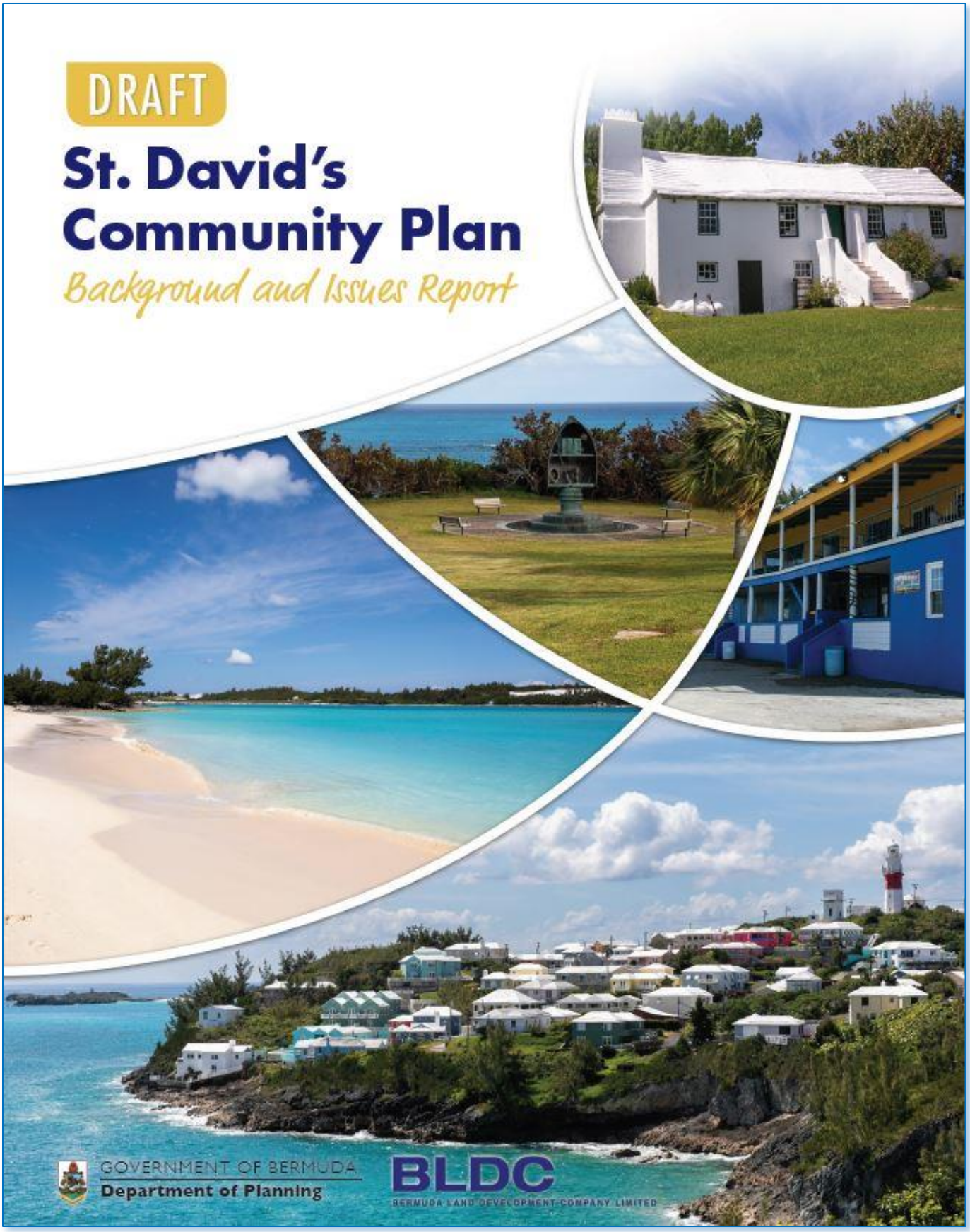
DRAFT

St. David's Community Plan

Background and Issues Report



GOVERNMENT OF BERMUDA
Department of Planning

BLDC
BERMUDA LAND DEVELOPMENT COMPANY LIMITED

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1.0 Introduction

1.1 Community Planning

In 2021, the Government of Bermuda's Department of Planning embarked on a community planning initiative, the aims being to focus planning efforts at a local community scale; to improve connections and collaboration between community stakeholders, residents, Government Departments and quangos; and to identify and address the needs and aspirations of communities across the Island.

This community planning initiative involves the preparation of Community Plans which identify what communities most cherish about their areas, what their needs and desires are, and what they would like to see improved. The Community Plans will provide key objectives and prioritized actions for achieving social, economic and environmental goals within communities, and improving the well-being of residents as well as visitors to these areas.

The intent is for Community Plans to be taken into account when decisions are made about the allocation of public, private and third sector resources and future development in local areas, to ensure that the services and amenities provided align with the community's needs.

The Community Plans will provide localized policy direction to support the broader goals, objectives and policies of the strategic Island-wide development plan. They will be prepared as local plans, in accordance with section 7 of the Development and Planning Act. Their objectives and policies will complement the Bermuda Plan 2018 development plan (and any subsequent revisions) and help to provide ongoing updates to the development plan.

1.2 Building Healthy Communities

There is an increased emphasis, in many jurisdictions around the world, on the need to integrate health and planning agendas. A holistic and coordinated approach to the provision of public and private facilities, services and amenities is considered to lead to the creation of healthier environments to support people in achieving their optimal health and well-being.

There is also growing interest around the world in creating '20 minute neighbourhoods' or places which can be reached within a short walk or cycle and where most people's daily needs can be met. This concept gained significant momentum during the COVID-19 pandemic lockdowns which forced people to spend more time at home and within their neighbourhoods.

Creating healthy environments which help people to live more healthy lifestyles is a central theme of the current Bermuda Plan 2018 which aims:

> *"to effectively manage Bermuda's natural and built environment, resources and development and to help build healthy, sustainable communities"*

The Bermuda Plan 2018 also includes a chapter entitled 'Healthy Communities' which provides the objectives and policy framework for Community Plans to be prepared for local neighbourhoods across the Island.

This aim of building healthy communities is reflected in the Government of Bermuda's Health Strategy 2022-27 and its core vision of 'healthy people in healthy communities'. This strategy emphasizes the need to engage all sectors of the community in a coordinated, strategic plan to promote healthy living, and halt the rise in obesity and diabetes in Bermuda.

The provision of adequate housing, social services, employment opportunities, access to healthy foods, safe neighbourhoods, and recreational and open spaces are essential to ensuring people's health and well-being. Increasing the walkability of neighbourhoods through the construction of new sidewalks and the creation of bicycle friendly routes can also provide direct health benefits to people in terms of keeping them fit and reducing the levels of obesity, as well as providing more sustainable modes of transport to reach shops, schools and other local services.

1.3 Preparing the St. David's Community Plan

1.3.1 St. David's Island

St. David's Island was chosen to be the focus of Bermuda's first community planning initiative. This aligned well with the Bermuda Land Development Company (BLDC)'s aim to engage more intently with the St. David's community to ensure that BLDC's efforts in Southside reflect the needs of the St. David's community and meet BLDC's strategic goals which, as stated in the BLDC Master Plan 2017, include:

- *To optimize public use of the properties for leisure, social and community activities; and*
- *To be a good corporate citizen concerned for the environment and the economic and social wellbeing of neighbouring communities and the public.*

In addition, one of the recommendations made at the Bermuda Plan 2018 Objections Tribunal was the need for a definitive, long term vision for Southside and that this should be prepared as part of a wider St. David's Community Plan.

1.3.2 Report of Survey

The Draft St. David's Community Plan comprises two documents - this *Draft St. David's Community Plan Background and Issues Report* and the *Draft St. David's Community Plan Statement and Action Plan*.

This *Draft St. David's Community Plan Background and Issues Report* constitutes the formal 'Report of Survey' which is required in the preparation of development plans, and the 'descriptive matter' required in the preparation of local plans, as stated in section 6(5) and section 7(4) respectively, of the Development and Planning Act 1974.

This report provides an outline of the main steps involved in preparing the St. David's Community Plan and includes background research and data collection on St. David's population, economic, social and environmental profile. It describes the community engagement work conducted and the community feedback received. The community's comments and suggestions have shaped the vision and objectives of the St. David's Community Plan as well as the recommended action items. These are documented in the *Draft St. David's Community Plan Statement and Action Plan*.

1.3.3 Work Programme

Figure 1 illustrates the key milestones in the work programme for the preparation of the Draft St. David's Community Plan.

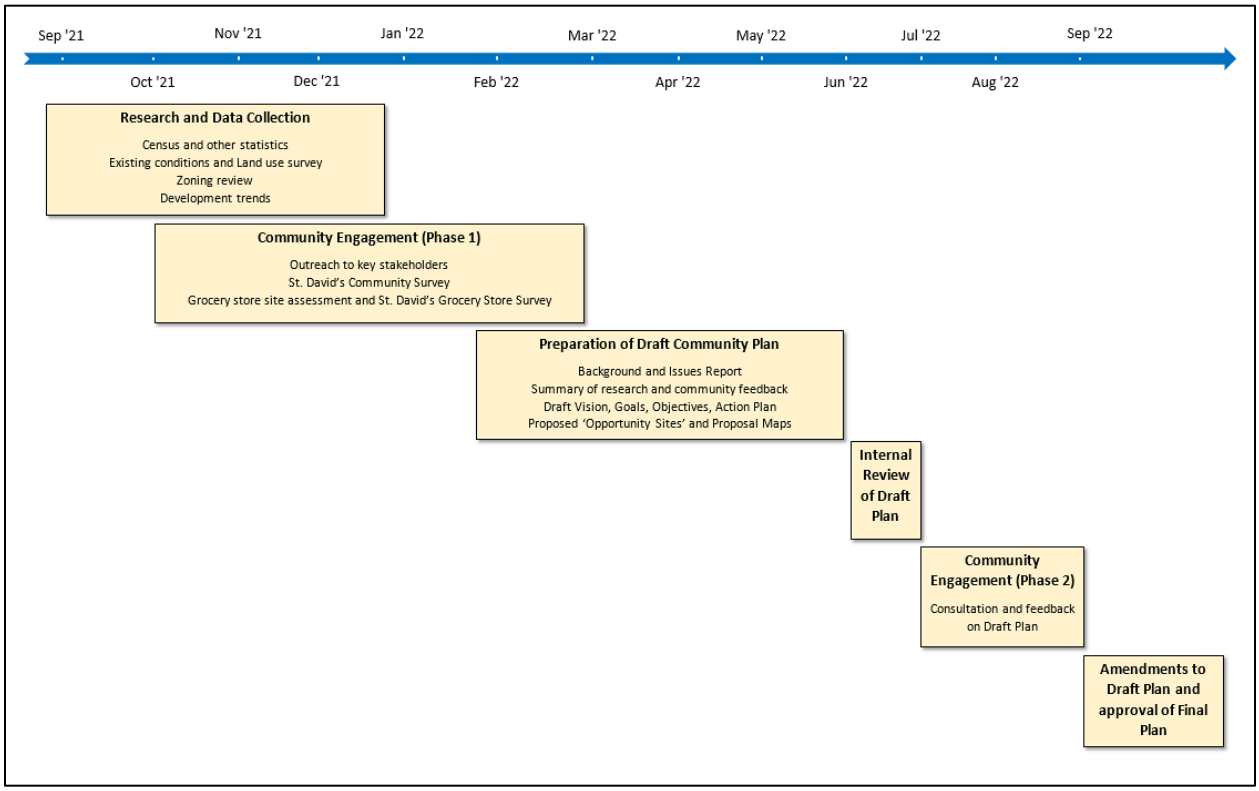

Figure 1: St. David's Community Plan Work Programme

1.3.4 Research and Data Collection

The first step in preparing the Draft St. David's Community Plan was to research and collect data on St. David's. Population, housing and employment data for St. David's Island was collated from the Censuses of Population and Housing. Development trends, planning applications, planning zonings, land valuation records and BLDC records were examined. In addition, a Land Use Survey was conducted as well as a SWOT analysis of existing amenities and services. Key findings and recommendations from this research are referenced throughout this report.

1.3.5 Community Engagement

The initial phase of community engagement involved reaching out to St. David's residents and businesses; the Bermuda Land Development Company; the St. David's Historical Society; Government Departments including the Ministries and Departments responsible for Parks, Public Works, Civil Aviation, Environment and Natural Resources, and Health; Skyport and the Bermuda Airport Authority; the Bermuda Red Cross and other stakeholders and organizations involved in St. David's.

A short online survey was launched in mid-November 2021 asking David's residents and visitors what they most like about St. David's, what they least like, and what suggestions they have for improvements in St. David's. A video was released inviting community engagement and participation in the St. David's Community Survey and postcards were sent to every address in St. David's with a link to the survey. The community survey was promoted on two morning radio talk shows as well as on social media, including the Department of Planning and BLDC websites and facebook pages, and the Government's online consultation hub, the Bermuda Citizens' Forum. In addition, emails were sent to key stakeholder groups in St. David's including BLDC tenants, Clearwater Middle School, the St. David's Historical Society and St. David's Cricket Club.

There was a good response to the St. David's Community Survey with a total of 373 responses received. Over half of the responses (215 or 58%) were from St. David's residents which represents just under 10% of the resident population of St. David's. The remaining 42% of responses were from persons who visit St. David's for work, church, recreation or other reasons.

The results of the St. David's Community Plan Survey provided valuable insight into what St. David's residents and visitors like most about the area and what concerns they have. There were also many useful recommendations and comments provided. A report on the community survey results was shared on the BLDC website and in a Royal Gazette article (4 March 2022). Results and community feedback from the St. David's Community Survey are included throughout this report.

Figures 2, 3 and 4 illustrate the findings from the three main questions asked in the survey: what the community most likes about visiting or living in St. David's, what the community least likes about visiting or living in St. David's, and what the community recommends needs improving in St. David's.

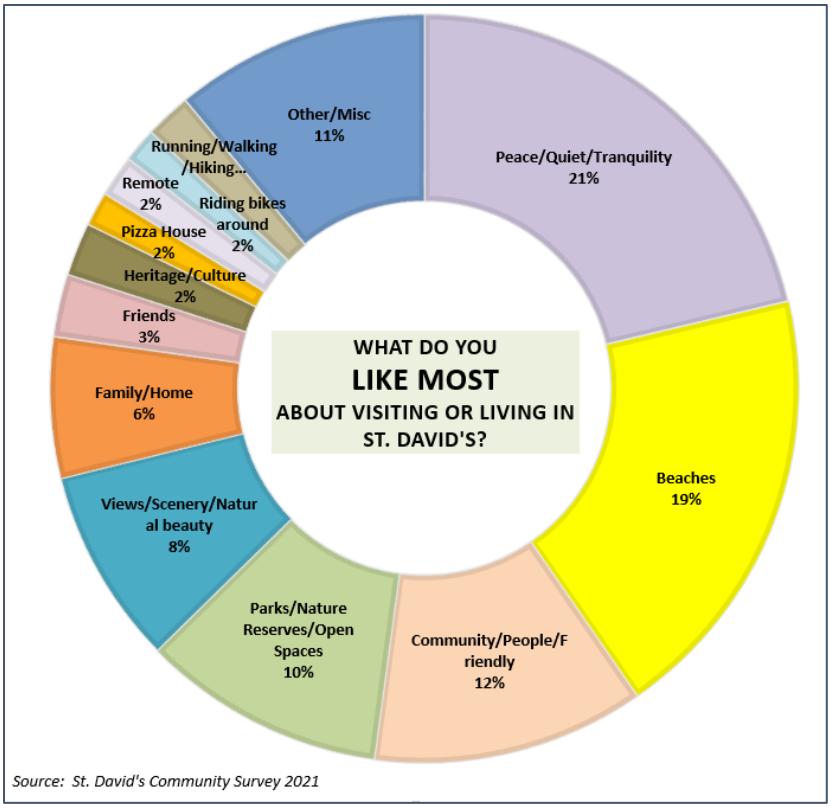

Figure 2: What the community most likes about St. David's

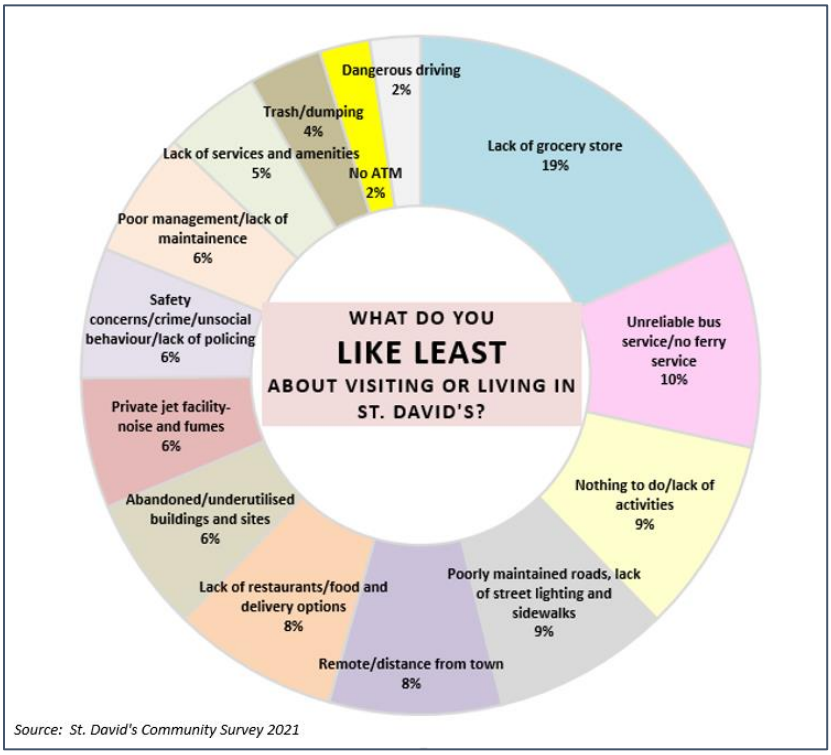

Figure 3: What the community least likes about St. David's

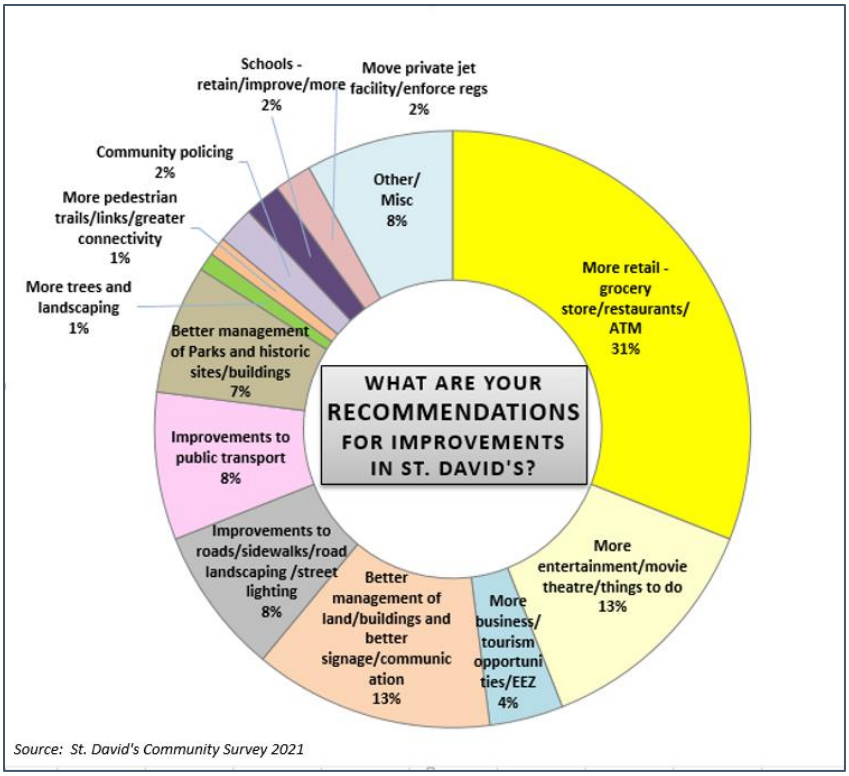

Figure 4: What improvements the community recommends for St. David's

The main finding garnered from the St. David's Community Survey was the community's desire for a new grocery store in St. David's, and associated services including an ATM and pharmacy. This recommendation was identified as a priority action item for the St. David's Community Plan and was considered to warrant further research and assessment. To gain a more detailed understanding of the community's needs, a follow-up St. David's Grocery Store Survey was launched online in mid-February 2022. The survey asked questions related to where the St. David's community currently shops for groceries, how often they would shop at a new grocery store if one were located in St. David's, and which of four potential sites in St. David's they most favour for a new grocery store.

The St. David's Grocery Store Survey generated a very high level of interest with 833 responses received. Of these responses, 51% were from St. David's residents and 22% were from persons who work in St. David's. The main findings of the St. David's Grocery Store Survey are shared in section 3.5.1 of this report.

2.0 St. David's - Then and Now

2.1 Geography and History

St. David's Island is located in the east end of Bermuda and measures approximately 1,312 acres (see Figure 5). It is one of two large islands comprising the Parish of St. George, and also includes a number of smaller islands, the biggest of which is Smith's Island. It is connected to the mainland via 'the Causeway'.

For the purposes of the St. David's Community Plan, the boundaries of St. David's have been defined as those areas with a DD postcode.

Figure 5: St. David's Island

St. David's Island was originally an unconnected, separate island and according to Richard Norwood, in his 1662-63 survey of Bermuda, consisted of 550 acres that "*have some of the most productive and best cared for farms in Bermuda*". St. David's Islanders were very self-sufficient and resourceful in farming, fishing and boatbuilding.

St. David's Island remained unconnected to the Bermuda mainland until 1934, when the Severn Bridge was built connecting St. David's and St. George's.

When the USA entered the Second World War in 1940, Bermuda's strategic position in the north-west Atlantic Ocean made it attractive for a US Naval Air Station and army base. St. David's Island was chosen as the site for this base and an additional 586 acres was created using ocean dredged fill (see Figure 6).

The US airfield and army base were constructed between 1941 and 1943 including barracks, a hospital, utilities, roadways and a water catchment.

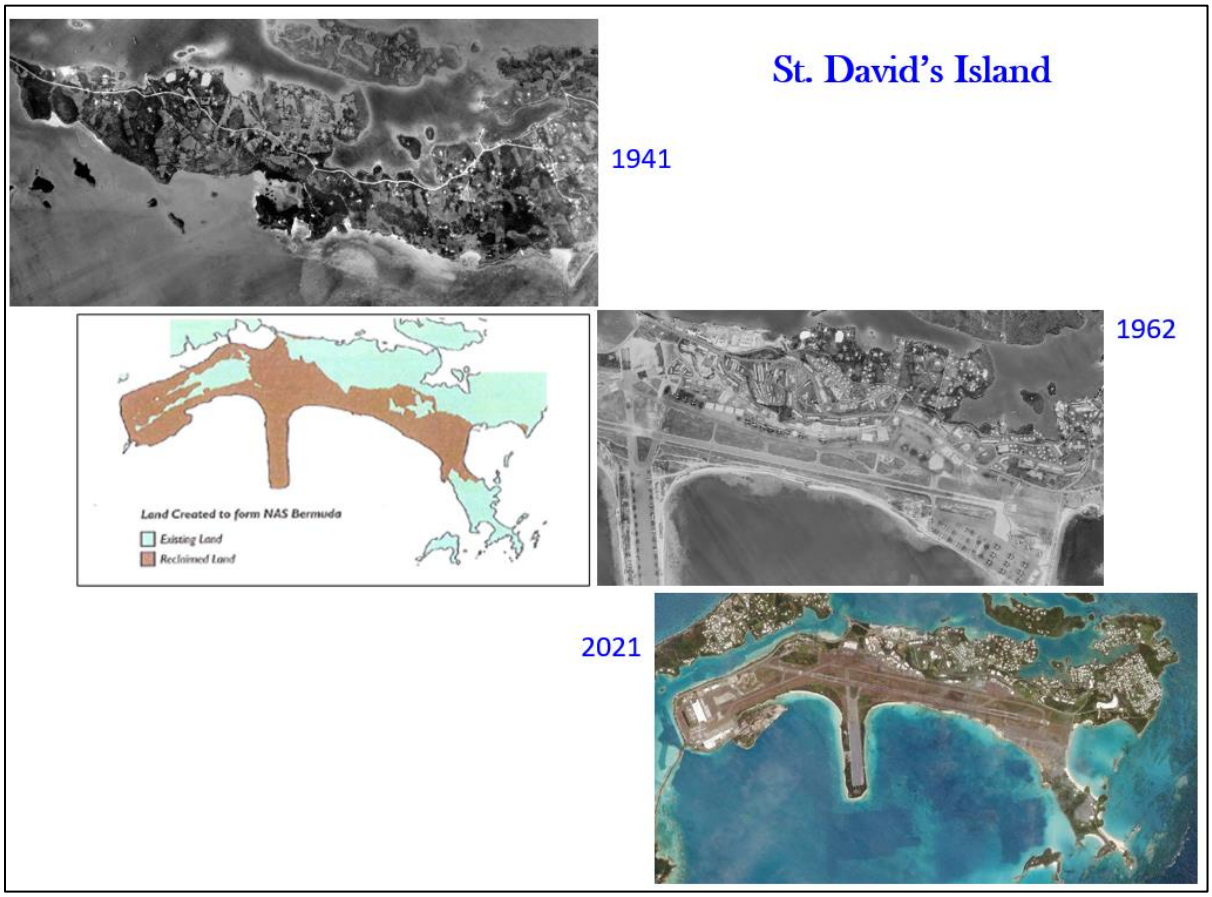

Figure 6: St. David's then and now

This led to 250 St. David's Islanders having to be relocated from their homes and land. UK Prime Minister at the time, Sir Winston Churchill, recognized this as a great sacrifice for world peace, US relations and Bermuda's economy stating that "*It is a sacrifice by a few for so many*". The St. David's Historical Society has organized a memorial rock and plaque to be installed at Annie's Bay (in August 2022) to commemorate those St. David's Islanders who sacrificed their homes and land for the establishment of the US Base in Bermuda.

Between the 1960s and 2001, Cooper's Island was the base for the NASA tracking station (see Figure 7). It was the first of NASA's 18 worldwide manned space tracking stations and participated in Mercury, Gemini, Apollo and Skylab missions as well as scientific launches. A mobile station was re-established in 2018. The Cooper's Island Management Plan 2005 indicates the potential for a NASA museum at Cooper's Island which would be a significant visitor attraction for St. David's.

Figure 7: NASA tracking station at Cooper's Island, St. David's
(Source: http://www.bermuda-online.org/seestdavids)

2.2 Land Uses and Management

2.2.1 Current Land Uses

A Land Use Survey conducted in 2021 estimates that approximately 560 acres or 43% of St. David's is Airport related land (see Figure 8).

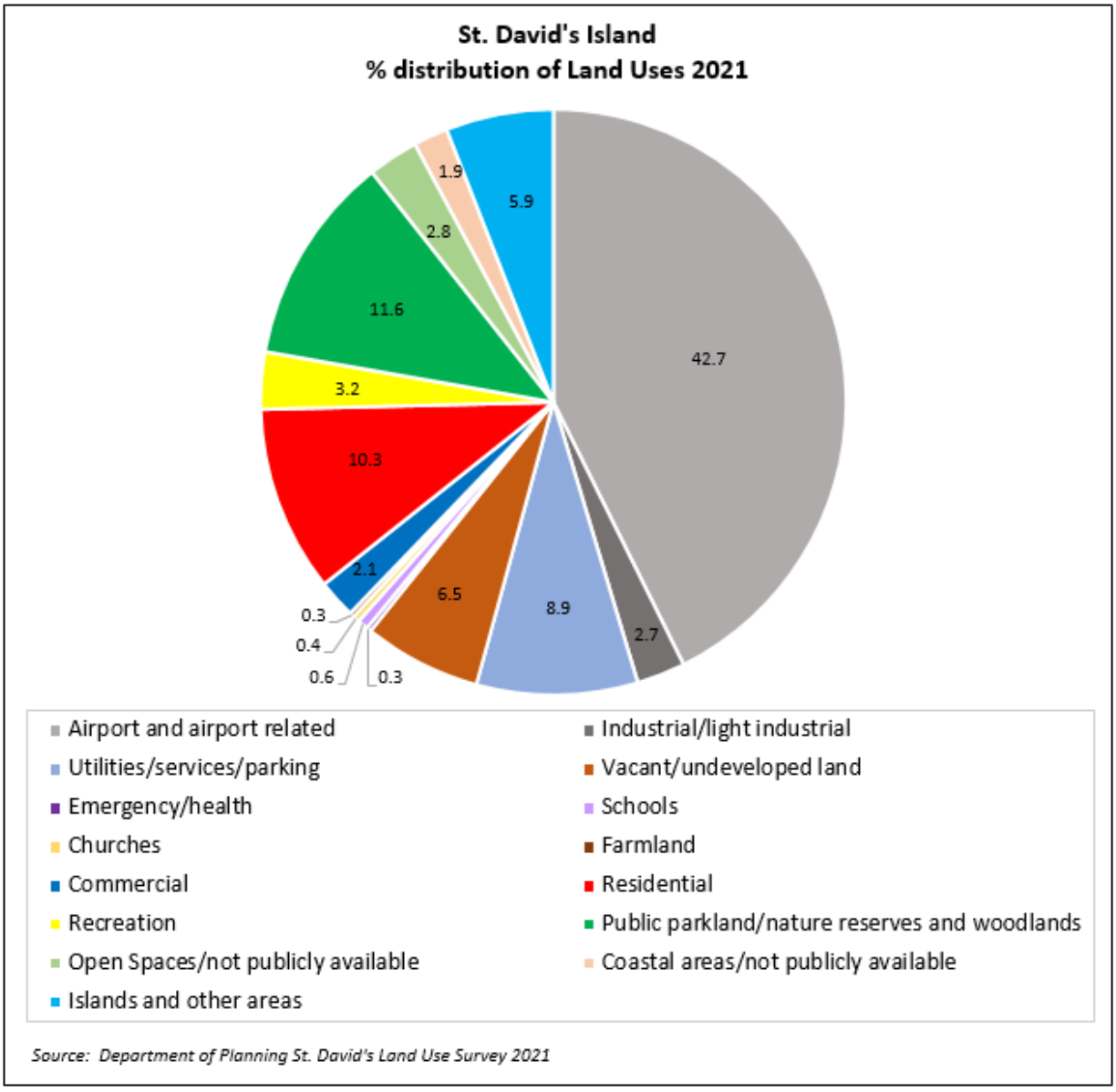

Figure 8: Distribution of Land Uses in St. David's

St. David's has an abundance of green space with public parkland, nature reserves and woodlands covering some 12% of St. David's Island. A further 11% is open space, coastal areas and islands, much of which is not publicly accessible but which has high amenity value, and 3% is used for recreational

purposes. Sections 3.2 and 3.3 of this report describe St. David's environmental and recreational assets and further opportunities to promote and enhance them.

The Land Use Survey estimates that 10% of the land in St. David's is used for residential purposes with an estimated 6.5% vacant or undeveloped. Section 4.2 of this report provides an overview of the main vacant sites and suggestions for their potential development. Some of these key sites are explored in more detail in the *Draft St. David's Community Plan Statement and Action Plan*.

2.2.2 Current Planning Zonings

The current development plan, the Bermuda Plan 2018, zones 71% (937 acres) of St. David's as 'Development Zones', the largest development zone being the Airport (558 acres). Residential 1 and Residential 2 development zones comprise a total of 228 acres and the Mixed Use development zone covers 104 acres (see Figures 9 and 10).

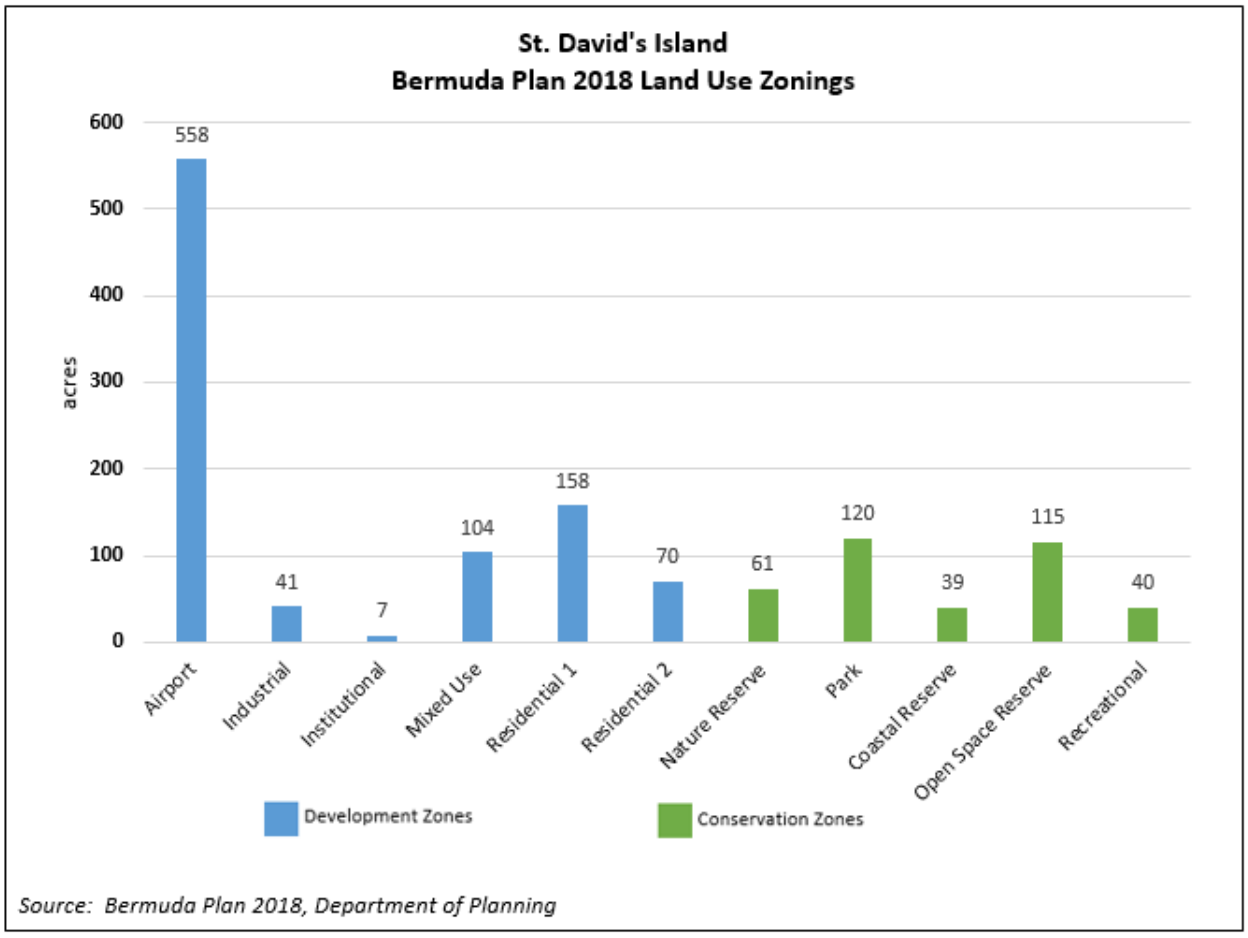

Figure 9: Bermuda Plan 2018 zonings for St. David's

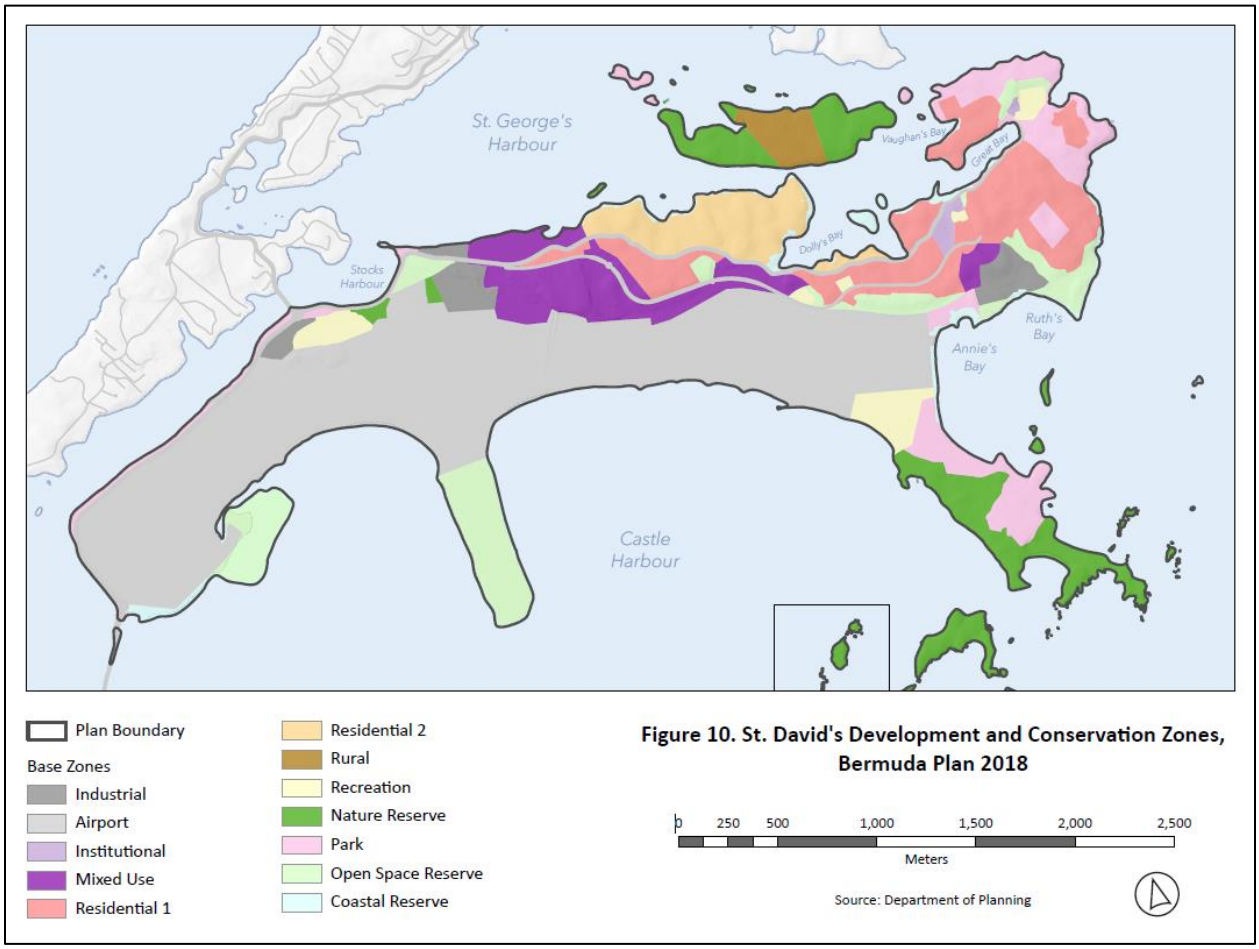

Figure 10: St. David's Development and Conservation Zones, Bermuda Plan 2018

The Mixed Use and Residential 1 development zones are the two most flexible and permissive development zones in terms of planning regulations. They permit a diverse range of uses including residential, tourism, social, commercial and light industrial, and allow for greater building heights and higher densities.

The Mixed Use development zone was first created for the Bermuda Plan 2008 to help promote increased vitality and viability in the three main commercial centres outside of the City of Hamilton. The objective is to support the further development of community centres at Dockyard, Town of St. George and Southside where people can work, live and play. Southside, St. David's has by far the largest of the three Mixed Use development zones.

'Conservation Zones' comprise 29% (375 acres) of St. David's including 61 acres of Nature Reserve and 120 acres of Park. These two conservation zones only allow for limited development associated with the nature reserve or park.

An additional 28 acres are zoned as Woodland Reserve and Agricultural Reserve 'Conservation Areas'. St. David's also has 15 acres of land protected within 'Historic Protection Areas' including the St. David's Battery, Fort Popple, St. David's Lighthouse and Carter House.

The Bermuda Plan 2018 was approved in June 2021 after a lengthy objections review and Tribunal process. There were 8 objections submitted regarding zonings or policies which related to St. David's. Two objections were submitted by property owners and related to conservation area zonings and these objections were resolved. Two objections were submitted by the Bermuda National Trust relating to mapping queries and these were also resolved. Four objections were submitted by the BLDC, two of which were resolved and two of which progressed to the Objections Tribunal. These resulted in the rezoning of some Industrial zoned lands, at Ships Wharf and Stanley's Run, to Mixed Use zoning.

Since the planning zonings have recently been revised, the Draft St. David's Community Plan does not include a comprehensive review of the Bermuda Plan 2018 planning zonings for St. David's; however, zoning amendments are recommended where necessary to correct a zoning anomaly or to help facilitate the St. David's Community Plan objectives.

2.2.3 Land Management

St. David's comprises large areas of land that are managed by different private and public entities as shown in Figure 11.

The L.F. Wade International Airport, comprising 43% of St. David's land and some 573 acres, is managed by the Bermuda Airport Authority.

Government land holdings in St. David's cover some 241 acres and include the National Parks, a number of islands, arable fields, industrial land, public roads, the Airport finger and landfill, the Weather Radar Tower, St. David's Lighthouse and buildings, St. David's Primary school and pre-school, and the former St. David's Post Office.

The Bermuda Land Development Company (BLDC) was created by the Base Lands Development Act 1996 to develop and manage those lands formerly occupied by the U.S. Military and Canadian Armed Forces including approximately 310 acres in Southside. As stated in BLDC's Master Plan 2017, a core mandate of the BLDC is to integrate the former baselands into Bermuda's social and economic fabric to enhance quality of life and long term prosperity. BLDC's responsibilities include maintaining and improving the road infrastructure, landscaping, street lighting, sewage, water supply and telecommunications to allow for sustainable development; renovating existing buildings to make them suitable for commercial, industrial, institutional or residential use; and constructing new facilities where demand exists.

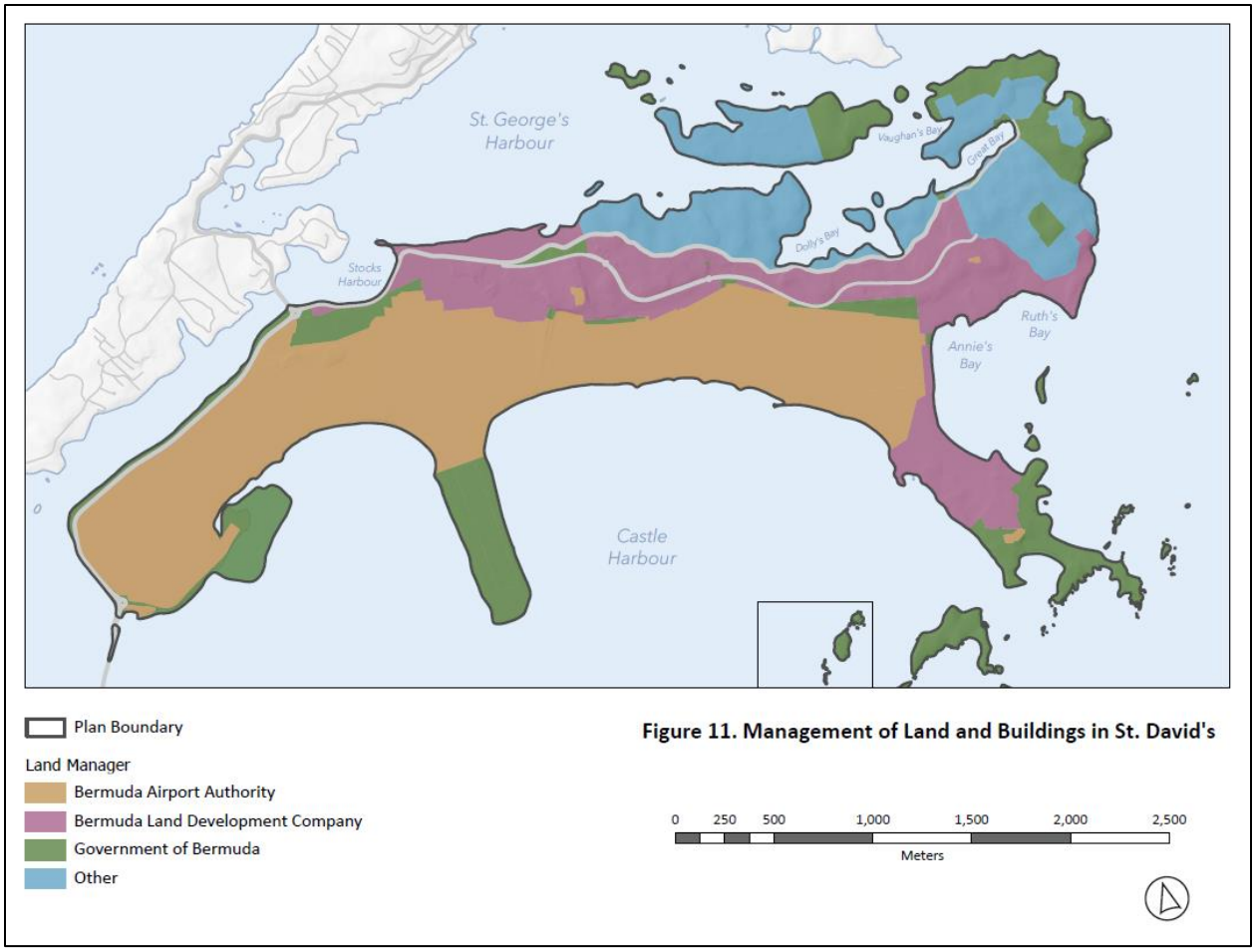

Figure 11: Management of land and buildings in St. David's

An estimated 6.5% or 85 acres of St. David's land is vacant, underdeveloped, brownfield land and is located in Southside under the management of BLDC. The development opportunities of these vacant sites are discussed in section 4.2 of this report and more detailed recommendations are made in the *Draft St. David's Community Plan Statement and Action Plan.*

Despite the former baselands of Southside officially being part of Bermuda and St. David's since 1995, there are still remnants of a physical and psychological separation between St. David's 'proper' and Southside. The linear shape of St. David's Island as well as the main route of St. David's Road, separating Southside from the northern parts of St. David's, reinforce this. The need to create better connections and synergy within St. David's is highlighted in the feedback received in the St. David's Community Survey and is a key objective of the St. David's Community Plan.

2.2.4 Buildings and Development Trends

The Department of Land Valuation records (2021) indicate that there are 1,282 land valuation units in St. David's, 1,085 (85%) of which are residential and 197 (15%) of which are commercial.

Commercial development in St. David's has included a phased development of the Commercial Park and renovations to former base buildings to accommodate office space and businesses. The Lamb Foggo Urgent Care Centre, built in 2009, was a significant addition to St. David's and the East End providing improved access to health care.

The largest development in recent years is the new L.F. Wade International Airport terminal (completed in December 2020) and the solar farm built on the Airport 'finger'. Otherwise, development in St. David's has largely comprised minor additions and alterations, mainly to residential properties.

2.2.5 Utilities

The Bermuda Land Development Company is currently near completion of phase I of a major water-wastewater infrastructure project that will provide potable water, sanitary sewer and reclaimed water infrastructure to the areas of Southside, St. David's and St. George including the St. Regis Hotel.

This project will also provide a substantial capacity upgrade to the existing Southside wastewater treatment facility and a system wide telemetry system to improve the reliability and efficiency of all systems.

These infrastructural improvements will also allow for additional capacity which is crucial to accommodating future growth in St. David's and in realizing the community and development objectives of the St. David's Community Plan.

2.3 Population and Housing

St. David's is a close knit community with a rich heritage and culture. A fifth of respondents to the St. David's Community Survey said they most liked St. David's for its people, family, friends and neighbours.

As MP Lovitta Foggo stated in the November 2021 launch video for the St. David's Community Plan project -

> *St. David's is a delightful, close-knit community…with names such as Minors, Lambe, Pitcher, Foggo. We recognize the importance of connecting with the families in St. David's, of the historical importance that this area has to the residents of St. David's. We want to make certain that not only do we celebrate the history of all that St. David's was but we also build in a manner that creates hope for the future and creates a path that the residents of St. David's, and Bermudians in general, can feel proud of.*

The St. David's residential community has grown significantly in the last 25 years with an additional 790 residents since 1991 bringing its population to 2,349 in 2016 (see Figure 12).

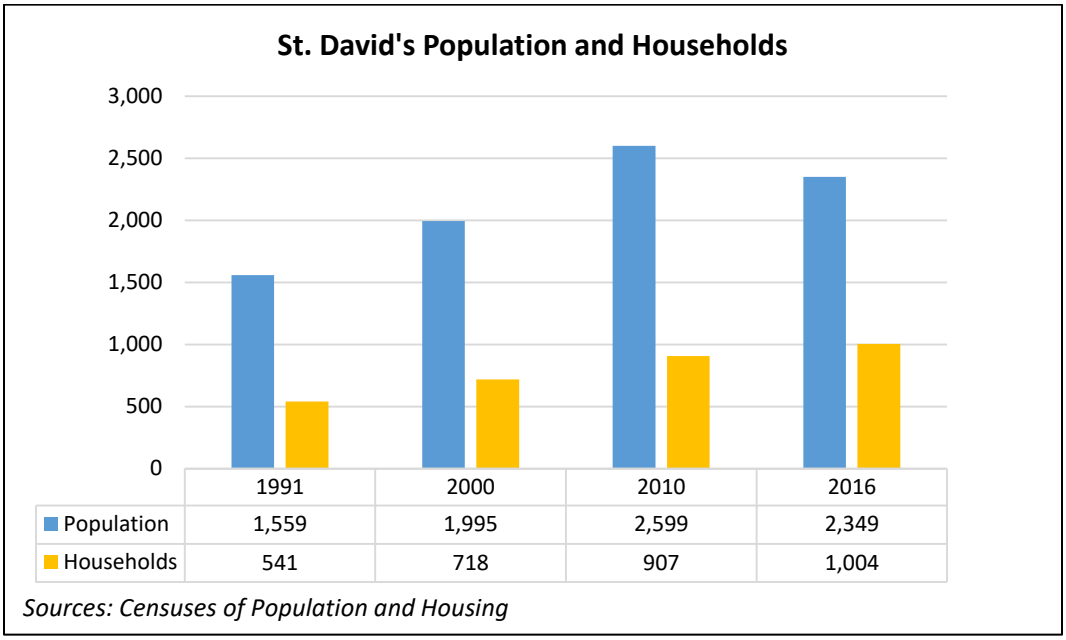

Figure 12: St. David's Population and Household trends

Similarly to the rest of Bermuda, since 1991 there has been a significant increase in the number of persons aged 65+ in St. David's, growing from 103 persons (6.6%) in 1991 to 392 persons (16.7%) in 2016 (see Figure 13).

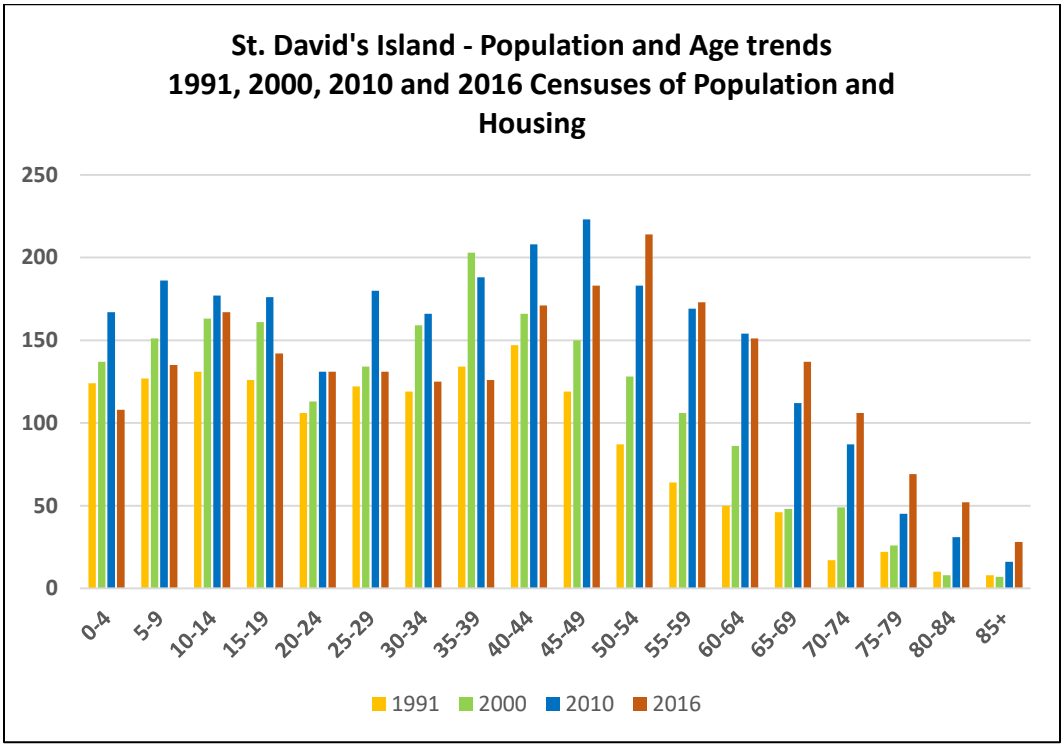

Figure 13: Population and Age trends in St. David's

With Bermuda's elderly population expected to increase to nearly a quarter of the total population by 2026, provisions such as adequate seniors housing, retirement facilities, and senior day care programmes need to be provided.

The majority of St. David's population aged 16 and over are working (61%); however, there is also a large percentage (16%) who are retired or who are looking for work (8%) (see Figure 14). According to the 2016 Census, the median annual household gross income for the population aged 16 years and over in St. David's was $78,000.

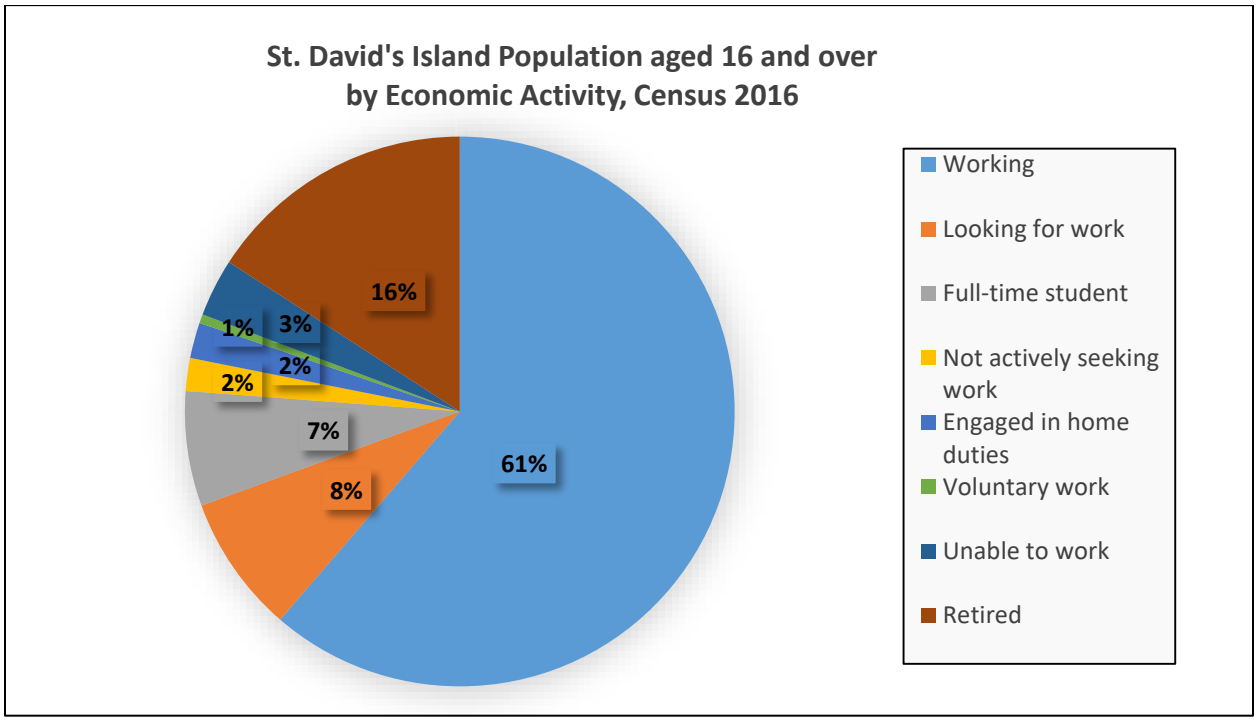

Figure 14: Economic Activity of St. David's Population

There are 1,085 residential land valuation units in St. David's and 1,004 households (Census 2016), including a large portion of the Island's Bermuda Housing Corporation (BHC) units and BHC shelter accommodation. Most notable was the addition of 86 affordable residential units at Harbour View in 2011 and a further 14 BHC units have planning approval on Battery Road.

Whilst Bermuda's population has started to decline and is expected to decline further as net emigration exceeds natural increases, the number of households is increasing. This is also the trend in St. David's as shown in Figure 12. With an increasing demand for housing and trend towards small-sized households, this will place greater pressure on the need for more affordable, single person housing including seniors housing to suit the ageing population and affordable starter homes for younger persons.

St. David's has the potential to accommodate significant residential development to meet the future housing needs of Bermuda. There are some ideal sites in St. David's for residential development, many of which have stunning views across St. George's Harbour and Castle Harbour and which have conducive planning zonings. The Residential 1 zoned sites allow for residential densities of up to 20 units per acre and it is estimated that up to 400 residential units could be accommodated on vacant sites within St.

David's. These residential opportunity sites will be discussed further in section 4.2 of this report and in the *Draft St. David's Community Plan Statement and Action Plan*.

3.0 St. David's - Key Attractions, Issues and Challenges

3.1 Historic Assets

St. David's has a rich heritage of military fortifications, listed buildings and historic sites. Most notable are St. David's Battery (and emplacements) which is part of Bermuda's World Heritage Site; St. David's Lighthouse, a prominent feature on St. David's skyline; and Carter House which is a Grade 1 listed building and home to the St. David's Historical Society Museum.

The St. David's Community Survey results indicated that 65% of respondents consider historic buildings and sites to be 'very important', and protecting St. David's historic assets and promoting them as key visitor attractions should be a priority.

Table 1 provides an overview of St. David's historic assets and highlights some issues and opportunities to further protect them and enhance the public's enjoyment of them. Financing and resources are required to oversee the management and repair of some of the historic structures such as St. David's Battery. There are also opportunities to provide interpretive heritage signage, to tell the story of the St. David's Islanders and their way of life.

Whilst St. David's has a number of Parks and Historic Protection Areas, there is also an opportunity to designate certain areas as 'Historic Parks' to ensure that their historic and cultural significance is celebrated and that they do not become commercialized. Such areas may include Carter House which is

currently zoned as a Historic Protection Area and Annie's Bay which is currently zoned as Park but not open to the public.

Suggestions in the St. David's Community Survey 2021 included better promotion of St. David's attractions, making a walking trail to St. David's Lighthouse, and a walking trail behind the St. David's Cricket Club. A well-maintained coastal path leading from the bus stop at Vaughan's Bay, Cashew City Road through Little Head Park to Fort Popple and up to St. David's Battery could certainly be a significant visitor attraction. Improved accessibility and directional signage is required to provide clearly marked and accessible routes to these important landmarks. These recommendations are discussed further in the *Draft St. David's Community Plan Statement and Action Plan*.

Table 1: St. David's Historic Assets

Historic Asset and location	**Description and historic designation**	**Photo**	**Issues and Opportunities**
St. David's Battery and Emplacements, Great Head Park	Historic Monument (SG218) Historic Protection Area Within World Heritage Site and zoned Historic Protection Area Constructed in the late 1890s. Finest surviving example of a double battery for the 9.2" and 6" BL gun within the British Empire. One of Bermuda's most important military sites Memorial for those Lost at Sea erected in October 2005	 	Two 9.2" and two 6" BL guns partially restored in 2006. Further works required. Interpretative historic signage Needs improved accessibility and publicity as a World Heritage Site visitor attraction with beautiful vistas
Fort Popple, Little Head Park	Historic Protection Area Built in 1730s to guard the channel into St. George's Harbour Named after Governor of Bermuda		Coastal Fort, subject to erosion Improve signage and coastal trail from Vaughan's Bay through Little Head Park Visitor attraction with beautiful vistas

Historic Asset and location	Description and historic designation	Photo	Issues and Opportunities
Smith's Fort, Governor Island	Historic Protection Area Within World Heritage Site 1613 Fort built by Governor Moore. Upgraded by Durnford in the 1790s, the fort was in use until the 1820s		Maintenance
Pembroke Fort, Cooper's Island	Historic Protection Area Built by Governor Moore ca. 1615 NASA tracking station was later erected on this site		Maintenance
Southampton Fort, Southampton Island	Historic Monument (SG219) This fort dates from 1619 and guards the northern side of Castle Roads, the entrance from the open sea to Castle Harbour. It exists in almost the same form in which it was built, which makes it (along with forts on Castle Island) the earliest surviving stone fort in British North America. Now part of a nature reserve, it is one of Bermuda's most important monuments of the first decade of settlement		Maintenance
St. David's Lighthouse, 1 Mount Road	Grade 1 Listed Building (SG082) Historic Protection Area Built in 1879 to provide a warning signal and light for ships as there were many shipwrecks on the nearby reefs Major landmark in St. David's and Bermuda		Unsightly telecommunication equipment on lighthouse Currently closed to the public. Needs to reopen as a visitor attraction Need to improve accessibility, signage and publicity as a visitor attraction

Historic Asset and location	Description and historic designation	Photo	Issues and Opportunities
St. David's Lighthouse cottages and restroom, 3 and 5 Mount Road	Grade 3 listed buildings (SG202, SG203 and SG204) Historic Protection Area		Recently painted and cottages refurbished. Watch tower in poor condition
Carter House, Southside Road	Grade 1 listed building (SG098) Historic Protection Area St. David's Historical Society Museum Built in 1640 and named after Christopher Carter One of Bermuda's oldest homes and exhibits many of the characteristics that have come to be recognised as typically Bermudian - 'welcoming arms' stair access, gable roof, exposed rafter feet, windows high up under the eaves, buttresses, an external above ground water tank, and a large chimney at the south end Endemic Garden Bermuda National Trust Award 2022 for heritage conservation and interpretation	 	Lack of funding and assistance Unreliable public transport Extension to endemic garden to create a Flora Museum Park Visitor amenities needed – café, bus layby Potential to rezone to Park Historic and Environmental education
Chapel of Ease, 20 Chapel of Ease Road	Grade 1 listed building (SG085) An example of simple Victorian ecclesiastical architecture, the Chapel of Ease was consecrated in 1849 Prominent on the skyline Slated gable roof, simple arched windows with, in many cases, movable sashes, and a tower		Heritage signage
Dolly's Bay House and outbuildings, 49 St. David's Road	Grade 2 listed building (SG083)		Heritage signage

Historic Asset and location	Description and historic designation	Photo	Issues and Opportunities
St. Luke's AME Church, 13 Lighthouse Hill	Grade 3 listed building (SG079) Built in the 1920s, replacing a wooden building. A typical small simplified Gothic church, with a three tiered tower open to the weather, lancet windows and prominent moulding		Heritage signage
Cottage, 15 Lighthouse Hill	Grade 3 listed building (SG080) Tiny late 19th century cottage with hipped roof, lateral steps, enclosed eaves, a flat topped tank, and a short beveled cooking chimney		Heritage signage
The Villa, 14 Tranquility Lane	Grade 2 listed building (SG084) A mid-18th Century 'L' shaped hillside house with a hipped roof, plain, flush window frames and side hung blinds, and buttresses with simple capitals		Heritage signage
Ambleside, 7 Emily's Bay Lane	Grade 1 listed building (SG086) A very rare example of a modest 18th century cottage which has survived in its original state. It is built into the hillside with a cellar, is hipped roofed, with a fairly steep pitch, has a single chimney, old rafter feet, windows high under the eaves, and top hung blinds		Heritage signage
The Forbes House, 3 Smith Island	Grade 2 listed building (SG195) Two storey Victorian house dating from the 18th century. Hipped roof, shallow bay windows, pilasters and the St. George's style eaves treatment		Heritage signage
Hayward Burial Ground, Haywards Road	Historic Protection Area Site of the Hayward family burial grounds. A walled family graveyard, gifted to the BNT by Howard Smith		Heritage signage
Mariner's Cemetery, Non-such Island	Historic Protection Area Between 1865 and 1910 Nonsuch served as a yellow fever quarantine station and hospital. The cemetery was established in this time		Heritage signage

3.2 Nature Reserves, Parks and Parkettes

One of St. David's biggest attractions is undoubtedly the expanse, variety and beauty of its nature reserves and parklands. Nearly 30% of respondents to the St. David's Community Survey 2021 said the beaches and parks are what they most like about St. David's, and 21% of respondents said they also like the peace, quiet and tranquility of St. David's.

The St. David's Land Use Survey 2021 (see Figure 8), shows that nearly 12% of St. David's Island comprises parklands, nature reserves and woodlands, with 61 acres protected as Nature Reserve conservation zone and 120 acres protected as Park conservation zone in the Bermuda Plan 2018 (see Figures 9 and 10).

St. David's nature reserves, parks and parkettes are listed in Table 2 with some issues and opportunities suggested to further protect them and enhance the public's enjoyment of them.

Clearwater National Park is one of Bermuda's largest parks, and combined with Cooper's Island Nature Reserve, is a popular attraction amongst residents and visitors. Little Head and Great Head Parks are also one of the largest expanses of parkland in Bermuda covering some 45 acres, yet they are probably the most remote of Bermuda's parks and the least visited. As mentioned in section 3.1 of this report,

one means of improving public access and connectivity to Little Head and Great Head Parks could include providing a well maintained coastal pathway from Vaughan Bay (which has a public bus stop and parking area) through Little Head Park to Fort Popple and connecting to St. David's Battery in Great Head Park. In addition, creating pathways through the woodlands of Great Head Park could enhance the public's use and enjoyment of this National Park.

Suggestions from the community in St. David's Community Survey 2021 also include creating a continuous green walkway and cycleway from gate 1/Double Dip to Clearwater Beach Park. Other opportunities for improvements include the creation of vista points and interpretative signage at major attractions as well as the preparation of Park Management Plans for all National Parks in accordance with the National Parks Act. These recommendations are discussed further in the *Draft St. David's Community Plan Statement and Action Plan.*

Table 2: St. David's Nature Reserves, Parks and Parkettes

Nature Reserves, Parks and Parkettes	**Feature and designations**	**Size (acres)**	**Issues and Opportunities**
Nature Reserves			
Non-Such Island and adjacent islands	Environmental Education, Cahows, National Park Act, zoned Nature Reserve	17.79	Environmental education
Castle Harbour Islands	Cahow nesting islands, National Park Act, zoned Nature Reserve	3.05	Environmental education
Cooper's Island Nature Reserve	Cooper's Island Management Plan 2005, National Park Act, zoned Nature Reserve	56.41	Environmental education
Stocks Harbour Nature Reserve	National Park Act, zoned Nature Reserve	3.58	Environmental education
Nature Reserve near Hangar	Zoned Nature Reserve	1.89	Incorporate into National Park Act
Smith's Island Nature Reserve	National Park Act, zoned Nature Reserve	20.03	Offer boat tours
Smith's Island Nature Reserve (Bermuda National Trust)	Nature Reserve	21.14	Environmental education
Parks			
Little Head Park	National Park Act, zoned Park	20.61	New Community Garden. Needs a Park Management Plan. Improve coastal path from Vaughan Bay to Fort Popple to St. David's Battery. Signage.
Great Head Park	St. David's Battery and Lost at Sea Memorial	24.29	Needs a Park Management Plan.

Nature Reserves, Parks and Parkettes	Feature and designations	Size (acres)	Issues and Opportunities
	National Park Act, zoned Park		Pathway through wooded areas. Signage.
Governor's Island Park	National Park Act, zoned Park	1.0	Offer boat tours
Clearwater National Park and car park	Beach, washrooms, concessions, parking, National Park Act, zoned Park	9.63 + 9 acres of car park/ vacant land	Create separate children's biking area on vacant land
Cooper's Island Park	Former NASA site Cooper's Island Management Plan 2005	19.81	Signage NASA Museum
St. David's Lighthouse Park and Dark Bottom Playground	Playground and grass area, historic importance. Park Management Plan 1988-93, National Park Act, zoned Park	6.08	Update Park Management Plan. Renovations to playground. Vista point and signage
Kindley Field Park	Coastal strip parkland, high public amenity value, mostly within National Park Act (minus @ 4 acres), zoned Park	23.76	Potential to extend Kindley Field at Stocks Harbour to include additional parkland if St. David's Road is closed to traffic
Great Bay Park	National Park Act, zoned Park	0.41	Signage
Annie's Bay	Historic importance, Site of new St. David's Islanders memorial plaque and rock. Zoned Park but not part of National Park system	5.01	Realign fence and gate to make accessible to the public Promote as a historic park for passive recreational and cultural uses Potential new park at adjacent Ruth Bay
Parkettes			
Carter House	Endemic garden - containing over 35 different endemic and native species of trees and plants	0.60	Request by St. David's Historical Society to extend planting and zone as Park Further planting proposed and bus layby A nearby café would be an added attraction

Nature Reserves, Parks and Parkettes	Feature and designations	Size (acres)	Issues and Opportunities
Anchor Park	Parkette picnic tables and benches, scenic views	0.25	Improve signage
Fitness parkette (near Channel House)	Parkette with fitness equipment	0.68	Not readily visible, not well used, needs better connectivity and signage

The Land Use survey 2021 estimates that approximately 11% of St. David's comprises islands, coastal areas and open spaces. These areas are protected as conservation zones in the Bermuda Plan 2018. Although some of these islands and open spaces are not publicly accessible, they have high visual amenity value and contribute significantly to St. David's scenic landscape. Eight percent of respondents to the St. David's Community Survey said they most loved St. David's for its views, scenery and natural beauty.

When asked in the St. David's Community Survey 2021 to rate the importance of new and/or improved entertainment, recreation and tourism amenities for St. David's, the strongest support was for Parks and Open Spaces, with 80% of respondents considering Parks and Open Spaces to be 'very important' (see Figure 15).

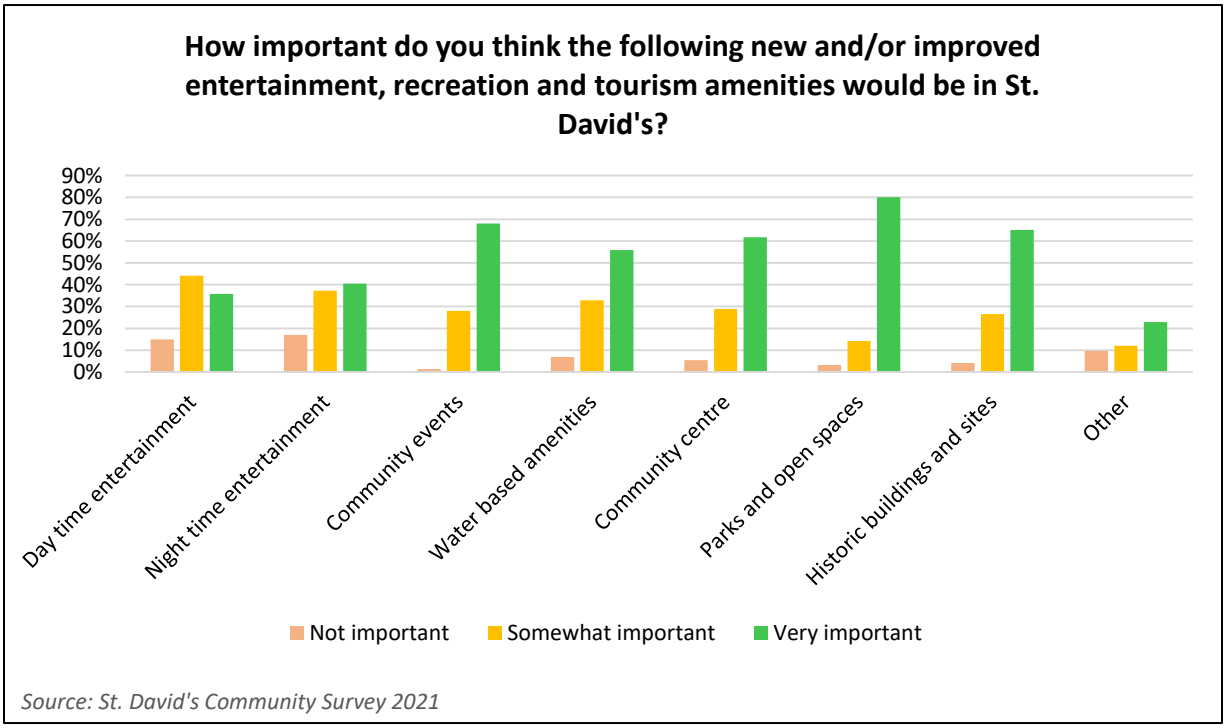

Figure 15: Entertainment, recreation and tourism amenities in St. David's

St. David's undoubtedly has some of the most beautiful views in Bermuda (see Figure 16). However, unless flying over St. David's, many of these views are not often seen or appreciated by the general public. They are not publicized as vista points and some can only be viewed from vacant, undeveloped areas. The many 'hidden treasures' of St. David's are what contribute so much to the charm and

tranquility of St. David's Island, and what St. David's residents rightly want to protect. There, therefore, needs to be a balanced and sensitive approach taken to increasing accessibility to and publicity of these sites.

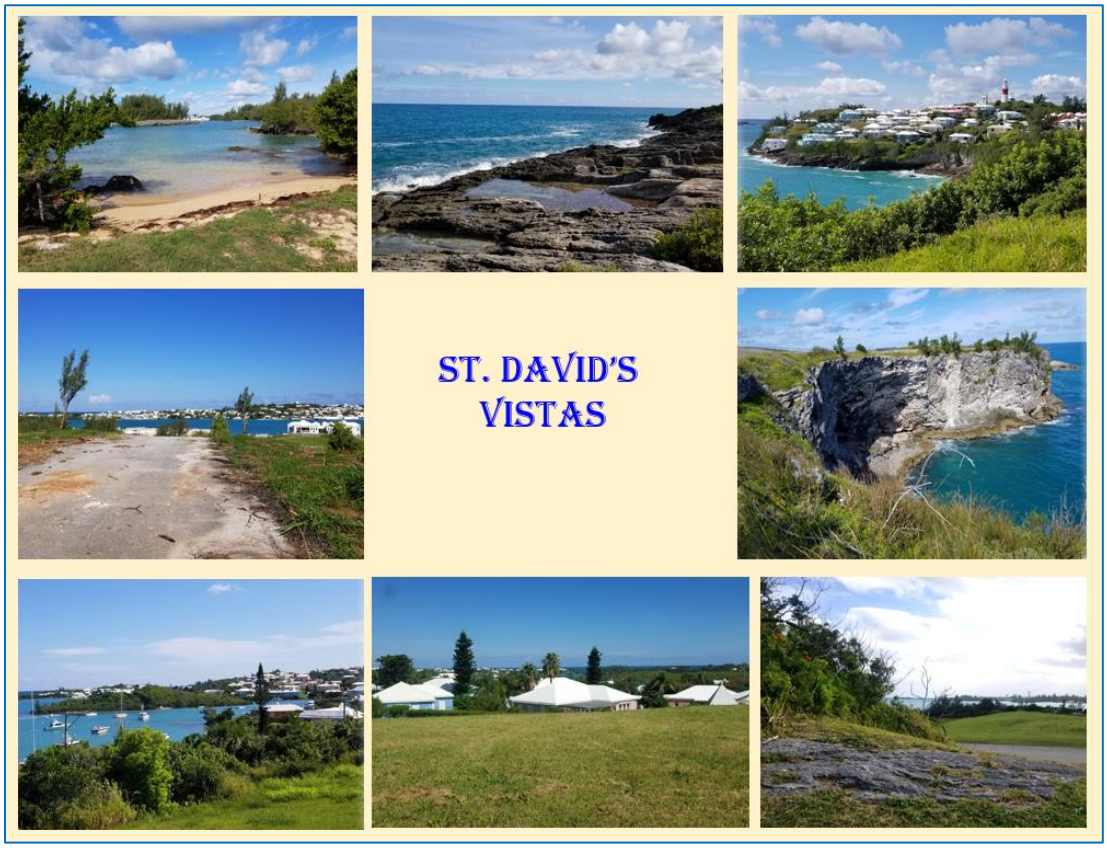

Figure 16: Vistas of St. David's

In addition to the opportunities to enhance St. David's existing parklands (mentioned in Table 2), there are also opportunities to create new parkland areas. One opportunity may be created at Kindley Field Park if the half mile stretch of St. David's Road from the Swing Bridge along the coastline of Stocks Harbour is closed off to traffic (see section 3.6.1 of this report). This area could be repurposed as a waterfront park with restored mangrove habitats. Public access could be provided to Stocks Harbour, with links to adjacent green spaces and Ships Wharf, accommodating marine related recreational, sporting and environmental education uses and outdoor camping opportunities. This area is not currently part of the National Parks system; however it is zoned as Park in the Bermuda Plan 2018.

This recommendation also reflects the feedback received in the St. David's Community Survey 2021 which included suggestions to expand the area near the Hangar for recreational uses and to create a green corridor for cyclists, walkers and runners from gate 1/Double Dip to Clearwater Beach Park.

Other suggestions from the community included making Annie's Bay more accessible and the creation of a new park at Ruth's Bay which is an unused area of open space currently inaccessible to the public. In order to avoid public access through the BLDC utility area on Ruth's bay Road, one suggestion is to

construct a short link road (less than 100m) from Texas Road south to a new coastal park at Ruth's Bay. This could provide ready access to nearby residents on Texas Road and surrounding residential areas.

3.3 Recreational Facilities

St. David's Island is also home to a diverse range of recreational areas and facilities, and includes some 40 acres of land designated as Recreation in the Bermuda Plan 2018. Most notable is the St. David's Cricket Club and grounds which is also integral to the social fabric of the St. David's community.

Table 3 provides an overview of St. David's recreational facilities and highlights some issues and opportunities to further enhance the public's use and enjoyment of them.

Table 3: Recreational Areas in St. David's

Recreational Areas	Features	Size (acres)	Designation	Issues and Opportunities
Softball fields	3 fields	11.8	Zoned Recreation	Seasonal use
Kilgore Softball field	Gold Point Archery	1.88	Zoned Recreation	Well used and maintained
Kindley tennis and basketball courts	3 tennis courts and 1 basketball court - disused	1.29	Zoned Recreation	Currently derelict. Opportunity to create community sports courts

Recreational Areas	Features	Size (acres)	Designation	Issues and Opportunities
Clearwater Middle school field	School field	0.98	Zoned Recreation	Provide additional recreational space on neighbouring government lot
St. David's Primary School/St. David's Cricket Ground	Cricket Field	4.8	Zoned Recreation	Well used and maintained
Southside Motor Sports Park	Motorcross	19.44	Zoned Recreation	Well used and maintained
RC track	Remote cars	0.9	Mixed Use	Well maintained. Site suitable for other uses - central location with harbour views

Additional recreational facilities in St. David's include the Bermuda Gymnastics facility, Strykz Bowling Lounge, the Xtreme Sports Fun Zone, Evolutions Health and Fitness Centre, and a fitness circuit on Longfield Road near Channel House.

St. David's is also a popular venue for sporting events including triathlon, cycling and running races, as well as power boat racing at Kindley Field/Ferry Reach and remote boat racing in Stocks Harbour.

Clearly, St. David's is a hub for sports and over a quarter of respondents to the St. David's Community Survey 2021 stated that they are involved in a sporting activity or club in St. David's. In addition, when asked in the St. David's Community Survey 2021 what types of development the community considers to be most important, sports and recreational facilities scored the highest, with 63% of respondents considering sports and recreational facilities to be 'very important' (see Figure 17).

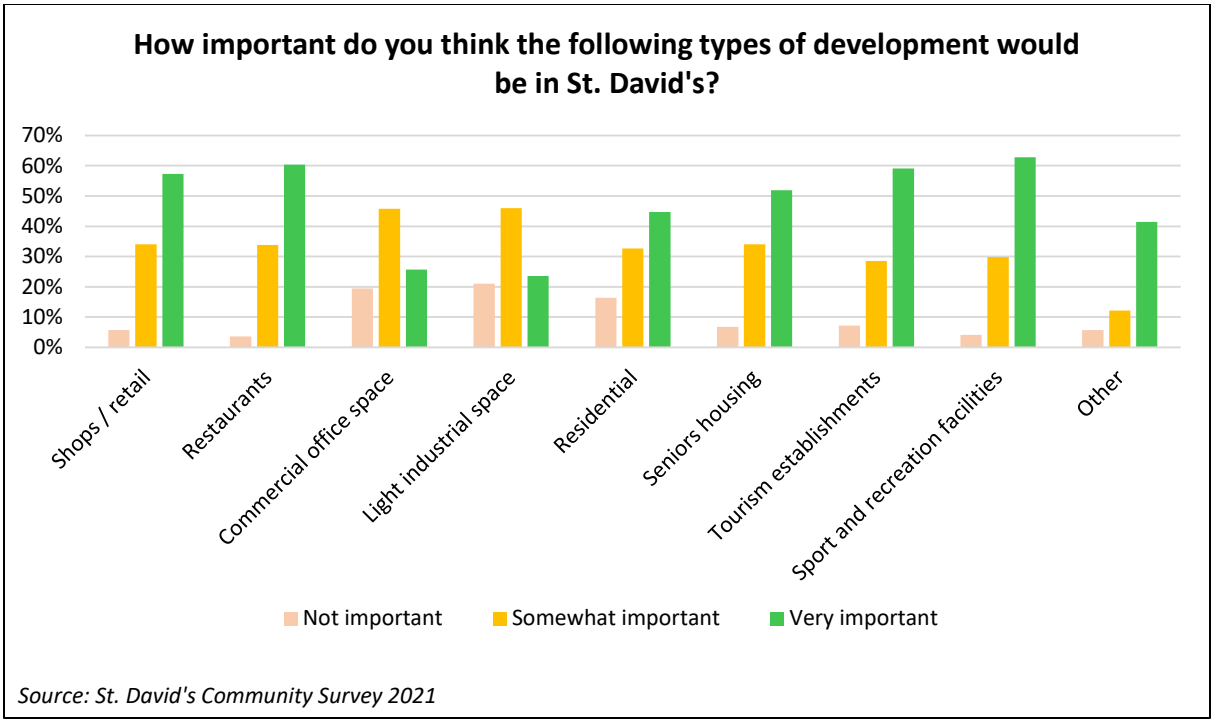

Figure 17: Types of future development for St. David's

Suggestions in the St. David's Community Survey 2021 for improvements to recreational facilities in St. David's included fixing up and reopening the basketball and tennis courts on Tommy Fox Road, providing a dog park, expanding the area near the Hangar for family use, bike riding and rollerblading, providing a camping ground area near Stocks Harbour, and providing a kids only biking area near Clearwater Beach car park.

With an abundance of vacant land and already well established array of sports venues, St. David's also seems to be a perfect location for a Sports Training Centre and Hostel for local and overseas athletes.

3.4 Tourism and Visitor Attractions

Although St. David's has no hotel accommodation and few vacation rental properties, it has a great deal to offer in terms of visitor experiences especially its rich heritage and culture, historic buildings, museum, beautiful parks and beaches, and special seafood cuisine. Improved accessibility and connectivity to these attractions, as well as better signage and publicity, could help to provide an enhanced visitor experience to St. David's.

St. David's has an excellent museum at Carter House managed by the St. David's Historical Society. It celebrates the unique culture and history of St. David's Islanders with exhibits about whaling, piloting, boat building, palmetto hats and dolls, and farming. This museum attracts a number of visitors but there is potential for it to attract higher volumes of visitors. Suggestions have included the incorporation of a bus layby outside Carter House to improve accessibility. Amenities such as a café and/or restaurant in the vicinity could also help to attract more visitors. In addition, the museum offers opportunities for links with schools and historical and environmental education programmes.

The St. David's Community Survey 2021 revealed that one of the community's biggest dislikes about St. David's is the lack of restaurants and dining options. Prior to their closure approximately 10 years ago, Dennis's Hideaway and the Black Horse Tavern restaurants used to draw many tourists and locals to St. David's. The former Black Horse Tavern building remains vacant and is prime real estate for the re-establishment of a waterfront restaurant with an outside porch, parking and water views.

Just prior to the start of the Covid pandemic, tours such as Kristin White's 'Taste of St. David's' tour was offered to cruise ship visitors, celebrating St. David's history, culture, food, historic landmarks and beaches. These sorts of tours embrace the entire St. David's experience and should be supported and re-continued.

Many of St. David's parks are not known or frequented by visitors due to their remoteness, lack of accessibility and publicity. The main visitor attraction in St. David's is Clearwater Beach Park. Whilst there is a bus service to Clearwater Beach Park, it is not frequent and tourists are sometimes seen walking from the bus stop on St. David's Road to Clearwater Beach Park and Cooper's Island. Minibuses and rental vehicles (electric cars and bikes) are also used by tourists visiting St. David's.

When asked in the St. David's Community Survey 2021 what types of development the community considers to be most important, restaurants and tourism establishments ranked second and third highest respectively, with just under 60% of respondents considering them to be 'very important' (see Figure 17).

Given St. David's extensive range of historic and environmental assets, there are many potential and enhanced opportunities for visitors, particularly those who are 'experience enthusiasts' or are 'active families', as identified in the Bermuda's National Tourism Plan 2019 to 2025. For these opportunities to be realised, however, it is crucial to ensure that efficient and reliable transport services, whether public or private, are in place to create an enjoyable and seamless visitor experience.

With more visitors returning to the Island since the start of the Covid pandemic, there are also greater opportunities for vacation rentals to be offered in St. David's.

3.5 Services and Amenities

Land Valuation records indicate that there are 197 commercial units in St. David's, many of which are located in Southside. Commercial businesses include construction, storage, wholesale, boatyards, workshops, boat repairs, water truckers, event planning, communications, a laundromat, as well as BLDC offices, some Government Departments, the Government Archives/Record Centre, the Police Station and the Weather Tower.

St. David's has a variety of community and educational services as shown in Figure 18. Pizza House and Eliana's on Southside Road are the main dining options in St. David's. Other food establishments include Double Dip ice cream parlor and the beach concessionaires at Clearwater. St. David's education establishments include Clearwater Middle School, St. David's Primary School and Pre-school and Sunbeam Nursery School. St. David's also has five churches. One recent addition has been the establishment of a new community garden at Little Head Park, facilitated by the Department of Parks.

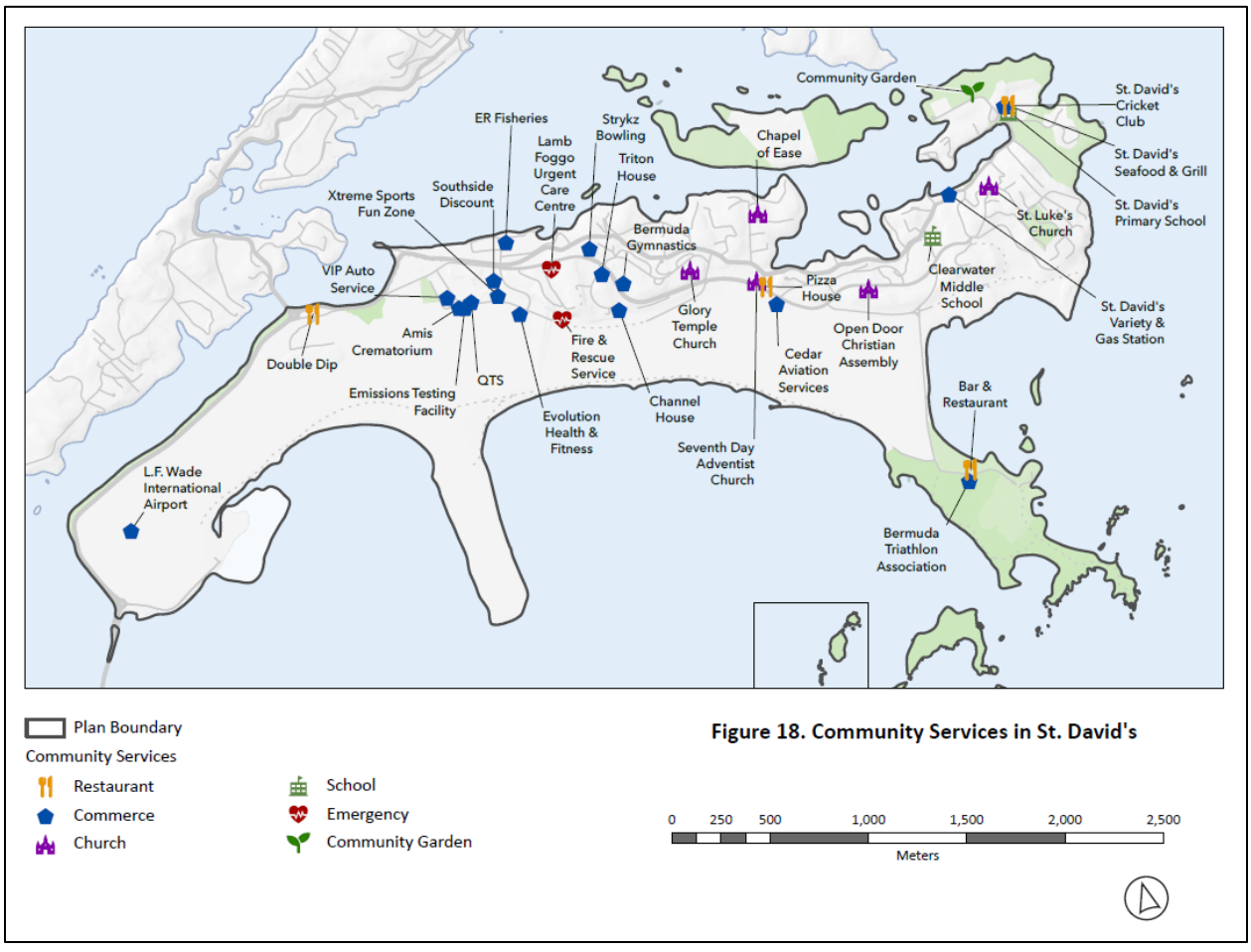

Figure 18. Community Services in St. David's

Figure 18: Community Services in St. David's

Although St. David's has seen some major developments such as the Lamb Foggo Urgent Care Centre (built in 2009) and new L.F. Wade Airport terminal (2020), these serve a national rather than a local

need. St. David's accommodates a number of key Island services and amenities yet it has few local community services.

Despite the upward trend in the resident population of St. David's and the increase in the number of Bermuda Housing Corporation residents, the provision of local amenities to serve that population has been diminishing. In the last 10 years, St. David's has lost its only grocery store and pharmacy (Whites); local restaurants Black Horse Tavern and Dennis' Hideaway; the Southside cinema; St. David's Post Office; its public ferry service; and its only primary school is due to close in 2023.

3.5.1 Grocery Store

There are currently no grocery stores in St. David's. The nearest grocery stores are Somers Supermarket in St. Georges, some 3 miles to the east, and Shelly Bay Market Place, some 6 miles to the west.

St. David's Variety, located in the heart of St. David's, is a convenience store and gas station, and sells a small range of groceries. In addition, Southside Discount located next to the Police Station offers a small range of bulk food items and E. R. Fisheries sells bulk frozen fish and meats.

In other jurisdictions, geographic areas where residents' access to affordable, healthy food options (especially fresh fruits and vegetables) is restricted or nonexistent due to the absence of grocery stores within convenient traveling distance, are described as 'food deserts'. In this respect, the St. David's area could similarly be described as a 'food desert'.

The St. David's Community Survey 2021 results revealed that nearly one fifth of all respondents stated that the lack of a grocery store is what they least like about St. David's. When respondents were asked to provide their top three recommendations for improvements in St. David's, out of a total of 683 recommendations provided, nearly one third (212 recommendations or 31%) was the recommendation

for more retail/restaurants/ATM. The recommendation for a grocery store, specifically, received 21% of all recommendations.

In addition, when asked to rate the importance of various new or improved services and amenities, 82% of respondents regard a grocery store as 'very important', 75% rated an ATM as 'very important' and 72% rated a food/vegetable market as 'very important' (see Figure 19).

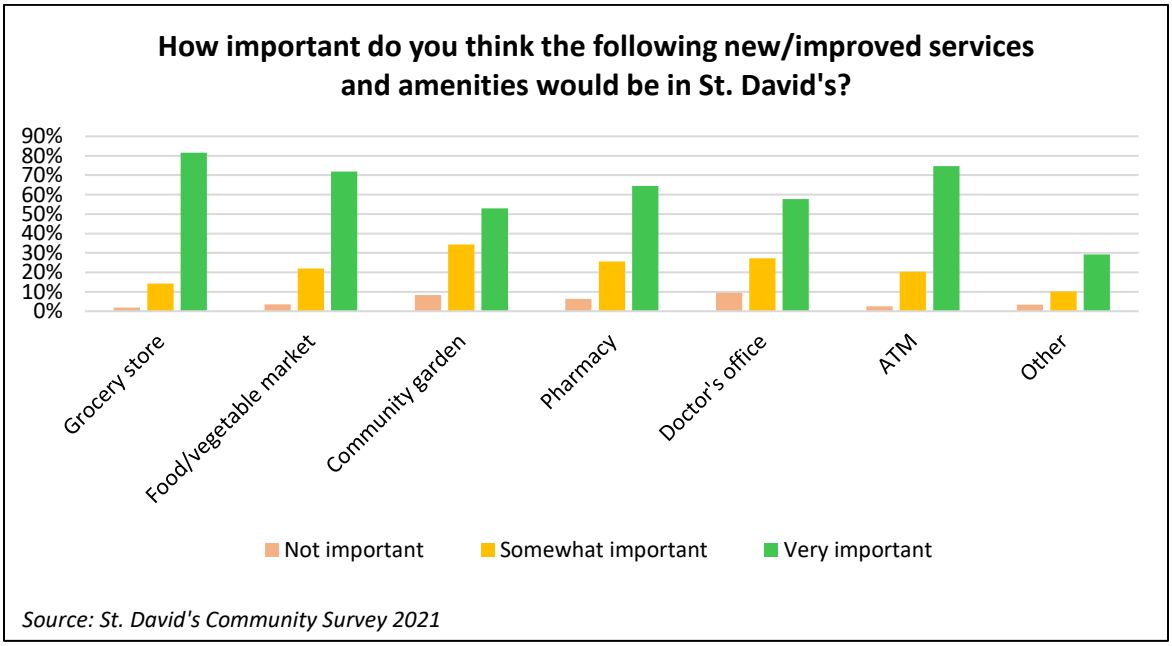

Figure 19: New or improved services and amenities for St. David's

Ninety eight percent of respondents to the St. David's Grocery Store Survey 2022 said they were in favour of having a new grocery store in St. David's and over two thirds of respondents indicated that they would be likely to use it to do the majority of their grocery shopping. Respondents said that having a grocery store in St. David's would provide greater convenience; save travel time particularly for those who currently have to travel by two buses to a grocery store; save money on gas for those who travel by private car or bike; and bring employment opportunities. Figure 20 captures a selection of comments received from the community.

Interest in other services associated with a new grocery store was also high, with 96% of respondents indicating that they would use an ATM if one was provided at a new grocery store and 92% saying they would use a pharmacy.

Over three quarters (78%) of respondents said they would like a new grocery store to be located at or near the former Whites supermarket. Reasons for this included the site's central location, proximity to residential areas, within walking distance, existing parking, on a bus route and having an existing building to repurpose and/or available land to build on.

Figure 20: Comments from St. David's Grocery Store Survey

The potential economic, social and health benefits of having a new grocery store in St. David's are illustrated in Figure 21.

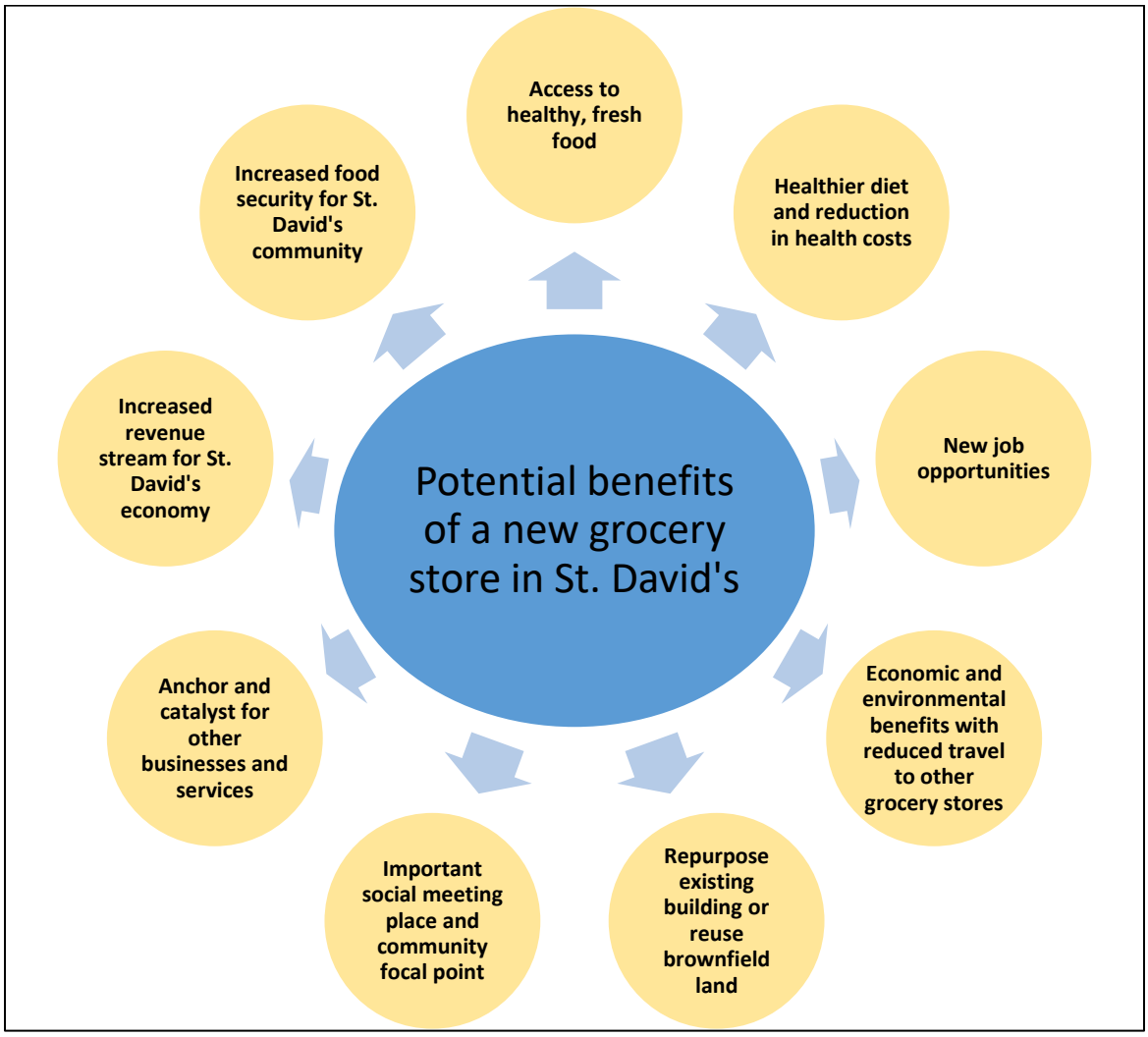

Figure 21: Potential benefits of a new grocery store in St. David's

One of the main recommendations of the St. David's Community Plan will be to attract a grocery store to St. David's as the first step in creating a new commercial and neighbourhood centre. An initial action item will be to gauge interest and to issue a Request for Proposal for a grocery store.

3.6 Road Infrastructure and Transport

3.6.1 Road Network

St. David's Island is connected to the mainland via a half mile long causeway. First built in 1871, the causeway is a narrow strip of reclaimed land connecting four islets across Castle Harbour. It is vulnerable to flooding and damage during storms and hurricanes, and at times is closed for public access.

The main public road serving St. David's Island is St. David's Road and is currently the only access road into St. David's. It runs for some 2.5 miles east from Swing Bridge/Double Dip roundabout through the eastern end of Kindley Field Park along Stocks Harbour, south of Ships Wharf and into the St. David's residential areas as far as the junction of Texas Road and Great Bay Road (see Figure 22).

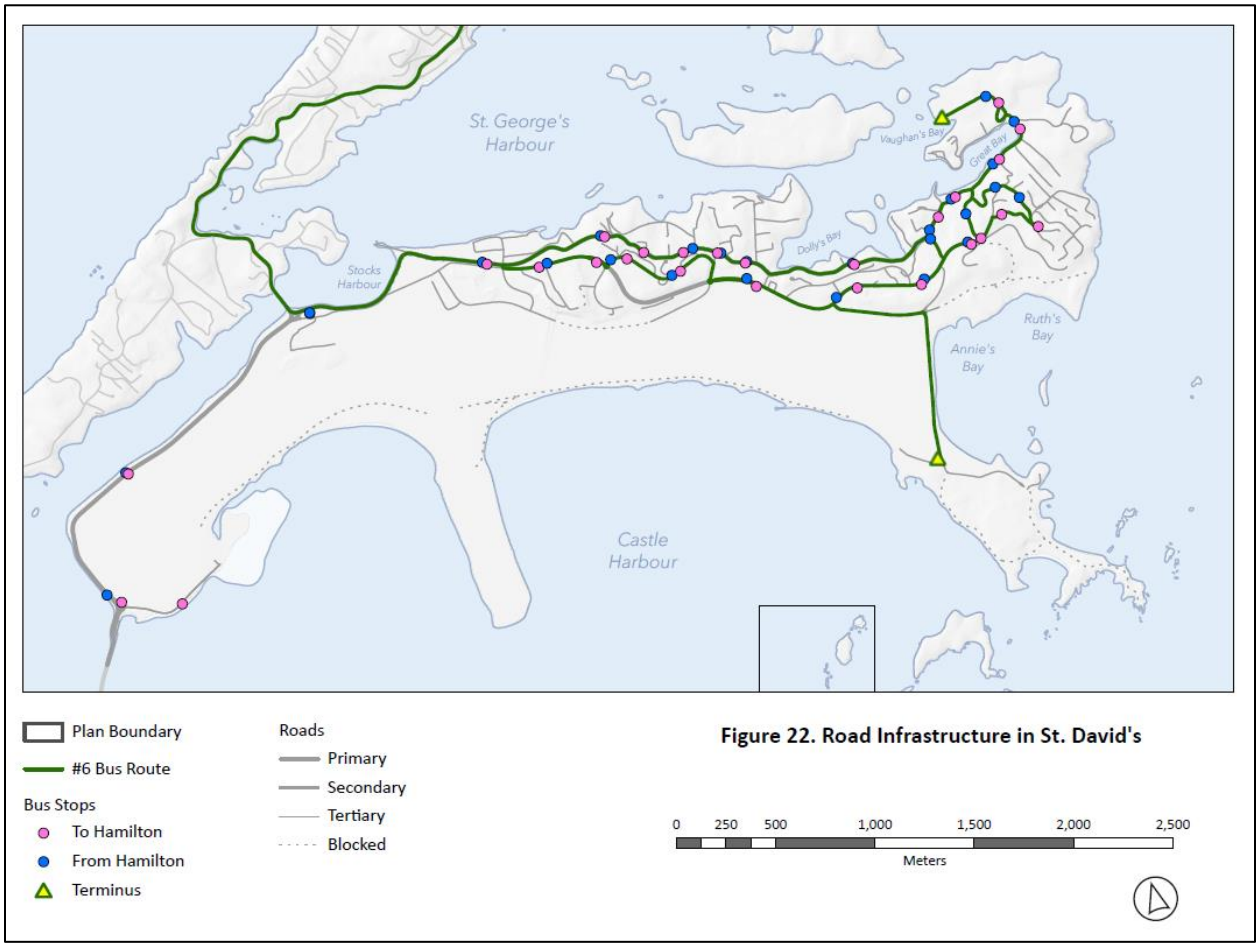

Figure 22: Road infrastructure of St. David's

When the US base vacated Southside and the land was put under the management of BLDC, there were a number of phased road infrastructure improvements. These involved opening up Southside Road as

the main road through Southside; narrowing carriageways, and adding sidewalks and lighting and bus laybys. A road link was also provided between Orange Hole Road and Texas Road, connecting these residential areas and providing a more direct route into eastern St. David's.

The western most stretch of Southside Road between Swing Bridge/Double Dip roundabout and Wallers Point Road/the Commercial Park is closed to the public. There are plans to reopen this road and establish it as the main thoroughfare into St. David's. This would allow for the half mile stretch of St. David's Road which follows the coastline of Stocks Harbour to be closed to traffic and repurposed as an extension to Kindley Field National Park (see also section 3.2 of this report)

Another recommendation from the St. David's Community Survey 2021 is to open a new park at Ruth's Bay. Access to Ruth's Bay could be provided from Texas Road and a short link road created from Texas Road south to the new park. This would avoid BLDC's utility area between Ruth's Bay and Annie's Bay which would remain closed to the public (see also section 3.2 of this report).

The Draft St. David's Community Plan suggests proposals for new road connections which can be developed further as part of a more comprehensive review of St. David's road network.

3.6.2 Sidewalks and Pedestrian links

As part of the research for the Bermuda Plan 2018, the Department of Planning conducted a GIS walkability analysis of the Island to identify the presence of sidewalks/grass verges or other safe walking areas on Bermuda's main roads. A map colour coding system was established with red indicating roads with no sidewalks or grass verges, yellow indicating roads with one sidewalk or grass verge, and green indicating roads with two sidewalks and/or grass verges.

As shown in Figure 23, St. David's compares relatively well compared to other areas of the Island with a number of roads having at least one sidewalk/grass verge; however, there are some residential pockets in the northern and eastern parts of St. David's which have no sidewalks or grass verges.

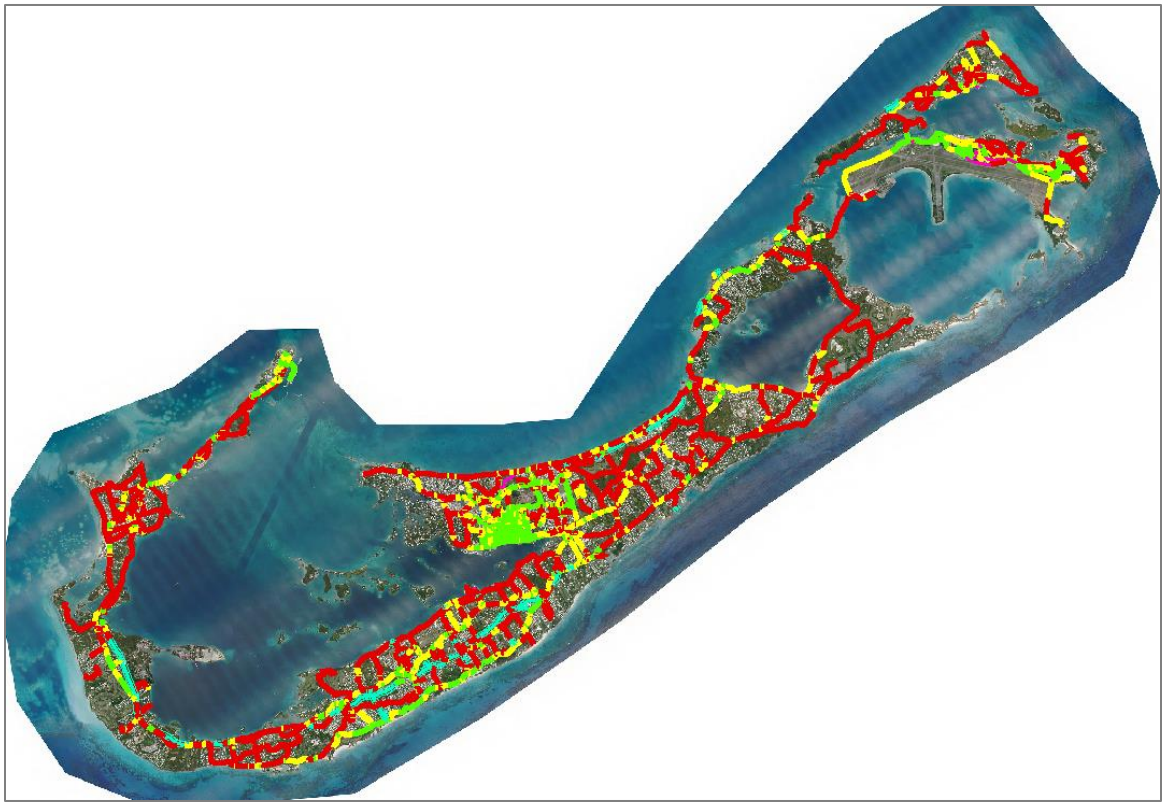

Figure 23: Bermuda's network of sidewalks
(Source: Department of Planning)

Some walking trail signs have already been installed in the Southside area which link some of the attractions along the 'blue' and 'pink' trails; however improvements are required to create more signage, connectivity and integration between all of St. David's attractions and amenities.

The creation of safe, accessible, walkable routes and connections throughout St. David's is a key objective of the Draft St. David's Community Plan. Where possible new or improved sidewalks should be provided and required as part of major development proposals. Priority areas for new sidewalks should include roads between bus stops and schools to create 'safe routes to school'; roads within high density residential areas; routes to retail stores and recreational areas; and roads between bus stops and tourist attractions. The *Draft St. David's Community Plan Statement and Action Plan* suggests proposals for new pedestrian links and connections which can be developed further as part of a more comprehensive review of walkability improvements in St. David's.

3.6.3 Public Transport

St. David's is served by the public bus route number 6 which starts in the Town of St. George and enters St. David's via Southside Road, serves Clearwater Beach Park, and exits via St. David's Road (see Figure 24). The route 6 schedule from January 2022 (www.gov.bm) provides two buses every hour (at 10 mins and 45 mins past) between 9.45 a.m. and 9.10 p.m. from Mondays to Saturdays.

Figure 24: Public bus route for Southside
(Source: Government of Bermuda website)

Respondents to the St. David's Community Survey 2021 stated that one issue they least like about St. David's is the unreliable/poor public transport service and lack of a ferry service. This ranked particularly highly as a 'dislike' amongst the respondents aged under 18 who commented that they face challenges getting to and from school by bus. Also scoring highly as a 'dislike' are the poorly maintained roads, and lack of street lighting and sidewalks.

When asked to rate the importance of certain transport service improvements in St. David's, 87% of respondents consider bus transport improvements to be 'very important', and 76% of respondents also rate road improvements as 'very important'. New and/or improvements to the minibus service and sidewalks/pedestrian links also rated highly as 'very important' for the St. David's community (see Figure 25).

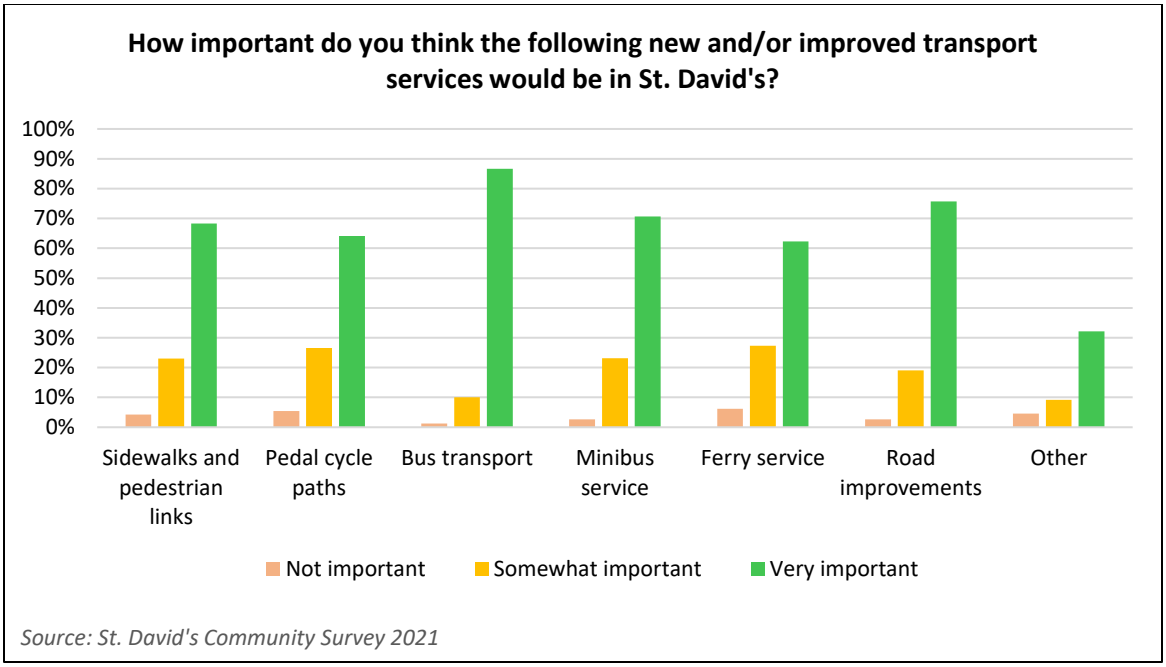

Figure 25: New and/or improved transport services for St. David's

Community feedback and site observations highlighted the lack of connectivity in parts of St. David's and the unwelcoming, 'keep out' feel created by unattractive fencing and unwelcoming signs. There is also a lack of useful signs along popular routes and at key attractions to guide visitors.

The Draft St. David's Community Plan addresses these issues providing recommendations to improve public transport services, and to provide greater accessibility and connectivity within St. David's with the removal of unnecessary fencing, the creation of more pedestrian and cycle trails, and the installation of more useful route marking and signage.

3.7 The Airport

3.7.1 Airport land use, traffic and noise

Bermuda's L. F. Wade International Airport is a vital part of Bermuda's transport infrastructure. It is also a major part of St. David's Island and has a significant impact on the St. David's community.

The main site of the L. F. Wade International Airport, which includes a new terminal building completed in December 2020, comprises some 558 acres or 42% of St. David's Island. There are also some small sites elsewhere in St. David's which accommodate Airport related facilities.

The L. F. Wade International Airport has unique land use and development requirements to accommodate its operational needs including terminal and runway facilities, taxiways, safety areas, general aviation areas, and air cargo facilities. As such, it is designated as a distinct 'Airport' zone in the Bermuda Plan 2018.

The Airport's operations also have a major impact on the surrounding area of St. David's particularly in terms of airport traffic and noise. Figure 26 illustrates the level of air traffic over the last 15 years with an obvious dip during the Covid pandemic which started in 2020.

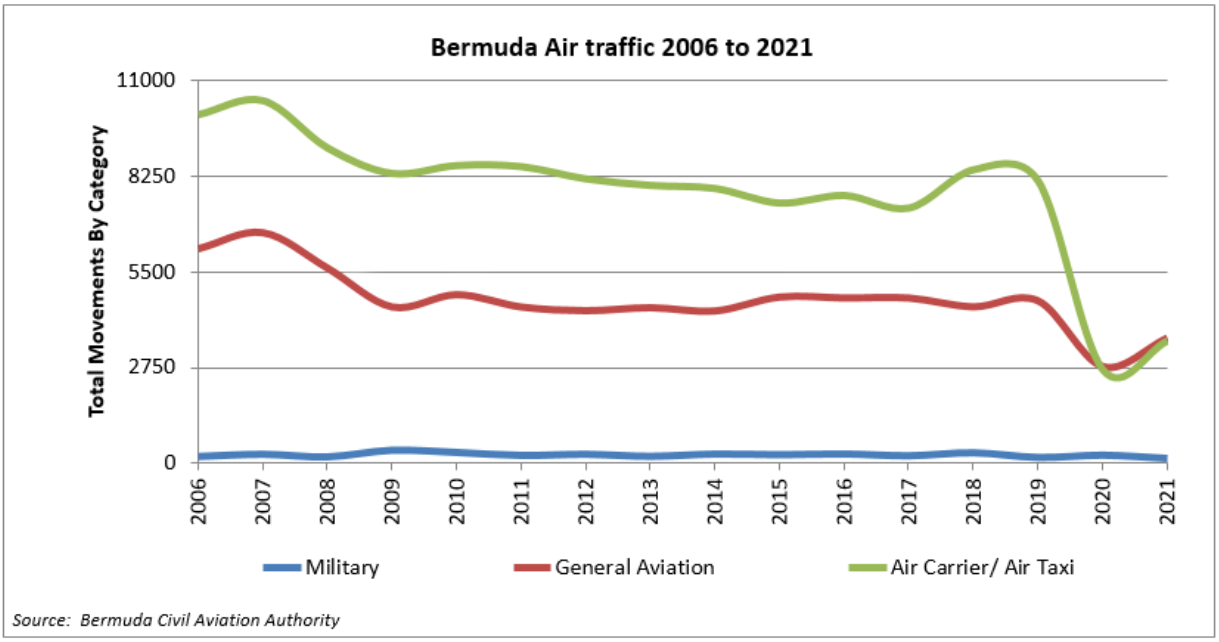

Figure 26: Bermuda air traffic 2006 to 2021

St. David's residents have expressed their concerns about noise and fumes from the private jet facility, Cedar Aviation. These concerns were confirmed in St. David's Community Survey 2021 where 6% of respondents rated the private jet facility amongst their top three dislikes about St. David's. A further 2% of respondents indicated that moving the private jet facility and/or better enforcement of the regulations ranked in their top three recommendations for improvements in St. David's.

In response to complaints from the community about noise and odour from the private jet facility, in 2021, Canadian Environmental Consultant (RWDI) conducted an assessment of noise impacts from the auxiliary power units and ground power units for aircraft parked on Apron 4. The results of this assessment showed the following:-

- that the noise impacts from the auxiliary power units are well above World Bank Guidelines;
- that switching from auxiliary to ground power units would result in a reduction in noise levels;
- that the ground power units should have a minimum performance limit;
- that noise barriers would not be effective; and
- that line power plugs are the best long term solution.

As such Cedar Aviation and Skyport have proposed the following mitigation measures:-

- the purchase of more effective ground power units;
- restrictions on the use of auxiliary power units to 30 minutes before flights;
- two additional locations for annual noise monitoring; and
- improved communication with the community regarding operations and noise monitoring results.

It is considered that these improvements should alleviate some of the community's concerns. The *Draft St. David's Community Plan Statement and Action Plan* includes the ongoing monitoring of noise levels from the private jet facility as an action item.

St. David's has the locational advantage of proximity to Bermuda's International Airport and private jet facilities as well as brownfield land available to build on. Should there be a demand for large conference facilities in the future, there are some ideal sites within St. David's that could accommodate a new hotel and conference facility.

3.7.2 Airport flight paths

Not only does the Airport have an impact on St. David's in terms of its land use, noise and air traffic; new development proposals within the Airport's flight paths and in proximity to the Airport need to be carefully assessed to ensure public safety as well as the safe and effective operation of the Airport. Physical obstructions to aircraft as they prepare to land and take-off must be avoided, as well as other materials and/or equipment that may interfere with aircraft operations.

The method of assessing the significance of any existing or proposed object within the airport boundary or in the vicinity of the airport is to establish defined obstacle limitation surfaces (OLS) particular to a runway and its intended use. The OLS for the L.F. Wade International Airport is shown in Figure 27 and impacts a large portion of St. David's Island. The OLS has been created in accordance with International Civil Aviation Organisation (ICAO) requirements, the UK Air Navigation (Overseas Territories) Order 2013 (as amended), Air Safety Support International (ASSI) requirements and the Bermuda Development of Land (Airport Approaches) Act 1956 (as amended).

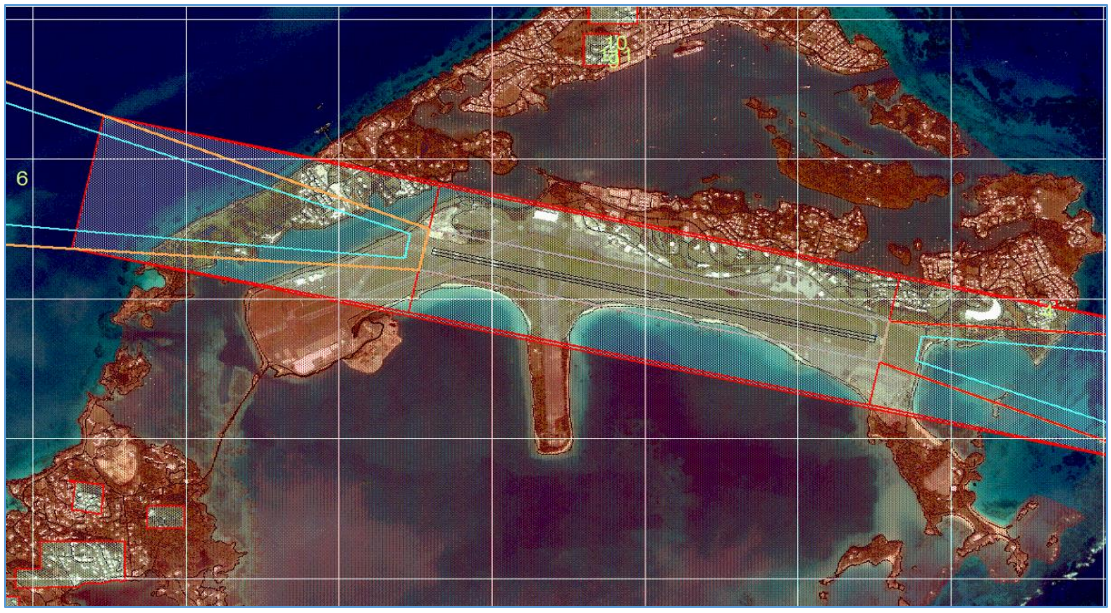

Figure 27: L.F. Wade International Airport Obstacle Limitation Surfaces

The Bermuda Plan 2018's Airport Control Protection Area represents the International Civil Aviation Organisation (ICAO) Annex 14 Obstacle Limitation Surfaces required to protect the controlled airspace around the Island and the airspace near the airport and runway. Any planning application received by the Department of Planning which may result in a potential impact to the OLS around the L.F. Wade International Airport must be reviewed by the Bermuda Civil Aviation Authority and/or Bermuda Airport Authority. Temporary obstacles such as cranes used in the course of the development must also be assessed. The Bermuda Airport Authority has indicated that updates to this Obstacle limitation Surfaces are due in late 2022.

The Draft St. David's Community Plan addresses the need to liaise with the Airport Authorities with regard to new developments proposals within the OLS to ensure their use and height are acceptable.

3.8 The Impacts of Climate Change

3.8.1 Coastal Development and Zonings

The Bermuda Plan 2018 establishes the current planning framework for addressing the impacts of climate change particularly with regard to future development. These key concepts are reinforced in the Draft St. David's Community Plan and include:

- Protecting areas at risk of flooding and storm surge;
- Allowing limited, appropriate development in coastal locations;
- Encouraging the reuse of brownfield sites and the adaptive reuse of existing buildings;
- Ensuring sustainable design principles in new developments and promoting energy efficient building design, water conservation and use of renewable energy sources;
- Encouraging sustainable, low carbon forms of transport and improving the walkability of communities;
- Incorporating green spaces and landscaping in new developments to help manage higher temperatures, improve air quality, and control flood and surface water;
- Encouraging the use of sustainable drainage systems and permeable paving;
- Building community resilience and encouraging local food production; and
- Helping communities understand and plan how climate change could affect them and build resilience to mitigate against increased storms and flood risk, longer periods of time without power and food imports, and more damage to infrastructure.

St. David's Island has an extensive coastline, a number of small islands, and some low lying areas. Another significant issue therefore affecting St. David's Island and the St. David's community is its potential for flooding given the future predictions for sea levels to rise and greater frequency of severe storms.

As seen in Figure 28, 63% percent of St. David's or some 828 acres is within a Water Resources Protection Area, as designated in the Bermuda Plan 2018. This includes all areas which are at an elevation of 4 m or less above sea level and/or all areas within 12 m from the coastline.

The main areas in St. David's that lie within the Water Resources Protection Area are the Causeway, Airport, Ship's Wharf, parts of Cooper's Island and the residential areas around Dolly's Bay. Whilst this protection zoning was introduced initially as a means of protecting coastal waters and other water resources from the impacts of development, it now also serves as a useful indication of those areas that will be most affected by the impacts of climate change, particularly sea level rise and flooding.

Figure 28: Water Resources Protection Area in St. David's

New data and information will provide a better understanding of at risk areas which will allow for more informed coastal zoning designations and policies. In 2021, the Bermuda Government received up to date LIDAR bathymetric data which is crucial to undertaking storm surge modelling, and delineating coastal hazard zones.

In addition, Smith Warner International Ltd was commissioned in March 2022 to update the Coastal Erosion Study 2004 and Coastal Protection and Development Planning Guidelines for Bermuda and to include additional studies and recommendations to better understand the impacts of climate change. These studies will include:

- a vulnerability assessment for major Government infrastructure including the Airport, Causeway and other public roads;
- updating the coastal erosion and flood inundation projections;
- mapping projections for inundation, identifying low-lying coastal areas that will be periodically or permanently inundated by seawater and low-lying freshwater resources that could be impacted by saltwater intrusion;
- understanding the effects that coastal erosion and sea level rise will have on the mean sea level benchmark thereby impacting waterfront properties;
- identifying coastal areas prone to hydraulic erosion and/or destabilisation of the cliff faces, and making recommendations for or reducing the effects of erosion; and
- identifying 'no go' areas for future development based on predicted flood zones and areas susceptible to high erosion.

One of the recommendations for the Draft St. David's Community Plan is to review the findings of the Smith Warner International coastal studies and recommendations as they impact St. David's particularly with regard to identifying coastal hazard zones and areas within which future development should not be permitted.

3.8.2 Marine Protected Areas and Mangroves

There are a number of important marine areas in the nearshore waters of St. David's Island including shipwrecks, protected dive sites, National Park marine areas and mangroves (see Figure 29).

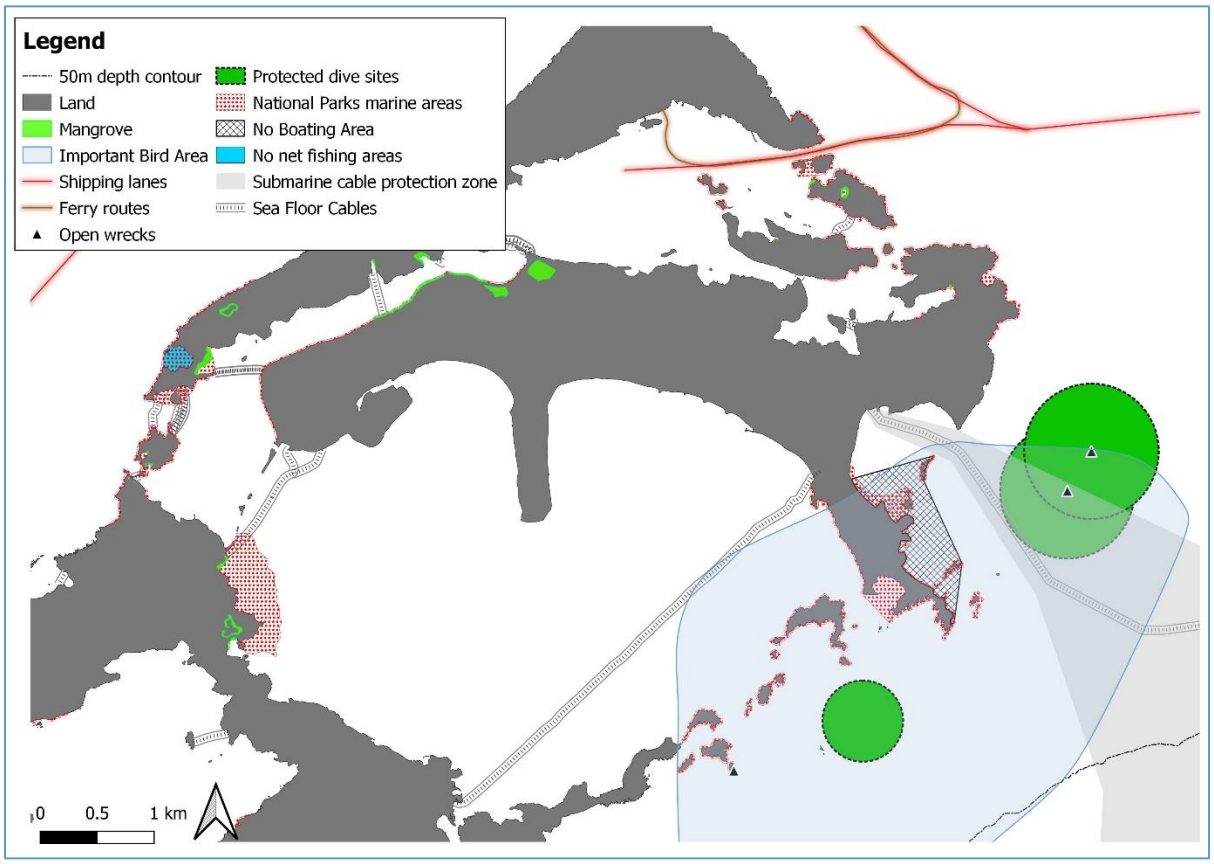

Figure 29: Protected Marine Sites and Areas around St. David's
(Source: Bermuda Government)

As part of the Bermuda Ocean Prosperity Programme, which aims to foster the sustainable, profitable and enjoyable use of ocean resources, a Marine Spatial Plan will be prepared for Bermuda. This will involve the expansion of Marine Protected Areas around the Island and may include the designation of small marine protected areas in certain bays and coastal areas of St. David's to support the marine ecosystem and fisheries.

Mangroves are a particularly important habitat for fish, crabs and birds. Mangroves also improve water quality by filtering pollutants in run off from land, and they buffer the coast and protect it from wave action and storms, flooding and wind.

A study of mangroves in the coastal areas of St. David's was conducted by the Department of Environment and Natural Resources and the Department of Planning in May 2022. A number of areas of

red and black mangroves were sighted in the coastal areas of Ferry Reach, Smith's Island, Dolly's Bay and Great Bay (see Figures 30 and 31).

Figure 30: Mangroves at Great Bay

Figure 31: Locations of Red and Black Mangroves in St. David's (Source: Bermuda Government)

Most mangroves in St. David's are located within National Park lands and zoned in the Bermuda Plan 2018 as Park or Nature Reserve; however a few are not currently zoned as conservation zones and

therefore warrant protection and rezoning. This will be addressed in the *Draft St. David's Community Plan Statement and Action Plan*.

There is also the opportunity to start a mangrove restoration programme in St. David's and build upon the programme previously initiated for Ferry Reach after Hurricane Fabian in 2003. One suggested location is at the eastern end of Kindley Field Park in Stocks Harbour.

3.8.3 Community Resilience

As indicated in the Healthy Communities chapter of the Bermuda Plan 2018, communities need to be able to prepare for and adapt to the direct and indirect effects of climate change including increased storms and flood risks, higher temperatures, and sustained periods without electricity.

The Bermuda Red Cross, in April 2022, announced that it will be providing community education and outreach on climate change resilience, and hopes to start offering virtual presentations to community groups. The *Draft St. David's Community Plan Statement and Action Plan* recognizes the importance of building community resilience to climate change through community education and environmental stewardship.

4.0 St. David's Community Plan

4.1 Community Engagement Themes and Suggestions

The community feedback received from the St. David's Community Survey results and from consultations with key stakeholders, as well as the research undertaken generated some key themes for the St. David's Community Plan to address (see Figure 32).

Figure 32: Community Engagement Themes

These themes include the community's love of St. David's peace, tranquility and natural beauty, as well as its parks and nature reserves. There is a strong sense of community and appreciation of St. David's rich heritage and culture. The community's need and desire for a grocery store and other retail and dining options is significant. There is also a strong desire to optimize the potential for new community and development opportunities in St. David's to help build a healthy and sustainable community.

This report has highlighted a range of opportunities for improvements in St. David's which have been suggested by the St. David's community and stakeholders.

The themes and suggestions have shaped the vision, goals and objectives of the Draft St. David's Community Plan. The intent is for these objectives to be achieved through the implementation of a phased action plan over the next 5 to 10 years aimed at:

- enriching the health and well-being of the St. David's community
- creating opportunities to support St. David's growth and viability as an attractive place to live, work and play
- promoting St. David's rich heritage and culture
- creating a greater sense of place and identity, particularly within Southside
- improving accessibility and connectivity within St. David's, and
- supporting the further building of St. David's as a sustainable and resilient community

4.2 Community and Development Opportunities Sites

As indicated in the St. David's Land Use Survey 2021, there are an estimated 85 acres of vacant and underdeveloped land in Southside including many attractive, brownfield sites. This offers huge potential for future investment and growth in St. David's.

Some of the main potential development sites are listed in Table 4 and shown in Figure 33. They include 21 acres of prime waterfront at Ships Wharf as well as Burrows Hill which is a significant 'opportunity site' with panoramic views of St. George's Harbour to the north and Castle Harbour to the south.

Of the estimated 85 acres, 52 acres have a Mixed Use development zoning and 33 acres have a Residential 1 development zoning. These planning zonings are extremely permissive and allow for a significant range of different types of development.

Table 4: Potential development sites in St. David's

Site/Area	Bermuda Plan 2018 Zoning	Potential uses
Ships Wharf	Mixed Use/Industrial	Mixed use – residential, commercial, tourism, marine related, warehousing
Burrows Hill, area near Lamb Foggo, former Whites, Channel House	Mixed Use	Residential, social, health, commercial
Near Commercial Park (vacant area by BLDC facilities and behind Police Station)	Mixed Use	Commercial
Vacant sites opposite Whites - vacant commercial	Mixed Use	Commercial
Former Club Azure site	Mixed Use	Residential

Site/Area	Bermuda Plan 2018 Zoning	Potential uses
Vacant land off Whalers Hill Road/the Sink	Residential 1	Residential
Vacant land off Tommy Fox Road	Residential 1	Residential
Vacant land off Westcott Road	Residential 1	Residential
Vacant land at Stanley's Run/off Pepper Hall Road	Residential/Open Space/Mixed use	Residential
So Far Lane	Residential 1	Residential

Figure 33: Potential development sites in St. David's

A key aim of the Draft St. David's Community Plan is to recommend how these vacant, brownfield sites can be developed in phases over time to bring a range of community and economic benefits to St. David's and Bermuda as a whole.

The phases will reflect the different priorities placed on providing certain types of developments and indicate suggested sites for them. Significant residential development will be proposed for the later

phases of the action plan and will be contingent on household projections for Bermuda and demand for more housing in St. David's.

4.3 Next phase of Community Engagement

The Draft St. David's Community Plan comprises two documents - this *Draft St. David's Community Plan Background and Issues Report* and the *Draft St. David's Community Plan Statement and Action Plan*.

Involvement and input from the St. David's community has been invaluable in preparing the Draft St. David's Community Plan. A one to two month public consultation period will be held when the Draft Plan is published, during which time the community will be invited to provide further input into the Draft Plan.

Postcards will be sent to all St. David's addresses as well as social media posts inviting comments and input into the Draft Plan. Presentations on the Draft St. David's Community Plan will be given to community and stakeholder groups, and any interested persons.

A community feedback survey will accompany the launch of the Draft St. David's Community Plan to capture the community's feedback, comments and suggestions on the Draft Plan including the proposed action items. Amendments will then be made to the Draft Plan.

The intent is for the St. David's Community Plan to be a 'living plan' which is used to guide priorities for community improvements and development, and which evolves and is updated over time.