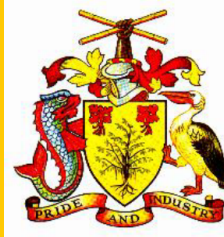


# Barbados Physical Development Plan Amendment

*Towards a Green, Prosperous and Resilient Nation*

## Launch of the Stakeholder Consultation

February 2017



**URBAN  
STRATEGIES  
INC**



ASH Prudentia  
Dr. Christina Cameron  
Environmental Planning Group  
Sir Frank Alleyne  
Dr. Frederick H. Smith

Sir Henry Fraser  
Hydroterra Inc.  
Dr. Karl Watson  
Mr. Leslie Walling  
Mr. Lionel Nurse

Mr. Luther Bourne  
Dr. Malcolm Hendry  
Dr. Marcia Burrowes  
Richard Gill Associates  
Savanta

Photo Credit: David Lewis

# Overview

## 1. The Process

Who has been involved and what is the process?

## 2. The Opportunity

How can the PDP Amendment support a green, prosperous and resilient nation?

## 3. The Imperative

What have we discovered through our due diligence process?

## 4. Draft PDP Amendment: Key Directions

What are the Key Directions in the Plan?

## 5. SEA Process

What were the outcomes of the Strategic Environmental Assessment Process

## 6. The Draft Review Process

How will the community be engaged in the process?

# Team



## Subject matter experts:

Environment

Climate Change

Coastal  
Management

Natural Resources

Agriculture

Green Economy

Tourism

Built Heritage

Archaeology

Infrastructure

Transportation

# The Process

## CONSULTING TEAM

### PHASE 1

Inception  
Meeting & Initial  
Work Plan

### PHASE 2

Analysis &  
Assessment

### PHASE 3

Testing Policy  
Areas for  
Amendment

### PHASE 4

Draft Plan Preparation

Launch and Stakeholder  
Consultation

6 Community Meetings

### PHASE 5

Finalising the  
Plan  
Amendment

Minister  
accepts  
Draft Plan



## GOVERNMENT OF BARBADOS

Formal  
Commenting  
Process

Plan  
Approval

# THE OPPORTUNITY

A wide-angle photograph of a modern outdoor plaza. In the foreground, a man with a red backpack walks towards the right. The plaza features a mix of grey cobblestone and red brick paving. Several people are scattered throughout the scene: some are sitting on red wooden benches, while others are walking. The area is lush with greenery, including large trees and manicured shrubs. In the background, there are modern buildings and a clear blue sky with a few clouds. The overall atmosphere is bright and open.

# The Opportunity

An aerial photograph of a coastal city, likely in the Caribbean, showing a dense urban area with a mix of residential and commercial buildings. A harbor with several boats is visible in the lower left. The city is surrounded by green hills and vegetation in the background.

**An island of tremendous core assets and increasing levels of vulnerability**

**New key initiatives and international commitments**

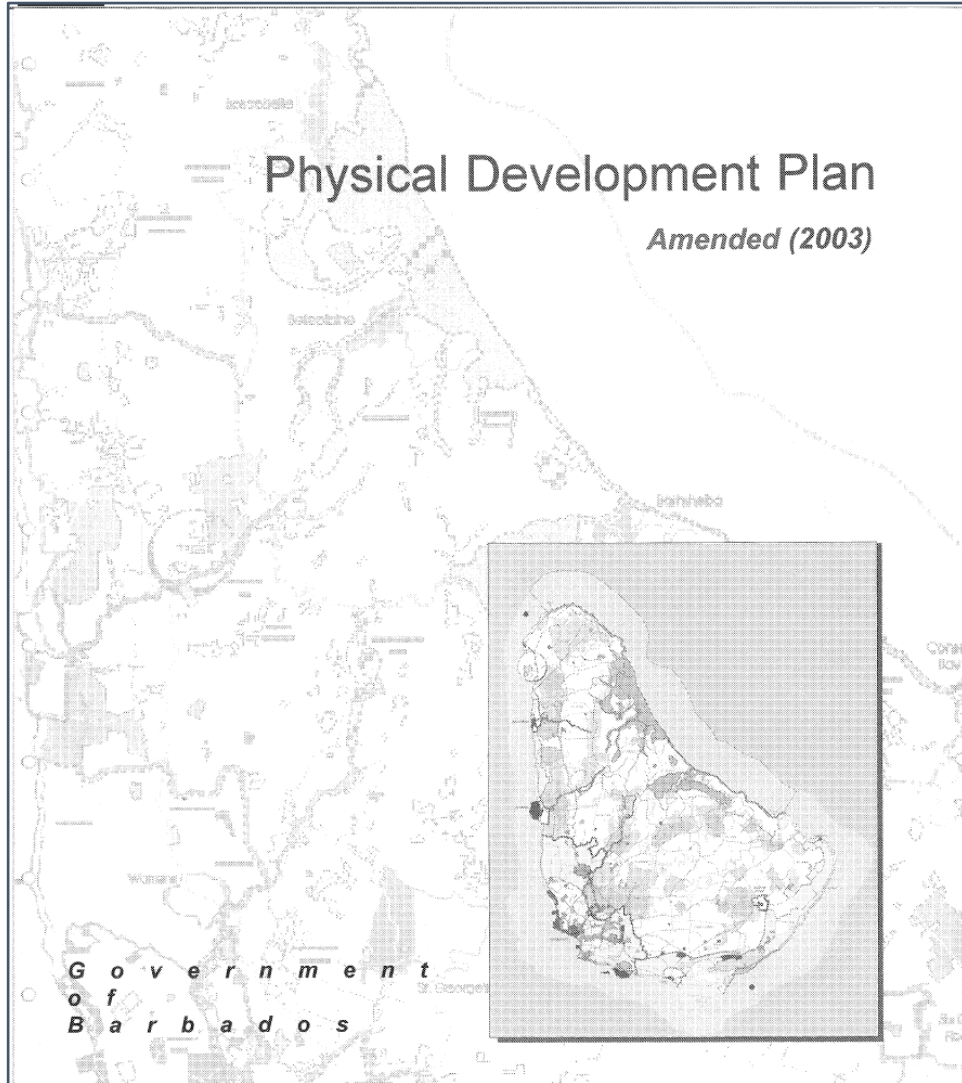
**Significant changes to the pattern, density and nature of development**

**Recognizing this is an island of scarcity: food, water and land**

**An opportunity to set in place transformational and foundational change**

**Towards a Green, Prosperous and Resilient Nation**

# Amending the PDP (2003)



Growth Management and Agricultural Preservation

Housing

Heritage

Environment

Infrastructure

Land Use

Parks and Open Space

Community Plans

National Park Plan

# What has changed since 2003?

- **UNESCO World Heritage** Designation: Historic Bridgetown and its Garrison
- Government **commitment to sustainability** – Habitat III and the Emerging Sustainable Cities Initiative
- Focus on **climate change and resiliency** with new international commitments – COP 21 Paris Agreement; Habitat III
- Prioritisation of the **green economy** – Green Economy Scoping Study

- Ongoing and successful implementation of the **National Park Plan**
- Commitment to **renewable energy** initiatives: 30% renewable energy by 2029
- Rising concern about **chronic non-communicable diseases**
- **Steady state growth** with an aging population

An aerial photograph showing a coastal town with numerous houses and buildings, surrounded by large agricultural fields. The ocean is visible in the background. The text "THE IMPERATIVE" is overlaid in large, white, bold, sans-serif capital letters across the center of the image.

# THE IMPERATIVE

# Plan Imperative | An emphasis on outward and lower density growth

Steady state population growth; 2% over the next 10 years



65+ age segment will increase from 11% today, to 25% by 2050



Estimated 20,400 vacant residential lots and 16% vacancy rate in existing buildings



High levels of vacancy in industrial areas

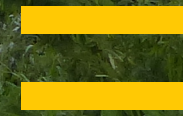
Residential density in the urban corridor declined from 23 people per hectare (pph) to 18 pph between (1983 – 2011)



Number of overall housing units grew by 15% while unoccupied units grew by 118% (1990 – 2010)



64% increase in urban footprint to accommodate 6% population growth from 1991-2013



**No new land needed to accommodate growth in people and jobs**

## Promoting Sustainable Development

# Plan Imperative | Food Scarcity and Health |

\$600 million BBD in food imports each year (2014); 50% of food imports are vegetables, fruits, fish or meat that could be grown locally



Between 1991 and 2013, the amount of agricultural land was reduced by 53%



30,000 acres required for agriculture but only 28,000 acres available



limited days of on-island food supply

Non-communicable diseases estimated to account for over 80% of deaths in Barbados



High rates of diabetes (17%), overweight (37%) and obesity (29%)



**Critical need to increase access to local and healthy food and promote a viable agriculture sector**

## Promoting Food Security

# Plan Imperative | Eroding Environment and Climate Change Projections |

Degradation of the coral reef cover, estimated at less than 10% of historic levels



Increased severe weather events and associated flooding



Decrease in average annual rainfall



Estimated 0.5 metre sea rise over 50 years

Approximately 25% of the population and majority of critical infrastructure lie within 2 km of the coast



Redefined Ground Water Protection Zones A-E



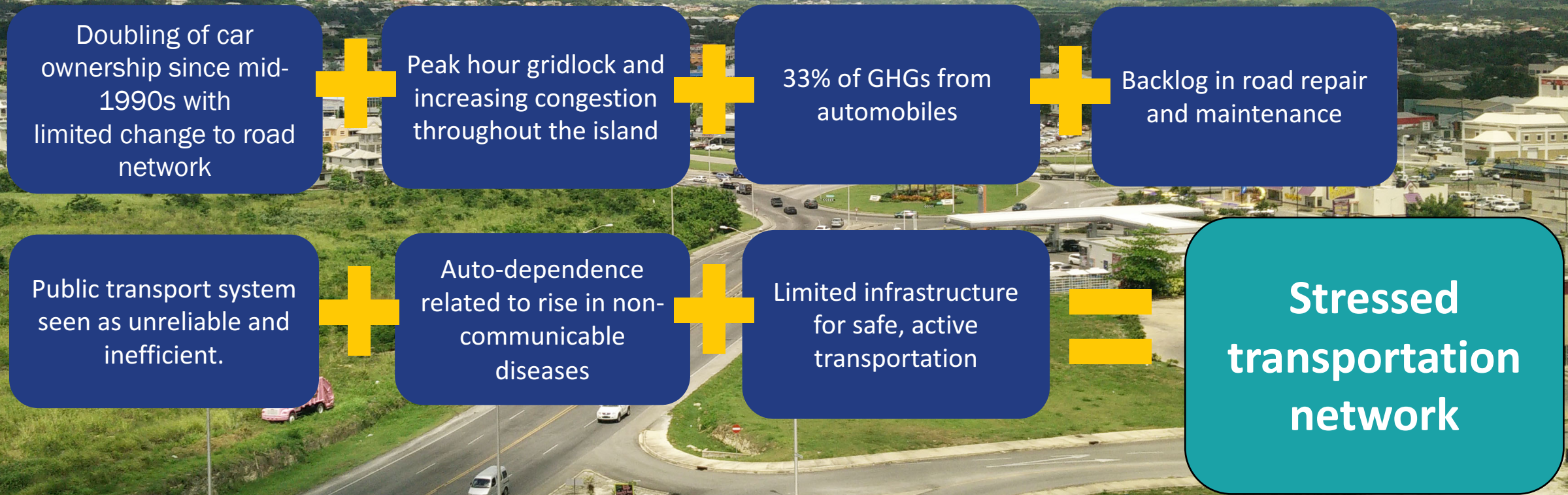
Increased forest cover



**Need for  
Resiliency and  
climate change  
adaptation to be  
a critical and  
cross- sectoral  
lens**

## Protecting Natural Heritage Systems and Introducing Disaster Risk Reduction

# Plan Imperative | Auto-dominance |



## Advancing Mobility and Accessibility

# Plan Imperative | Rethinking economic drivers |

In 1983, 386 heritage buildings were gazetted. Only 5-6 buildings have been added since.



The fine of \$500 for demolition of heritage properties is considered grossly inadequate.



Demolition and retrofit of heritage assets



Limited sand mine resources remaining

Extensive waste and litter dumping



Bridgetown and historic centres in decline as retail, government offices and other businesses move to the fringes



Rise of nature-based, experiential tourism



**Need to protect and leverage Core Assets**

## Greening the Economy

# Plan Imperative | Infrastructure Challenges

Barbados utilizing 98% of all available renewable freshwater sources on the island



62% of the water pumped into the distribution system is not accounted for: non-revenue water.



Increased reliance on desalination; 2 new plants proposed



Single air strip identified as a risk

Capital works and road maintenance over the last three years estimated at approximately USD \$99,000,000; not nearly enough.



90% of Barbados' energy is imported and 97% of it is derived from fossil fuel sources at an annual import bill of \$950 million BBD



Increased development interest in renewable energy matched by GOB target of 30% by 2029



**Infrastructure deficits and dependency**

## Increased Sustainability of National Infrastructure

# KEY DIRECTIONS



# Vision, Principles, Key Directions

## Vision

The Physical Development Plan seeks to achieve a vision for Barbados over the next 10 years as:

- A nation of healthy, safe, distinct and age- and gender-responsive communities sharing a common economic base and community aspiration.
- A nation in which sustainable economic and physical growth are balanced with conservation and restoration of irreplaceable resources, rural working landscapes, cultural heritage and natural heritage.
- A nation which fosters a green economy focused on strategies to enhance resource efficiency and economic growth, in particular in the sectors of agriculture, fisheries, housing, transportation, renewable energy and tourism.
- A nation characterized by increasing social equity enabling meaningful participation in social and economic activities for all.
- A nation which is resilient and prepared for the impacts of climate change.

# Vision, Principles, Key Directions

## Principles

The following principles underlie the policies of this Plan:

- The efficient use of land, resources and finances of the nation.
- The adoption of adaptive planning approaches in all aspects of national and sectoral planning for the consideration of climate variability and climate change impacts.
- The promotion of social equity, health and safety for all residents.
- The conservation, protection and restoration of irreplaceable core assets and man-made resources.
- The development of safe, vibrant places for people to live, work and play.
- The management of growth so that it occurs in a safe, logical and orderly fashion ensuring protection of core assets, reduction of environmental risks and ecological scarcities, promotion of sustainable development and efficiency in delivery of infrastructure.

# Vision, Principles, Key Directions

## 2.1 Promoting Sustainable Development



## 2.2 Protecting Core Assets



2.2.1 Food & Agriculture



2.2.2 Natural Heritage System



2.2.3 Water



2.2.4 National Park



2.2.5 Cultural Heritage



2.2.6 Community Core

## 2.3 Greening the Economy



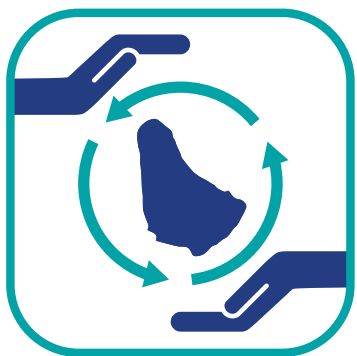
## 2.4 Advancing Mobility and Accessibility



## 2.5 Planning for National Infrastructure



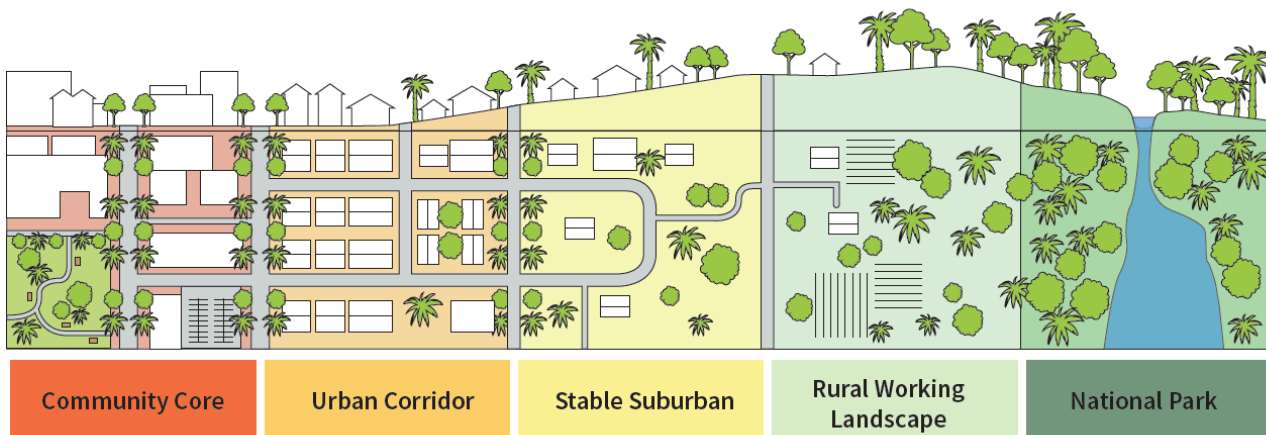
**Towards a Green, Prosperous and Resilient Nation**

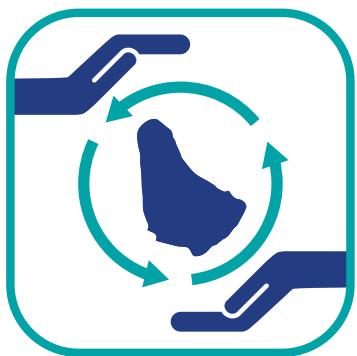


Planning for Sustainable Development

# The Growth Management Framework

- A focus on sustainable and resilient growth
- Managing Steady State Growth
- Urban Corridor to a Settlement Transect
- Promoting safe, inclusive communities that offer housing choice to meet the future demographic



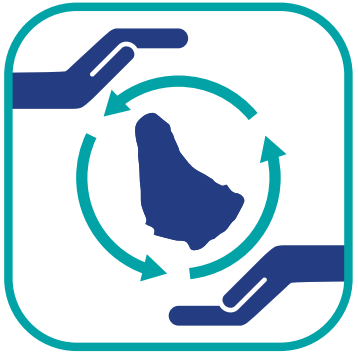


## Planning for Sustainable Development

# Island Settlement Structure

- Defines 3 structural components to manage growth and direct investment at appropriate scales:
  - Centres
  - Nodes
  - Corridors
- Encourages the integration of land use and mobility
- Promotes appropriate levels of service and efficiency of infrastructure to support complete communities

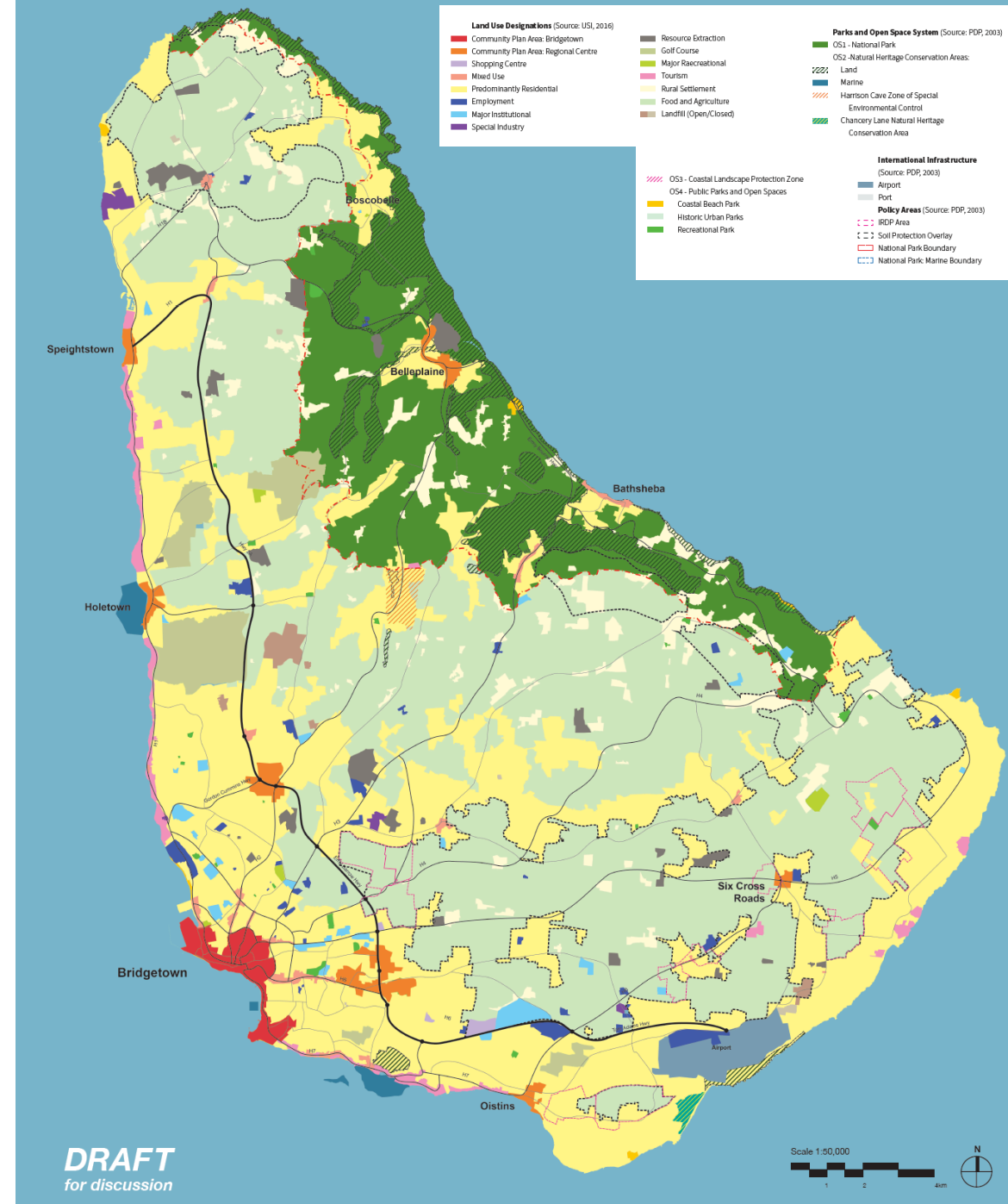




## Planning for Sustainable Development

# Land Use and Built Form

- Builds on and updates the existing PDP land use designations
- Provides design strategies, in particular for residential and mixed use areas
- Reinforces the strategic policies (food and agriculture, mixed use centres and corridors) and Community Plans

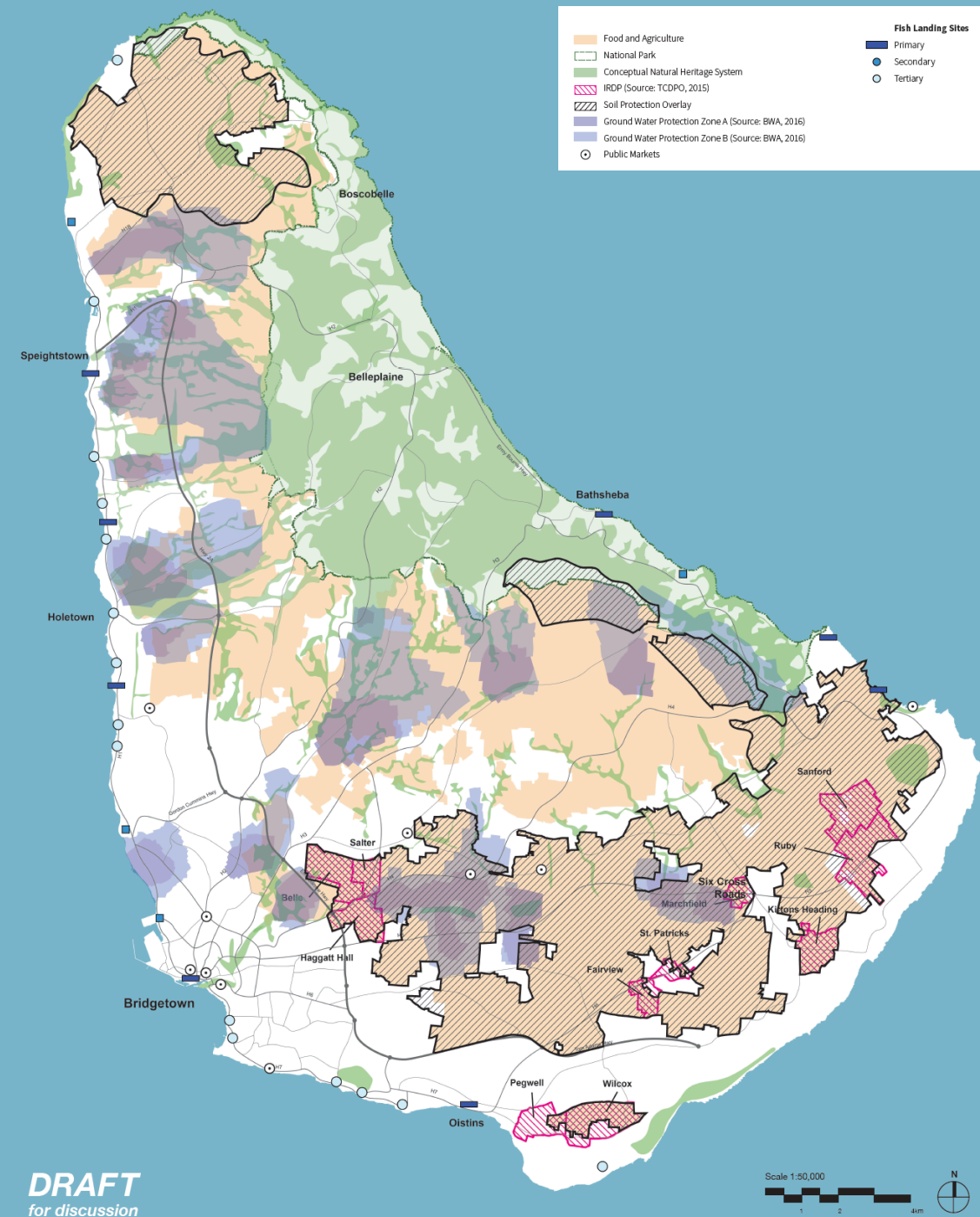




Protecting Core Assets

# Food Security and Sovereignty

- Emphasis on Food and Agriculture toward a healthy, resilient, and food sovereign nation
- Promotes viability of the sector
- Defines 4 policy layers:
  - Food and Agriculture Land Use Designation
  - Soil Protection Overlay
  - Integrated Rural Development Area
  - Food Production Zones
- Recommends an Agricultural Census be undertaken
- Introduces Agricultural Impact Assessment tool

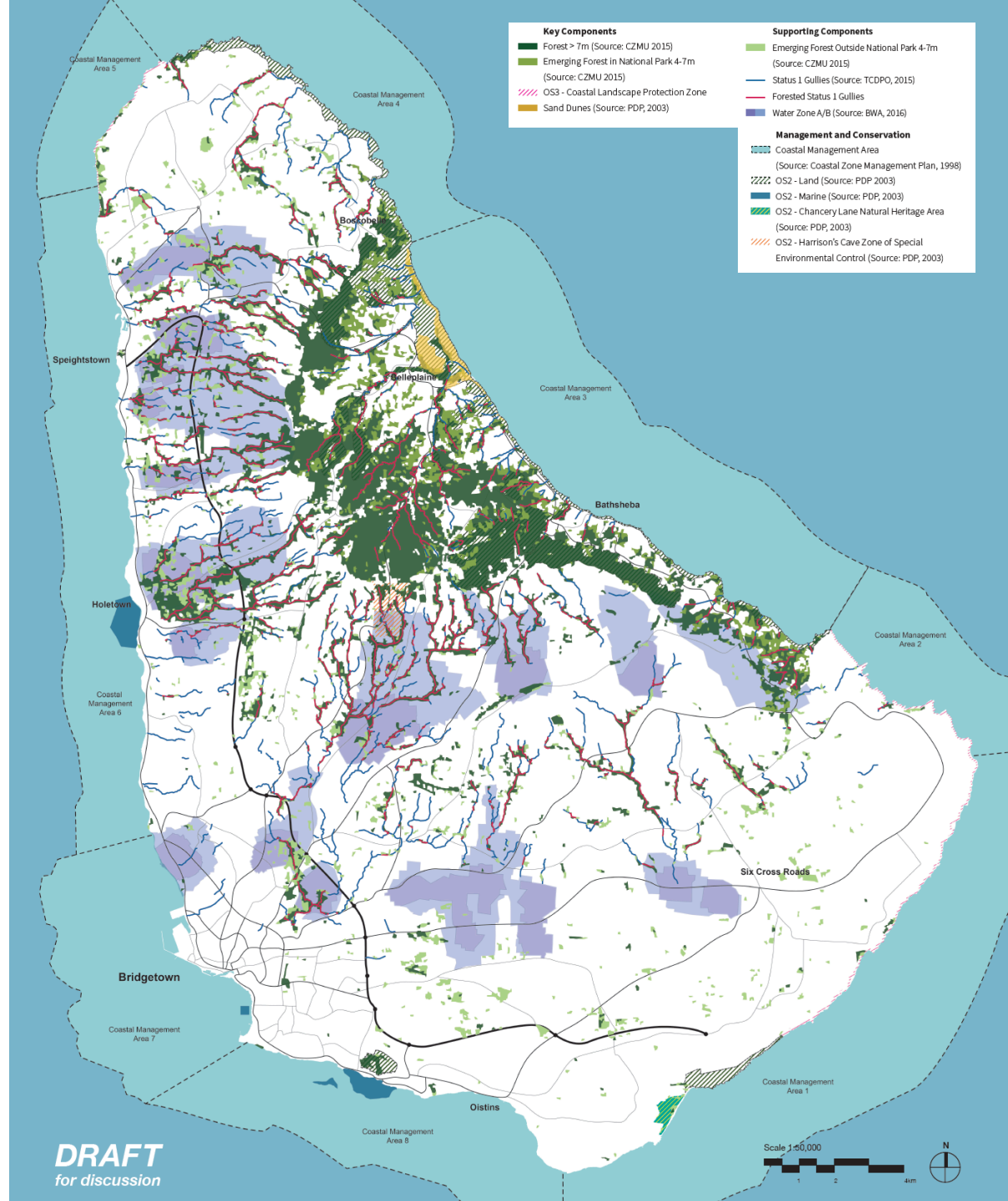




Protecting Core Assets

# Conserving the Natural Heritage System

- A focus on Protection and Restoration of the Natural Heritage System and adopts a ‘Ridge to Reef’ approach
- Recognizing the role of the NHS in addressing climate change and disaster risk reduction
- Identified Key Components and Supporting Components as well as:
  - Areas of Management and Conservation
  - Coastal Management Areas
  - Natural Heritage Conservation Areas
  - Harrison's Cave Special Environmental Control







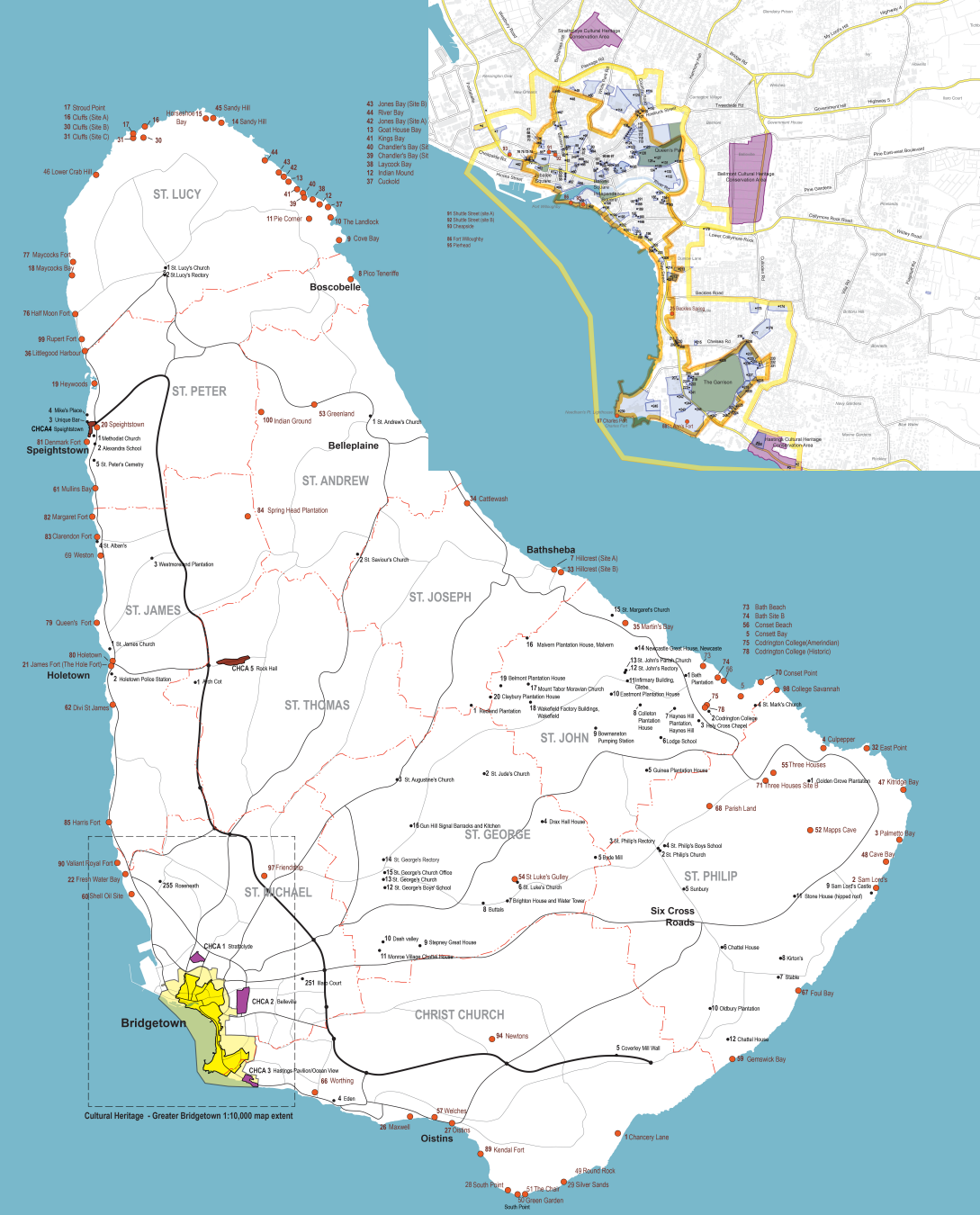
## Protecting Core Assets

# Celebrating Cultural Heritage

- Updated to reflect and support the UNESCO World Heritage Site and Management Plan for Historic Bridgetown and its Garrison
- Enhances policies to protect and support cultural heritage assets across the island
- Introduces the Barbados Registry of Historic Assets and Heritage Impact Assessments

**Legend**

- UNESCO World Heritage Conservation Area (Source: TCDPO 2015)
- UNESCO World Heritage Conservation Buffer (Source: TCDPO 2015)
- Cultural Heritage Conservation Areas (Source: TCDPO 2015)
- Listed Buildings (Source: TCDPO 2015, TCDPO 2017)
- Archeological Areas and Monuments (Source: TCDPO 2015, TCDPO 2017)
- Tax Parcels with Listed Buildings
- Historic Urban Parks

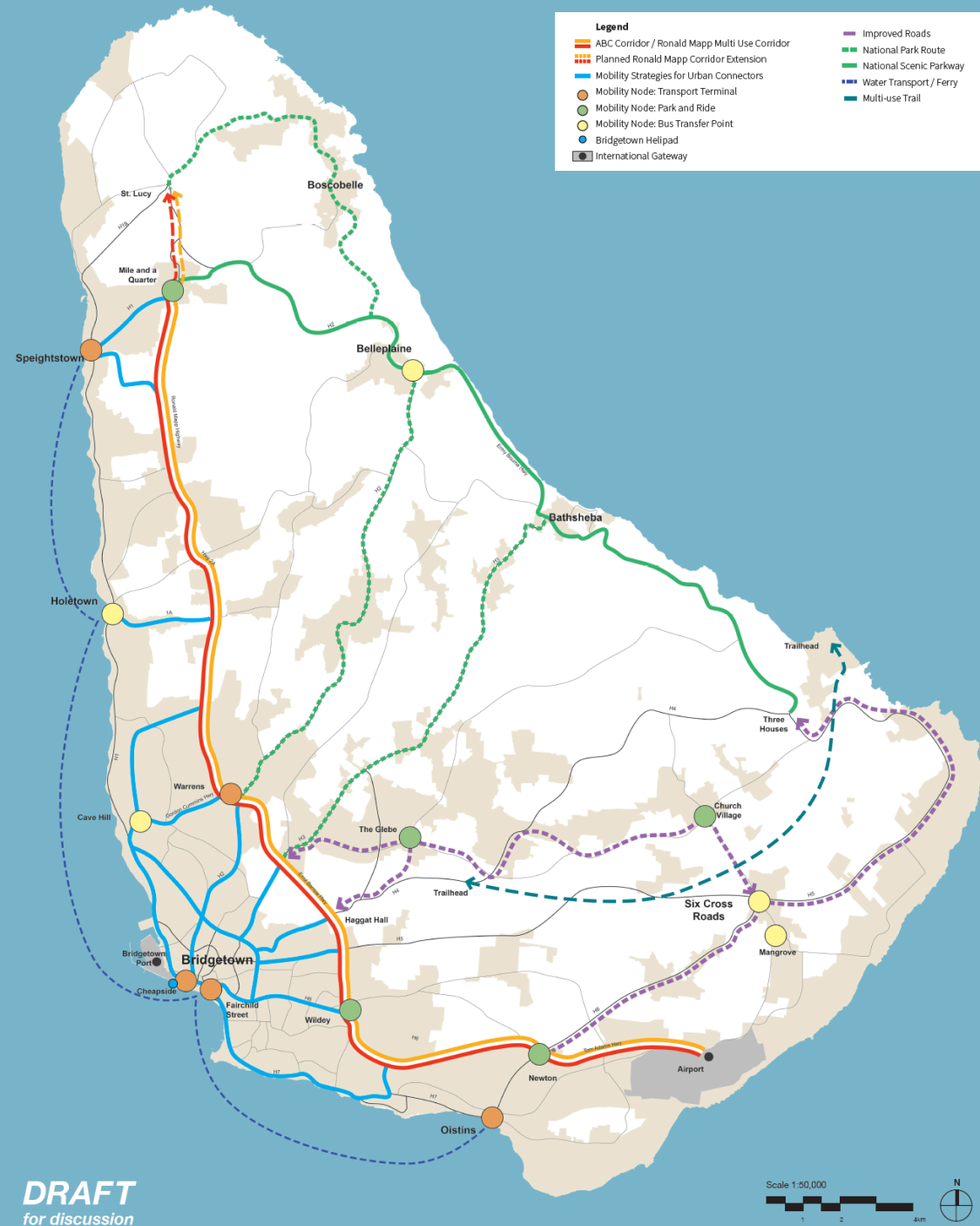


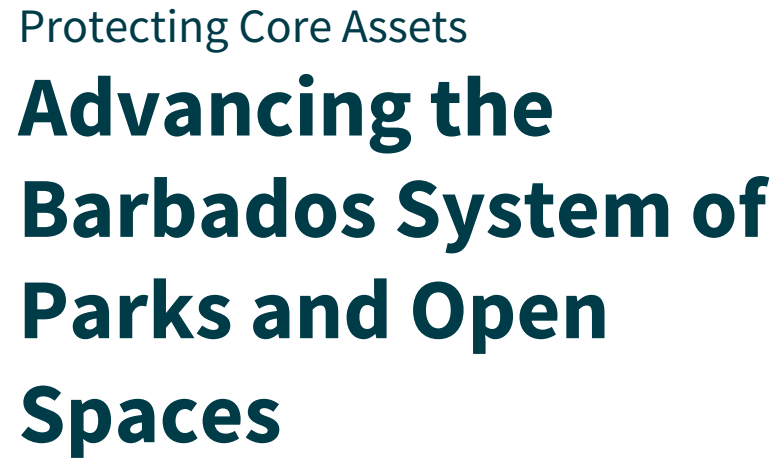


Protecting Core Assets

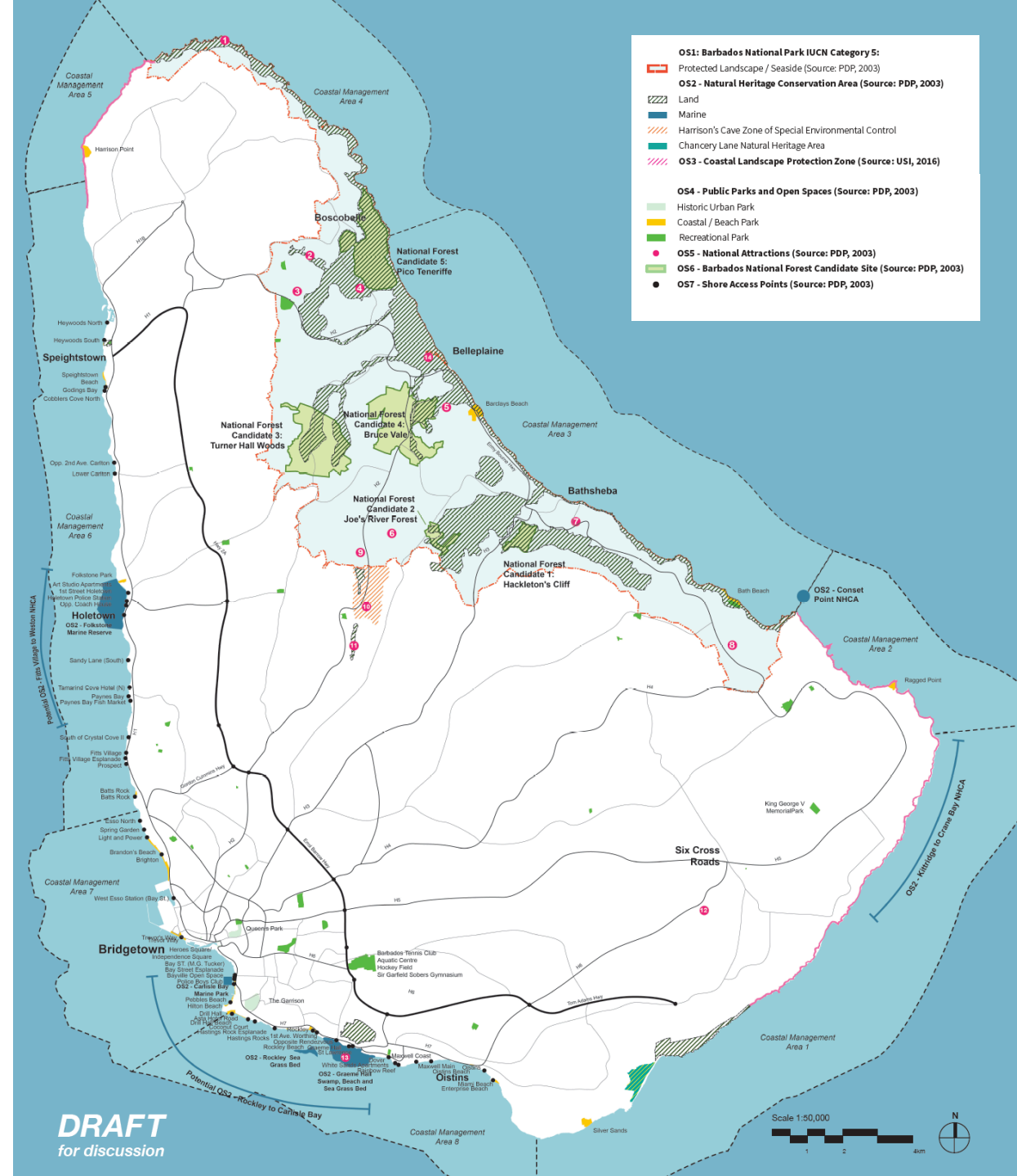
# Advancing Mobility and Accessibility

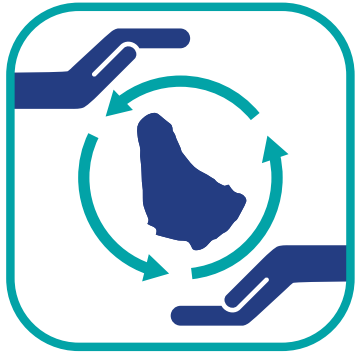
- Introduces “mobility” and “accessibility” as a key concepts
- Promotes integration of land use and transportation decisions and investment
- Defines a multi-modal network:
  - Mobility Nodes
  - Multi-use Corridors
  - Urban Connectors
  - National Scenic Parkway
  - Water Transport
  - International Gateways





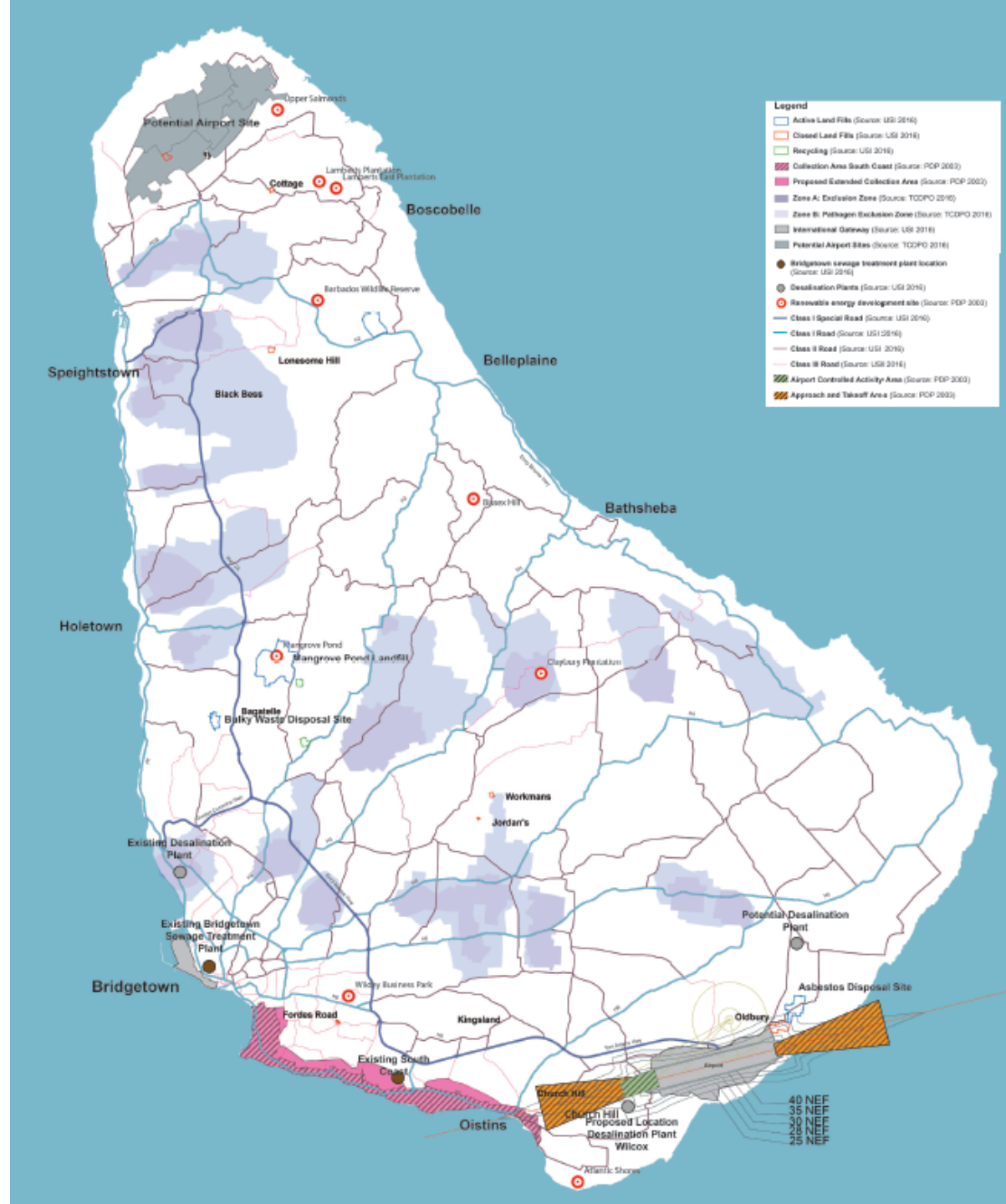
OS1	Anchored by the National Park
OS2	Natural Heritage Conservation Areas
OS3	Coastal Landscape Protection Zones
OS4	Public Parks and Open Spaces
OS5	National Attractions – adding Walkers Reserve
OS6	Barbados National Forest Candidate Sites
OS7	Shore Access Points - NEW





# Planning for National Infrastructure

Renewable Energy and Energy Conservation  
Airport and Bridgetown Port  
Solid Waster Management  
Road Network  
Active Transportation



A photograph of a rural landscape. In the foreground, several brown cows are grazing in a field of tall green grass. To the left, there is a small building with a corrugated metal roof and a concrete wall. To the right, a portion of a green building is visible. In the background, a large, rounded hill covered in green vegetation rises against a sky filled with white and grey clouds. The title 'STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA)' is overlaid in large white text across the center of the image.

# **STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA)**

# Strategic Environmental Assessment (SEA)

## What is SEA?

An analytical tool used to integrate environmental considerations into policies, plans and programmes.

## The Approach:

### Integrated Sustainability Appraisal (ISA)

- promotes sustainable development by extending the assessment from environmental to include the social and economic aspects of development.

# National Sustainability Objectives

## Economic

Economic growth

Agriculture and food security

Tourism competitiveness

## Social

Universal education

Health care

Housing

Social equity

Efficient transportation

## Environmental

Sustainable energy

Natural heritage

Green economy

Water resources

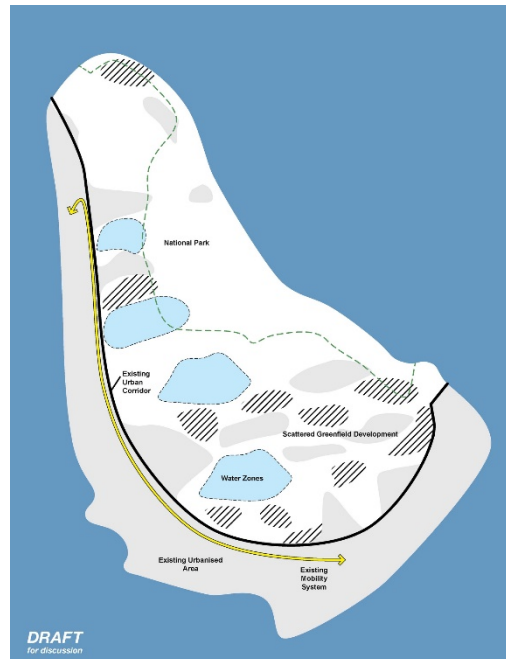
Climate resilience

Land resources

Marine environment

# The Spatial Development Options

## The Status Quo



Map F-1  
Alternative 1 - Status Quo

September 16, 2016



## Protecting Core Assets



Map F-3  
Alternative 3 - Compact and Complete Communities

September 16, 2016

Barbados Physical Development Plan Amendment



## Compact and Complete Communities



Map F-2  
Alternative 2 - Protecting Core Assets

September 16, 2016



# Outcomes of the Assessment

<b>The Status Quo</b>	<b>Protecting Core Assets</b>	<b>Compact &amp; Complete Communities</b>
Continued land use tensions	Strategies address scarcity issues	Integrated development
Stress on provision of services	Efficiency gains from concentration/ cores	Preserves agricultural land Promotes food production
Traffic congestion	Some gains may be neutralised by limited strategies	Concentrated investment areas Local service centres Protection of natural and cultural heritage Protection against natural hazards and climate change

## **Recommended Option Based the Assessment...**

### **Option III – Compact and complete communities**

- Addresses issues of scarcity by more efficient use of available land space,
- Increases protection of natural assets - the basis of economic development and competitiveness
- integrates measures to build resilience to threats of natural hazards => sustained development

# REVIEWING THE DRAFT PLAN



# Engaging the Community

1

**SATURDAY, FEBRUARY 25, 2017 | 3:00PM**  
Princess Margaret Secondary School,  
Six Roads, St. Philip

2

**MONDAY, FEBRUARY 27, 2017 | 6:00PM**  
Alexandra School,  
Speightstown, St. Peter

3

**TUESDAY, FEBRUARY 28, 2017 | 6:00PM**  
Queen's College, Husbands, St. James

4

**FRIDAY, MARCH 03, 2017 | 6:00PM**  
Queen's Park Steel Shed,  
Bridgetown

5

**MONDAY, MARCH 06, 2017 | 6:00PM**  
The Alleyne School, Belleplaine,  
St. Andrew

6

**SATURDAY MARCH 11, 2017 | 3:00PM**  
Oistins Bay Gardens, Christ Church

**FREE** *health checks will be available*

Draft PDP amendment available at: **[townplanning.gov.bb/pdp](http://townplanning.gov.bb/pdp)**