture, natural heritage systems, cultural heritage, the National Park, public beach access, and the central places in our communities.

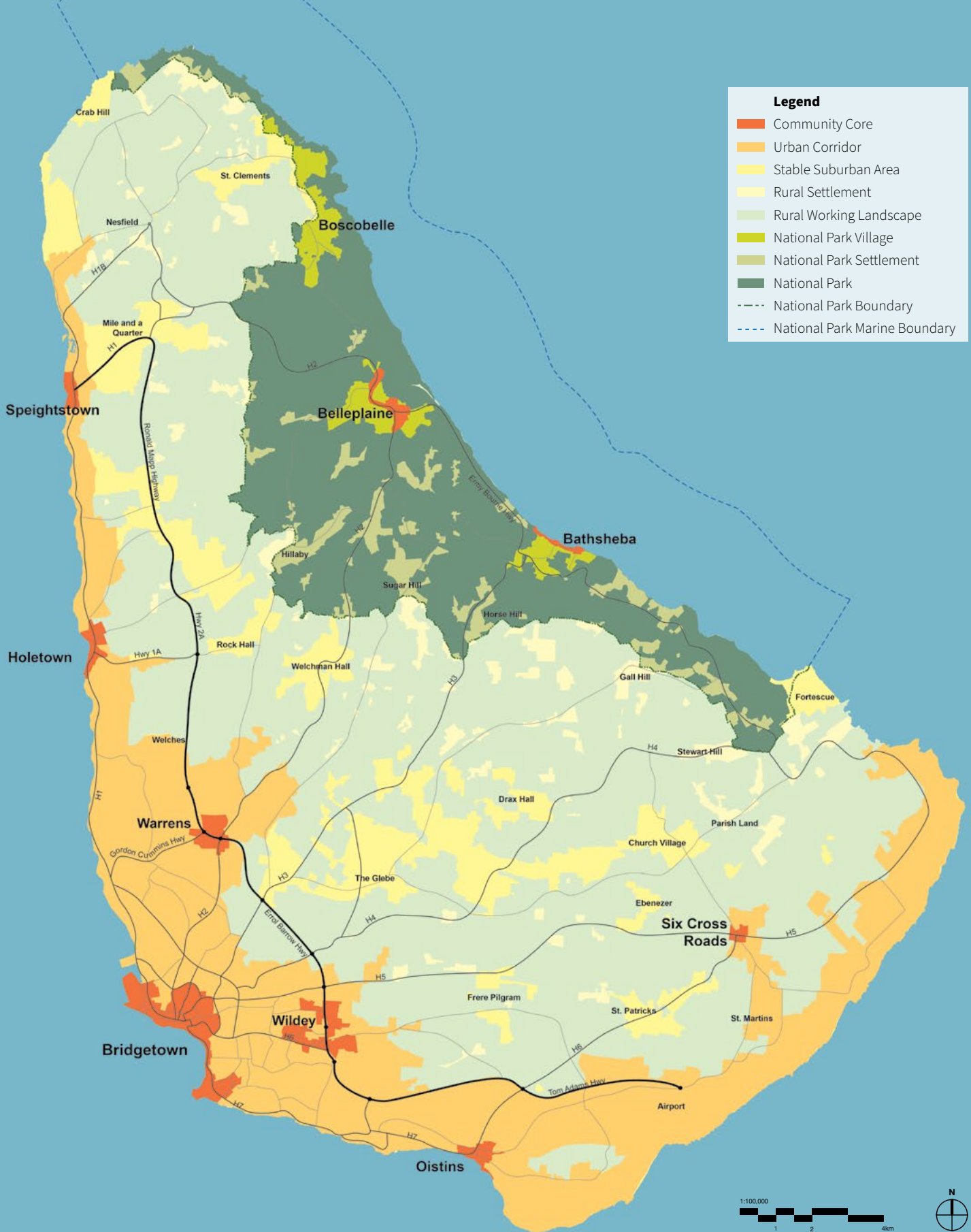
Community core: the commercial, residential and cultural heart and central places of Barbados, providing the densest concentration of people, buildings, and activities. Strengthening the cores strengthens the entire region, as the cores provide services far beyond their borders.

Population Growth: is the increase in the number of people in a population/within Barbados. Planning in relation to population growth needs to consider also changing demographics, rate of household formation, quality of housing and access to key amenities.

FIGURE 2. Growth Management Framework Components



	COMMUNITY CORE	URBAN CORRIDOR	STABLE SUBURBAN	RURAL WORKING LANDSCAPE	NATIONAL PARK
CHARACTERISTICS TODAY	- Greatest mix of uses - Finest grain of streets and blocks; high potential for walkability - Greatest density - Focal point of public transport routes - Focal point of government and community services - Focal point of retail and amenities - Significant employment uses - High potential for efficient delivery of infrastructure - Largest concentration of historic fabric	- Mix of uses - Mix of densities - Multiple public transport routes - Services, retail, employment distributed along corridors and in centres - High potential for efficient delivery of infrastructure	- Predominantly residential - Low density and auto-dependent - Limited public transport - Few amenities and services - Modest potential for efficient delivery of infrastructure	- Primarily agricultural - Resource extraction - Forestry - Cultural heritage landscapes - Rural settlements - Lowest potential for efficient delivery of infrastructure	- Forestry - Agriculture - Resource extraction - Cultural heritage landscapes - National Park Villages - Rural settlements - Lowest potential for efficient delivery of infrastructure
LOCATIONS	- National Centre - Bridgetown - Historic Regional Centres – Speightstown, Hometown, Oistins, Belleplaine - Emerging Regional Centres – Warrens, Wildey, Six Cross Roads	West and south coasts from Checker Hall to Ragged Point. Extending inland with contiguous development.	St. George Valley, National Park Villages, non-contiguous development across the island.	Interior	Scotland District and northeast coastline
POLICY DIRECTION	- Reinvestment (historic cores) - Reurbanisation (emerging cores) - Heritage conservation	- Infill - Intensification - Reinvestment	- Infill - Minimal rounding out of existing settlement areas subject to criteria - No new communities	- Infill in rural settlements - Conservation and restoration - Promoting food and agriculture	- Naturalisation - Nature tourism - Reinvestment in National Park Villages
DENSITY CONSIDERATIONS	Plot coverage • 50%	• 50%	• 40%	N/A	N/A
	Plot ratio All cores, except in National Park: 2.0 - 5.0 (equivalent to 3-10 storeys)	• 0.5 - 2.0 (equivalent to 1-4 storeys)	• No minimum	N/A	N/A
	Density target for major development - Existing community cores will generally be built at existing densities - In Bridgetown, the density target is 30 or more units per net hectare	• 25 units per net hectare	• 20 units per net hectare	N/A	N/A
TYPICAL BUILDING PATTERN	 Bridgetown	 Kingsland, Christ Church	 Hilbury, St. George	 Venture, Saint John	 Mellowes, St. Joseph



MAP 1:
Growth Management Framework

5. A hierarchy of centres defines the Island Settlement Structure. Centres are activity nodes that service the local, regional or national population with a concentration of development and a mix of uses including services, institutions and amenities. Centres are the most accessible places on the island and have the greatest mix of land uses and density of development. In centres the quality of the architecture and urban design, public realm and walking environment is particularly important and contributes to their success and vitality as places. The Island Settlement Structure identifies the following centres:

- a) The **National Centre** is the most urban, diverse, dense, and commercially, institutionally and culturally rich centre in Barbados. The National Centre acts as a dense hub of activity and services for the Bridgetown community and the entire nation.
- b) **Regional Centres** are historic or emerging communities that contain a mix of office, retail, light industrial, tourism and institutional uses at a scale sufficiently large to create a regional attraction. Seven Regional Centres have been designated:
 - i) Speightstown historically has served the northern population of the island and acts as a departure point to the National Park. It has a substantial cluster of cultural heritage assets and a traditional street and block pattern.
 - ii) Hometown is a historic community with a primarily tourism-focused core, with hotels and restaurants on the coastal side of Highway 1 and retail, commercial and residential development on the eastern side of the highway.
 - iii) Oistins has a historic core and is a centre that serves the southwest coastal communities and has an important commercial, fishing and tourism focus.
 - iv) Belleplaine is the centre of the National Park and serves a regional function for the residents of National Park Villages and rural settlements and tourists visiting the Park.
 - v) Six Cross Roads is an emerging Regional Centre that has developed into a centre for retail, employment and community facilities serving residents of St Philip.
 - vi) Warrens is an emerging Regional Centre with an employment and retail focus. It has succeeded in attracting significant high density office, retail, institutional and industrial development and is a focal point for government offices.
 - vii) Wildey is an emerging Regional Centre with an employment, institutional and health and wellness focus. It is an important focal point for light industrial, commercial, institutional and recreational functions.
 - viii) As Barbados evolves, new centres of importance may emerge, such as Lears, which has a cluster of employment uses that is playing an important economic role. These centres may warrant a future designation as Regional Centre, and the preparation of Community Plans.
- c) **Local Centres** are existing or potential future concentrations of shops, amenities and community facilities serving the daily needs of surrounding neighbourhoods and are typically focused at a major intersection. Eighteen Local Centres have been designated:
 - i) Eagle Hall serves as a commercial and community service centre for surrounding residential neighbourhoods north of central Bridgetown.
 - ii) Three Local Centres on the south coast – Hastings, Rockley and Worthing – serve as commercial centres for the surrounding residential and tourist communities.
 - iii) Fitts Village on the west coast provides local serving retail in an area primarily focused on tourism.
 - iv) The Glebe provides a cluster of community services in St. George including a post office, library, police station, and polyclinic.
 - v) St Martins provides retail and community services for the rapidly developing suburban area of St. Philip and is the location of a primary school.
 - vi) Coverley is a newly built neighbourhood along the ABC Highway in Christ Church. The neighbourhood centre includes a grocery store, retail, and some office space.
 - vii) Church Village, St. Philip is an existing destination for the local community due to its cluster of churches and has the potential to include daily amenities and services.
 - viii) Tamarind Hall includes a municipal complex with a cluster of community services in St. Joseph including a post office, library and police station.
 - ix) Welchman Hall serves the surrounding community in St. Thomas with community services including a post office.



- x) Rock Hall, St. Thomas has a rich history as Barbados' first free village. The area has a magistrates' court and a public kiosk vending area related to the freedom statue commemorating its history.
- xi) Four Roads, St. John provides services such as a fire station and post office to the surrounding area.
- xii) Gall Hill includes the St. John's Church and surrounding amenities.
- xiii) St Patricks (Woodbourne) serves a growing community in Christ Church with daily services and amenities.
- xiv) Bathsheba is a National Park Village with a strong tourism focus.
- xv) Mile and a Quarter serves as a commercial centre for the growing community in St. Peter.
- xvi) St Lucy Parish Church (Pickering) has been identified as a future Local Centre as it will be the terminus of the Ronald Mapp Highway extension and is at the convergence of several roads that serve the north of the island.

6. Four types of nodes are focal points for different types of development:

- a) **International Gateway Nodes** are the major entry points into Barbados. They are essential to the economic well-being of the country and require supportive infrastructure to ensure the efficient movement of people and goods to and from them. Two International Gateway Nodes have been designated:
 - Bridgetown Port; and
 - Grantley Adams International Airport.
- b) **Mobility Nodes** include existing bus terminals and other existing or potential locations where there is potential to transfer between transportation modes. Mobility Nodes are the strategic transfer points where there is the opportunity to get people out of cars and into public transport, shared transportation and/or active transportation routes to key locations, reducing traffic congestion. Thirteen Mobility Nodes have been designated and are characterised as either:
 - **Transport Terminal;**
 - **Park and Ride;** or
 - **Bus Transfer Point.**

Further policy direction on the design, role and function of each type of Mobility Node is provided in Section 2.4.

- c) **Retail Nodes** are major shopping centres that attract significant amounts of activity and traffic. They play an important role as a commercial amenity but need to be planned to mitigate their impact on the surrounding road network. Four Retail Nodes have been designated:
 - Sheraton Park (Sheraton Mall)
 - Kendal Hill
 - Mapp Hill (Sky Mall); and
 - Welches (The Walk)
- d) **Major Institutional Nodes** consist of important educational and health campuses that have significant employment and attract students and patients from across the island. Six Institutional Nodes have been designated:
 - The University of the West Indies Cave Hill Campus;
 - Queen Elizabeth Hospital;
 - The planned hospital at Kingsland;
 - The geriatric hospital facility at Waterford;
 - The proposed hospital at Welches; and
 - The proposed medical school and clinic at Wildey.

7. Three types of linear, multimodal corridors have different roles and characteristics:

- a) **Mixed Use Corridors** are intended to continue to develop and intensify as linear concentrations of commercial, residential, office, institutional and mixed use development fronting onto major roads or highways and serving local residents and commuters. Six Mixed Use Corridors have been designated:
 - Lower Collymore Rock;
 - Roebuck Street;
 - Whitepark Road / Lower Bank Hall Road;
 - Tudor Street / Baxters Road / Barbarees Hill;
 - Cheapside Road / Fontabelle Road / Spring Garden Highway; and
 - Bay Street.
- b) **Tourism Corridors** are tourism-focused linear corridors running along the coast with a concentration of hotels, residential, restaurants, commercial and mixed use development and opportunities to intensify. Three Tourism Corridors have been designated:



➤ Highway 7 South Coast Mixed Use Corridor, Christ Church

- St. Lawrence Gap;
- Highway 7 between the Garrison and Oistins; and
- Highway 1 between the Frank Worrell Roundabout / Proposed Four Seasons Site and Half Moon Fort.

c) **The ABC/Ronald Mapp Corridor** is the primary cross-island highway corridor with significant residential, commercial, office and industrial development at key junctures. It has the potential to move from a carrier of cars and trucks to a multimodal mobility corridor with space dedicated to trails and high-occupancy vehicles, including public transport.

8. Growth will primarily be accommodated within the **Community Cores** and the **Urban Corridor** in a compact manner in order to protect core assets, protect and conserve natural heritage, preserve food and agricultural lands, ensure efficient use of existing and planned infrastructure and facilitate transportation choice.

- a) The Government will prioritise infill development, the development of vacant lots, and the redevelopment or adaptive reuse of vacant and derelict properties over the conversion of food and agricultural land and greenfield development.
- b) The Government will promote the efficient use of land and services through compact, contiguous and mixed use development.
- c) Intensification and higher density development will be encouraged within the Urban Corridor, and in particular in Centres, Mixed Use Corridors and at Mobility Nodes.

d) Development will be planned to achieve the density targets outlined in Figure 2 and in Section 3: Land Use and Built Form.

9. Within **Stable Suburban Areas** moderate growth will be accommodated through completion of existing Plans of Subdivision and infill development that:

- a) Reduces vacant lots;
- b) Is designed to encourage healthy and active lifestyles;
- c) Provides for a range of housing to meet income, life stage and housing needs;
- d) Includes common and community gathering spaces;
- e) Encourages walkability and connectivity within and between neighbourhoods;
- f) Achieves the density target outlined in Figure 2;
- g) Includes a mix of use at Local Centres including retail, services and amenities to meet daily living needs; and
- h) Allows for urban agriculture and community gardening.

10. **Rural Settlements** will continue to serve an important role in providing small scale clusters of housing serving residents in the Rural Working Landscape and the National Park. Rural Settlements are not planned to expand through outward growth. More specifically:

- a) Development through new Plans of Subdivision of more than five lots within existing Rural Settlement boundaries will not be permitted.
- b) Infill and intensification on existing lots will be permitted.

11. Rural Working Landscapes are to be protected for food and agricultural production, natural resources and forestry. Within Rural Working Landscapes lots may be subdivided to create a maximum of one new lot of maximum one hectare. The subdivided portion is to continue to be used for food and agricultural production, with ancillary residential use in support of farming or agricultural uses.

- a) Additional subdivision of rural working landscapes to create 1-4 acre lease-holdings may be permitted subject to demonstration that the subdivided lands will continue to be used for agricultural purposes and will be leased to a registered farmer.

12. Within Rural Working Landscapes, a change of land use or Plan of Subdivision to create more than 10 new residential lots will only be permitted if the following can be demonstrated to the satisfaction of the Director of Planning and Development:

- a) The development will not create fragmentation of Food and Agricultural lands. This will be demonstrated through the preparation of an Agricultural Impact Assessment in accordance with Section 2.2.1 and Section 5.
- b) The lands are contiguous to the existing Urban Corridor;
- c) The lands are planned in a compact manner with a minimum density of 25 units per net hectare.
- d) The lands are planned for turnkey housing development including both subdivision of lots and erection of houses;
- e) The lands can be efficiently and sustainably serviced in terms of potable water, drainage, waste collection and roads;
- f) Transportation choices including public transport can be provided in an efficient manner; and

- g) It can be demonstrated that there is need for the conversion to accommodate demand for the type of housing proposed.

13. The Government will promote the efficient use of existing and future infrastructure investments.

- a) Infrastructure planning and land use planning will be carried out in an integrated manner, in accordance with the New Urban Agenda objective to coordinate transportation and land use.
- b) The Government will explore options to incentivise development of vacant lots to ensure more efficient use of the land base and existing infrastructure investments.
- c) The Government will, with the owners' consent, encourage short and long term utilisation of vacant lots by the community for open space, community gardens or food production, where appropriate.
- d) In order to prevent the inefficient use of infrastructure to service further vacant lots, priority will be given to applications for turnkey housing developments including both subdivision of lots and erection of houses over subdivision only developments.

14. The Government will promote design excellence in key areas by requiring development within Centres and Mixed Use areas to adhere to the built form controls outlined in Section 3.4 and the Community Plans. This may also include consideration by a Design Review process.

15. For each Centre, the Government will create a Comprehensive Disaster Management Strategy including the identification of emergency routes for evacuation and distribution of critical supplies and emergency shelters.

16. Complementing the national level strategic and land use policies are a set of nine Community Plans found in Part B of this Plan. The Community Plans provide more detailed policy that is tailored to the specific context of each community, thereby providing an opportunity to enhance the distinct role and character of each. The Community Plans address the following topics:

- a) Climate crisis resiliency, including adaptation and mitigation measures and disaster risk reduction;
- b) Physical, environmental and urban design related opportunities and constraints;
- c) Detailed land uses and specific urban design directions;
- d) Cultural heritage assets, including listed buildings, cultural heritage landscapes, archaeological resources, and intangible heritage;



➤ Rural area, St. George



➤ St. George Farmers Co-op and Over 40's Club, The Glebe, St. George

- e) Schools and other community facilities;
- f) Opportunities to protect and restore components of the Natural Heritage System;
- g) The existing parks and open space network and opportunities to enhance it or create linkages;
- h) Opportunities to provide a range of housing options appropriate to the local context to meet the community's housing needs, including but not limited to the aging population;
- i) Sites or blocks that have good potential for intensification or infill;
- j) Opportunities for improving multimodal transportation choice within the community, including:
 - i) Increasing walkability and active transportation networks within and beyond the Community Plan area;
 - ii) Improvements to public transport;
 - iii) Improvements to existing bus terminals;
 - iv) Where a bus terminal does not already exist and a Mobility Node has been identified, identification of an appropriate location and design considerations for one of the types of Mobility Nodes;
 - v) Strategies to address local transportation challenges; and
 - vi) Parking management strategies appropriate to the community.

Communities and Housing

- 17.** The Government will promote inclusive settlements that are safe, healthy, accessible, affordable, resilient and sustainable and foster prosperity and quality of life for all, in accordance with the objectives of the Barbadian Government and New Urban Agenda.
- 18.** The Government will implement the policies of the Housing Policy Paper being undertaken by the Ministry with responsibility for Housing at the time of the PDP (2023).
- 19.** The Government will promote settlements that provide:
 - a) A variety of types of housing within communities;
 - b) Affordable housing options;
 - c) A mix of uses with amenities and services located within walking distance of residences;
 - d) Locations for public transport stops, transfer points or transport terminals;
 - e) Infrastructure for active transportation such as sidewalks, trails and shared use paths;
 - f) Accessibility for people with disabilities;
 - g) Appropriate amounts of open and landscaped space designed to meet the community's needs;
 - h) Locations for community gardens and farmers' markets; and
 - i) Community-based strategies to support climate crisis resilience and the use of renewable energy.

20. The Government will facilitate the provision of adequate shelter for all. This will include:

- a) Maximising opportunities to increase the supply of social and affordable housing within the context of the policies of this plan;
- b) Facilitating access to land which is constrained by tenure arrangements, using such tools as land adjudication and declaration of tenancies.
- c) Locating development adjacent to existing serviced communities and integrating Low Impact Development (LID) and Stormwater Best Management Practices (SBMP) approaches to reduce vulnerability to the climate crisis and increase resilience;

21. Development will be planned to incorporate a greater variety of housing types, tenures, forms, and sizes to reflect the needs of Barbados' changing demographics and smaller household sizes. This will include:

- a) Encouraging the development of multi-family housing such as townhouses and apartment/condominium buildings in appropriate locations, including in Centres and along Mixed Use and Tourism Corridors; and
- b) Prioritising residential development applications for types of housing that are underrepresented in the island's housing mix today, such as seniors' housing.

22. The Government will promote the development of age-friendly, sustainable, inclusive and accessible communities and reduce residential overcrowding. This will include:

- a) Encouraging seniors' housing to locate in Centres and Mixed Use Corridors close to amenities and services to meet daily needs;
- b) Promoting the development of new housing which is fully accessible to people with disabilities;
- c) Continuing to require that new developments and significant renovations in public spaces be accessible and encouraging the retrofitting of existing communities to improve accessibility;
- d) Requiring the installation of lighting in public spaces;
- e) Planning for the provision of 30,000 units of affordable housing over the next 10-30 years;

(Address by President Dame Sandra Mason to the Barbados House of Assembly and Senate February 5, 2022, p 9)

Key Concepts

Complete communities: Complete communities meet all the needs of residents' daily lives, including a range of housing types, diverse job opportunities, provision of goods and services, and community infrastructure like schools, healthcare, and recreational and open spaces. They are walkable, and provide easy access to public transportation. Complete communities are places where everyone, from children to seniors, can live a fulfilling life.

Healthy communities: A healthy community is one that provides its residents with physical, emotional, and social well-being. In the PDP, policies ensure that the development of Barbados actively encourages physical health (such as nutritious local food markets and cycling infrastructure), emotional health (such as green spaces and fulfilling employment opportunities), and social health (such as community gathering spaces and recreational facilities).

- f) Addressing conditions of overcrowding through the provision of new units of affordable housing; and
- g) Increasing housing climate crisis resilience in order to maintain access to potable water and electricity in the event of extreme weather events.

23. The Government will seek to ensure that basic infrastructure services, including the provision of potable water, efficient waste management, sanitation, health and emergency services, are provided for all.

24. The Government will support the provision of affordable housing by the National Housing Corporation (NHC) in accordance with the following policies:

- a) NHC developments will be considered on sites that meet the following criteria:
 - i) Located within lands that are serviced in terms of potable water and roads.
 - ii) Located in proximity to daily services and amenities; and
 - iii) Provide access to transportation choices including public transport.
- b) NHC developments will incorporate a mix of housing types including higher density units.

- c) NHC developments will be designed to create integrated developments that encourage a mix of market and non-market housing developments and connectivity between communities. In particular, developments will encourage active transportation and avoid backlotting of development.
- d) NHC developments will be encouraged to incorporate redevelopment or reuse of vacant or derelict properties in the Urban Corridor where ownership of these properties can be obtained and to prioritize locations adjacent to existing communities to take advantage of existing infrastructure, services and transit.
- e) NHC developments will be encouraged to incorporate renewable energy technologies for micro-generation to support housing affordability.

25. An urban renewal plan will be implemented through the Urban Development Commission, Rural Development Commission, and NHC. One of the principal objectives of the plan is to create new, improved climate resilient and affordable housing in revitalised communities. This will be achieved by:

- a) PDD working with the Ministry responsible for housing and related agencies to identify areas for urban renewal and implement other strategies for the delivery of affordable housing, repair, etc;



➤ Apartment housing , Country Road, Bridgetown

- b) Encouraging the sale of land on non-plantation tenancies in urban areas to qualified tenants at a subsidised rate of \$2.50 per sq. ft. for the first 5,000 square feet;
- c) Promoting the reuse of vacant residential lots and vacant residences through the Derelict Housing Programme; and
- d) Constructing, and promoting the construction of terraced, semi-detached and other forms of housing, which are designed to produce increased densities on existing vacant and underutilised lands;

Concomitant to this programme is the Rural Tenancies Programme, which enables qualified tenants residing on non-plantation tenancies in the rural parishes to purchase land at the same subsidised rate.

26. The Government will continue to invest in the rehabilitation of Community Improvement Areas. Community Improvement Areas may include under-served or poorly maintained residential neighbourhoods, clusters of vacant and/or derelict buildings or other blighted areas. Community Improvement Areas include:

- Bridgetown:
 - Synagogue District
 - Nelson/Wellington St
 - Delamere Weymouth
 - The Garden Land
 - Westbury
 - New Orleans/Cats Castle/Mahogany Land/Chapman Street
 - Bank Hall
- Speightstown
 - Mango Lane
 - Major Walk/Sand Street
- Holetown
 - Back of First Street Area
 - Trens/Porters Neighbourhood
- Oistins
 - Scarborough Neighbourhood
 - Ashby Neighbourhood
 - Keizer Hill Neighbourhood

27. Unauthorised occupation of land, such as informal settlement areas, shall not be permitted.



> Housing, Warrens, St. Michael

Social and Community Facilities

- 28.** Social and community facilities, identified on Map 3, will be planned to address climate crisis resiliency and disaster risk reduction.
 - a) Where possible, new social and community facilities will be developed outside of flood susceptible areas or other hazards.
 - b) New social and community facilities will be required to incorporate site plan and design measures for climate crisis resiliency.
 - c) New social and community facilities should be planned to function as emergency shelters for surrounding communities.
- 29.** Wherever possible, community facilities will be sited in Regional or Local Centres, recognising that they are an important part of complete and healthy communities.
- 30.** The Government and respective Ministries must consult with the Director of Planning and Development prior to selecting a site for a new community facility, in order to ensure that it is appropriately located, planned and designed with respect to population needs and requirements.
- 31.** Where possible, social service and community facilities, public services and amenities should be grouped together, potentially sharing buildings, sites and parking.
- 32.** New social service and community facilities will be required to be accessible to persons with disabilities and the elderly.

Education Facilities

- 33.** It is not envisaged that new school buildings to serve the local population will be required over the plan period. However, should new schools be proven to be required, these should be located based on the following criteria:
 - a) On sites within the Urban Corridor. If a suitable site cannot be found, new schools may be permitted to locate on sites that are contiguous to the Urban Corridor and well served by transportation options;
 - b) On sites that are outside of areas at risk to natural hazards; and
 - c) With consideration to concentrations of population.
- 34.** The potential for integrating other community facilities on-site should be considered when allocating the budget for the refurbishment or renovation of existing schools.
- 35.** The Government will continue to promote the amalgamation of primary schools in districts where the primary school age population is falling and existing facilities are underused.
- 36.** New educational facilities will be required to incorporate design measures for ease of access and mobility for persons with disabilities.



MAP 3:
Social and Community Facilities

Health Facilities

- 37.** Consideration should be given to the relocation of the Gordon Cummins Hospital, which is also intended for replacement, to a more accessible location.
- 38.** As shown on Map 3, a location has been identified for a potential new hospital at Kingsland. This location will be protected for this purpose.
- 39.** Private health clinics and new polyclinics will be encouraged to locate in Regional or Local Centres in proximity to other central community facilities where they can serve the surrounding communities.

Sport Facilities

- 40.** The Sir Garfield Sobers Complex is a multi-purpose facility for sporting disciplines and social events. Given the predominance of residential development in the surrounding areas and its proximity to the ABC Highway, future development of the Complex should, wherever possible, be multi-purpose in nature. Due consideration should be given to any adverse impacts of further development on the nearby residential communities, road network and traffic management.
- 41.** Development applications in support of future expansion of the National Stadium, including the provision of increased seating and enhanced ancillary facilities, should adequately address concerns related to safety, traffic, lighting, noise, visual amenity and the surrounding Groundwater Protection Zone.
- 42.** An Environmental Impact Assessment will be required for any development of a sporting complex to ensure that potential negative impacts such as noise, dust and traffic disruption are adequately mitigated.

Police and Fire Facilities

- 43.** New police stations and other facilities such as Magistrates' Courts will be encouraged to locate in Regional and Local Centres.
- 44.** A new fire station has been proposed in the parish of St Peter and/or St Philip. This facility should be located to maximise response times, reduce the burden on operational capacity of existing stations and protection of public health and safety.
- 45.** Where possible, the Government will encourage the development of Emergency Medical Response (Paramedics) Facilities, fully integrated with the Fire Department.

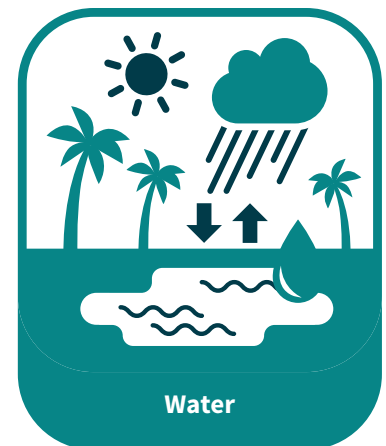
Post Office, Libraries, Community Centres

- 46.** New post offices, libraries and community centres will be encouraged to locate in Regional and Local Centres and, where possible:
 - a) Incorporate adaptive reuse of public and heritage buildings; and
 - b) Co-locate in a single municipal complex.
- 47.** The distribution of post offices, libraries and community centres should be based on population service areas, rather than on the parish system.
 - a) Priority should be placed on establishing a new library in the northern parishes or St. Thomas, where there is no functioning public library at the moment. Regional Centres Speightstown and Belleplaine and Local Centres Mile and a Quarter, St. Lucy Parish Church (Pickering), Rock Hall, and Welchman Hall are all potential sites.

➔ 2.2

Protecting Core Assets

Barbados has a number of Core Assets that are integral to the long-term health and prosperity of the island. These include food and agricultural lands, the natural heritage system, water resources, the National Park, cultural heritage assets and community cores. Identifying and protecting these core assets, and building resilience in the context of a worsening climate crisis, is at the heart of the PDP's rationale for directing growth and new development in a more sustainable manner. For some assets, this is also a strategy to address scarcity, including food, water and land. The PDP (2023) identifies some areas that should be restricted for new development to conserve and protect sensitive core assets, and other areas where new development and investment should be focused to capitalise upon and enhance existing settlement, communities and infrastructure.





➔ 2.2.1

Food and Agriculture

Barbados is a food scarce country with high levels of net food imports and minimal days of on-island supplies. The value of its food imports has reached nearly BBD\$600 million annually (2014). At the same time, the amount of agricultural land has declined from 44% of the island in the 1980s to a total of 26.5% or just over 28,000 acres today, well below the Government's minimum agricultural land allocation requirement of 30,000 acres (provided by the Ministry of Agriculture, Food and Nutritional Security). This situation is not only economically unsustainable, but it severely reduces the resiliency of the island when the impacts of the climate crisis and severe weather events are considered. Achieving food and nutrition security and sovereignty is recognised as one of Barbados' highest priorities.

In 2011, over 50% of food imports were comprised of products such as vegetables, fruits, root crops, meat and fish, all of which can be produced locally. Barbados could achieve significant reductions in the food import bill and consequent foreign exchange savings by substituting local products. Increasing value added agricultural activities on the island would help to reduce imports of processed foods as well as support a competitive and economically viable agri-food sector and create jobs.

The local fishing industry is an important contributor to local food and food sovereignty, and an area of economic activity and employment dominated by vibrant small businesses and self-employed fisherfolk. Across the Island there are 30 fish landing sites, including eight fish markets that serve an estimated 1,000 fishing vessels, employing 6,200 persons. Annual fish landings range from 3000-6000 metric tonnes and contribute \$13.2 million in ex vessel catch value and \$46.2 million in value added products. Barbadian fisher-folk catch about half the local fish demand. Yet, the fisheries sector today is challenged with inadequate physical infrastructure, such as landings, vending facilities, handling and boat repairs.

Fresh and nutritious food is also important for the prevention of chronic non-communicable diseases. Improving the health of Barbadians requires the provision of alternatives to the processed foods often found in grocery stores. Healthy local foods should be affordable and easily accessible in communities across the island.

In the context of climate crisis and as enabled through the Water Reuse Act (2023), water reuse and extension of water

pipelines provides opportunities to improve arable lands within IRDP areas and Food and Agriculture lands that may not previously have had access to irrigation.

This chapter is comprised of five sections:

- **Overarching Policies**
- **Food and Agriculture Protection Layers**
- **Fisheries**
- **Development Adjacent to Food and Agricultural Land**
- **Value Added Opportunities**

Overarching Policies

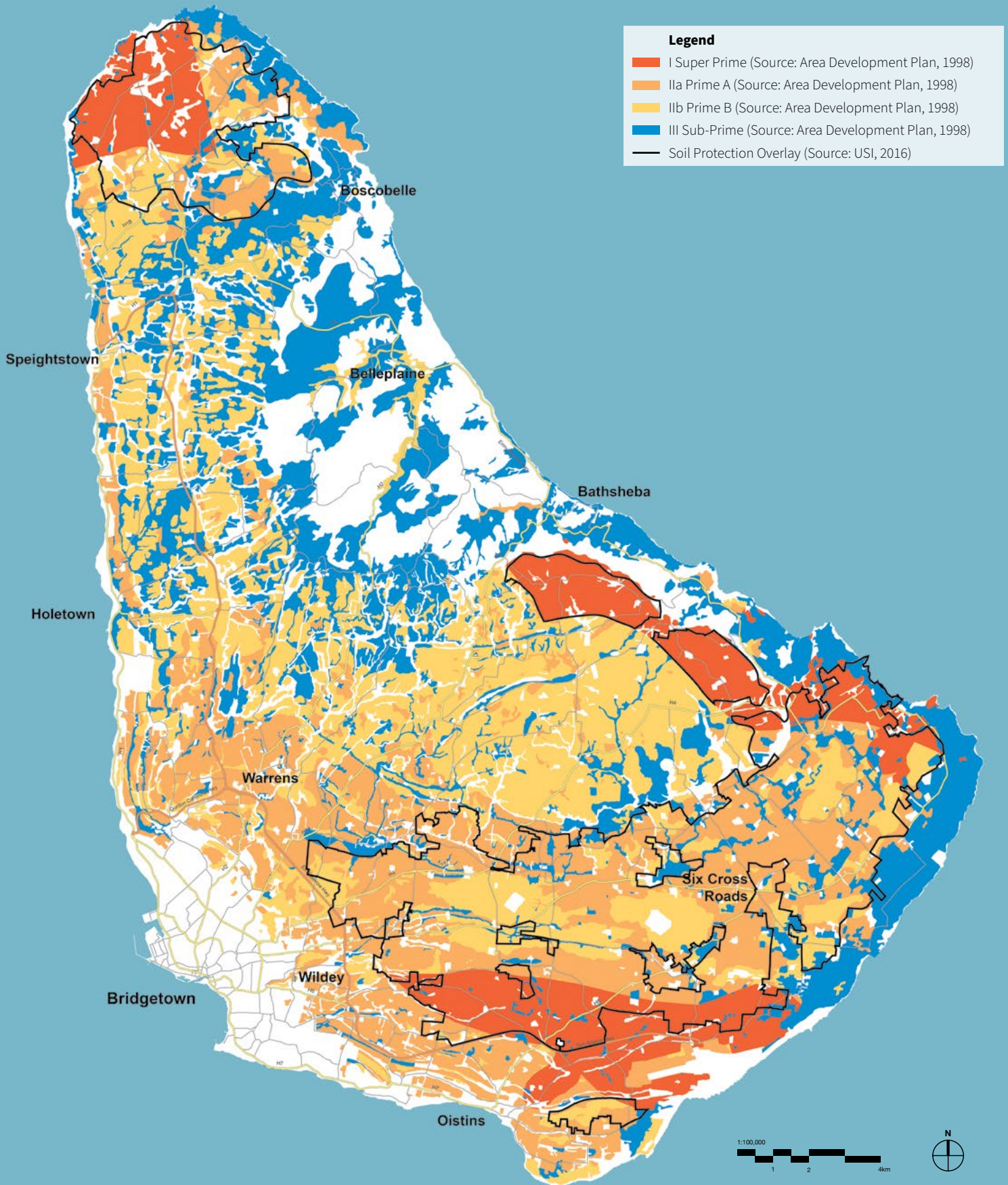
The policies in this section aim to support the food and agricultural sector in Barbados, with the ultimate goal of ensuring a healthy, resilient and food sovereign nation.

1. The Government will promote a viable food and agricultural sector, recognising its important role in food security, climate crisis resilience, the national economy and healthy communities. This will include:
 - a) Protecting the agricultural land base from conversion to other primary land uses and fragmentation;
 - b) Ensuring that agricultural practices are sustainable and designed to protect and preserve natural resources;
 - c) Increasing food security and sovereignty through continued emphasis on crop diversification and by striving to substitute domestic food production for imported food products where possible; and
 - d) Promoting research into new agricultural practices and technologies, including intensive agriculture practices, that will increase diversification and improve the efficiency, profitability and sustainability of the sector.

Key Concepts

Food security: A situation that exists when people have secure access to sufficient amounts of safe and nutritious food for normal growth, development and an active and healthy life. Food insecurity may be caused by the unavailability of food, insufficient purchasing power, inappropriate distribution, or inadequate use of food at the household level.

Food sovereignty: Refers to national self-sufficiency in a country's food production, processing, and distribution system. A nation with food sovereignty does not need to rely on imports to meet the needs of its population.

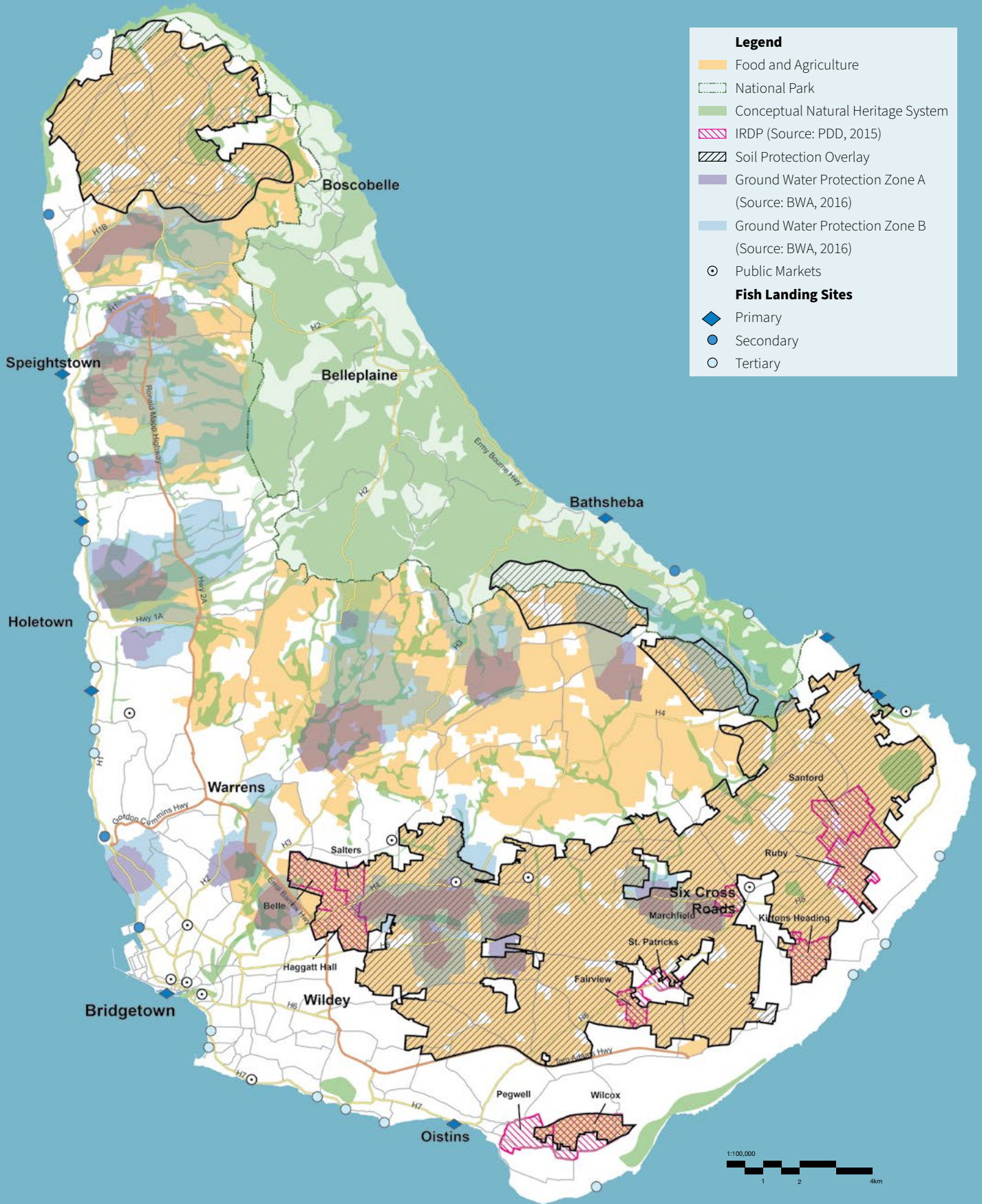


MAP 4:
Agricultural Land Classification

2. The Government will consider environmental sustainability and climate crisis resiliency in the food and agricultural sector. These policies align with Agriculture and Climate Change Policy (2022) and recognize the potential for co-existence of agricultural and renewable energy uses. The Government will promote:
 - a) The use of agricultural management best practices, including biological pest control, to minimise the negative impacts of agricultural activity, notably the use of pesticides and herbicides;
 - b) Farming practices that seek to reduce the volume of agricultural waste;
 - c) The production of more resilient crops and varieties as a climate adaptation measure; and
 - d) Risk mitigation measures including water storage, rainwater harvesting, improved drainage, stormwater management and efficient irrigation.
3. The Government will plan for the full spectrum of food production and other agricultural crops by:
 - a) Using the data compiled through the Agricultural Census to assist in the review process of the PDP, as detailed in Section 5.7. This Census provides an inventory of activities related to all forms of agricultural production, including lands in rotation, in a GIS form that is compatible with the National Mapping system in the PDP. This survey should be kept up to date and be used as a reference in ongoing land management practices and land use changes proposed in the Working Landscape area;
 - b) Prioritising and protecting the use of the highest classes of agricultural land for the growth of food crops;
 - c) Supporting livestock operations appropriate to the context and with appropriate separation distances to avoid land use conflicts;
 - d) Promoting organic farmers and the organic farming sector;
 - e) Supporting a sustainable fishing industry;
 - f) Supporting the use of gullies for growing food such as fruit;
 - g) Initiating a National Seed Bank;
 - h) Recognising the historic and ongoing role of the sugar cane sector across the island and related rotation crops;
 - i) Supporting the growth of niche agricultural industries such as “Sea Island” cotton;
 - j) Promoting urban and intensive agriculture within the Urban Corridor and Stable Suburban Areas; and
 - k) Creating strategies to address the challenges associated with praedial larceny.

Food and Agriculture Protection Layers

4. An adequate supply of viable agricultural land will be protected to ensure the food security and sovereignty of Barbados. There are four types of protections that work together to support food and agricultural production, as detailed on Map 5:
 - a) The **Food and Agriculture** land use designation;
 - b) The **Soil Protection Overlay**;
 - c) The **Integrated Rural Development Programme** (IRDP) policy areas; and
 - d) **Food Production Zones**.
5. Agricultural uses will be protected on lands within the **Food and Agriculture** land use designation, in accordance with Section 3.1. The intent of the Food and Agriculture land use designation is to:
 - a) Accommodate food production and other agricultural uses with a priority on growing local food;
 - b) Protect large, contiguous agricultural areas to enable efficient agricultural protection and support the food and agricultural sector; and
 - c) Restrict the change of land to any other use unless the criteria set out in Section 3.1 are met.
6. Lands within the **Soil Protection Overlay** represent an irreplaceable resource and will be protected over the long term for food production and other agricultural uses. The Soil Protection Overlay has been identified based on the following criteria: the availability of the best agricultural land, suitability under projected climatic conditions, access to or potential for irrigation water and the provision of the support services necessary for the efficient production of food crops. Within the Soil Protection Overlay:
 - a) Conversion of land to a primary land use that is non-agricultural will not be permitted.
 - b) The Government will encourage the return of idle lands to agricultural production including, but not limited to, exploring incentives for farmers and landowners to do so.
 - c) Installation of renewable energy technologies for micro-generation will be permitted within the Soil Protection Overlay, in accordance with the policies of Section 3.1.2.6.
 - d) Large Scale Renewable Energy Projects (PV) are generally not permitted in Soil Protection Overlay unless it can be demonstrated through an Agricultural Impact Assessment that there is no negative impact on agricultural production on those lands or surrounding lands and the project is in compliance with Technical Guidance documents.



MAP 5:
Food and Agriculture

7. Agricultural uses will be protected in **IRDP** policy areas to make best use of the Government's investment in irrigation in these areas. Within IRDP policy areas:
 - a) There will be no change in the use of existing buildings located on the lots.
 - b) There will be no change of the use of land.
 - c) One dwelling house only will be permitted per lot.
 - d) There will be no increase in the capacity of any dwelling house beyond a two-family unit.
 - e) small scale subdivision of IRDP parcels may be considered where the primary land use remains agriculture; any existing or new lot is a minimum of 1 acre in size; and the lot is brought into or is continued to be used for agriculture practices.
 - f) There will be no erection of structures on existing irrigation pipelines.
 - g) The return of idle lands to food and agricultural production will be encouraged.
 - h) IRDP lots that are not currently farmed will be considered as opportunities to implement the Land for the Landless programme through lease arrangements to ensure the lands remain for agricultural use over the long term.
 - i) Pilot projects related to urban agriculture and intensive agricultural practices will be considered.
8. The Government will support the implementation of the National Agricultural Policy with regard to Food Production Zones.
 - a) The purpose of **Food Production Zones** will be to:
 - i) Mobilise a group of modern farmers who are committed to agriculture and food production;
 - ii) Achieve a measure of food security by reserving lands for food production; and
 - iii) Act as the nuclei of agricultural activity to stimulate agricultural production in the surrounding districts.
 - b) Food Production Zones will include the following elements:
 - i) A research and development component that defines the crops to grow, the most appropriate technologies and production systems;
 - ii) An agricultural extension component that provides the technical and market information necessary for high productivity;
 - iii) A public information system that educates the community on the project and on the benefits of the consumption of local foods;
 - c) The following criteria will be used to identify Food Production Zones:
 - i) Presence of irrigation facilities; and
 - ii) Presence of an established community of commercial farmers.
 - d) Areas within the following candidate sites will be considered:
 - St. John

– Bath	– Ashford
– Victoria	– Society
– Colleton	– Easy Hall Estates
– Malvern	– Claybury
– Todds, Pool, Henley	– Bowmanston
– Clifton Hall, Lemon Arbor, Wakefield	
 - St. Lucy

– Hope/Spring Hall/Friendship	
– Crab Hill	– Barrows/Bourbon
– Mount Gay	– Pickerings
 - St. George

– Birghton	– Buckley/Jordans
– Boarded Hall, Stepney	– Buttals, Windsor
– Constant	– Cottage
– Draxhall	– Mount
– Valley	– Woodland
– Hanson	
 - Christ Church

– Hopefield	– Hannays, Lower Grey
– Lowthers	– Bannatyne
– Newton, Yorkshire, Searles	– Adams Castle
– Kingsland Estates	– Newton
 - St. Philip

– Foursquare	– Carrington, Chapel
– Edgecomb, Halton	– Palmers
– Thickets	– Vineyard, Pollard
– Woodbourne	– River
 - St. Thomas

– Walkes Spring	– Strong Hope
– Mt. Wilton	– Dunscombe
– Dukes	– Hopewell
– Fisherpond	– Vauclause

Fisheries

9. The Government will support the fisheries sector as a vital component of the economy and contributor to food security and sovereignty.
 - a) Land use and infrastructure decisions related to fisheries will take guidance from the Fisheries Sector Management and Development Policy 2013 and the Strategic Actions Plan.
 - b) Fish landing sites, boat hauling, launching and boat repair facilities identified on Map 5 will be maintained, upgraded and served with adequate infrastructure.
 - c) The Government will continue to encourage the use of renewable energy sources for on-board power within the fishing fleet.
 - d) Ecosystem-based management of the island's marine and coastal resources will support a sustainable fisheries sector by seeking to ensure the health of fish stocks and their habitat and preserve the biodiversity of the marine environment.
 - e) The Government will promote value added activities in the fisheries sector by providing infrastructure for post-harvest activities.

Development on or Adjacent to Food and Agricultural Land

10. In accordance with policy 2.2.1.6 a), conversion of land in the Soil Protection Overlay to non-agricultural uses will not be permitted.
11. Lands designated for Food and Agriculture outside of the Soil Protection Overlay are also important to the agricultural land base of Barbados and should be protected for agricultural use. On these lands, a change of land use or Plan of Subdivision to create more than 10 new residential lots will only be permitted if the criteria of policy 2.1.12 are satisfied.
12. A Scoped Agricultural Impact Statement will be required for applications on or adjacent to lands designated for Food and Agricultural use for a change of use or subdivision of agricultural land for a site greater than two acres or more than 5 residential lots to determine impacts on or incompatibilities with the agricultural use.
13. Applications on or adjacent to lands designated for Food and Agricultural use for a change of use or subdivision of agricultural land for a site greater than four acres or more than 10 residential lots will require an Agricultural Impact

Assessment to determine impacts on or incompatibilities with food and agricultural uses and identify appropriate mitigation measures.

14. Scoped Agricultural Impact Statements and Agricultural Impact Assessments will be prepared in accordance with Section 5.
15. Through the Planning Obligations mechanism, Food and Agricultural lands may be obtained and used for Affordable Housing according to the following criteria:
 - a) The lands are contiguous with or on the periphery of an existing community or settlement area;
 - b) Lands can be serviced in a sustainable and resilient manner;
 - c) The location/introduction of residential use will not:
 - i) Fragment Agricultural lands to the extent that agricultural production is compromised;
 - ii) Create land use compatibility issues (noise, odour, dust) with surrounding Agricultural uses; and
 - d) the lands are not in a Soil Protection Overlay zone.
16. New development adjacent to Food and Agricultural land will:
 - a) Only be permitted if it can be demonstrated that surrounding agricultural operations have the ability to carry on normal farm practices and development will not adversely impact farming practices; and
 - b) Provide sufficient buffers to mitigate land use conflicts with farming operations to the extent feasible and to the satisfaction of the Director of Planning and Development, in consultation with the Ministry responsible for Agriculture. This would depend on the size and nature of the proposed use, the existing agricultural uses, and on any buffering factors between them. For example, gullies, roadways and other prominent features may be helpful in defining and screening a non-agricultural use from surrounding farms.
17. The Government will support the use of lands designated for Food and Agricultural use for compatible renewable energy uses, in accordance with the policies of 3.1.2.6.

Value Added Opportunities

18. The Government will promote value added activities in the food, agriculture and health sectors. This will include:
 - a) Encouraging food processing and distribution facilities and related opportunities;

- b) Promoting diversification related to production and processing of food and other agricultural products; and
 - c) Supporting organic agriculture.
- 14.** The Government will support infrastructure for the food and agricultural sector to improve conditions and provide opportunities for distribution and value added activities. This will include:
- a) Maintaining and improving transportation access and infrastructure to agricultural lands;
 - b) Providing drainage and irrigation infrastructure;
 - c) Planning for cooperative infrastructure such as distribution centres, abattoirs, and canning/processing facilities;
 - d) Directing agricultural infrastructure to locate in proximity to agricultural lands; and
 - e) Identifying locations for farmers' markets in Centres and Rural Settlements.
- 19.** The Government will continue to promote the development of local food markets, farmers' markets, community gardens and kitchen gardens as a way to encourage healthy food options and develop the local food economy.
- 20.** Opportunities for urban agriculture will be encouraged within the Urban Corridor, Stable Suburban Area and Rural Settlements. These will include:
- a) Intensive agriculture;
 - b) Community gardens, including as a temporary use on vacant lots, with the express permission of the landowner;
 - c) Kitchen gardens; and
 - d) Rooftop gardens.
- 21.** Renewable energy will be considered on Food and Agriculture lands in accordance with the policies of Section 3.1.

Key Concept

Value added agriculture: Activities that take a raw agriculture product and process it in a manner that enhances its value. Examples include creating necklaces and handbags from fish skin or processing sheep's milk into cheese.





➔ 2.2.2

Natural Heritage System

The Barbados Natural Heritage System is a core asset defined using an ecosystem approach to the protection, conservation and restoration of the components of the environment. The recognition of a National Natural Heritage System enables the protection and enhancement of the quality of the natural environment through soil and groundwater conservation, protection of land and marine biodiversity, and the prevention of air, land and water pollution. The implementation of the Roofs to Reefs Programme will advance conservation efforts that will help reduce pollution and protect the natural heritage system.

The NHS plays a key role in the conservation and enhancement of biodiversity. Biodiversity provides the necessities of life. It provides clean water, air and fertile soil. Biodiversity conservation is key to ensuring a healthy environment and productive economy.

Adopting an ecosystem approach to the Natural Heritage System provides a strong foundation to advance public awareness and appreciation of the essential linkages between the environment, quality of life and sustainable development. As a core asset identified within the PDP (2023), the Government will protect, maintain and enhance the Natural Heritage System in urban and rural environments and seek to minimise adverse impacts arising from new development. The Natural Heritage System should also be recognised as contributing to the green and blue economy, providing an essential foundation for employment through the appropriate use of renewable resources to support sustainable jobs and livelihoods.

The Natural Heritage System chapter is comprised of five sections:

- **Overarching Policies**
- **The Climate Crisis and Risk Reduction**
- **Components of the Natural Heritage System**
- **Coastal Zone Management**
- **Natural Hazards**

Overarching Policies

1. The Barbados Natural Heritage System (NHS) outlined in Map 6 will be regarded as one of Barbados' irreplaceable and significant core assets.
2. The NHS will be conserved, restored and managed to capitalise on its valued ecological functions and to provide an improved quality of life for current and future generations of Barbadians.

3. Water is a core and scarce asset in Barbados, one that is an intrinsic part of the NHS. Restorative efforts, such as increasing vegetative cover, which enhance the potential for infiltration will be encouraged.
4. Development and land use across the island and in particular within or adjacent to the NHS will take into account the risks and impacts of the climate crisis and opportunities for disaster risk reduction.
5. The Roofs to Reefs Programme will help enhance the quality of the natural heritage system through conservation efforts and the reduction of ecosystem pollution.
6. An ecosystems approach, which considers the integration of terrestrial, coastal and aquatic systems, will be advanced. Proposed Terrestrial Zones will complement the defined Coastal Zones. Nature-based solutions will be promoted, using this understanding, to enhance the conservation and restoration of the Natural Heritage System and increase resilience. Ongoing work, referenced in Figure 3, related to proposed terrestrial landscape sub-areas will inform the National Heritage System mapping and policy in future PDP Updates.
7. The National Park will be recognised for its important role as an anchor to the Natural Heritage System. The successful conservation and restoration practices of the Soil Conservation Unit and Natural Heritage Department provide precedent for implementation of the NHS in other areas of Barbados.
8. Stewardship and partnership opportunities will be developed between government, communities, ENGOS (e.g., Future Centre Trust), institutions (e.g., UWI, Bellairs Research Institute), specific entities (Barbados Hiking Association, Barbados Sea Turtle Project), and the private sector to advance natural heritage conservation and management efforts across the island.

Key Concepts

Roof to Reefs (R2R): A holistic, integrated national initiative for the resilient development of Barbados. The R2R programme provides for responses at the individual, community and country levels and presents an integrated public investment programme founded on principles of sustainable development and climate crisis resilience.

Resiliency: The ability to anticipate, prepare for and respond to hazardous events, trends or disturbances related to climate. (Climate Resilience Portal of the Center for Climate and Energy Solutions)

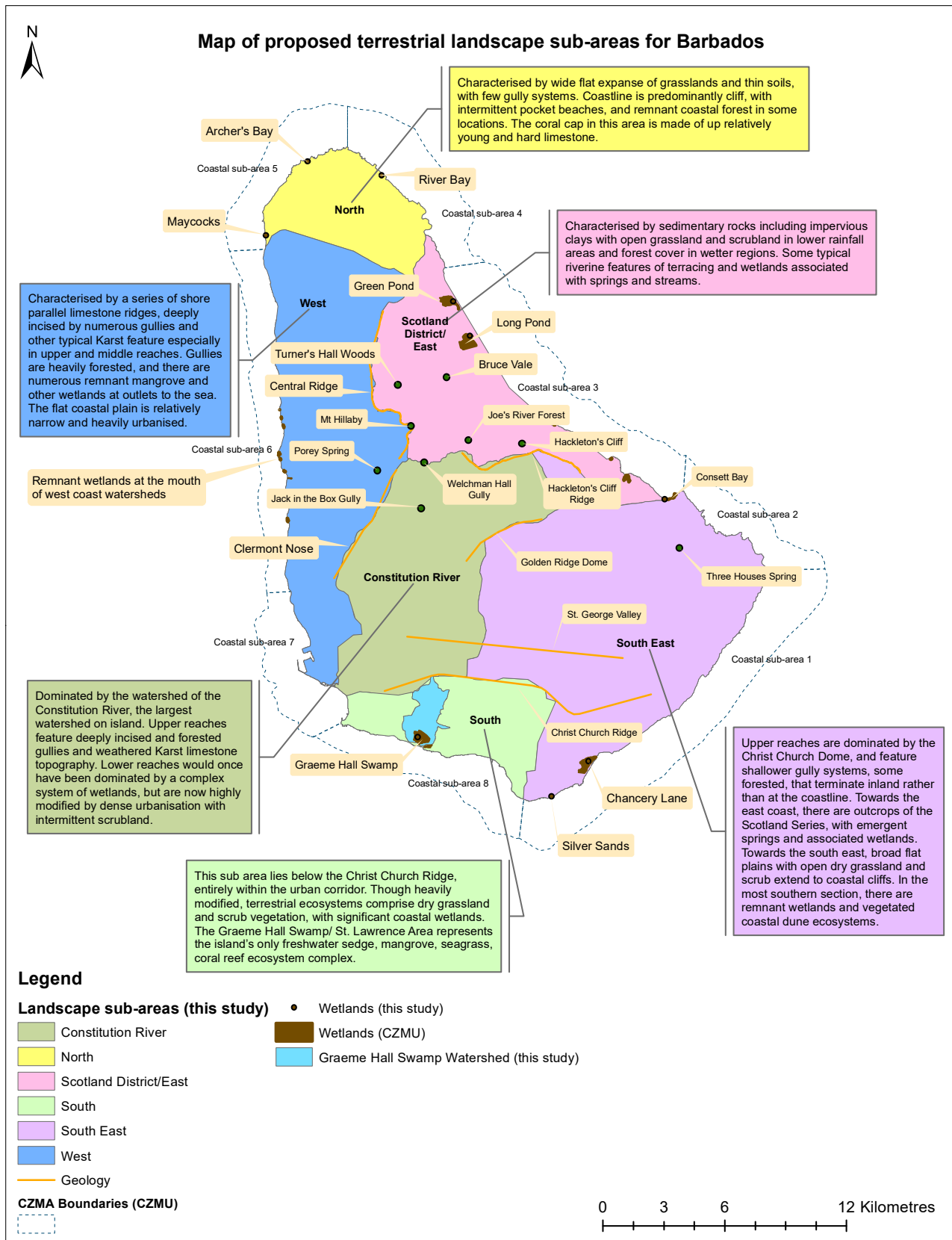


FIGURE 3. Landscape Sub-Areas (Source: Degia, AK, Marshall, RD, and Small, M.)

Natural Heritage Conservation Areas (OS2):**Land:**

1. Graeme Hall Swamp and Beach
2. Harrison's Cave Zone of Special Environmental Control
3. Chancery Lane Swamp
4. Welchman Hall Gully
5. Jack in the Box Gully
6. Drill Hall Beach
7. Heywoods Mangrove Swamp and Sand Street Beach
8. Natural Heritage Conservation Area within the National Park

Marine:

9. Graeme Hall Seagrass Bed and Reef Ecosystem
10. Folkestone Marine Reserve
11. Carlisle Bay Marine Management Area
12. Rockley Breakwater
13. Rockley to Carlisle Bay (potential)
14. Kitridge to Crane Bay
15. Conset Point
16. Salt Cave Point to Conset Bay (potential)
17. Archers Bay to Maycock's Bay (potential)
18. Folkestone Marine Reserve Extension (potential)

Natural Heritage

- Forest > 7m (Source, CZMU 2015)
- Emerging Forest in National Park 4-7m (Source, CZMU 2015)
- Emerging Forest Outside National Park 4-7m (Source, CZMU 2015)
- Sand Dunes (Source: PDP, 2003)
- Status 1 Gullies (Source: TCDPO, 2015 (Now PDD))
- Forested Status 1 Gullies
- Zone A: Exclusion Zone (Source: BWA, 2023)
- Zone B: Pathogen Management Zone (Source: BWA, 2023)
- Zone F: Desalination Zone (Source: BWA, 2023)

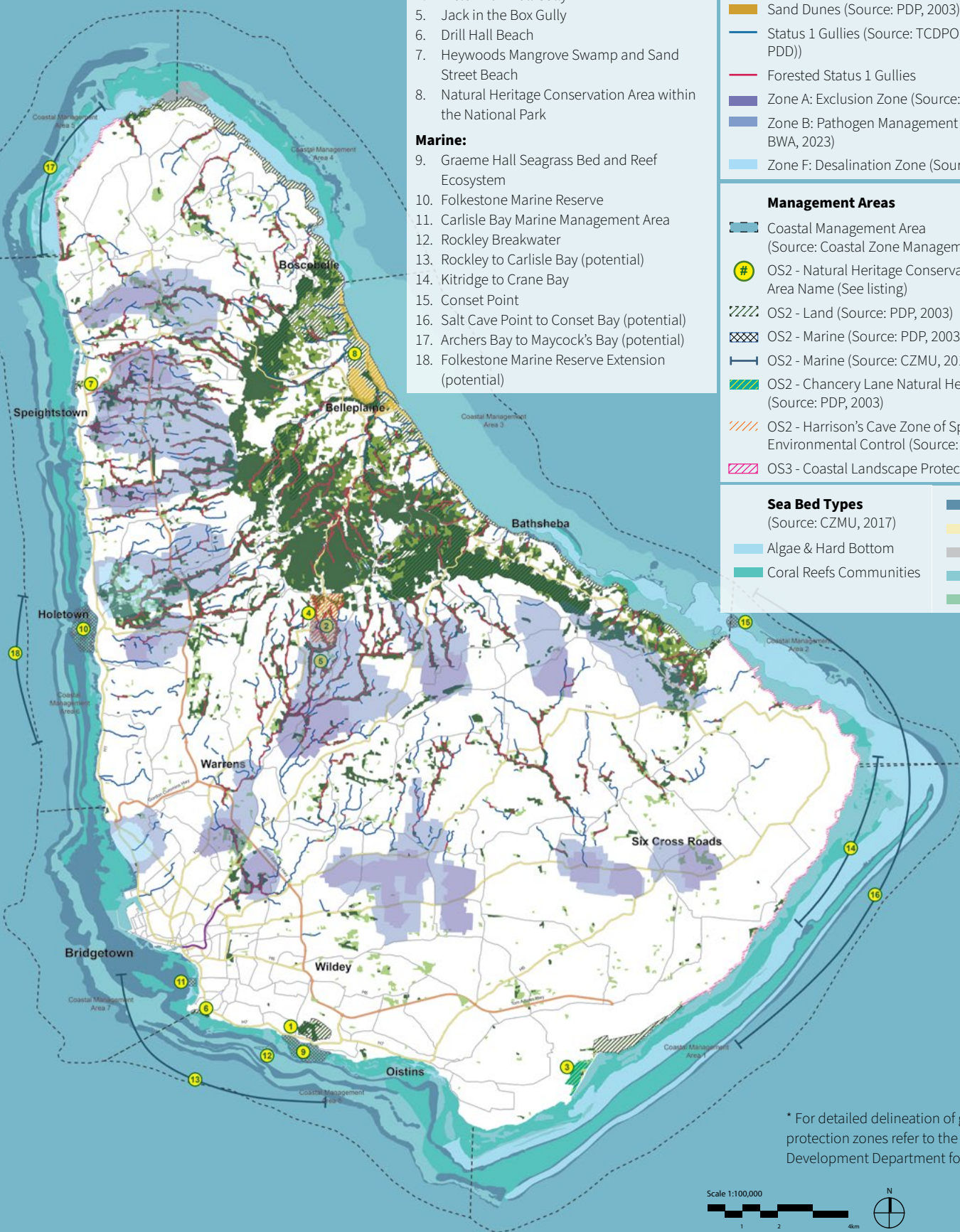
Management Areas

- Coastal Management Area (Source: Coastal Zone Management Plan, 2020)
- OS2 - Natural Heritage Conservation Area Name (See listing)
- OS2 - Land (Source: PDP, 2003)
- OS2 - Marine (Source: PDP, 2003)
- OS2 - Marine (Source: CZMU, 2017)
- OS2 - Chancery Lane Natural Heritage Area (Source: PDP, 2003)
- OS2 - Harrison's Cave Zone of Special Environmental Control (Source: PDP, 2003)
- OS3 - Coastal Landscape Protection Zone

Sea Bed Types

(Source: CZMU, 2017)

- Algae & Hard Bottom
- Coral Reefs Communities
- Hard Coral
- Manmade
- Rock
- Sand
- Seagrass



* For detailed delineation of groundwater protection zones refer to the Planning and Development Department for more details.

Scale 1:100,000



The Climate Crisis and Disaster Risk Reduction

9. The NHS will be valued as a means of mitigating the effects of the climate crisis and the related risks of natural disasters. It contributes to climate crisis adaptation through the conservation of a range of ecosystem services (provisioning, protection, regulation, listed below) that will in turn confer reduced vulnerability to, and enhance resiliency of, human populations, infrastructure, and sectoral undertakings in the face of evolving natural hazard and climate crisis threats.

- Provisioning through:
 - i) Water conservation (reuse, infiltration and storage);
 - ii) Food security and sovereignty;
 - iii) Habitat and biodiversity; and
 - iv) Renewable energy.
- Protection by:
 - i) Flood risk reduction;
 - ii) Land stabilisation/landslide risk reduction;
 - iii) Storm surge mitigation; and
 - iv) Risk mitigation measures.
- Regulation related to:
 - i) Coastal water quality (quality and quantity of surface water runoff); and
 - ii) Temperature moderation.

Components of the Natural Heritage System

10. The Barbados NHS is comprised of Key Components and Supporting Components. Key Components are the more significant and sensitive natural features with important associated functions, and they are the subject of policies oriented towards their conservation and restoration. Supporting Components are existing and potential features with associated functions that require a secondary level of conservation.

- a) Key Components of the NHS are:
- i) Forested and naturally vegetated gullies;
 - ii) Forests (existing vegetation over 7m);
 - iii) Emerging forests (existing vegetation 4-7m) in the National Park;

Key Concepts

Climate crisis adaptation: Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected effects of the climate crisis.

Disaster risk reduction: Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development. The United Nations endorsed Sendai Framework for Disaster Risk Reduction 2015-2030 aims to achieve “The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries”.

- iv) Coastal and inland wetlands (addressed through policies in Section 4.3 OS2 - Natural Heritage Conservation Areas);
 - v) Coral reefs;
 - vi) Mangroves;
 - vii) Key habitat areas;
 - viii) Species at risk;
 - ix) Sea cliffs and sea rocks (addressed through policies in OS2 Natural Heritage Conservation Area within the National Park and OS3 Coastal Landscape Protection Zone outside the National Park).
 - x) Karst formations and cave systems;
 - xi) Rivers; and
 - xii) Sand dunes and natural beaches.
- b) Supporting Components of the NHS are:
- i) Other gullies; and
 - ii) Regenerating forests (4-7 m) outside the National Park.

11. Barbados’ groundwater resources are also recognised as part of the Natural Heritage System and for having a strong interdependency with many of the Key and Supporting Components. Policies for the protection of groundwater resources can be found in Section 2.2.3.

12. Natural Heritage Conservation Areas have been established and are intended to protect one or more NHS components from potentially incompatible development. The locations of Natural Heritage

Conservation Areas are shown on Map 6 and Map 15. Development in Natural Heritage Conservation Areas will be subject to the policies of Section 4.3 OS2 - Natural Heritage Conservation Areas.

Delineation of the Natural Heritage System

13. The approximate limits of the NHS and the Key Components and Supporting Components that can be mapped are shown on Map 6: Natural Heritage System.

14. Some components of the NHS have not been fully mapped and/or are dependent upon additional information. The following policy direction applies to the latter components:

- a) Key habitat areas are those wildlife habitats where species concentrate at a vulnerable point in their annual or life cycle and areas which are important to migratory and nesting species. Examples include sea turtle nesting beaches, migratory shorebird stopover habitat, and habitat areas that are important for the survival of species at risk.
- b) Species at risk include those that are:
 - i) At risk of local extirpation and extinction;
 - ii) Limited in numbers and/or distribution nationally and/or in the Caribbean Basin; or
 - iii) Under significant pressure from human and/or natural threats.
- c) A provisional list of those species is maintained and periodically updated by the Natural Heritage Department. The occurrences and habitat areas for these species may not be fully identified and/or mapped.
- d) The PDD, Natural Heritage Department and Ministry responsible for the Environment and Drainage will collaborate to further develop data and mapping regarding occurrences of species at risk and key habitats. The sensitive nature of this information will be considered in terms of accessibility and use.

15. Key Components and Supporting Components of the NHS will be precisely delineated on a site-by-site basis supported by appropriate technical studies such as an Environmental Impact Assessment, geotechnical study and/or hydrological evaluations.

16. Refinements, additions and deletions can be made to the limits of the NHS and its Key Components and Supporting Components without an amendment to this Plan.

Development Within and Adjacent to the Natural Heritage System

17. New development will generally be prohibited within Key Components of the NHS.

18. For major development or change of land use applications in or within 50 metres of the boundary of Key Components of the NHS:

- a) A targeted Environmental Impact Statement will be required. It will identify any potential impacts related to the proposed development on the Key Components and identify appropriate mitigation and enhancement measures.
- b) Based on the targeted Environmental Impact Statement, and where the Director of Planning and Development considers it appropriate, an Environmental Impact Assessment and other environmental investigations such as marine and terrestrial ecological surveys, geotechnical studies and/or hydrological evaluations may be required to be submitted as part the development application. Details on the scope and process for the targeted Environmental Impact Statement and Environmental Impact Assessment are outlined in Section 5.

19. With respect to unmapped components of the NHS (e.g., key habitats), guidance will be provided by the PDD in consultation with the Natural Heritage Department and the Ministry responsible for the Environment and Drainage regarding known or expected occurrences and habitats.

20. Decisions on development, conservation and management in all components of the NHS are to be informed by the latest technical data and analysis available.



> Housing, Chancery Lane Swamp, Christ Church

21. Development may be permitted within Supporting Components of the NHS subject to policy 2.2.2.22 below.
22. For all major development or change of land use applications within Supporting Components of the NHS:
 - a) A targeted Environmental Impact Statement will be required. It will identify any potential impacts on environmental and ecological functions.
 - b) Based on the targeted Environmental Impact Statement and where the Director of Planning and Development considers it appropriate, an Environmental Impact Assessment and other environmental investigations may be required to be submitted as part the development application that will demonstrate how environmental and ecological functions will be maintained and enhanced.
23. Where, after consideration of options and alternatives and completion of environmental investigation, the policy of no net negative impact cannot be implemented at the site of a development proposal, then as a condition of approval the PDD may approve compensation measures taken by the applicant at other locations. These measures may include support from project proponents for conservation, watershed, and natural resources management. Any compensation must achieve an overall benefit to the natural features and associated functions that are predicted to be affected. The PDD or the Natural Heritage Department will provide guidelines for the determination of acceptable types of compensatory mitigation.

Restoration Within and Adjacent to the Natural Heritage System

The restoration of natural features and functions contributes to a healthy environment, upon which the citizens of the island depend. While this process can happen naturally and passively through the abandonment of other land uses, these restoration policies direct active restoration to those areas where benefits will be greatest. Restoration that enhances natural vegetation cover in the most sensitive Groundwater Protection Zones and in surface water catchments with limited natural cover will reduce runoff, provide improved infiltration and improve water quality, important objectives given the importance of sustainable potable water and concern over nearshore water quality.



> Sea turtle hatchlings (Source: <http://www.palmbeach.bb/>)

24. The restoration of marine, terrestrial and freshwater areas of importance and potential importance should be encouraged through the development process and in the ongoing management of natural areas and resources. Priority should be given to:
 - a) Developing restoration plans for open land areas within Groundwater Protection Zones A and B where ecological restoration will improve infiltration and water quality;
 - b) The restoration and enhancement of wetlands and coastal protection areas (e.g., dune systems);
 - c) The reforestation of open gullies which contribute to flood alleviation;
 - d) The conservation of potable water resources;
 - e) The restoration and rehabilitation of marine ecosystems including coral reefs and seagrass beds; and
 - f) The creation of Beach Management Plans will be undertaken, in particular in areas where endangered species habitat or hatching grounds are known to be, to provide guidance on ongoing operations and maintenance of the beach areas to ensure conservation measures to protect sensitive habitats.

25. The Government will explore Incentives for ‘conservation schemes’ that support the conservation, restoration and management of the NHS in consultation with the Director of Planning and Development, Ministry of Agriculture, Food and Nutritional Security*, Natural Heritage Department and other relevant agencies. These incentives may include specific fiscal measures, payments in kind, grants, etc.
 - a) Conservation schemes can include organic farming, use of fertilizers, soil management, biodiversity management, reforestation projects, payment schemes, use of technology and techniques for farming slopes to bring about sustainable farming practices.
26. The overall forest cover and regenerating forest cover in Key and Supporting Components of the NHS should be maintained, managed and where possible increased to promote ecosystem health and the long-term viability of surface water and biodiversity conservation.
27. The Government will continue to implement important projects linked to flood control and ecological restoration (e.g., Constitution River rehabilitation).
28. Restoration should consider opportunities to engage a variety of stakeholders to leverage partnerships and optimise outcomes. The Government will work with landowners to create demonstration restoration projects for private sector initiatives such as the rehabilitation of Walkers Reserve.
29. The Government will encourage the preservation of trees and the enhancement of tree cover in the Urban Corridor, the Rural Working Landscape and the National Park through the following measures:
 - a) The creation of Barbados National Forest Candidate Sites and protection of Existing Forests, Regenerating Forests and Forest Linkages in the National Park, according to the policies of Section 4.
 - b) Requirements for street tree planting in all new residential subdivisions, according to the policies of Section 3.3.2;
 - c) Requirements for landscaping in commercial areas, according to the policies of Section 3.4.4.
 - d) Requirements for tree preservation and replacement plans as part of the supporting documentation for all development in the Coastal Zone Management Area;
 - e) Enforcement of the Tree Preservation Act; and
 - f) Requirements for tree preservation in Cultural Heritage Conservation Areas in accordance with Section 2.2.5.
30. The Government will integrate restoration and rehabilitation of seriously degraded marine and coastal habitats with approaches for reducing chronic groundwater nutrient loading from land-based domestic and agricultural sources and as required, chemical pollution. The PDP (2023) supports a range of strategies to reduce these loadings including:



➤ Stormwater Retention Pond, Church Village Green, Bridgetown



➤ Reinforced shoreline and boardwalk, Holetown, St. James

- a) Increasing forest and ground cover through policies of the Natural Heritage System to increase infiltration and rainfall retention in the watershed and to reduce runoff;
- b) Improving agricultural practices to control nutrient application, reduce runoff and retain soil;
- c) Increasing collection and treatment of sewage and wastewater through means that include new collection systems and treatment plants, and upgrade or extension of existing plants; and
- d) Repairing and extending marine outfalls.
 - i) Projects to promote reef recolonisation using, for example, laboratory-based coral nursery facilities will be supported, working alongside nutrient reduction strategies and in consideration of locations where reef rehabilitation will have beneficial impacts for shoreline stabilisation.

Coastal Zone Management

The coastal zone of Barbados provides the natural resources and environmental attributes which underpin the nation's vital tourism industry. At the same time, the coastal zone contains a substantial portion of the island's population along with the infrastructure and facilities necessary to support it: major infrastructure including ports and harbours, road networks and power-generating facilities and community facilities such as hospitals and health clinics, schools, police and fire stations and emergency shelters.

The Coastal Zone Management Act 1998 provides the legislative framework to manage the assets of this critical area and authorises the Director of the Coastal Zone Management Unit to prepare a Coastal Zone Management Plan and to define a Coastal Zone Management Area.

The landward boundary of the Coastal Zone Management Area follows the main coastal road or the limit of the 100-year storm surge flood area, whichever is further inland. The seaward boundary lies along the 100-metre depth contour except on the Caribbean coast, where the boundary lies



In 1998, the Government of Barbados updated the 1995 Integrated Management Plan for the West and South Coasts of Barbados. In 2020, an updated Integrated Coastal Management Plan was approved, which reflect the mandates to embrace Disaster Risk Management and Climate Change Adaptation. The six policy outcomes of the Policy Framework include:

- 31.** All decisions on development, conservation and management in the coastal zone are to be informed by the latest technical data and analysis available to the Coastal Zone Management Unit (CZMU) including, but not limited to:

 - a) Environmental, geotechnical, climatic, and oceanographic knowledge;
 - b) Hazard and risk assessment and maps related to, among other factors, long term sea level rise, storm surge, flooding from marine and terrestrial events, shoreline including cliff stability, and tsunami impacts.
- 32.** Coastal management and development management decisions will explicitly involve consideration of policies and management guidance under the ‘roof-to-reef’ concept, and specifically, the principles and practice of Integrated Watershed Management Planning and the Natural Heritage System identified in this Plan.
- 33.** The Integrated Coastal Management Plan will implement the PDP (2023) policies for open spaces that occur within its area, including OS2 Natural Heritage Conservation Areas, OS3 Coastal Landscape Protection Zone, and OS4 Public Parks and Open Spaces.
- 34.** In cases where policies of PDP (2023) conflict with the Integrated Coastal Management Plan (2020), the direction of the Integrated Coastal Zone Management Plan (2020), or the latest version of such plan shall prevail.
- 35.** Applications for major development or change of land use within Coastal Zone Management Sub-Areas outlined in Figure 4 will be subject to an Environmental Impact Assessment and/or Marine Impact Assessment or other supporting environmental investigation, subject to the satisfaction of the Director of Planning and Development or designate. In considering such applications, the Planning and Development Department (PDD) will act on advice provided by the CZMU, Environmental Protection Department and Ministry of Transport, Works and Water Resources and may impose conditions of approval such as maintenance requirements. In preparing these Assessments and studies, the applicant will have regard for the Integrated Coastal Management Plan principles which outline the need to establish sufficient setback to allow for safety, to preserve the character of the coastal landscape and retain views to the sea. These studies will also analyse any impact of development to coastal and marine environments and habitat and take into consideration susceptibility to the climate crisis and natural disasters and identify mitigation measures that result in no net negative impact.

- 36.** Development setbacks in coastal areas will:
- Be assessed utilising the latest available technical information and analysis available to the Coastal Zone Management Unit.
 - Be appropriate for each location and take into account the following:
 - Statutory conservation or management designations and associated requirements;
 - Understanding of historical and future projections for coastal and shoreline change;
 - Habitat characteristics including, amongst others, proximity to turtle nesting areas or sites of importance to migratory bird species and critical habitats in the marine environment; and
 - Susceptibility to climate crisis impacts and natural disasters, for example sea level rise, storm surge and storm wave run-up projections, coastal and terrestrial flooding.
- 37.** No new development will be permitted on the seaward side of the Ermy Bourne Highway.
- 38.** The construction and repair of man-made coastal structures will be managed to ensure adherence to best practices. Man-made coastal structures in Barbados include harbours, breakwaters and berthing facilities, jetties and piers, protective structures including seawalls and revetments and beach nourishment schemes.
- Where repair of older structures or new coastal structures is required, these will be subject to a Marine Impact Assessment.
 - The repair of old structures should be justified in relation to the most recent understanding of environmental conditions and the design or re-design of such structures should be tailored accordingly.
 - To support biodiversity, the design or repair of coastal structures will integrate habitat friendly design, in particular as it relates to endangered species such as sea turtles.
- 39.** Where essential buildings and structures are approved within coastal Flood Susceptible Areas they should be designed with appropriate protection design strategies. Coastal Flood Susceptible Areas include those within the 100 Year Floodline indicated on Map 7, as well as additional areas identified by the Coastal Zone Management Unit and the Ministry responsible for

drainage, which may include, among others, areas at risk from storm surge and storm wave inundation, sea level rise, flooding through runoff from terrestrial rainfall events, and tsunamis.

- 40.** To ensure that tourism in Barbados remains internationally competitive, major development for tourism uses and related infrastructure and facilities in the Coastal Zone Management Area will be subject to a full Environmental Impact Assessment to inform design, construction and operations of these facilities to the highest international environmental and conservation standards. Environmental investigations will consider carrying capacity and the use of beach areas, climate impact assessment modeling and Comprehensive Disaster Management.
- 41.** To enhance Barbados' reputation for quality beaches, a programme of beach accreditation will be pursued. This standard should provide assurance and guidance to residents and visitors on areas including water quality, environmental education, management, and safety.
- 42.** Turtle nesting sites will be managed through the statutory and policy mechanisms provided in the Coastal Zone Management Act and Integrated Coastal Management Plan (2020). These include restrictions on beaches in relation to sand mining, setbacks, vehicular beach access, enclosures and fences, plus replanting and protection of littoral vegetation.
- During the development control process, the Coastal Zone Management Unit will flag any application that proposes lighting for upper beach areas and will recommend appropriate adjustment in lighting arrangements to take into account the sensitivity of nesting and hatching turtles to lighting and the disorienting impacts this has on juvenile turtles.
 - Nationally Index Beaches denoting Endangered Sea Turtle habitat will be considered in the Natural Heritage System and mapping.
 - A public education programme will be undertaken to ensure that coastal developments, and in particular hotels, have turtle protection protocols in place.



> Channelised gully outfall prone to flooding

Natural Hazards

Disaster risk reduction (DRR) and climate crisis adaptation (CCA) share the common foci of reducing National and community vulnerability and contributing to resilient and sustainable development in the face of climate variability and the climate crisis.

Across Barbados, the spatial distribution of natural hazard risks is determined by the interaction of local and regional hydro-meteorological, oceanographic and tectonic phenomena with the island's varying geological, topographic, bathometric, and biological features. The resulting interactions give rise to location-specific expressions of natural hazard risk that threaten human health and wellbeing, built infrastructure, sector-specific economic activities, and natural heritage assets.

Climate crisis impacts can affect the frequency, intensity, duration, timing, spatial distribution and extent of the severe weather events to which the island is exposed, increasing the associated risks. Climate crisis considerations, therefore, need to be taken into account in all governmental and private sector planning processes to ensure that adaptation and resilience building become a mandatory feature of all socio-economic, sectoral, and environmental development planning processes. In this way, DRR and CCA will be mainstreamed in development and programming, and disaster risk management will complete its transformation from short-term relief and response interventions to becoming a central element in the development process.

43. Effective disaster risk reduction requires an integrated approach to the management of land, coastline and the natural, built and social environments to strengthen climate resilience.

- 44.** The risk to human life and property of natural hazard areas will be reduced through Natural Hazard Impact Assessments, climate impact modeling, mapping, development control and mitigation measures.
- 45.** Specific Natural Hazard Areas, outlined on Map 7: Natural Hazards, include:
 - a) Soil slippage and Erosion Prone areas;
 - b) Gullies and Escarpments; and
 - c) Flood Susceptible Areas including rivers, streams, floodplains and coastal areas.
- 46.** Where major development is proposed within or within 30 metres of Natural Hazard Areas, a Natural Hazard Impact Assessment may, at the discretion of the Director of Planning and Development, be required as part of environmental investigations or an Environmental Impact Assessment. Details on Natural Hazard Impact Assessments can be found in Section 5.
- 47.** The designation and delineation of Natural Hazard Areas will be reviewed periodically based on new data that becomes available from Natural Hazard Impact Assessment studies and from climate crisis models and projections.
- 48.** As updated mapping and data related to natural hazards and projected climate crisis threats becomes available, the PDP (2023) will be amended to include this information and related policies. This may include:
 - a) Additional areas delineated by the Ministry responsible for drainage as vulnerable to periodic flooding based on the findings of initiatives such as the Stormwater Management Plan Update and other ongoing drainage studies. Provisions should recognise that the applicable Observed Flooded Area policies will also apply to these mapped areas;



MAP 7:
Natural Hazards

- b) The Coastal Zone Management Unit's Coastal Risk Assessment and Management Programme's (CRMP) natural hazard vulnerability and risk maps, slope and cliff stability and other initiatives; and
 - c) Additional information that may come from Natural Hazard Impact Assessments, Environmental Impact Assessments and climate crisis models and projections.
- 49.** The Government will implement development controls within Natural Hazard Areas and create Comprehensive Disaster Management Strategies related to Natural Hazard Areas in order to increase the resiliency of island communities.
- a) New development will be encouraged within the Urban Corridor and outside of the Natural Hazard Areas.
 - b) New institutional and community facilities and national infrastructure projects, where possible, will be located outside of Natural Hazard Areas.
 - c) All development adjacent to Natural Hazard Areas will incorporate site plan and design measures to address climate resiliency.
- 50.** The Government will use information management as a key tool to minimise natural hazard and climate crisis risk by:
- a) Promoting data and information compilation for natural hazard and climate crisis risks at the National and community scale in support of comprehensive analysis and adaptive planning;
 - b) Promoting public review and discussion among residents and private sector and public sector stakeholders on revision and enforcement of land use zones, building codes, and setbacks to manage natural hazard risks in a changing climate;
 - c) Providing businesses and developers with the information and tools they need to make decisions and investments that support climate resilience at a National and community scale;
 - d) Considering new forms of public-private partnerships nationally for tackling the more complex challenges of DRR and CCA;
- e) Establishing clarity on the roles and responsibilities of Constituency Councils in DRR with reference to those of the Department of Emergency Management (DEM);
 - f) Stimulating markets for adaptation through financial and risk reduction incentives; and
 - g) Engaging the community in the review and adoption of the Green and Blue Economy approaches to promote a more balanced economic model that improves human wellbeing, social equity, and economic resilience, enhances ecosystem health and ecosystem service provision, while significantly reducing natural hazard and climate risk.



> Much of the Scotland District consists of unstable slopes



> Coastal erosion, Sand Street, Speightstown

Erosion Prone Areas

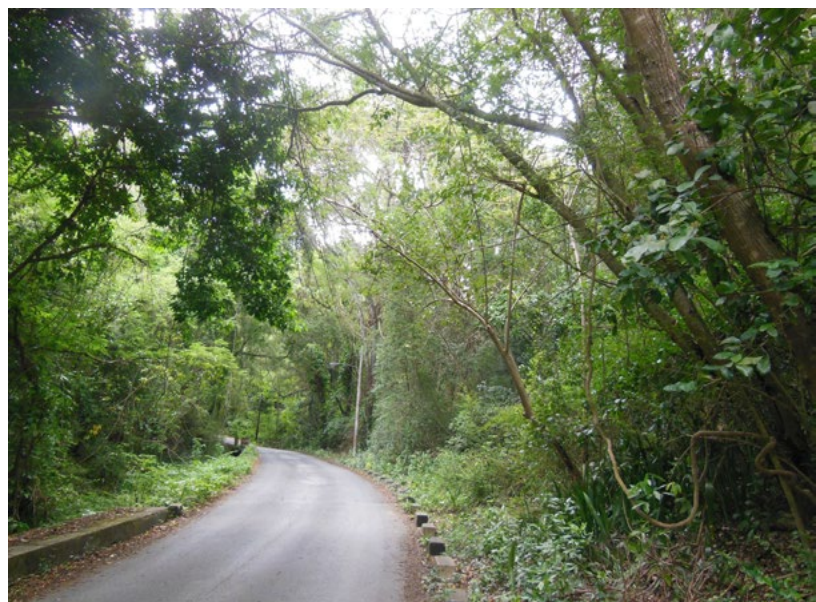
- 51.** Erosion Prone Areas, including areas that are prone to soil slippage, are delineated on Map 7: Natural Hazards. In addition, there are areas designated in the Integrated Coastal Management Plan (2020) (shoreline change studies, etc) as erosion prone.
- 52.** Development on sites which are susceptible to erosion or soil slippage, as identified on Map 7: Natural Hazards, will not be permitted.
- 53.** All development applications involving the construction of permanent structures adjacent to Erosion Prone Areas will be reviewed by the Soil Conservation Unit, Coastal Zone Management Unit, Ministry of Agriculture, Food and Nutritional Security and the Ministry responsible for drainage and may be required to undertake studies on a site specific basis.

Gullies and Escarpments

- 54.** The boundaries of the gullies and escarpments shown on Map 7: Natural Hazards are approximate and will be subject to site-specific verification.
- 55.** For all applications for major development within or proximate to gullies and escarpments the following safety investigations will be required, to the satisfaction of the Director of Planning and Development and in consultation with the Ministries responsible for the environment and drainage, the Environmental Protection Department and Natural Heritage Department and other relevant authorities:
 - a) Within 30 metres of gullies and escarpments, Drainage Plans will be required that assess and mitigate potential flooding of upstream and downstream lands and erosion risks in these areas.
 - b) Within 50 metres of gullies, geotechnical and/or biophysical studies will be required that identify the location of stable top of bank and any related components of the NHS.
 - c) Within 100 metres of the base of escarpments, geotechnical and/or biophysical studies will be required to determine the stability of the escarpment face in the vicinity of the proposed development site.
- 56.** Further to policy 2.2.2.52, the required studies and all major development will consider the management objectives of the Integrated Gully Ecosystem Management Plan (2005), including:

- a) Minimising the extent of habitat modification and loss;
- b) Conserving representative biodiversity, rare and sensitive species and habitats;
- c) Encouraging sustainable land use practices on gully lands and lands adjacent to gullies;
- d) Implementing structural and non-structural measures towards flood mitigation and stormwater attenuation;
- e) Preventing illegal dumping of waste in gullies and cleaning up the wastes currently present;
- f) Promoting low-impact or passive recreational uses such as hiking and walking, and the use of gullies for educational purposes and scientific research; and
- g) Incorporating gullies into formal and non-formal education processes.

- 57.** All new development will be set back a minimum of 10 metres from the stable top of bank of the gullies and the base of escarpments shown on Map 7. Additional setback may be required by the Director of Planning and Development in consultation with the Ministry of the Environment and National Beautification and the Ministry responsible for drainage, particularly in areas which are experiencing significant erosion or in areas with existing landscape or vegetation features which, in the opinion of the concerned agencies, would benefit from additional setbacks.



➤ The Whim gully, St. Peter

58. All new development will be designed in a manner that it will not increase the risk of flooding upstream and downstream.

59. When residential development occurs along or proximate to an escarpment, attention will be given to preserving important views and lateral public access.

Flood Susceptible Areas

60. Three categories of Flood Susceptible Areas are shown on Map 7: Natural Hazards:

- a) Engineered Floodline Areas. The boundaries of Engineered Floodline Areas have been determined through detailed engineering analysis and represent the boundaries of a 20-year flood event and 50 year flood event for engineered works;
- b) Observed Flooded Areas, which are lands that have been observed by the Drainage Unit to be periodically flooded. Generally, this flooding has been caused by improper stormwater management techniques associated with previous development; and
- c) 100 Year Floodline Area. The 100 Year Floodline Area has been identified through the Feasibility Studies on Coastal Conservation project in 1995 and are subject to further refinements based on current work being undertaken by CZMU.

61. The implications of anticipated sea level rise will create a long term flood risk and hazard. The extent of the projected sea level rise will be mapped through the CZMU and adaptation and resiliency strategies prepared to address the flood risk.

62. All applicants proposing major development within Flood Susceptible Areas will prepare, to the satisfaction of the Ministry responsible for drainage, a hydrologic design study as part of the supporting documentation for development proposals. The purpose of this study will be to assess the suitability of the development proposal to withstand projected flooding events on the site and to propose flood proofing measures.

63. Within Engineered Floodline Areas, new development will not be permitted unless it can be shown that the flood can be contained with proposed flood proofing measures.

64. Within Observed Flooded Areas, new development will not be permitted unless the stormwater management deficiencies within the area have

been corrected to the satisfaction of the Ministry responsible for drainage, Environmental Protection Department and Ministry of Health and Wellness.

65. In 100 Year Floodline Areas, applications for major development will be subject to an Environmental Impact Assessment and/or other supporting environmental investigation in accordance with policy 2.2.2.33.

- a) As part of an EIA, the applicant may be required to prepare and submit a Natural Hazard Impact Assessment that explicitly identifies the potential risks and mitigation measures acceptable to the Director of Planning and Development.
- b) The EIA process will take into consideration the impact of the climate crisis and climate variability on the proposed development, and the development's influence on ecosystem process and services.

66. Any permitted development in 100 Year Floodline Areas will be designed with appropriate flood protection measures such as minimum freeboard elevations and limiting of habitable space to building elements above flood levels.

67. The Department of Emergency Management, with assistance from relevant government agencies, will prepare Comprehensive Disaster Management Strategies for Flood Susceptible Areas, which should include but not be limited to the identification of planned safe evacuation routes, provisions for alternate shipping and air access for supplies, and locations for emergency shelters.

68. Best practices will be applied for the construction and management of facilities that are allowed in coastal areas prone to hazards, for example the use of a building code. The nature of the facility or structure will be taken in to consideration in decision-making including, but not limited to:

- a) Whether the application is for critical infrastructure to be built in the public interest;
- b) Climate crisis impacts;
- c) Whether the facility may require the storage of hazardous materials that could be a pollution risk; and
- d) Whether ancillary structures and access are required.



➔ 2.2.3 Water

Barbados is ranked as the 15th most water scarce country in the world. The critical nature of Barbados' water scarcity is an important planning issue that must be addressed through a comprehensive systems approach, coupled with protection and conservation measures to ensure the long term supply of fresh water for the population of Barbados. These measures include the application of integrated water resources management (IWRM) principles, an island-wide Groundwater Protection Zone system, and stormwater management approaches based on low-impact development.

Figure 5 illustrates the water cycle in Barbados. All fresh water is supplied from groundwater derived from rainfall entering the island's limestone cap. Close to the coast, the limestone cap forms lenses of freshwater perched above salt water. Rain falling on non-limestone areas runs off quickly to the sea and into the marine environment. In Barbados, the land and marine systems are intrinsically linked and the health of one directly affects the other. This cycle demonstrates the importance of taking an integrated approach to water management in Barbados.

An examination of Barbados' groundwater systems reveals that while aquifer recharge rates are high, the rapid flow of groundwater makes them highly vulnerable to pollution. The geological formation of unconsolidated limestone aquifers limits the attenuation of pollution in the water. Elevated levels of nitrates in groundwater are related to domestic sewage discharge to groundwater and use of agricultural fertilizers. The transmission of these nitrates to coastal water has contributed to significant degradation of coral reef cover, now at 10% of historical levels.

In addition, climate crisis projections indicate that average annual rainfall will decrease, while potentially more intense tropical weather systems will be associated with heavier rainfall events and flash flooding. As such, the use of a stormwater management approach based on the principles of low-impact development will be necessary to reduce the impact of polluted runoff on Barbados' water resources.

Finally, the Barbados Water Authority provides for both potable water and sewerage services. Although policies related to water services are detailed in the National Infrastructure section of this Plan, they must be understood as an important part of the system involved with this irreplaceable, scarce resource in Barbados.

This chapter is comprised of three sections:

- **Overarching Policies**
- **Groundwater Protection**
- **Stormwater Management**

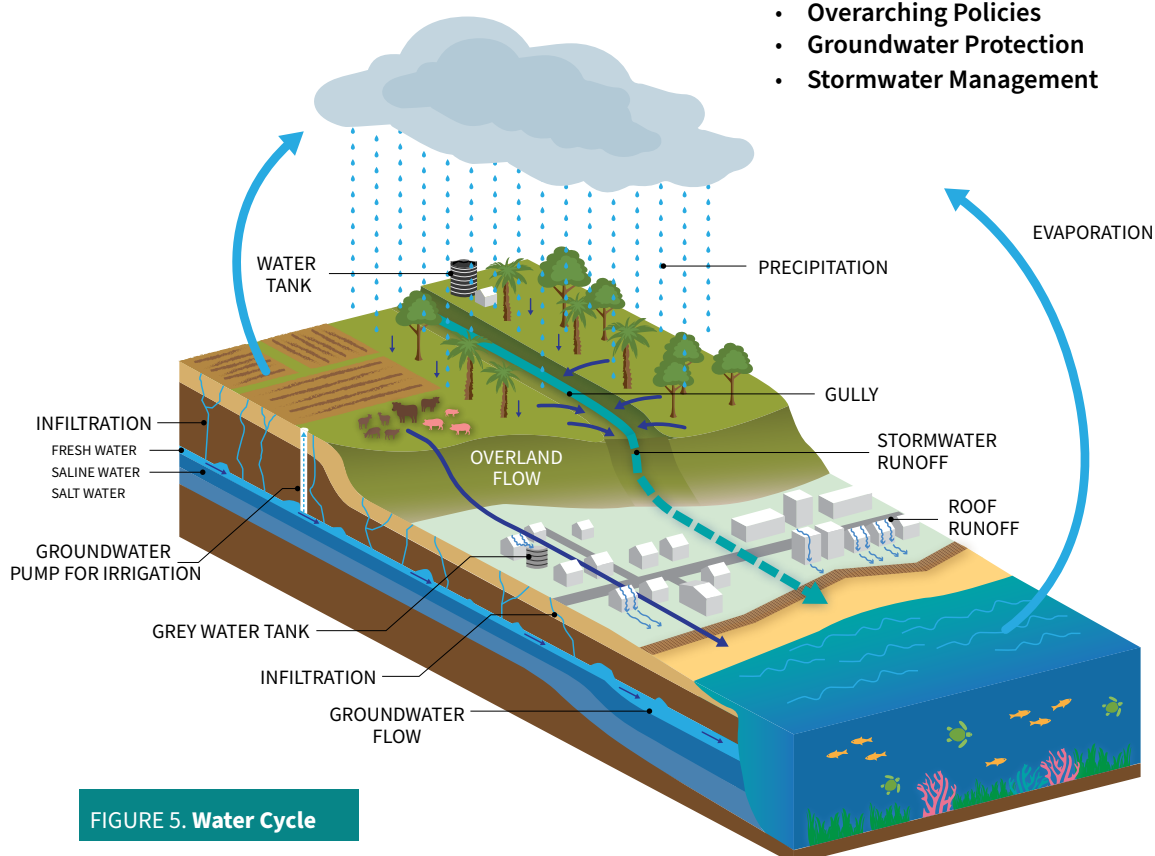


FIGURE 5. Water Cycle

These policies address water as part of the Natural Heritage System and need to be read along with policies on water services/infrastructure outlined in the National Infrastructure Section, Section 2.5.

Overarching Policies

1. Water scarcity is regarded as a critical issue for Barbados. Accordingly, water resources will be recognised as one of Barbados' most significant and irreplaceable core assets.
2. Water resources will be protected and conserved as a means of mitigating the effects of the climate crisis and related risk of natural disasters.
3. To manage the impacts of human activities on Barbados' water resources, an integrated water resources management approach will be used to:
 - a) Support adaptation to the climate crisis;
 - b) Encourage the collection and safe storage of rainwater for both potable and non-potable use;
 - c) Protect groundwater recharge areas from pollution through application of Groundwater Protection Zone policies;
 - d) Enhance water re-charge and retention through increased forest cover of appropriate species, conservation and low-impact development land use practices;
 - e) Increase re-charge in built-up areas and from stormwater runoff;
 - f) Provide effective systems for collection and management of wastewater, as well as the use of reclaimed wastewater for appropriate uses;
 - g) Encourage and guide the placement of surface water retention and infiltration areas and measures, including improved household rainwater harvesting and storage and enhanced stormwater management;
 - h) Recognise and protect the gully catchment areas outlined on Map 8: Water Resources. Restoring gully catchment areas through reforestation, enhancing terrestrial and aquatic habitat, and improving drainage and stormwater management systems will contribute to the overall ecological health of the island; and
- i) Encourage efficient and sustainable irrigation systems to support food and agricultural lands and best farm management practices, where feasible, including but not limited to rainwater harvesting, use of reclaimed wastewater, and low-impact development approaches.
4. The integrated water resources management approach will have regard for:
 - a) The context of both the surface water catchment basins and groundwater aquifers within Barbados and treating these in a synchronised manner; and
 - b) The operational activities of the Barbados Water Authority in:
 - i) Promoting water conservation;
 - ii) Water loss reduction and efficiency improvements for water production and distribution infrastructure; and
 - iii) Maintaining healthy environmental systems and associated services.
5. For landfill, solid waste disposal, and land-raising, geological conditions and the behaviour of surface water and groundwater will be assessed both for the site under consideration and the surrounding area. The suitability of locations subject to flooding, with consequent issues relating to the management of potential risk posed to water quality from waste contamination will be taken into consideration.

Key Concepts

Integrated water resources management: The process of managing human activities and natural resources on a watershed basis. This approach allows for the protection of important water resources, while at the same time addressing critical issues such as the current and future impacts of rapid growth and the climate crisis.





Groundwater Protection

A system of Groundwater Protection Zones has been in existence across Barbados since 1963. Based on a review of the existing zoning and associated policies, limitations were identified in the ability of these policies to provide sufficient aquifer protection, with a need for a stronger policy and management approach along the lines of an Integrated Water Resources Management (IWRM) model.

The Barbados Water Authority Act (2023) reflects a refined approach to defining Groundwater Protection Zones. This new approach identifies six Groundwater Protection Areas, Zone A to Zone F. The policies related to each zone determine the level of infrastructure services and waste disposal methods required and provide a framework for development control. The locations of Zone A to Zone F are shown on Map 8: Water Resources.

The Groundwater Protection Zones are defined by the time of travel capture zones to existing Barbados Water Authority (BWA) wells. Zones A and F, Zone B, Zone C each represent 0-90, 91-300, and 301-750 days' travel time from the well, respectively. Other zones speak to rest of the island where BWA doesn't have wells, but there may be private wells.

6. The Groundwater Protection Zones outlined on Map 8: Water Resources protect water as a core asset and irreplaceable resource in Barbados. The zones are an integral part of the larger water system, including but not limited to the gullies and other Key Components of the Natural Heritage System, overland flow and water services.

- 7.** Existing land uses will be grandfathered. Any development, site alteration, building expansion, or change in land use will trigger the need for compliance with the new Groundwater Protection Zone provisions. Mitigation of existing non-conforming land uses to be in keeping with the new Groundwater Protection Zone provisions will be strongly encouraged.
- 8.** Policies for Zone A Exclusion Groundwater Protection Areas (0 to 90-day time of travel) are as follows:
- a) The purpose of this zone is to provide the Barbados Water Authority with a buffer zone immediately surrounding the well where they would have complete control in preventing any potential contamination.
 - b) Zone A includes areas within the aquifer that are 0 to 90 days' travel time distance from a BWA well.
 - c) All land uses are prohibited in Zone A, with the exception of any land uses associated with the treatment and distribution of water, or renewable energy systems approved by the regulatory authority and may be subject to an Environmental Impact Assessment.
- 9.** Policies for Zone B Pathogen Management Groundwater Protection Areas (91 to 300-day time of travel) are as follows:
- a) The purpose of this zone is the management and regulation of pathogenic or chemical sources that can pose a threat to the public water supply.
 - b) Zone B includes areas within the aquifer that are 91 to 300 days' travel time distance from a BWA well.

- c) Land uses that are considered pathogenic contaminants will only be allowed under prescribed conditions aimed at providing enhanced protection.

d) Restricted land uses and activities include:

- i) Sewage lagoons or any surface storage of chemicals;
- ii) Sewage treatment via suckwells;
- iii) Land application of manure based fertilizer;
- iv) Storage or disposal of manure;
- v) Activities that generate animal waste, manure, or other pathogenic contaminants;
- vi) Waste disposal from meat or meat products facilities;
- vii) Waste disposal from sugar factories, rum plants, or other manufacturing / industrial facilities;
- viii) Zoos, animal sanctuaries and other facilities for the intensive housing of animals;
- ix) Storage and handling of fuel and fuel products;
- x) Quarrying and the operation of quarries;
- xi) Landfills;
- xii) The use of battery storage systems from renewable energy generation, recycling of batteries, and storage of significant quantities of batteries;
- xiii) Storage and handling of dry cleaning products;
- xiv) Chemical manufacturing and storage;
- xv) Recycling of scrap metals, automobiles, appliances and machinery;
- xvi) Use of chemical based fertilizers on land;
- xvii) Use of agro-chemicals on land;
- xviii) Storage of significant volumes of fertilizers or other agricultural chemicals;
- xix) Storage of significant volumes of household, industrial or other domestic chemicals;
- xx) Use of pesticides or other household chemicals on land; and
- xxi) Cemeteries or crematoria.

10. Policies for Zone C Chemical Management Groundwater Protection Areas (301 to 730-day time of travel) are as follows:

- a) The purpose of this zone is the management and regulation of microorganisms, pollutants and other contaminants that can pose a threat to the public water supply.
- b) Zone C includes areas within the aquifer that are 301 to 730 days' travel time distance from a BWA well.

c) Restricted land uses and activities include:

- i) Storage and handling of fuel and fuel products; and
- ii) Sewage treatment via suckwells.

11. Policies for Zone D Aquifer Recharge Contributing Groundwater Protection Areas are as follows:

- a) Zone D consists of the groundwater aquifer recharge contributing area.
- b) Wastewater disposal within Zone D will be regulated in a manner similar to the remainder of the limestone areas of the island.
- c) Additional "sensitive areas" may be designated within this zone where water resources will be treated according to special conditions.
- d) Restricted land uses and activities include:
 - i) Sewage treatment via suckwells; and
 - ii) Location of potential threat activities in the vicinity of "sensitive areas".

12. Policies for Zone E Non-Recharge Contributing Groundwater Protection Areas are as follows:

- a) This zone refers to areas outside of a protection zone and outside of the groundwater recharge area. This zone comprises areas where impermeable rock occurs at the surface, and is generally confined to the Scotland District and Panhandle.
- b) Wastewater disposal in this zone should be regulated in a manner similar to other general practices for Barbados.
- c) Restricted land uses and activities include: Sewage treatment via suckwells.

13. Policies for Zone F Desalination Groundwater Protection Area (90-day travel time) are as follows:

- a) This zone refers to areas surrounding a well field use to produce brackish or seawater feed-water for desalination.
- b) Restricted land uses and activities include: the use of suckwells as the primary means of sewage and wastewater treatment.

14. For lands that are no longer required to comply with the restrictions of former Groundwater Protection Areas 1-5, the priority for any change in land use will be food and agriculture, natural restoration/reforestation or the provision of affordable housing, providing these uses are in compliance with the new Zone provisions.

Stormwater Management

In a water scarce nation, stormwater must be understood as a resource. Stormwater management is very important to Barbados' developed and built-up areas due to the presence of paved surfaces, buildings and site features which prevent the natural filtration of rainwater into the ground. As water rushes across paved surfaces, it can collect pollutants that end up in Barbados' surface water, groundwater and marine systems. During particularly heavy rainfall events, poor stormwater management can result in incidents of flooding, soil loss, the possible temporary lack of accessibility to communities and the contamination of natural water basins. Due to the effects of the climate crisis, it is projected that Barbados will experience increases in intense heavy rainfall events that could lead to increased incidences of flash flooding. The use of properly designed stormwater management practices will be very important to effectively manage the flow of water, particularly after heavy rainfalls.

- 15.** A comprehensive understanding of drainage and stormwater management and its implications on the land development process will be advanced by:
- a) Promoting innovative practices with respect to drainage and stormwater management to reduce the effects of flooding and water contamination and maximise infiltration into the aquifer;
 - b) Taking into consideration the cumulative effect of impacts of new development on Barbados' drainage system and the direct effect of water quality on the nearshore and reef marine environment; and
 - c) Integrating updated data and mapping from the Ministry responsible for drainage by updating relevant PDP (2023) mapping and policies to conform with these directions through a Technical Update to the PDP (2023).
- 16.** Stormwater management systems are an important infrastructure requirement and should incorporate best management practices, and low-impact development (LID) and water conservation to reduce the level of flooding or pollution to watercourses and major drainage channels. It is important that stormwater be viewed as a valuable resource in a water scarce nation. The three values of quantity control management, water quality management and reuse should be observed in the design of stormwater management systems.



> Outfall of Holetown Lagoon

- a) To the extent possible, on all site development projects, stormwater management systems will be designed to maximise natural infiltration, water reuse and aquifer recharge, and to minimise the use of drainage techniques such as stream channelisation, or significant piped solutions which reduce natural infiltration and may cause downstream erosion.
- b) Low-impact development practices will be promoted that seek to manage and possibly re-use a large fraction of the stormwater generated on-site and reduce the speed and volume of stormwater surface discharges by: reducing impervious cover using vegetation and landscape features to absorb runoff, diverting as much as possible of the surface water flow into natural and restored areas for water quality filtering, recharge and re-use. On smaller sites, cisterns, holding tanks, bleeder systems and infiltration galleries can all be appropriate techniques.
- c) For all new development involving a Plan of Subdivision creating more than 20 lots, the Director of Planning and Development will require one tree per lot to be planted.
- d) The design of stormwater treatment facilities will consider the requirements of water quantity management and water quality, will maintain and enhance landscape, environmental and ecological integrity, and will provide net benefit to the on-site and adjacent natural environment. Where feasible, stormwater treatment facilities will also be designed as community amenities, suitable for passive, non-contact recreational activities, wildlife habitat enhancement and landscape quality.

- e) The quality of the discharge water should comply with prevailing environmental regulations and agreements such as the proposed regulations under the Marine Pollution Control Act and the Cartagena Convention.
- 17.** Development applications in support of any commercial or industrial development over 1,860 square metres in floor area, or any residential subdivision over 10 lots will include a comprehensive Master Stormwater Drainage Plan to address the provision of stormwater management and drainage.
- a) The catchment area boundaries for the Master Stormwater Drainage Plan will be determined by the Director of Planning and Development, in consultation with the Ministry responsible for drainage. The size of the study area will depend on the scale of the proposal and the extent of potential environmental impacts.
 - b) The Master Stormwater Drainage Plan will be prepared to the satisfaction of the Director of Planning and Development and the Ministry responsible for drainage.
- 18.** Master Stormwater Drainage Plans will consider a large scale drainage strategy for the site including existing on-site drainage features and attribution to off-site or adjacent natural features matched with appropriate stormwater management systems as outlined in policy 2.2.3.17 above, and will address the following issues:
- a) Maintenance of on-site groundwater infiltration at minimum at predevelopment levels, with consideration of options to enhance infiltration explored in the design of the proposed stormwater management systems;
 - b) Maintenance and enhancement of overall pre-development level groundwater flow patterns;
 - c) The provision of stormwater management facilities that include but are not limited to ponds, grassed or vegetated swales, forested blocks, cisterns and tanks, bleeder systems, rooftop collection and storage or other stormwater management or reuse techniques;
 - d) Impact of storm drainage to adjacent lands and watercourses including gullies, wetlands and rivers;
 - e) The protection of the marine environment from adverse stormwater impacts; and
 - f) Mechanisms for reducing or eliminating soil runoff during construction and post development.
- 19.** Development proposals which are smaller than the standards set out above will be subject to the stormwater and drainage policies of the Ministry responsible for drainage.
- 20.** Surface water retention through systems such as sand dams, subsurface dams and check-dams will comply with established best practices and environmental guidelines.
- 21.** Development will result in no net increase of stormwater runoff from the site. Measures such as water conservation, permeable surface materials, landscaping, shallow wells and suckwells may be integrated into the site design to achieve this result.
- 22.** To ensure the safe and effective storage of rainwater, technical guidance documents will be developed to provide specifications and standards for water storage tanks including installation, maintenance and use.



➤ Stormwater channel, Trevor's Way, Bridgetown



➔ 2.2.4 National Park

The Barbados National Park is the foundation of the island-wide System of Parks and Open Spaces. It is the anchor of the Natural Heritage System and includes the most interconnected ecosystems on the island including forests, river systems, geologic formations and habitat. The National Park is also a critical part of the cultural heritage of the island and continues as a protected working landscape.

The Soil Conservation (Scotland District) Act (1959) provides the legislative framework for management and conservation of the Scotland District. Development and management of the National Park is detailed in the The National Park Development Plan (1999)/Guidelines for the Management and Operation of the Barbados National Park and other Natural Heritage Conservation Areas (The National Park Plan). When undertaking activities within the boundaries of the National Park, the policies therein should be applied along with the policies outlined below and in Section 4 of this Plan. Detailed interpretations of the National Park Plan can be obtained through discussions with the Government of Barbados Natural Heritage Department.

The National Park boundary shown on various maps in this Physical Development Plan (2023) incorporates both a land and an adjacent offshore marine component. This boundary was identified based on:

- The National Park boundary shown in the Physical Development Plan Amended 1986;
- Extensive field surveys and literature review;
- Review of aerial photographs, development applications, land ownership patterns and GIS mapping information;
- Consultation with the Coastal Zone Management Unit;
- Consultation with stakeholders and local residents; and
- A reconfirmation of the integrity of the boundary by review in 2016 through field observation and digital data review.

The land boundary closely matches the public roads and visible landscape features. The marine boundary was established in concert with the Coastal Zone Management Unit and may be revised from time to time.



➤ Codrington College, St. John

Overarching Policies

- 1.** The use and management of the land and marine resources in the National Park will be of a sustainable nature and supportive of the social and economic development of local communities.
- 2.** An ecosystem approach that encompasses the terrestrial and marine environment will be required in decision making in the National Park.
- 3.** The biodiversity of the area including terrestrial and marine ecosystems, habitats and species will be protected. Specifically:
 - a) Key and Supporting Components of the Natural Heritage System will be protected in accordance with the policies of Section 2.2.2: Natural Heritage System.
 - b) The quality and integrity of the ecosystems including air, water, land, plant and animal components will be protected and improved.
 - c) The linkages and relationships among ecosystem components, including humans will be developed, and these components will be considered beyond their immediate environs in the broader National Park area and the island as a whole.
 - d) Viability of both native and desirable non-native species will be promoted.
 - e) Restoration of ecosystems will be encouraged where integrity has been affected.
 - f) Ecosystems will be managed to encourage resiliency and a balance between humans and nature.
 - g) Landforms, geomorphological features and reef systems will be protected.
 - h) Water resources will be protected.
 - i) The Park's most important natural features will be protected within the National Park Natural Heritage Conservation Area designation.
- 4.** The distinctive character and appearance of each of the Park's five terrestrial landscape zones will be promoted and protected:
 - a) The St Lucy Coastal Cliffs;
 - b) The Savannahs;
 - c) Chalky Mount;
 - d) The Scotland Basin; and
 - e) Hackleton's Cliff.
- 5.** The qualities of wilderness and solitude and the traditional patterns of resource use and management will be preserved from encroachment.
- 6.** Sites, features and buildings of architectural, historical and archaeological significance will be enhanced and protected in accordance with the policies of Section 2.2.5: Cultural Heritage.
- 7.** The settlement pattern of National Park Villages and Rural Settlements will be preserved and new development will respect this pattern.
- 8.** The 'De Heart uh Barbados' Area will be managed as the gateway to the National Park and centrepiece of the nature tourism area that surrounds it.
- 9.** Opportunities for sustainable local economic development will be created and supported through:
 - a) Rural tourism;
 - b) Craft industries;
 - c) Environmentally sensitive farming and fishing activities;
 - d) Conservation projects including reforestation and the creation and development of National Forest Sites;
 - e) Amenity and community upgrading projects;
 - f) Touring and guiding opportunities; and
 - g) Incentives for 'conservation schemes' including organic farming, use of fertilizers, soil management, biodiversity management, reforestation projects, payment schemes, use of technology and techniques for farming slopes to bring about sustainable farming practices.
- 10.** Opportunities for passive recreation and to promote an understanding and enjoyment of the special qualities of the Park will be promoted.
 - a) Recreation and tourism which respects the Park's special environmental qualities and, where possible, provides social and economic benefits for local communities will be promoted.
 - b) Provision will be made for 'rights of way' in protected areas including the National Park Natural Heritage Conservation Area, and National Forest Candidate Sites to support passive recreation.
 - c) Information about the Park will be prepared and made available in order to improve understanding and awareness of recreational opportunities,



➤ Walkers Restoration, St. Andrew

increase awareness of its special qualities, and engender support for the continued protection of the area.

11. Residential development will complement and support the landscape, seascape and environmental qualities that led to the National Park designation, while recognising the longstanding communities within the National Park.
 - a) Future residential development will be focused in the National Park Villages of Belleplaine, Bathsheba and Boscobelle so as to conserve the rural character of the landscape, while enhancing the amenity and economic health of these villages.
 - b) Belleplaine will be advanced as the centre of the National Park.
 - c) The Government will take steps to improve housing conditions in the National Park by upgrading roads, water and electricity services and existing housing, and by relocating residents from lands threatened by erosion or land slippage.
 - d) Development outside of the National Park Villages will be limited to ensure the preservation of the characteristics of the National Park.
12. Mineral extraction will be limited to those resources for which there are no alternative sources of supply and the use of the resource is in the national interest. Restoration of mineral extraction sites will be required at the earliest possible date and to the highest possible standards.



➤ Agriculture in the National Park, Belleplaine, St. Andrew



➔ 2.2.5

Cultural Heritage

Cultural heritage plays a key role in shaping Barbados' national identity. The island's wealth of heritage assets range from buildings and conservation areas to terrestrial and marine archaeological resources to intangible heritage and cultural practices. Since the adoption of the Physical Development Plan Amended (2003), Historic Bridgetown and its Garrison have achieved international recognition as a UNESCO World Heritage Site. Other highlights include the collection of heritage assets in Speightstown, the Morgan Lewis Sugar Mill, the Barbados National Park and the Barbados Landship. These special places and cultural traditions point to Barbados' central role in the Atlantic economic system of the early colonial period and shed new light on British colonialism, the rise of plantation societies and the intendant creation of a Barbadian identity.

Key Concepts

World Heritage Sites: places recognised for Outstanding Universal Value under the UNESCO World Heritage Convention. In Barbados, Historic Bridgetown and Its Garrison was inscribed as a World Heritage Site in 2011. Cultural Heritage Conservation Area 1: World Heritage Site of Historic Bridgetown and its Garrison is defined by the boundaries of the World Heritage Site.

Cultural Heritage: The legacy of physical artefacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations. Cultural heritage assets may include archaeological assets or areas, built heritage, cultural heritage landscapes, underwater and intangible heritage.

Intangible Heritage: The practices, expressions and knowledge – along with the objects or spaces associated, with them – that are a part of Barbadian culture. Intangible cultural heritage is often associated with arts, traditional craftsmanship or social rituals or events. Examples include traditional fishing and boatbuilding practices and the Landship.

This chapter is comprised of seven sections:

- **Overarching Policies**
- **Cultural Heritage Assets**
- **Development Adjacent to a Cultural Heritage Asset**
- **UNESCO World Heritage Site**
- **Development in or Adjacent to the UNESCO World Heritage Site**
- **Cultural Heritage Conservation Areas**
- **Archaeological Resources**

Overarching Policies

1. Cultural heritage is recognised as an irreplaceable core asset, consisting of buildings, conservation areas, terrestrial and marine archaeological resources and intangible heritage.
2. Cultural heritage assets play an important role as part of Barbados' green and blue economy and its sustainable tourism industry.
3. The Government will develop protocols to coordinate actions to be taken by the Director of Planning and Development or designate in situations where cultural heritage assets are threatened or damaged by the impacts of the climate crisis or natural disaster.
4. A climate crisis risk analysis will be conducted to characterise the multi-hazard vulnerabilities (levels of exposure and susceptibility) and attributes of natural hazard/climate crisis risks (intensity, duration, frequency timing/seasonality, spatial extent) for individual cultural heritage assets and attributes.
5. Location and asset specific climate crisis adaptation measures will be developed to respond to potential natural hazard and climate crisis impacts.
6. The Government will develop a Heritage Impact Assessment process appropriate to Barbados' context and cultural heritage.
7. In order to retain the historic, architectural or landscape character of specific areas for development and redevelopment within Cultural Heritage Conservation Areas, the requirements of Section 2.5 regarding road reserves and access may be relaxed on agreement of the Director of Planning and Development and Chief Technical Officer, Ministry of Transport, Works and Water Resources.

Cultural Heritage Assets

8. The Barbados Register of Historic Places will list and describe all cultural heritage assets that are formally recognised for their cultural heritage value and include statements of significance that explain their heritage values and character-defining elements. Heritage assets include:
 - a) Buildings and structures;
 - b) Historic urban parks;
 - c) Cultural landscapes;
 - d) Districts or clusters of buildings;
 - e) Industrial sites;
 - f) Cultural spaces and areas;
 - g) Sacred spaces; and
 - h) Visual perspectives.
9. The Government, through its Ministry responsible for culture should prepare, update and maintain a Barbados Register of Historic Places within two years of the coming into operation of the PDP. Updating of the Barbados Register of Historic Places will include a public consultation process. Properties included on the Barbados Register of Historic Places (Barbados Register) will be announced and published through the Official Gazette.
10. The Barbados Register will include statements of significance explaining the heritage value and character defining elements of listed cultural heritage assets including: architectural, design or physical values; social, community, historical, natural, archaeological, scientific, or technological values; associated values based on context, setting, or views; or landscape values. The contribution of Barbados' diverse history and cultures will be considered in determining the cultural heritage value of an asset.
11. The Planning and Development Department (PDD) will update and maintain a comprehensive island-wide inventory of Barbados' cultural heritage assets on land and under water.
12. A comprehensive set of standards and guidelines for the conservation of historic places will be developed and endorsed by the PDD to support the conservation decision-making process for the identification,

conservation, and management of all cultural heritage assets. Standards and guidelines will apply to those listed in the Barbados Register. All cultural heritage assets shall be protected, conserved, and maintained consistent with these standards and guidelines.

13. The Barbados Register will be made easily accessible to the public in order to increase public awareness and engagement on the conservation and preservation of cultural heritage assets. Members of the public will be encouraged to submit proposals for new designations of cultural heritage assets.
14. Incentives, including specific fiscal measures, advisory services and grants, will be provided to encourage non-governmental initiatives for the protection and conservation of cultural heritage assets.
15. Significant deterrents for unauthorised interventions and demolitions will be created, including fines of up to BBD\$50,000 and other deterrents. Enforcement capacity will be strengthened to ensure that deterrents are effective.
16. Designated cultural heritage assets will be protected against deterioration by neglect through the enforcement of heritage property standards by-laws.
17. Identified cultural heritage assets may be further protected, maintained, and enhanced through the preparation of specific capital projects and through Planning and Development legislation and any other legislation ratified to protect tangible and intangible heritage assets.
18. An ongoing programme of identification and designation of cultural heritage assets will be undertaken by PDD, in conjunction with the Barbados National Trust, the Barbados Museum and Historical Society, the University of the West Indies and the World Heritage Committee.

Development On or Adjacent to a Cultural Heritage Asset

19. Any proposed development (including public works), alteration, extension, or change of use on, or adjacent to, a cultural heritage asset listed in the Barbados Register will protect the integrity of the cultural heritage asset, including its cultural heritage value and defining characteristics.



MAP 9:
Cultural Heritage Assets



MAP 10:
Cultural Heritage Assets: Bridgetown

20. Any proposed development (including public works), alteration, extension, or change of use on, or adjacent to, a cultural heritage asset will require express written planning permission by the Director of Planning and Development or his/her designate, and will be circulated to the Barbados National Trust, the Barbados Museum and Historical Society, the Archives Department, the Natural Heritage Department, the World Heritage Committee (where appropriate) and any additional nominated body for comments.
21. Any development, alteration, extension or change of land use on or adjacent to the site of a cultural heritage asset, including those listed on the Barbados Register, will require:
 - a) A scoped Heritage Impact Statement that identifies any potential impacts related to the proposed development on the identified values associated with the asset or described in the Barbados Register and appropriate mitigation strategies; and
 - b) Based on the scoped Heritage Impact Statement and where the Director of Planning and Development considers it appropriate, a Heritage Impact Assessment may be required to be submitted as part the development application. Details on the scope and process for the scoped Heritage Impact Statement and Heritage Impact Assessment are outlined in Section 5.
22. Prior to undertaking an approved alteration to a property on the Barbados Register, the property will be recorded and documented by the owner, to the satisfaction of the Director of Planning and Development and documentation as well as information on the proposed alteration, circulated to the Barbados National Trust, the Barbados Museum and Historical Society and any other nominated body for comment.
23. Demolition or partial demolition of a cultural heritage asset listed in the Barbados Register will not be acceptable unless it can be shown to the Minister responsible for planning that the building is structurally unsound and beyond economic repair, that viable alternative uses cannot be found, or that there would be substantial benefits (including public safety) to the larger community.
 - a) The input of the Barbados National Trust, the Barbados Museum and Historical Society and any other additional nominated body should be sought and considered in making a decision.
 - b) An appropriate and detailed redevelopment plan shall be submitted at the time of application for demolition.
24. In order to protect the defined values and attributes, permanent advertisements, or signs of any type within the curtilage of cultural heritage assets will need the express written permission of the Director of Planning and Development.

UNESCO World Heritage Site

Historic Bridgetown and its Garrison became Barbados' first World Heritage Site in 2011. The World Heritage Management Plan for Historic Bridgetown and its Garrison sets out a complete programme to protect, rehabilitate, interpret, monitor, and celebrate this internationally recognised site. The Management Plan contains a set of policies and processes that will serve as a model for potential future designations being considered across Barbados.

The World Heritage designation presents an unprecedented opportunity to build national pride among Barbadians and foster sustainable economic growth through heritage tourism. To unlock the potential of this international recognition and to advance a new vision for promoting the island, Barbados will work towards implementing the 2011 World Heritage Management Plan by addressing issues such as knowledge about the site, consolidation of the management area, protection measures, coordinated management, public awareness and adequate funding.



> Harrison College, Bridgetown



> Barbados Museum, Garrison, St. Michael

25. The Physical Development Plan (2023) recognises the UNESCO World Heritage Site designation for Historic Bridgetown and its Garrison, as identified on Map 9: Cultural Heritage Assets and Map 10: Cultural Heritage Assets: Bridgetown. The significance of the UNESCO World Heritage Site is formally acknowledged in the Physical Development Plan (2023) as a Cultural Heritage Conservation Area (CHCA 1) based on its Statement of Outstanding Universal Value as inscribed at the 35th session of the World Heritage Committee in 2011.

26. The Barbados World Heritage Committee (WHC) may provide advice to the Director of Planning and Development on the overall management and protection of the Outstanding Universal Value of Historic Bridgetown and its Garrison. The WHC will take on the role of:

- a) Overseeing adherence to the World Heritage Convention;
- b) Advising on policies and programmes for the conservation and management of heritage sites; and
- c) Monitoring and evaluating all matters relating to the protection and management of cultural heritage sites in Barbados.

27. The Management Plan for Historic Bridgetown and its Garrison 2011 (Management Plan), or its updated version when available, is a core resource tool with the overarching goal of facilitating a participatory and comprehensive system of management to protect and preserve the Outstanding Universal Value of the property

and its buffer zone. Strategically, the objectives of the Management Plan are to:

- a) Protect, preserve and enhance the cultural heritage within the property;
- b) Enhance physical and intellectual access to the site;
- c) Harness, manage and develop the recreational assets and tourism potential of the site to contribute to the diversification of the economy;
- d) Raise awareness, understanding and appreciation of the Outstanding Universal Value of the property and encourage local participation in its preservation;
- e) Interpret the Outstanding Universal Value of the site through a series of cultural programmes and activities;
- f) Establish guidelines for and manage the social and economic activities within the property;
- g) Develop a set of appropriate risk responses and ensure the availability of efficient emergency services for the protection of the property; and
- h) Ensure that future development does not have a negative impact on the Outstanding Universal Value of the property.

28. In keeping with the Management Plan and under the guidance of the Ministry with responsibility for culture in consultation with the WHC, Action Plans will be undertaken including:

- a) Action Plan for Protecting, Preserving and Enhancing Heritage;
- b) Action Plan for Education, Capacity Building and Research;

- c) Action Plan for Traffic Management;
- d) Action Plan for Tourism Management;
- e) Action Plan for Public Awareness;
- f) Action Plan for Cultural and Heritage Interpretation;
- g) Action Plan for Risk Management; and
- h) Action Plan for describing the thematic zones as outlined in the Management Plan page 25.

- 29.** The Physical Development Plan (2023) policies and interpretation and implementation of these policies will be consistent with the goals and objectives of the Management Plan, and will contribute towards implementation of the Action Plans for the Management of Historic Bridgetown and its Garrison.
- 30.** A defined buffer zone extends beyond the boundaries of the Historic Bridgetown and its Garrison World Heritage Site. The intent of the buffer zone is to provide an area of protection from any potential negative impacts of any development proposed outside of and in proximity to the World Heritage Site boundaries.
- 31.** Any proposed development or alteration of land within the buffer zone must demonstrate that appropriate measures will be taken to mitigate potential negative impacts on cultural heritage assets located within the designated World Heritage Site.
- 32.** The Physical Development Plan (2023) recognises the potential for future additional UNESCO inscriptions for locations in Barbados, and will be amended in order to reflect appropriate policies to implement any associated heritage management plans. Map 9 will be updated in order to reflect the site boundaries and buffer zones of any future UNESCO World Heritage Sites. Local communities will be involved in the development of nomination files as a means to build awareness and engagement.

Development in or Adjacent to the UNESCO World Heritage Site

Cities inscribed on the World Heritage List need to evolve and be the focus for investment in order to respond to community needs and to remain resilient. Good development can in fact enhance a designated site. It is important to acknowledge that “one size does not fit all”. Each World Heritage Site is

unique and arguably different locations within one World Heritage Site can be - and often are - different. Good process that takes the specific context into account is the key to successful insertion of new developments in or adjacent to World Heritage Sites. World Heritage guidelines encourage ecologically and culturally sustainable uses that may contribute to the quality of life of communities but require countries to avoid negative impacts on the Outstanding Universal Value of World Heritage Sites.

- 33.** Any proposed development (including public works), alteration, extension, or change of use in, or adjacent to, the UNESCO World Heritage Site will protect its Outstanding Universal Value.
- 34.** A robust understanding of context requires local knowledge to elaborate on the Statement of Outstanding Universal Value. An in-depth understanding of the context within which a new development will be situated will consider the site itself and the surrounding area, and include historical significance, archaeological resources, heritage buildings, streetscapes, visual perspectives and any other pertinent tangible or intangible values.
- 35.** Any proposed development (including public works), alteration, extension, or change of use in, or adjacent to, the UNESCO World Heritage Site will require express written planning permission by the Director of Planning and Development or his/her designate, and will be circulated to the Barbados National Trust, the Barbados Museum and Historical Society, the Archives Department and the World Heritage Committee and any additional nominated body for comments.
- 36.** Any decisions regarding the development or alteration of any property located within the boundaries of the UNESCO World Heritage Site as identified on Maps 9 and 10 will be consistent with the policies of this section as well as the objectives and directions of the Historic Bridgetown and its Garrison Management Plan (2011).
- 37.** Decisions on development proposals will be based on principles that support the conservation of heritage value and character-defining elements when creating any new additions.
 - a) New work will be physically and visually compatible with, subordinate to and distinguishable from the World Heritage Site.

- b) New work may be acceptable when it respects and does not distort or obscure the cultural significance of the place, or detract from its interpretation and appreciation.
 - c) New work should respect the World Heritage Site elements through consideration of its siting, mass, form, scale, character, colour, texture and material.
- 38.** Knowledge of the context and conservation principles should inform the design of new projects from the outset. Dialogue between project proponents and planning officials is an iterative process that begins at the initial stages of project development.
- 39.** Within or adjacent to the World Heritage Site (CHCA 1: World Heritage Site of Historic Bridgetown and its Garrison):
- a) A scoped Heritage Impact Statement will be required for any development, alteration or extension of greater than 20 square metres of gross floor area or Plan of Subdivision for over 5 lots. Based on the scoped Heritage Impact Statement and where the Director of Planning and Development considers it appropriate, a Heritage Impact Assessment may be required to be submitted as part the development application; and
 - b) A Heritage Impact Assessment will be required to be submitted as part of the development application for any development alteration or extension of greater than 50 square metres of gross floor area or Plan of Subdivision of over 10 lots.
- 40.** The scoped Heritage Impact Statement or Heritage Impact Assessment will identify any potential impacts related to the proposed development on the Outstanding Universal Value and, if appropriate, the identified values associated with the asset or described in the Barbados Register and will identify appropriate mitigation strategies. Details on the scope and process for the scoped Heritage Impact Statement and Heritage Impact Assessment are outlined in Section 5.
- 41.** Demolition or partial demolition of a property within the World Heritage Site that is listed on the Barbados Register or contributes to the Outstanding Universal Value of the site will not be acceptable unless it can be shown to the Minister responsible for planning that the property is structurally unsound and beyond economic repair, that viable alternative uses cannot be found, or that there would be substantial benefits (including public safety) to the larger community.
- a) The input of the Barbados National Trust, the Barbados Museum and Historical Society and any other additional nominated body should be sought and considered in making a decision.
 - b) An appropriate and detailed redevelopment plan shall be submitted at the time of application for demolition.
- 42.** In order to retain its appearance, permanent advertisements, or signs of any type within the World Heritage Site will need the express written permission of the Director of Planning and Development.
- 43.** Landmark projects of significant scale are best dealt with through a peer review, using a Design Review process with a panel of experts including heritage conservation expertise. A made-in-Barbados professional evaluation of major proposals would allow for a broader range of input from knowledgeable sources to encourage excellence in architecture, urban design and landscape design.

Cultural Heritage Conservation Areas

Cultural Heritage Conservation Areas represent a contemporary approach to achieving heritage conservation goals while integrating heritage as part of the life of the community. They consist of the buildings, landscapes, cultural spaces, archaeological resources, important views, and other contributing features that define the unique character of the community.

- 44.** Cultural Heritage Conservation Areas (CHCA) will be designated in accordance with the Planning and Development Act as a means of conserving their heritage values, including architectural, design or physical values; social, community, historical, natural, archaeological, scientific, or technological values; associated values based on context, setting, or views; or landscape values. The contribution of Barbados' diverse history and cultures will be considered in determining the cultural and/or natural heritage value of an area, and in the case of CHCA 1 (World Heritage Site of Historic Bridgetown and its Garrison), its Outstanding Universal Value.
- 45.** Barbados' designated Cultural Heritage Conservation Areas are identified on Map 9: Cultural Heritage Assets and Map 10: Cultural Heritage Assets: Bridgetown and include:

- a) CHCA 1: World Heritage Site of Historic Bridgetown and its Garrison;
 - b) CHCA 2: Strathclyde – also documented and supported by the Strathclyde Local Area Plan;
 - c) CHCA 3: Belleville – also documented and supported by the Belleville Local Area Plan;
 - d) CHCA 4: Hastings Pavilion/Ocean View;
 - e) CHCA 5: Speightstown; and
 - f) CHCA 6: Rock Hall.
- 46.** Statements of significance will be prepared for each of the Cultural Heritage Conservation Areas to explain their heritage values and character-defining elements. These statements of significance will be made available for public access.
- 47.** The Planning and Development Department will implement targeted community programmes to encourage engagement and public awareness of Cultural Heritage Conservation Areas, and to encourage the involvement of local communities in the development of future Cultural Heritage Conservation Areas.
- 48.** Within Cultural Heritage Conservation Areas, natural heritage risk zones will be identified along with strategies to mitigate any risks to heritage assets.
- 49.** Any proposed development, alteration, extension, or change of use within Cultural Heritage Conservation Areas will require express written planning permission by the Director of Planning and Development or designate, and will be circulated to the Barbados National Trust, the Barbados Museum and Historical Society, and any additional nominated body for comments.
- 50.** Within a CHCA, development will require the submission of a scoped Heritage Impact Statement/ Heritage Impact Assessment as follows:
- a) A scoped Heritage Impact Statement will be required for any development, alteration or extension of greater than 20 square metres of gross floor area or Plan of Subdivision for over 5 lots. Based on the scoped Heritage Impact Statement and where the Director of Planning and Development considers it appropriate, a Heritage Impact Assessment may be required to be submitted as part the development application.
 - b) A Heritage Impact Assessment will be required for any development alteration or extension of greater than 50 square metres of gross floor area or Plan of Subdivision of over 10 lots.
 - c) A Heritage Impact Assessment will be required for new roads and improved roads or junctions that widen existing rights-of-way.
- 51.** Development in Cultural Heritage Conservation Areas will only be permitted where the scoped Heritage Impact Statement or Heritage Impact Assessment demonstrates that the proposed development:
- a) Enhances or preserves the values associated with the CHCA or described in the Barbados Register and defines appropriate mitigation strategies to the satisfaction of the Director of Planning and Development.
 - b) Respects the special character and quality of the area through size, design and materials, in compliance with the Barbados standards and guidelines for the conservation of historic places.
- 52.** Demolition or partial demolition of a property within a CHCA that is listed on the Barbados Register or contributes to the heritage value of the CHCA will not be acceptable unless it can be shown to the Minister responsible for planning that the property is structurally unsound and beyond economic repair, that viable alternative uses cannot be found, or that there would be substantial benefits (including public safety) to the larger community.
- a) The input of the Barbados National Trust, the Barbados Museum and Historical Society and any other additional nominated body should be sought and considered in making a decision.
 - b) An appropriate and detailed redevelopment plan shall be submitted at the time of application for demolition.
- 53.** The felling or lopping of all trees over 0.5 metres in diameter in Cultural Heritage Conservation Areas will require the express written permission by the Director of Planning and Development or designate.
- 54.** All new development should normally conform to the relevant planning policies referred to elsewhere in this document, but variations in these standards would be considered in review of applications by PDD in order to maintain the specific values and characteristics of the Cultural Heritage Conservation Areas.
- 55.** In order to retain the appearance of Cultural Heritage Conservation Areas, permanent advertisements or signs of any type will need the express permission of the Director of Planning and Development.



➤ Cemetery, Nidhe Israel Synagogue

56. Development by the Government, its agencies and statutory undertakers, including wirescapes, sub-stations, road signs, street furniture, drainage activities, streetscaping, road repairs and widening that affect the appearance of Cultural Heritage Conservation Areas will require the express approval of the Director of Planning and Development. Generally, all publicly funded works will be designed in a comprehensive and complementary manner, in compliance with the Barbados standards and guidelines for the conservation of historic places, to enhance their special heritage character.

Archaeological Resources

Archaeological resources and research include both terrestrial and underwater resources. Archaeological research in Barbados began in the early twentieth century. It helps shed light on the Amerindian peoples who settled the island thousands of years ago and on the lives of colonists and enslaved workers. Archaeological heritage also supports cultural tourism initiatives. To improve the protection, management and awareness of archaeological resources, Barbados should enact legislation, strengthen policies, improve professional capacity and undertake public awareness initiatives.

57. The Government will update inventories for terrestrial and underwater resources, taking care to keep exact locations confidential to prevent looting and other inappropriate activities.

58. Statements of significance for recognised Archaeological Areas will be prepared that will explain their heritage values and character-defining elements. These statements will be included in the Barbados Register and made publicly available, when appropriate.

59. A scoped Heritage Impact Statement identifying any potential impact on archaeological resources will be required for any development, infrastructure project, alteration, extension or change of use:

- a) Over 20 square metres gross floor area or over 5 lots within Archaeological Areas identified on Map 9: Cultural Heritage Assets;
- b) Over 50 square metres gross floor area if the site is within a Community Core of a Historic Regional Centre; or
- c) Over 500 square metres gross floor area or Plan of Subdivision over 10 lots otherwise.

The scoped Heritage Impact Statement will summarise any potential presence of archaeological resources including a brief background history and a shovel test survey of the property to determine whether there are archaeological resources on the site.

60. Where potential presence of archaeological resources is identified, a full Heritage Impact Assessment will be undertaken, unless determined otherwise by the Director of Planning and Development. The documentation for a Heritage Impact Assessment related to archaeological resources will include:

- a) Details on the background history of the property;
- b) Details on the presence and importance of the archaeological remains;

- c) Details as to how the development will affect the archaeological remains; and
 - d) Appropriate remedial and mitigation actions required to maintain the integrity of the archaeological resources, such as:
 - i) Site designs which avoid the archaeological remains;
 - ii) Burial of the archaeological remains by covering the features with a geotextile layer and mounding prior to development; or
 - iii) Excavation, recovery, and conservation of the archaeological remains prior to development.
- 61.** Archaeological surveys and mitigation are at the cost of the project proponent.
- 62.** Oversight and/or review of the Heritage Impact Assessment will be carried out by a professional archaeologist in consultation with the PDD and an advisory board made up of representatives from the Barbados Museum and Historical Society, UWI (Cave Hill) and Barbados National Trust.
- 63.** When human skeletal remains are encountered, it will be the responsibility of the developer to immediately contact the Royal Barbados Police Force. If it is determined that the skeletal remains belong to early historic or prehistoric populations, then efforts must be made for the proper recording, recovery, and removal of the skeletal materials. The recovery of human skeletal remains should be conducted by a trained archaeologist.
- 64.** Prior to approval, the Director of Planning and Development, in consultation with the Barbados National Trust, the Barbados Museum and Historical Society and the Archives Department, may require:
- a) Additional documentation of the archaeological resources present on the site; and/or
 - b) Redesign or enhancement of the development proposal including the proposed mitigation measures.
- 65.** A detailed record of archaeological observations during construction may also be required as a condition of approval.
- 66.** Should archaeological resources be encountered during underwater development projects, it will be the responsibility of the proponent to hire a trained underwater archaeologist to record and recover archaeological resources.



➔ 2.2.6

Community Cores

Community cores are recognisable, established centres throughout the existing urban fabric. They are the focus of shops, services and transport for an area. In some places, such as Speightstown, Hometown or Oistins, they are the historic cores of these communities. Emerging community cores are also developing in fast growing areas of the island and may have a more auto-oriented function drawing from a wider regional area. The intention of recognising distinct community cores throughout the island is to ensure that these places continue to function as a focus for shops, services, public spaces, amenities, and community gathering.

The community cores of Bridgetown, Speightstown, Hometown, Oistins, Six Cross Roads, Warrens, Wilkey, Belleplaine and Bathsheba are identified in the Community Plans in Part B of the Physical Development Plan (2023). Each core is defined in a place specific manner and policies to encourage vibrant, walkable, and prosperous cores are tailored to the distinct opportunity of that community.

Overarching Policies

1. The distinct role and identity of each community core within the wider community will be recognised and strengthened.
2. Community cores are intended to provide a higher level of service for their surrounding areas. As such, the Government will continue to provide a range of services in community cores.
3. Community cores are intended to function as employment centres for the surrounding area, and the Government will support the creation of employment opportunities in community cores.
4. A range of housing types, including seniors' and affordable housing, are appropriate for community cores to build on existing community assets and services.

5. Community cores may be appropriate locations for multi-family, multi-storey buildings. Further guidance can be found in the Design Strategies provided in Section 3.4.4 for Mixed Use Areas and within each of the Community Plans.
6. Community cores will be the focus of the mobility network, providing the greatest transportation choice on the island. Mobility Nodes have been identified within many community cores, as described in Section 2.4 and the Community Plans.
7. Community cores will be designed to be the most walkable and accessible locations on the island.
8. Buildings and the public realm of community cores will be designed to the highest standard. To this end, a Design Review process may be considered in community cores.
9. The open space system in community cores will link together high quality parks, open spaces and the waterfront, where applicable.
10. Cultural heritage assets within community cores will be identified and enhanced as key to community character and incorporated into place making strategies.
11. Vacant and abandoned buildings will be considered prime locations for reinvestment and revitalisation, in particular cultural heritage resources within community cores that may be in disrepair.
12. Design strategies will ensure adaptability of community cores to the impacts of the climate crisis, in particular sea level rise and storm surge.

Key Concepts

Community core: the commercial, residential and cultural heart and central places of Barbados, providing the densest concentration of people, buildings, and activities. Strengthening the cores strengthens the entire region, as the cores provide services far beyond their borders.

Public realm: the space around, between and within buildings that is publicly accessible, including streets, squares, parks, beaches and open spaces.

➔ 2.3

The Green and Blue Economy

Transitioning to a green and blue economy is seen as pivotal in reducing the vulnerability of the nation to economic and natural shocks and charting a more sustainable development path. In this regard, promoting and sustaining a green and blue economy is an underlying direction that guides the scope and focus of the PDP (2023) policies.

The concept of a green economy was first articulated in the Barbadian context in the National Strategic Plan 2006-2025 and thereafter in the Barbados Growth and Development Strategy 2010-2014. Since that time, the Government of Barbados established formal partnerships in 2010 with the United Nations Environment Programme, Partnership for Building a Resource-Efficient Green Economy, and thereafter with the United Nations Industrial Development Organisation.

Key Concepts

Green Economy: An integrated production, distribution, consumption, and waste assimilation system that, at its core, reflect the fragility of our small island ecosystems as the basis for natural resource protection policy intervention, business and investment choice, human development programming, and for the facilitation of export market development strategies.

Blue Economy: The Blue Economy is all of the resources, activities, people and practices that exist within Barbados' coastal zone. The development of a sustainable development approach to ocean resources will diversify the economy and create jobs.



➤ Berinda Cox Fish Market, Oistins

The Green Economy Scoping Study (GESS) for Barbados (UWI, 2012; Moore et al, 2014) commissioned by the Government of Barbados and approved by the Parliament of Barbados in 2016 outlined a roadmap inclusive of principles, strategies and policy measures for mainstreaming the green economy into the national development policy framework. Barbados is the first Caribbean nation to have undertaken this initiative. To support Barbados in developing a long-term strategy to achieve blue growth, support from the UNDP resulted in the completion of a Blue Economy Scoping Study (UWI 2020).

This chapter is comprised of two sections:

- **Overarching Policies**
- **Sustainable Tourism**

Overarching Policies

1. The Government will support the island's transition to a green and blue economy. This will include:
 - a) Advancing the concept of the blue economy in all sectors;
 - b) Pursuing the mainstreaming of the green economy concept in all sectors of the economy, in particular implementing opportunities identified in the Barbados Green Economy Scoping Study for greening the agriculture, fisheries, building/housing, transport and tourism industries;
 - c) Protecting the island's core assets including water, food and agricultural lands, the natural heritage system, cultural heritage assets, the National Park and community cores, in accordance with Section 2.2;
 - d) Promoting the efficient use of land through a resilient and sustainable development pattern, in accordance with Section 2.1;
 - e) Developing the National Park based on best practices in the integration of economic growth within the context of sound environmental management and good stewardship, in accordance with Section 2.2.4;
 - f) Encouraging a more sustainable approach to waste management, with increased recycling, reduction and reuse, consideration of waste to energy conversion and increased diversion from landfills;
 - g) Advancing mobility and accessibility by developing a transportation network that prioritises alternatives to the private automobile including public transport and active transportation, in accordance with Section 2.4;
 - h) Prioritising energy efficiency and renewable energy sources, in accordance with Section 2.5;
 - i) Requiring sustainable resource extraction practices including controls on location, scale, and methods of extraction and rehabilitation of former mined sites for recreational purposes and environmental restoration; and
 - j) Prioritising putting in place the relevant mechanisms and legislation in support of the green economy including environmental management, protected areas management, renewable energy, and waste and pollution control.
2. The Government will support the diversification and greening of sectors within the island's economic base to build resilience. This will include:
 - a) Promoting and expanding green economy-related employment, in particular employment in the sustainable tourism and agriculture sectors;
 - b) Encouraging more resource-efficient offices and knowledge-based industries in Employment Areas in addition to adopting greener approaches to traditional light industrial uses and spaces; and
 - c) Promoting innovative and sustainable development, infrastructure and building practices. These may include the greater use of green building materials and less resource intensive technologies, the introduction of higher environmental building standards and improved efficiencies in energy and water consumption.
3. The food and agriculture sector is recognised as a key component of the island economy. Primary importance will be given to maintaining a sustainable food and agricultural land base, increasing food and nutrition security and sovereignty and supporting a viable agricultural sector in accordance with Section 2.2.1.
4. The commercial role of central Bridgetown and the community cores of other communities is key to the success of these cores as complete communities and will therefore be enhanced and revitalised.

5. The redevelopment of commercial facilities in community cores will be encouraged by such measures as:
 - a) Increasing flexibility in permitted uses;
 - b) Encouraging the conversion and adaptive reuse of existing buildings;
 - c) Creating a comprehensive parking and traffic strategy; and
 - d) Improving the amenity and quality of the public realm.
6. Major shopping facilities in suburban and peripheral areas will be permitted, provided that they do not negatively impact the planned function of central Bridgetown or the Regional Centres. Market Impact Assessments will be required for major shopping centre proposals outside of central Bridgetown and the Regional Centres in accordance with Section 3.5.
7. The return to productivity of vacant, derelict and under-performing lands and buildings within Employment Areas will be encouraged by such measures as:
 - a) Increasing flexibility in permitted uses;
 - b) Encouraging the conversion and adaptive reuse of existing buildings; and
 - c) Improving the level of amenity and public realm.
8. New major institutional campuses such as medical schools will be considered on sites that meet the following criteria:
 - a) Easily accessible by public transportation;
 - b) Appropriately scaled for the ultimate capacity of the institution; and
 - c) Compatible with adjacent land uses.

Sustainable Tourism

Tourism has been Barbados' primary foreign exchange earner and most powerful economic driver since the 1970s when the nation shifted from a land based production economy towards a service based economy. The value of the tourism industry in Barbados reflects the long established and self-reinforcing relationship between the appeal of the island's sub-tropical location and climate, the range and quality of its natural assets, and its ability to attract inward investment for the development of a range of quality tourism facilities and services. Not only is it essential to maximise the contribution of tourism to the Barbadian economy, tourism must also act as the catalyst for the economic stimulation of other sectors.

Traditionally the tourism industry in Barbados has been focused around sun, sea and sand. However, in today's context of the competitive global tourism marketplace and the climate crisis, relying on these is no longer enough. Coastal hotel developments will be the first to suffer from the effects of sea level rise and extreme weather events. There is a need to build resiliency into the tourism sector in Barbados, both by broadening and re-orienting the tourism offer and by incorporating sustainable practices and climate crisis adaptation and mitigation strategies into the management of tourism assets and attractions.

9. The Government will support the development of the tourism industry in accordance with the principle of sustainable tourism.
 - a) All tourism-related land use decisions will support the primary goal of Barbados' Tourism Master Plan 2014-2023, "to grow the Barbados visitor economy sustainably and responsibly in consideration of the people, the economy and the natural environment."
 - b) The Government will promote its sustainable tourism objectives by:
 - i) Determining the optimal mix of types of establishments to be encouraged; continuously upgrading the accommodation product and encouraging investment in the tourism product;
 - ii) Directing new beach-related tourism development primarily to existing Tourism Corridors and areas designated for tourism along the south and west coasts;

- iii) Promoting and enabling sustainable community-based tourism initiatives as means to support social and economic development;
 - iv) Supporting expansion, improvement and redevelopment of tourist accommodation facilities in proximity to prime attractions including good swimming beaches, cultural heritage assets and community cores;
 - v) Directing new tourism development to areas currently served, or proposed to be served, by piped water systems;
 - vi) Encouraging the conservation, sound management and enhancement of the built environment and cultural heritage assets in order to create an attractive environment for visitors; and
 - vii) Promoting the preservation of unique natural and open spaces, identified in the Barbados System of Parks and Open Spaces, that add to a unique visitor experience.
- 10.** Environmental sustainability and climate resiliency will be primary considerations in the development of tourism attractions and hotel accommodations.
 - a) Energy efficiency and the incorporation of renewable energy will be encouraged in tourism developments.
 - b) Water conservation practices will be required in tourism developments, particularly the hotel sector.
 - c) Disaster risk reduction and climate crisis adaptation measures will be required in the design and operation of coastal hotel developments and in International Gateway Nodes such as the Bridgetown Port and Grantley Adams International Airport.
- 11.** A broader range of tourism accommodations and attractions will be encouraged across the island, particularly those that provide an “authentic” Barbados tourism experience. This will include:
 - a) Attractions that involve interacting with the island’s natural or cultural heritage;
 - b) Attractions that demonstrate sustainability and/or innovation;
 - c) Alternative accommodations such as bed and breakfasts, inns in historic houses, camping grounds, eco-lodges, retirement villages and inland accommodations where services exist; and
 - d) Tourism products that serve both the domestic and international tourism markets.
- 12.** The Government will encourage the conversion of plantation houses for tourism and accommodation uses.
- 13.** The Historic Bridgetown and its Garrison UNESCO World Heritage Site will be promoted as a key sustainable tourism asset and the cornerstone of a cultural heritage tourism strategy.
- 14.** The National Park will be promoted as a key sustainable tourism asset. Strategies for sustainable tourism in the National Park will include:
 - a) Facilitating opportunities for nature tourism activities and facilities such as camping, hiking, eco-lodges, and food trails;
 - b) Identifying Belleplaine as the centre of the National Park and encouraging the development of infrastructure to support this role such as signage, an education centre, and trailheads;
 - c) Promoting unique sustainable attractions in the National Park including the Walkers Sand Mine Regeneration Project; and
 - d) Improving the wayfinding to and within the National Park through enhanced signage on the National Park Route and National Scenic Parkway.
- 15.** To support new tourism and economic activities, new islands and peninsulas off the coast of Barbados may be constructed, according to the following criteria:
 - a) An Environmental Scoping Study is required to determine the feasibility of the project;
 - b) An Initial Environmental Evaluation will be required to demonstrate the project’s benefit;
 - c) The proposal must be reviewed against and demonstrated to be in keeping with the overall direction of the Coastal Zone Management strategy for the island.

➔ 2.4

Advancing Mobility and Accessibility

The provision of efficient transport service and infrastructure is fundamental to the promotion of inclusive, healthy communities and sustainable development within Barbados. Access to employment opportunities and education, health and other services, and obtaining benefits from those services, hinges on the availability of safe, affordable, comfortable, reliable and efficient transport systems.

Recently there has been a major shift in transportation thinking, from a focus on the ease of movement for cars, to a focus on the ease of movement for people and goods. The concept of accessibility refers to ease of travel between activities, or the overall difficulty in getting from an origin to a destination. Transportation planning today involves considering how a combination of modes can be used to improve accessibility for people and goods. Finally, there has been growing evidence of the key role mobility, accessibility and land use can play in addressing the challenges faced by increasing rates of non-communicable diseases such as obesity and diabetes. Advancing mobility and increasing accessibility will be key to an inclusive, prosperous and healthy nation in Barbados.

This chapter is comprised of eight sections:

- **Overarching Policies**
- **Multimodal Network**
- **Mobility Nodes**
- **Active Transportation**
- **Public Transport**
- **International Gateways**
- **Parking Management**
- **Water Transport**

Key Concepts

Mobility: The ease of movement for people and goods, encompassing a full range of modes including walking, cycling, transit, water transport, private vehicles and air transportation.

Multimodal: Combining more than one mode of travel, such as driving to a Park and Ride lot and getting on a bus, or cycling or walking to a water taxi stop and getting on a boat.

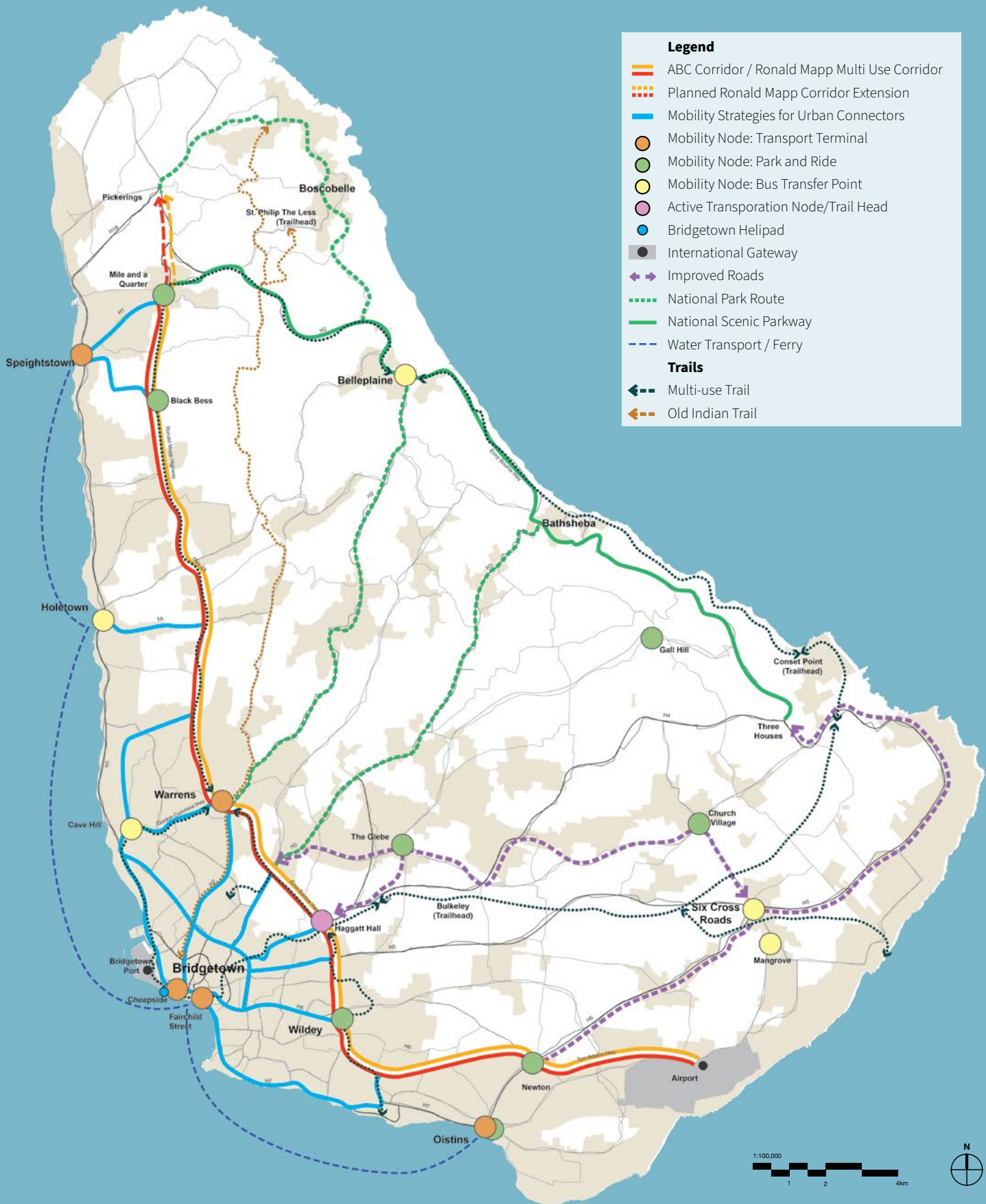
Overarching Policies

1. Barbados will shift towards increasing mobility and accessibility by planning for multiple modes of transportation tied together as part of an integrated island-wide network. Barbados will plan for a multimodal transportation network as outlined in Map 11 that:
 - a) Offers a choice of multiple transportation modes, including active transportation (walking, cycling), public transport (bus, water transport), and the automobile (private or shared);
 - b) Meets a variety of people's needs and connects them with major destinations for employment, institutional, commercial, and cultural uses;
 - c) Remains resilient under changing natural hazard and climate conditions;
 - d) Plans for Mobility Hubs of varying scales and types across the island that will allow people to connect and facilitate ease of transfer and interchange between different modes of transportation;
 - e) Places greater emphasis on the development and redevelopment of communities, on public transportation, active transportation, and pedestrian connectivity, recognising that constructing new roads alone will not solve transportation challenges;
 - f) Ensures that transportation strategies will be appropriate in the context of the locations that they are planned for, achieving a balance between the effective and efficient movement of people and goods while ensuring public safety; and



➤ Public Transport, Congo Road, Six Cross Roads, St. Philip

- g) Explores potential strategies and policies to promote and incentivise public and shared transport usage and active transportation, and to dis-incentivise private automobile usage.
2. The Government will promote access for all to safe, age- and gender-responsive, affordable, accessible, and sustainable urban mobility and land and sea transport systems, in accordance with the objectives of the New Urban Agenda ratified during Habitat III.
 - a) Barbados' transportation network will be designed to:
 - i) Enable people to engage in meaningful participation in social and economic activities across the island;
 - ii) Increase the level of public safety, health and longevity by reducing transportation related fatalities, injuries and accidents; and
 - iii) Increase safe transportation choices, availability and reliability for all citizens, residents and visitors to Barbados.
 - b) The Physical Development Plan (2023) will integrate transport and mobility plans with land use planning decisions to promote a wide range of transport and mobility options.
3. The Government will recognise the link between transportation and the climate crisis, in particular the significant amount of greenhouse gases contributed by private automobile usage.
 - a) Transportation alternatives to the automobile, such as public transport and active transportation modes, will be promoted as a means of reducing Barbados' greenhouse gas emissions.
 - b) The use of electric vehicles will be incentivised as an alternative to gasoline-based transportation.
4. The Government will identify and plan for disaster risk reduction and resiliency measures related to Barbados's transportation network.
 - a) A network of alternate routes set inland will be planned in order to ensure resiliency if roads in risk-prone areas, particularly near coastal zones, become inaccessible or fall into disrepair, requiring the redirection of traffic.
 - b) Research, data, and projections regarding impacts of the climate crisis and natural hazard phenomena will be integrated into decisions regarding Barbados' transportation network to develop a more robust perspective.
 - c) Iterative risk management approaches that are supported by appropriate modelling and adaptation tools will be developed to respond to projected climate and hazard impacts. Performance measures will be used to inform the prioritisation and decision making on appropriate adaptation approaches and interventions.



MAP 11:
Mobility and Accessibility

Multimodal Network

5. Barbados' multimodal transportation network, as shown conceptually on Map 11, will consist of the following core components:
 - a) **ABC/Ronald Mapp Corridor:**
 - i) Barbados' primary highway corridor, which will be planned over the long term to accommodate multimodal movement including cars, goods, transit and active transportation, where appropriate and mobility strategies such as High Occupancy Vehicle (HOV) lanes on high volume segments.
 - ii) Ronald Mapp Corridor extension: planned extension of the Corridor to connect to St Lucy Parish Church.
 - b) **Urban Connectors:** As the primary routes from the ABC/Ronald Mapp Corridor to coastal communities, high traffic volumes and congested segments at peak times characterise these routes. Mobility strategies such as peak hour reverse traffic flows and other traffic management approaches should be explored to increase the efficiency of these corridors.
 - c) **Mobility Nodes:** Including Transport Terminals, Park and Rides and Bus Transfer Points.
 - d) **Active Mobility Node/Tailhead:** Where trails converge, providing an opportune location for infrastructure that support active mobility.
 - e) **Improved Roads/Routes:** Improvements to existing roads that better connect existing communities, key destinations and commuter routes.
 - f) **National Park Route:** Improvements to existing key routes to, from and within the National Park including wayfinding signage.
 - g) **Scenic National Parkway:** Scenic route through the National Park, which should be improved and promoted as a tourism attraction.
 - h) **Water Transport / Ferry:** Water based transportation for movement of people.
 - i) **Multi-Use Trails:** Consisting of "rail to trail" routes and other established hiking trails.
 - j) **International Gateways:** Including the Grantley Adams International Airport and the Bridgetown Port.
6. Land use planning and transportation planning decisions will be integrated and coordinated in order to increase mobility and accessibility, and to encourage use of active transportation and public transport modes.
 - a) The Government, through the Ministry of Transport, Works and Water Resources, will update and complete a National Transport Plan so that national land use in the Physical Development Plan (2023) and transportation policies are aligned and in support of the Ministry's Strategic Plan (2017).
 - b) Residential and non-residential development located near transportation corridors and Mobility Nodes will be planned to accommodate higher densities where it fits with the character of the surrounding use. This will consist of a built form, scale, and type of development that will foster a modal shift towards public transport and active transportation modes.
 - c) The provision of transportation infrastructure will be consistent with the vision, direction, and policies of the PDP (2023) and the Ministry of Transport, Works and Water Resources' Strategic Plan (2017), and shall be planned to integrate land use and transportation to support the National Centre and Regional Centres, employment areas, major institutional nodes such as universities or healthcare facilities, and retail nodes.
 - d) The multimodal transportation network will be planned to ensure the efficient, convenient, and safe movement of both people and goods. The location of goods transport routes across Barbados will be periodically reviewed and refined to ensure effective movement.
 - e) Accessible and barrier-free design options will be incorporated into all modes of public transportation infrastructure throughout Barbados.

Mobility Nodes

Mobility Nodes consist of multiple modes of transportation infrastructure situated at central or key strategic locations in communities across Barbados. They may include a combination of public transport services including both public and private operators, active transportation infrastructure with pedestrian and cycling connectivity, and park and ride facilities.

- 7.** Mobility Nodes will be planned and developed throughout Barbados at central or strategic locations, and will be designed to offer convenience and reliability to increase the overall appeal of public transport services and active transportation modes. Mobility Nodes are located throughout Barbados as identified on Map 11: Mobility and Accessibility.
 - a) Mobility Nodes will be designed with a high quality public realm that features attractive landscaping and prioritises pedestrian connectivity, convenience, and comfort. Mobility Nodes will be designed to emphasise a comfortable pedestrian experience, including pedestrian pathways and bridges and safe street crossings.
 - b) Mobility Nodes will be developed as mixed use areas, and permit a variety of compatible retail vendors and services on-site or in the surrounding area in order to serve the needs of travellers and strengthen their connection to the surrounding community.
 - c) Additional Mobility Nodes may be located at central or strategic locations within the National and Regional Centres, local centres, major institutional uses such as universities, government buildings or healthcare facilities, and proximate to major commercial, employment, or tourism and cultural areas.
- 8.** Mobility Nodes will link together multiple modes of transportation including public and private transport services, active transportation and related infrastructure for the purposes of reducing congestion and encouraging shared transportation solutions. Mobility Nodes will be planned and designed to successfully achieve a range of functions appropriate to their location and scale as follows as outlined in Figure 6.
 - a) Transport Terminals: bus terminals with shelters where numerous buses, minibuses, and ZR taxis come together.
 - b) Park and Ride facilities: car parks where travellers can leave their car and transfer to public transport modes or a car pool.
 - c) Bus Transfer Point: location of several bus stops/ convergence of transport service designed to ensure safe, weather protected areas for passengers.
- 9.** Supporting infrastructure will be integrated with Mobility Nodes:
 - a) Public transport services, including public and private operators; and
 - b) Active transportation infrastructure such as bicycle facilities/parking or pedestrian priority improvements;
- 10.** A Park and Ride facility will be explored at the Glebe Mobility Node as a pilot project to determine the feasibility of developing other examples across the island.

	TRANSPORT TERMINAL	BUS TRANSFER POINT	PARK AND RIDE
Mobility related Infrastructure	• Bus terminal building or shelter for multiple buses to lay over. • Potential for integration of public transport, bus, minibus, jitney, taxis • Cycling infrastructure (parking) • Pick up and drop off areas • May include public parking or park and ride lot • Often adjacent to formal or informal vending areas	• Several bus stops and multiple routes • Potential shared stops for public transport buses, mini bus, and jitney, taxi • Cycling infrastructure • Bus shelters • May include roadside vending	• Car park which provides the opportunity for transfer to other modes (carpooling, car sharing, public or private bus, private coach, taxi)
Policy Direction	• Enhance multimodal options: integrate public and private operators, increase bike parking, improve walking environment • Plan for connections to water transportation • Formalise related vending areas, and other amenities, services	• Improved waiting areas (larger shelters, or shade structures, seating, lighting) • Improved pedestrian connections in vicinity • Can be integrated with mixed use developments or sites	• Create a safe and comfortable pedestrian environment including lighting and seating/shelter areas for pickup and transfer areas.
Locations	• Fairchild Street • Cheapside/Princess Alice • Speightstown • Warrens • Oistins	• Holetown • Cave Hill • Belleplaine • Mangrove • Six Cross Roads	• Mile and a Quarter • The Glebe (Pilot) • Wildey • Newton • Church Village • Oistins • Black Bess • Gall Hill

FIGURE 6. Mobility Node Types

Active Transportation

Rates of diabetes, obesity, and hypertension have been found to be on the rise in Barbados. Research has established a strong link between the health of residents based on the transportation choices they make and the physical design and layout of the communities they live in. Active transportation and the creation of walkable, pedestrian oriented communities has been shown to be one means of helping to effectively address the rise of these non-communicable diseases.

- 11.** Active transportation networks and investments in supporting infrastructure will be a key consideration in transportation and land use planning decisions, and will form a core localised component of the multimodal transportation network illustrated on Map 11.
- 12.** Active transport routes will be developed in those coastal communities served only by coastal roads, to provide safe, efficient, and rapid mass-evacuation routes from vulnerable low-lying communities to safer, high-ground staging areas in the event of imminent natural hazard threats and to provide ingress/egress routes for disaster risk response and recovery.
- 13.** The physical design and layout of communities will be planned to support active transportation, in particular to provide safe, comfortable, and reliable travel options for pedestrians and cyclists.
 - a) Where possible, communities will be planned with an interconnected street network that facilitates movement by active transportation modes within, between and to and from neighbourhoods and communities.
 - b) Neighbourhood streets will be designed to prioritise pedestrian safety, recognise use of the street for informal recreation and minimise through traffic.
 - c) Active transportation routes should be planned in Centres and along Mixed Use Corridors, such that people are able to move and access a variety of local services, community amenities, retail shops, and other commercial uses by walking or cycling.
 - d) Priority Pedestrian Linkages and Pedestrian Improvement Areas will be identified through the Community Plans, and will be designed as areas with highly walkable and safe environments, including but not limited to Mobility Nodes, markets, parks and public spaces and major institutions. In particular, continuous sidewalks, street lighting, tree canopy and shade, benches and safe crossings should be integrated into street design, development and infrastructure plans
- 14.** A network of multi-modal trails will be developed over time, in partnership with interested organizations, advocacy groups, landowners and developers. The Government will seek opportunities to secure easements along the network of multi-modal trails to ensure that a continuous network can be achieved. The opportunity to incorporate supporting infrastructure, such as bicycle parking, shade/rest areas, and trail maps, will be explored, as well as an opportunity to create an Active Transportation Node/ Trailhead as identified on Map 11.



➤ The Trailway, Photo by Courtney É. Jordan

2

STRATEGIC POLICIES

- ## 2.4 ADVANCING MOBILITY AND ACCESSIBILITY



- PHYSICAL DEVELOPMENT PLAN (2023)

International Gateways

By definition, Small Island Developing States (SIDS) do not share national borders and are therefore limited to air and sea transport options for the movement of imports and exports. Barbados' international air- and seaports are critical to the success and survival of a number of industries and sectors as components of industry distribution and value chains. The developmental significance of Barbados air- and seaport operations is demonstrated by the high levels and dependency on imports through these gateways. A less frequent but equally important function performed by SIDS' international ports is to serve as the gateway for international emergency response and recovery support in the event of a national disaster. As strategic transport points for disaster response, recovery and restoration, Barbados' international gateways are central national security elements, and a critical component of the full transportation network.

- 17.** Connectivity within, to and from each of Barbados' international gateways will be strengthened, including the Grantley Adams International Airport (GAIA) and the Bridgetown Port. Opportunities for these high traffic generating gateways to develop into multimodal transportation hubs that are part of a connected, resilient efficient sustainable transportation network across Barbados will be promoted.
- 18.** An effective network of roadways, highways, transport and access points into and out of international gateway areas will be achieved by:
 - a) Planning for the efficient movement of people into and out of these ports by improving the interface between international gateways and connecting transportation (roads, transit, pedestrian) infrastructure;
 - b) Connecting international gateways with Barbados' broader multimodal transportation network, ensuring integration with fast, efficient, and reliable public transport service and providing active transportation infrastructure; and
 - c) Providing designated areas for fast and efficient passenger drop-off and pickup. This will include dedicated taxi stand parking areas located near international arrival and departure points.

- 19.** Resiliency measures for Barbados' international gateways will be implemented. Port and airport resiliency and access to supply chains will be considered, recognising that the emergency response point of GAIA is located outside of the 100 year floodline. The Government will:
 - a) Plan for redundancy and alternates to the ABC Highway that connect with the GAIA;
 - b) Develop formal mechanisms for the sustained collaborative engagement of supply chain logistic infrastructure providers to plan and design connected logistics hubs that are resilient to evolving, location specific, natural hazard and climate impacts; and
 - c) Plan for future airport landing or airport facilities to provide redundancy and allow for emergency preparedness.

Parking Management

A parking management programme is any plan by which parking space is provided, controlled, regulated, or restricted in any manner. The absence of adequate parking management results in increased traffic congestion with motorists searching out parking spaces, and with inconsiderate parkers. Important gains in road capacity may be achieved through improved parking management, loading and unloading control and enforcement. Uncontrolled parking, loading and unloading of commercial vehicles reduces the capacity of roads to accommodate moving traffic.

- 20.** In all Centres, a Parking Management Strategy should be prepared to minimise the amount of land occupied by parking and to ensure adequate levels of parking are provided through the day and week to appropriately support development.
- 21.** The provision of short-term public parking spaces should be prioritised and the availability of long-term public parking spaces limited, particularly in the National Centre and the Regional Centres.
 - a) Limits on street parking time will be limited as a means of discouraging long-term use.
 - b) Residents living in proximity to a public parking space may be granted street parking permits allowing priority access to parking spaces and exemptions from regulations limiting duration of parking stay.

- 22.** In Community Cores, Mixed Use Corridors and Nodes, the number of required parking spaces for land uses may be reduced through the demonstration of a lesser standard through the development process and/or implementation of a shared parking approach.
- a) Adjacent properties with different peak parking demands will be permitted to share automobile parking resources thereby reducing excess parking spaces.
 - b) To implement shared parking measures, landowners must demonstrate that land uses have excess parking that could be shared with other surrounding businesses to serve their parking needs.
 - c) Properties taking a shared parking approach will execute an agreement to share parking resources outlining conditions for how parking related costs will be shared.
 - d) In general, major development will provide adequate on-site visitor and employee parking, as determined through the parking requirements set out by PDD and through a Transportation Impact Assessment.
- 23.** Alternatively, in locations where it is not physically feasible to provide on-site parking for all individual developments, such as the National Centre and Regional Centres, developers may, with the consent of PDD, provide off-site parking spaces on adjacent land for the sole use employees and visitors. Such parking spaces will be provided at the sole expense of the developer.
- 24.** All parking areas shall provide one disabled parking space for every 25 or fewer regular spaces, up to a maximum of 10 disabled spaces.
- 25.** Designated taxi stands will be located to ensure they are in proximity to passengers while not impeding the flow of surrounding traffic routes.
- a) Taxicab parking stalls will be located along sections of specified streets to be determined at the local Community Plan level.



➤ Public parking lot, Speightstown



➤ The Oistins Jetty may be considered for water transport

Water Transport

- 26.** The Government will plan for the potential of developing future water-based transportation opportunities, such as a ferry or water taxi business, in communities across the island including Speightstown, Holetown, Bridgetown and Oistins.
- a) Water-based transportation will primarily serve the movement of people instead of goods, and will be developed to connect to key coastal destinations across Barbados.
 - b) Strategic locations will be identified at the Community Plan level for the development of docks, piers, and other necessary infrastructure to facilitate future water-based transportation options.
 - c) The interface between water based transport and land based transportation will be designed to ensure ease of transfer and transition between both modes.
 - d) Measures to ensure that water transport does not interfere with the local fishing industry will be required.
 - e) The Constitution River is recognised as a potential water transport corridor, for both commuting and tourism purposes.
- 27.** The Government will seek opportunities to support the private sector in the provision of water transport.

➔ 2.5

Planning for National Infrastructure

National infrastructure includes the full range of transportation, communication, water, sewer, renewable energy and waste management facilities that are essential to the health, safety, economic success and environmental health of Barbados. This section sets out policies to guide the future design, development, upgrading and location of these facilities.

This chapter is comprised of nine sections:

- **Overarching Policies**
- **Renewable Energy and Energy Conservation**
- **Air Transportation**
- **Port of Bridgetown**
- **Water and Wastewater**
- **Solid Waste Management**
- **Road Network**
- **Active Transportation and Walkability**
- **Information Technology, Communications and Transmission Facilities**



➤ Constitution River, Bridgetown

Overarching Policies

1. All national infrastructure will be planned, built and maintained in a manner that optimises integration with development and efficiency in service provision.
2. The impacts of the climate crisis will be considered in all aspects of national infrastructure planning.
3. The Government will create Comprehensive Disaster Management Strategies related to national infrastructure including the identification of areas of risk of national infrastructure failure and built-in redundancies to increase resiliency against severe weather events.

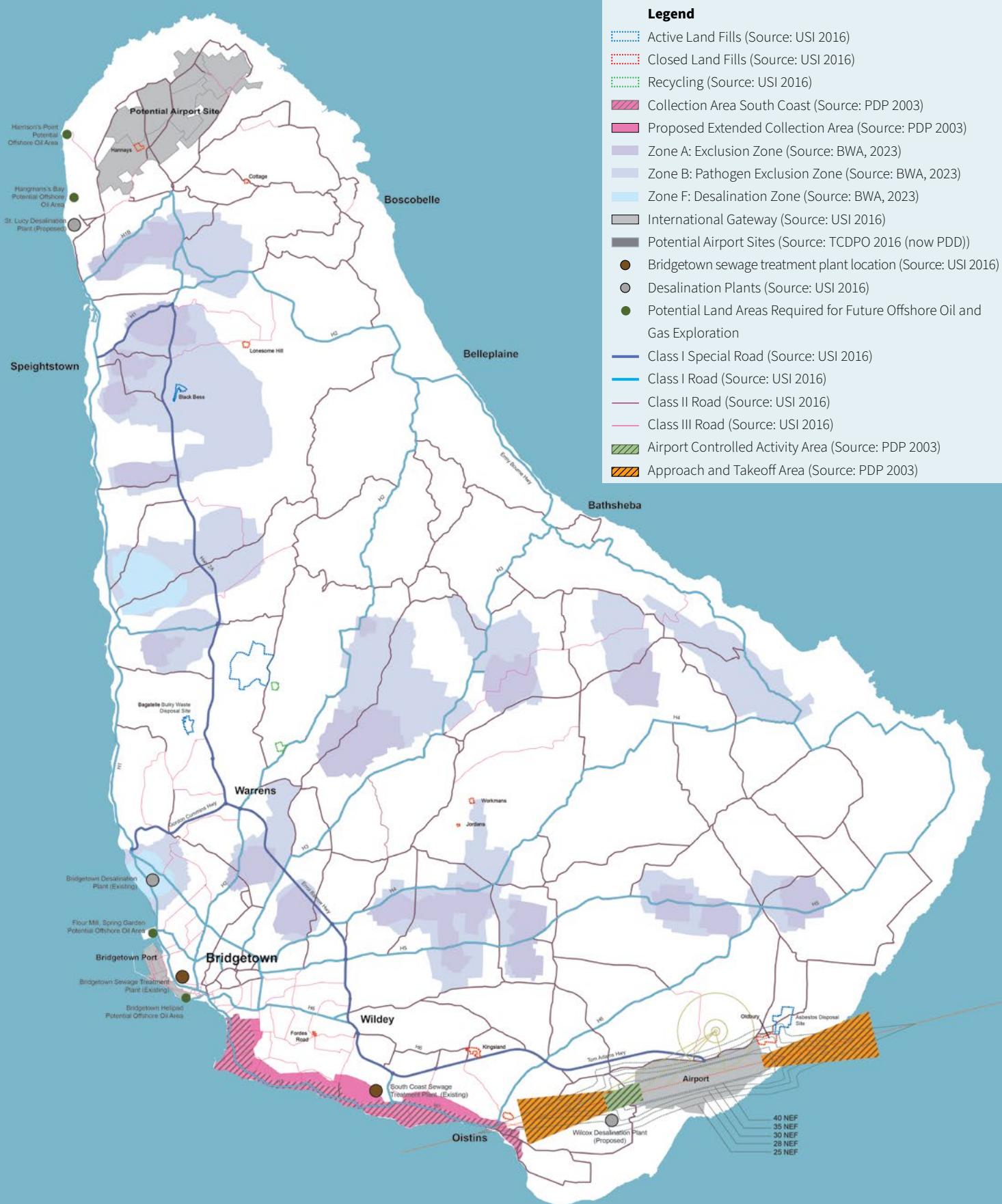
Renewable Energy and Energy Conservation

Renewable energy and energy conservation are of critical importance to the sustainability of Barbados and are recognised as effective means of addressing the climate crisis and reducing national levels of greenhouse gas emissions. In addition to their climatic impact, Barbados' heavy reliance on the import of fossil fuels contributes to the nation's vulnerability to the external global energy market. Renewable energy and energy conservation are also essential to Barbados' national commitment to developing a green and blue economy, recognising the potential for creating new jobs, increasing productivity, and realising positive health benefits.

The Government of Barbados has established a target to achieve a 70% reduction in gross GHG emissions by 2030 with a view to achieve 100% reduction in gross GHG emissions (economy wide) by 2035. Additionally, Barbados has joined numerous other nations in ratifying the United Nations' Paris Agreement, which is a multilateral environmental obligation requiring participants to take determined action to combat the effects of the climate crisis, and signed on to the Glasgow Climate Pact in 2021. One such action is the 2021 Nationally Determined Contribution, based on the 2019 National Energy Policy and its Implementation Plan, which aligns Barbados with other Small Island Developing States (SIDS) and members of the Alliance of Small Island States (AOSIS) by significantly expanding ambition and increasing the national contribution to mitigation to be entirely compatible with the objectives of the Paris Agreement.

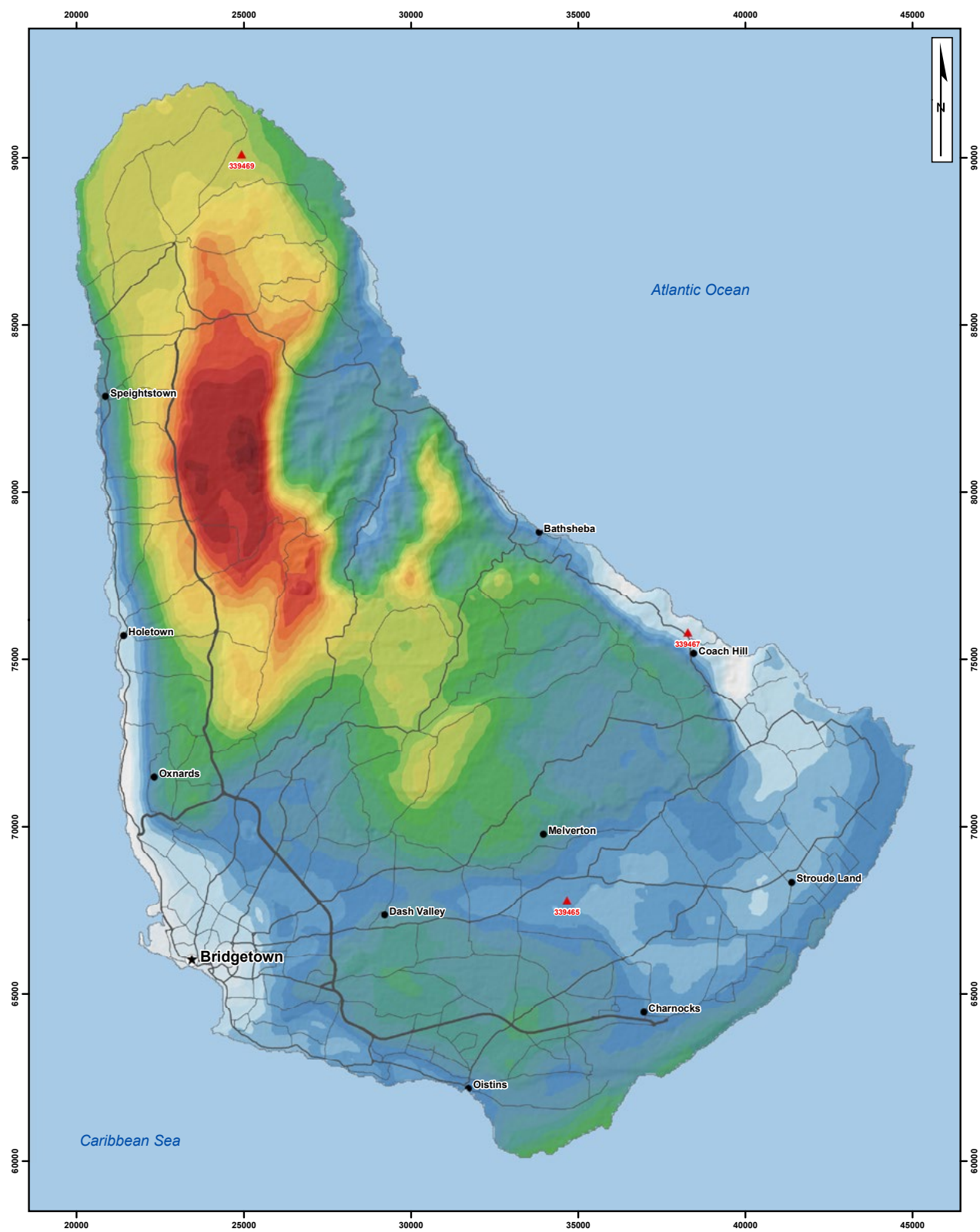
Barbados has made significant progress in the adoption of small-scale renewable energy technologies since the 1970s. Solar water heaters have been widely adopted, and there are now approximately 40,000 of them in Barbados, with more than 30,000 domestic installations. The policies of this Physical Development Plan (2023) establish a framework to build upon this success and continue Barbados' transition to the use of renewable energy.

4. The Government will promote the use of renewable energy, a reduction in the use of fossil fuels and overall energy conservation as part of Barbados' transition to a green and blue economy.
 - a) The Government will encourage research and development of renewable technologies including solar, wind and geothermal.
 - b) Both large-scale dedicated renewable energy generation projects and small-scale renewable energy infrastructure integrated with other land uses will be encouraged.
 - c) The Government will continue to define and protect renewable energy zones that can best optimise wind and solar energy generation and minimise land use conflicts and to identify appropriate triggers and required studies for Environmental Impact Assessments.
 - d) The Government will seek to foster an understanding of the benefits of renewable energy through an education, consultation and engagement programme related to renewable energy development.
 - e) Technical guidance documents that provide detailed policy and practical direction for renewable energy implementation will be developed by the Ministry of Energy, Small and Business and Entrepreneurship in consultation with the Environmental Protection Department and the Ministry of Agriculture, Food and Nutritional Security and other relevant agencies.
 - f) The Government will seek new financial instruments to facilitate access to renewable energy technologies.
5. Renewable energy development sites will be protected from sensitive and incompatible land uses and developments.



MAP 12:
National Infrastructure

- 6.** More detailed study of the potential wind zones shown on Figure 7 will be undertaken. Feasibility of these zones and protection measures for their utilisation for wind energy generation will be considered in the National Renewable Energy Strategy identified in policy 2.5.4 c).
- 7.** The following renewable energy installations are encouraged, usually do not require express planning permission and are subject to all applicable standards under the Planning and Development Act, (2019), as amended, and the Development Order provisions:
 - a) Roof-mounted photovoltaic systems for micro-generation;
 - b) Ground mounted photovoltaics for micro-generation;
 - c) Hurricane rated micro-generation scale wind turbines for domestic use, and
 - d) Hurricane rated micro-generation scale wind turbines as an accessory structure in the Food and Agriculture area.
- 8.** Proposals for large-scale renewable wind energy development installations or projects:
 - a) will be subject to an Initial Environmental Impact Evaluation and may be subject to a targeted or full Environmental Impact Assessment.
- 9.** Proposals for large-scale renewable solar energy development installations or projects:
 - a) will be subject to an Initial Environmental Impact Evaluation and may be subject to a targeted or full Environmental Impact Assessment.
- 10.** In Impact Assessments determining the appropriateness of renewable energy development projects, consideration will be given to, but not limited to: scale and size of renewable energy development, bedrock geology, proximity to other conflicting land uses, tonal noise, shadow flicker, impacts on historic/heritage/landscape values including cultural landscapes, core components of the Natural Heritage System, biodiversity (birds, bats, etc), bird migratory routes, telecommunication and electronic infrastructure, electromagnetic interference, safety and air traffic control - interference, airport operations, buffer zones or setback distances from adjoining land uses and shadowing.
- 11.** The Government will encourage renewable energy facilities to be combined with another compatible land use such that dual land uses are permitted on a single property, subject to the following criteria:
 - a) The renewable energy use is considered a secondary use on a property that is already designated for a primary use;
 - b) All land use regulations as prescribed by this Physical Development Plan (2023) that apply to the primary use as well as for the renewable energy project must be satisfied. Where potential land use conflicts arise, the policies and permissions of the primary use shall prevail; and
 - c) In the case of agricultural land, the policies of Section 2.2.1 and 3.1 with regard to renewable energy are met.
- 12.** The Government will encourage the use of alternative fuels and electric vehicle technology in the transportation sector to reduce greenhouse gas emissions. Electric Vehicle charging stations are encouraged in parking lots on public and private land across the island.
- 13.** The Government will encourage energy conservation practices throughout all sectors of the economy.
 - a) Energy conservation within the hotel sector is identified as having particular potential and will be a focus of conservation efforts.
 - b) Pilot projects for renewable energy in government and institutional buildings will be explored to demonstrate the potential to implement energy conservation and integration of renewable energy in development.
- 14.** Potential land areas required to support future offshore oil and gas exploration have been identified on Map 12 and will be protected for this purpose.
 - a) Until such time as the lands are required for this purpose, all existing and planned uses that are in keeping with this Plan, and that do not preclude future use for this purpose will be permitted.
 - b) An EIA will be required to ensure the use is compatible with surrounding uses and any potential conflicts are mitigated.



Legend

▲ Potential Meteorological Mast

Average Annual Wind Speed at 80 m AGL* (m/s)



<6.8
6.8-7.0
7.0-7.2
7.2-7.4
7.4-7.6
7.6-7.8
7.8-8.0
8.0-8.2
8.2-8.4
8.4-8.6
8.6-8.8
8.8-9.0
>9.0

*Above ground level

FIGURE 7.

Optimal zones for renewable wind energy. Average Annual Wind Speed at 80 metres above ground level. (Source: IDB, 2020)

Air Transportation

- 15.** Grantley Adams International Airport (GAIA) is designated as an International Gateway in the Island Settlement Structure and will be protected as a nationally significant site that is a major economic asset, transportation node and important place of employment and economy.
- 16.** Lands surrounding GAIA will be planned for complementary and compatible uses, in particular commercial and industrial uses that benefit from being located in proximity to an International Gateway.
- 17.** In order to address the issues of noise, safety, and the potential effects of long-term exposure to radar emissions associated with development in proximity to GAIA, the following policies apply within the referenced zones identified on Map 12: National Infrastructure:
 - a) There shall be no subdivision of land where vacant lots will be created within the Approach and Take-off Zones (NEF 25 to 28 and NEF 28 to 30), NEF 30 to 35 and NEF 35 to NEF 40.
 - b) One single family house only per lot or parcel of land will be permitted in the Approach and Take-off Zones (NEF 25 to 28 and NEF 28 to 30), NEF 30 to NEF 35, and NEF 35 to NEF 40.
 - c) There shall be no new development within the NEF 40 or greater except that which is associated with the GAIA.
 - d) There shall be no development (building) within a 300 metre radius of the Radar Facility.
 - e) The height of any structure which falls within the 300 metre and 1000 metre radius of the Radar Facility will be restricted. The maximum allowable elevation will be determined on an individual basis and based on Barbados Datum. Roof covering and any material used to erect means of enclosure shall be non-metallic.
 - f) There shall be no development in the radar line of sight cones except that which is associated with the GAIA.



➤ Grantley Adams International Airport

- 18.** The Government will promote resilience and disaster risk reduction in the air transport sector.
- a) GAIA will be recognised as an essential piece of infrastructure for climate crisis resiliency and disaster risk reduction as one of the International Gateways through which food and other imports enter Barbados.
 - b) The Government will explore and plan for future air landing or airport facilities to allow for emergency preparedness or for long term air transportation needs of Barbados.
 - i) A future potential airport site development zone is identified on Schedule 12 for this long term purpose.
 - ii) All land use and development within this zone shall not preclude this area for future airport use.
 - iii) Until such time as the feasibility, design and construction of any future airport facility has been determined, all existing and planned uses located within this Zone, that are in keeping with this Plan, and that do not preclude future airport development will be permitted. More specifically, Food and Agriculture uses are permitted.
 - iv) Future airport development would be subject to an Environmental Impact Assessment.
- 19.** The Bridgetown Heliport will continue to function as a tourism-focused facility located in proximity to the Bridgetown Port at the mouth of the Careenage. To ensure that it remains compatible with the objectives of planning policy for the development of central Bridgetown, the following policies apply:
- a) The Helipad function is permitted at grade or integrated onto the roof of a development, subject to air safety standards.
 - b) In order to minimise noise disturbances, all proposed hotels, housing or community uses within 200 metres of the boundary of the heliport site will undertake, to the satisfaction of the Director of Planning and Development, a noise impact study to assess the potential noise disturbance and appropriate mitigation methods.
 - c) There shall be no development of a hangar and maintenance facility.
 - d) There shall be no garaging and maintenance of helicopters at this site.



➤ Solar powered BWA pumping facility, St. Peter

Bridgetown Port

- 20.** The Bridgetown Port is designated as an International Gateway in the Island Settlement Structure and will be protected as a nationally significant site that is a major economic asset and important place of employment.
- 21.** Lands surrounding the Bridgetown Port will be planned for complementary and compatible uses, in particular commercial and industrial uses that benefit from being located in proximity to an International Gateway.
- 22.** To maximise the economic benefit of the Bridgetown Port, the Government will:
 - a) Assign a high priority to ensuring that the facilities can accommodate current and projected demands for freight handling and berthing of cruise ships;
 - b) Assign a high priority to improvements to transportation links between the Bridgetown Port and central Bridgetown, as well as proposed water transport between the Bridgetown Port, Speightstown and other communities on the west and south coast for cruise ship passengers;
 - c) Assign a high priority to improving road infrastructure serving the Bridgetown Port to ensure efficient access for truck traffic;
 - d) Continue to explore opportunities for expansion of the port and improvements to the efficiency of port operations;
 - e) Plan and protect for Port improvements to existing facilities and the potential for upgrades to the facility as envisioned in the Port of Bridgetown Master Plan;
 - f) Promote the implementation of sustainable infrastructure measures such as energy conservation, utilisation of renewable energy and waste management and reduction strategies; and
 - g) Plan for the future or potential of separation of passenger and freight ship docking facilities.
- 23.** The Bridgetown Port will be recognised as an essential piece of infrastructure for climate crisis resiliency and disaster risk reduction as one of the International Gateways through which food and other imports enter Barbados.

Water and Wastewater

- 24.** In the context of Barbados' water scarcity, the distribution of water and treatment of sewage are recognised as key activities within the overall water resource cycle described in Section 2.2.3, Figure 5.
- 25.** To promote water conservation and the reduction of water leakage, the following measures will be introduced:
 - a) Ongoing rehabilitation of the existing distribution system where the system is in need of improvement; and
 - b) Metering of all water abstraction points, including irrigation and other wells used by industry.
- 26.** The Government will plan for water desalination as part of a water resource resiliency strategy.
 - a) Lands surrounding desalination plants will be included within Groundwater Protection Zone F and subject to the policies of that zone, including restriction on uses that can impact desalination plants such as but not limited to hydrocarbons.
 - b) Potential areas for abstraction will be identified in conjunction with the Barbados Water Authority, Ministry of Transport, Works and Water Resources.
 - c) An Environmental Impact Assessment will be required for all desalination projects.
 - d) Where options exist for considering alternative locations for desalination plants, these should be subject to an Environmental Impact Assessment.
- 27.** Every new and redeveloped dwelling (whether individual or in an apartment block) should have a separate metered connection to the potable water supply.
- 28.** The Government will support the use of renewable energy sources to reduce the high level of energy consumption within the water and wastewater sector.
- 29.** All new developments within sewered areas will be connected to the sewerage system.
- 30.** The Government will provide appropriate sewage infrastructure to meet future demand for water and wastewater.
- 31.** The Government will encourage the production and use of reclaimed water from wastewater for appropriate uses, as outlined in the Water Reuse Bill (2023).
- 32.** All new hotel developments are required to treat their own wastewater with a system/process that meets the Environmental Protection Department's standards for sewage effluent.
 - a) The effluent criteria shall be included as part of the permission and will be used as the basis for monitoring of compliance.
 - b) The owner/operator shall monitor the effluent and shall regularly report the results and performance of the plant, noting any problems and proposed remediation, as specified by the Environmental Protection Department. In the case of any significant malfunctions, the owner/operator shall be required to immediately notify the Environmental Protection Department.
 - c) The Director of Planning and Development will consider the comments of the Environmental Protection Department in issuing planning permission for such development, and may attach a condition to the planning permission relating to requirements for effluent criteria to be achieved by the treatment plant.

Solid Waste Management

- 33.** The Government will promote conservation and waste reduction programmes and practices with respect to solid waste management, in keeping with the Barbados' Integrated Solid Waste Management Programme (2007). As a Small Island Developing State, waste reduction is recognised as a key objective for Barbados.
- 34.** The Government will consider a full range of potential solid waste management strategies, including the use of waste as a source of energy.
- a) Local waste and education centres will be encouraged in partnership with institutions and local communities in Centres.
 - b) Potential waste-to-energy plant sites may be identified. Appropriate buffers from surrounding land uses will be put in place and infrastructure requirements to service such a facility identified.
 - i) An Environmental Impact Assessment will be required for any proposed waste-to-energy plant to ensure the site is compatible with surrounding land uses and ensure any potential conflicts are mitigated.
- 35.** To ensure the sustainability of waste management operations and compatibility with surrounding uses, the following policies will apply for any development of residential, community and other sensitive uses within 200 metres or all other uses within 100 metres of an operating waste disposal site, landfill site or transfer site and to all development within 50 metres of a closed waste disposal site:
- a) The applicant will undertake a planning investigation to show to the Director of Planning and Development that no significant and undue adverse impacts from the waste disposal site will affect the proposed development. If negative impacts are present, the applicant will be required to demonstrate that appropriate mitigation measures can be undertaken to reduce the impacts to acceptable levels.
 - b) Where the Director of Planning and Development, in consultation with relevant regulatory agencies, considers it appropriate, the threshold distances referenced above can be reduced.
- 36.** All landfills, waste disposal and transfer sites will be required to undertake baseline, operating and post operating environmental monitoring programmes and closure plans.
- 37.** Proposals to develop new waste disposal facilities will be subject to the following policies:
- a) For all new landfills, disposal sites, and transfer sites (including hazardous material storage and disposal) to be operated by the Government and its agencies or by the private sector, an Environmental Impact Assessment will be required.
 - b) In general, landfill sites will not be acceptable close to residential uses, and all community and social uses. Specific separation distances would be dependent on the particular site and development characteristics, on any specific mitigation methods proposed for the landfill or waste disposal site, and any specific matters referred to in the Environmental Impact Assessment.
 - c) New landfills will not be permitted in the National Park, in Natural Heritage Conservation Areas, or in Cultural Heritage Conservation Areas.
 - d) A proposal for a new or expanded landfill, waste disposal or transfer site will only be permitted if the following conditions are met:
 - i) The adverse environmental, social or economic impacts of the proposal can be avoided or mitigated; and
 - ii) A detailed end-use plan is prepared, documenting the proposed uses for the site after the landfill operation has ceased, as well as appropriate strategies for closing, rehabilitating and restoring the site have been prepared to the satisfaction of the Director of Planning and Development, in consultation with the Environmental Protection Department.

- 38.** Landfill sites will be restored after closure in accordance with international best practice and in keeping with the Barbadian landscape.
- a) Once restored, former landfill sites may be suitable for some restrictive development after a geotechnical survey has been undertaken.
 - b) Closed landfill sites that have not been decommissioned according to an approved end use plan will be fenced off from the public for a minimum of ten years. During this period, landscaping of the site for amenity purposes will be permitted but no development of any type, including parks, open space and recreation, will be allowed. After 10 years, a reassessment of the site may be appropriate after a geotechnical survey has been undertaken to determine the stability and safety of the site.
- 39.** No storage, disposal or transfer of hazardous material will be permitted in Zones A and B Groundwater Protection Areas. This applies to both solid and liquid hazardous materials. Notwithstanding this policy, transfer of hazardous material will be permitted along sections of the ABC Highway and the Ronald Mapp Highway which pass through Zones A and B Groundwater Protection Areas.
- 40.** All requirements and restrictions described above are applicable to the use of disused quarries for the disposal, transfer and storage of all waste and hazardous waste.

Road Network

Barbados has a dense road network system (1,600 km of roads in an island which is 430km²) with five classes of roads, from highways to secondary roads (Ministry of Transport, Works and Water Resources, Strategic Plan 2017). The highway network consists of seven major highways that radiate from Bridgetown as well as the ABC Highway, Spring Garden Highway, Ronald Mapp Highway, Ermy Bourne Highway and Charles Duncan O'Neal Highway which do not radiate from the city but are also critical transportation assets. The road network is a fundamental component of the overall transportation network and optimising the utilisation of the road reserve for mobility and infrastructure provision in an efficient and resilient manner is critical. An amendment to the following policies and related mapping may be required to reflect updated road classifications as directed by the Minister responsible for Planning and Development.

41. All roads in Barbados are classified in accordance with the following hierarchy, shown conceptually on Map 12: National Infrastructure:

- a) Class I Special: Primary Distributors – National Highways.
- b) Class I Secondary Distributors – All other national highways and routes linking all principle communities and uses.
- c) Class II District Distributors – Local routes providing local links to the national highways or the national routes.
- d) Class III Local Distributors – All other through routes and main access routes.
- e) Class IV Access Roads – All other roads used mainly for providing frontage for the development of land.

42. The Road Reserve and Building Line standards for all new development and redevelopment schemes should be as follows:

	Road Reserve:	Building Line:
Class I Special	6.40 metres	15.24 metres
Class I	6.40 metres	9.75 metres
Class II	5.18 metres	9.75 metres
Class III	5.18 metres	9.75 metres
Class IV	3.96 metres	5.79 metres

- 43.** Existing development will not normally be affected by the above road reserves.
- 44.** All new roads and subdivisions must be classified and designed in accordance with the standards of policy 2.5.41 above and be designed to consider multimodal function, safety and resiliency.
- 45.** All new public roads and public road improvement schemes that exceed one or more of the following thresholds will require and Environmental Impact Assessment:
 - a) New roads over 500 metres long;
 - b) New or improved roads or junctions taking through eminent domain at least 10 habitable dwellings or 10 other buildings in active use; and
 - c) Improved roads or junctions that widen existing rights-of-way into privately owned land by at least 3 metres for a length of at least 100 metres.
- 46.** Within a Cultural Heritage Conservation Area, new roads and improved roads or junctions that widen existing rights-of-way will require the submission of a Heritage Impact Assessment.
- 47.** A Transportation Impact Assessment (TIA) will be required to determine the impact of additional traffic introduced as part of any proposed development that meets the following criteria:
 - a) Development containing 100 or more new residential lots; and
 - b) Any development over 2,000 square metres located within a Mixed Use Corridor.
- 48.** In planning for transportation corridors, to ensure the sustainability and resiliency of infrastructure systems (water, wastewater, electricity, etc), the Government, where possible, will protect for dedicated underground utility corridors within the road reserve.

Active Transportation and Walkability

As described in Section 2.4, improving walkability is essential to creating healthy communities across the island and will be a priority. The lack of sidewalks presents a growing threat to the health and safety of Barbadians as congestion increases and the population ages. The following policies will apply to the provision of sidewalks and other pedestrian facilities:

- 49.** It is the long term that all Calss I Special, Class I and Class II Roads will have sidewalks on both sides of the road. Sidewalk will be 1.5 or 2.0 metres wide, depending on site characteristics.
- 50.** In respect of Class III and Class IV roads, separate sidewalks will be provided on one side of the road only and will normally be 1.5 metres wide. Sidewalks should be created as development and redevelopment occurs.
- 51.** Sidewalks will be provided in Priority Pedestrian Linkage areas and for a minimum of 100 meters on both sides of the road from the entrance of all Public Schools or seniors housing developments adjoining Class I Special, Class I, Class II and Class III roads.
- 52.** To improve accessibility for people with disabilities, all new and rebuilt sidewalks should make provisions for wheelchair access at intersections and designated crossings.
- 53.** In order to retain historic, architectural or townscape character, the Building Line requirements of policy 2.5.42 may be relaxed on agreement with the Planning and Development Department and Chief Technical Officer, Ministry of Transport, Works and Water Resources for development and redevelopment within Cultural Heritage Conservation Areas and selected other urban areas.
- 54.** It is the long term aim to develop the network of cycling infrastructure. Cycling infrastructure in the form of bicycle lanes or shared use paths may be required as part of development on Class 1 Special and Class 1 roads subject to the discretion of the Director of Planning and Development.
- 55.** All vehicular access and egress points from new development or redevelopment should be designed to minimise the possibility of road accidents and conflicts between pedestrians, cyclists and automobiles.
- 56.** Development or redevelopment will be designed to meet the following regulations with respect to access points:
 - a) Shared access points to Class I Special, Class I, Class II and Class III roads for commercial industrial and institutional properties through the use of service roads or rear lanes will be encouraged where feasible;
 - b) Access points will be located to minimise disruptions to vehicular and pedestrian traffic patterns; and
 - c) Access points will be restricted to areas with good sight lines in order to maximise visibility and safety.
- 57.** Street vending, while an important source of income for farmers and other self-employed workers, can constitute a traffic hazard when located along major roads and highways. Consequently, street vending along Class I Special, Class I and Class II roads will only be allowed through special permits issued by the Government. Among other things, these permits will specify the locations where street vending is allowed.

Information Technology, Communications and Transmission Facilities

It is the long term aim of the Physical Development Plan to reduce the visual intrusion of existing and proposed communication and transmission facilities. This will involve careful control over all new facilities and a programme, where feasible, of reducing the environmental impact of existing facilities. In Cultural Heritage Conservation Areas and Natural Heritage Conservation Areas, both inside and outside the National Park, it will be necessary to consider the visual impact of the facilities on the cultural heritage assets and natural environment.

- 58.** Within Cultural Heritage Conservation Areas, all existing electricity power lines (of any size) and all existing communication lines should be included in a long-term programme of undergrounding.
- 59.** The Government will facilitate the provision of information and communications technology infrastructure and smart city infrastructure to support the growth of the Barbadian economy.
- 60.** Designs and engineering details for telecommunications masts/monopoles, telecommunications towers, and rooftop antennae shall be submitted to the Director of Planning and Development for approval and shall meet the following criteria:
 - a) Telecommunications towers shall meet the technical emissions standards set by the regulatory agency, and their radio frequency emissions shall not be harmful to the environment or the health of residents.
 - b) No telecommunications tower shall be erected closer than one hundred (100) feet (30 metres) from any Class I Special, Class I, Class II or Class III road.
 - c) No telecommunications tower shall be sited less than three hundred and fifty (350) feet (107 metres) from any school, park, playground, daycare centre, health care facility, senior citizens home or any place where human beings are domiciled.
 - d) Roof-mounted antennas shall not extend higher than fifteen (15) feet above the apex of the roof.
 - e) Telecommunications masts shall be appropriately camouflaged to blend in with the natural environment to the satisfaction of the Director of Planning and Development.
 - f) Telecommunications towers shall be landscaped and screened from view at ground level from any adjacent lot or street up to a height of ten (10) feet (3.05m) with plantings that provide year round screening.
- 61.** The Director of Planning and Development shall issue conditions to ensure compliance with International Civil Aviation Organisation regulations, the protection of public safety, and the protection of the visual amenity of the area.
- 62.** All telecommunications masts and cellular towers shall be subject to periodic re-inspection. No additions, changes or modifications shall be made to a telecommunications tower unless approved by the Director of Planning and Development.
- 63.** The Director of Planning and Development may at any time request that telecommunications masts or rooftop antennae be moved or re-established at the developer's expense if they are not properly maintained.