

Infrastructure Capacity Study

December 2020



Government of Jersey
Infrastructure Capacity Study
Final Report

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This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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Appendices

Appendix A

Superseded Indicative Future Infrastructure Requirements

1 Introduction

1.1 Infrastructure and its Importance

Infrastructure may be defined in physical, environmental and social terms, across a broad range of scales. Infrastructure ranges in form: from large scale assets such as major roads and airports; to less tangible elements such as community services and open space. Infrastructure, in all its forms, is an essential requirement to support society and to achieve Jersey's wider aspirations.

In particular, a strong network of utilities, transport connections, energy supply and connectivity are a prerequisite for increased housing provision and economic growth. This hard infrastructure must, however, be supported by social infrastructure, in the form of education, health, community space, leisure and sports facilities and emergency services facilities. This social infrastructure encourages social interaction and cohesiveness, promotes learning, improves health and assists in creating equitable, vibrant, liveable places.

In addition, the creation of green infrastructure and new transport modes and technologies is important in achieving sustainable development for the Island. Green infrastructure can take the form of open space, play space, public realm, green energy networks and natural capital. Green infrastructure enhances wellbeing, access to outdoor recreation, improves health, enhances biodiversity, influences food and energy production, results in urban cooling and builds resilience to climate change.

In Jersey, life expectancy is increasing and birth rate is declining. This ageing society will also have specific infrastructure requirements and poses a set of challenges that need addressing.

In looking to the future and considering the appropriate use and development of land on the Island, it is therefore pertinent to establish what infrastructure exists and how the Island's infrastructure needs to evolve to support the direction of development in Jersey. Infrastructure assets and natural resources are critical to the quality of life in the Island and underpin our economy. Assets will reach capacity at different points in time.

The emerging bridging Island Plan (see Section 1.3), Future Economy Programme, Framework and Migration Policy Development Board and Housing Policy Development Board all explore issues linked to the different routes that Jersey might take towards the future, and the infrastructure required to support these routes. To support these workstreams it is necessary to review both the carrying capacity and longevity of current and already planned social and public infrastructure and resources.

1.2 Overview of the Infrastructure Capacity Study

The Government of Jersey has commissioned Arup to produce an Infrastructure Capacity Study. The Infrastructure Capacity Study provides a baseline of the

Island's existing and planned infrastructure, across a wide range of topics, and considers what additional or enhanced infrastructure will be required to support the workstreams outlined in Section 1.1.

More specifically, the Study:

- assesses existing infrastructure provision, its current capacity, and expected lifespan;
- identifies planned/known enhancement of the capacity of existing or new infrastructure;
- considers the impacts of relevant external drivers and mega trends, including technological developments, demand management etc.;
- establishes, in the form of an Infrastructure Delivery Schedule, what infrastructure is required, when, and who will be responsible to deliver it.

The Infrastructure Capacity Study will be used to inform the development of infrastructure projects and programmes, and more detailed infrastructure plans for specific types of infrastructure. It may also be used as a basis of future scenario and foresight planning for the island, informing short and long-term strategic policymaking and understanding the costs and consequences for our economy and wider society of any proposed scenarios.

The information included in the Infrastructure Capacity Study is based on desk-based assessment undertaken throughout 2020, and draws on a number of sources. The nature of planning for infrastructure means that the Infrastructure Capacity Study is a 'snapshot in time'. As different infrastructure providers respond to their own unique challenges, the information that they provide will naturally date and alter over time, reflecting changing needs.

1.3 Overview of the Bridging Island Plan

The Government of Jersey is currently undertaking a review of its Island Plan. The new 'bridging' Island Plan will set out and plan for the Island's positive growth until 2025, in the context of the Covid-19 pandemic and the Island's recovery. The bridging Island Plan will exist between two longer-term plans (the current Island Plan 2011 to 2021; and a future Island Plan 2025 to 2034).

The new bridging Island Plan will set the means to facilitate the Island's positive future growth over a period of significant uncertainty and provide a new framework against which planning decisions will be made. The plan will be key to ensuring that we can deliver sustainable development that will meet the needs of the community, as we balance the future economic, environmental and social needs of the island in a way that is best for Jersey and which reflects the vision and aspirations of islanders. Whilst the bridging Island Plan will be in force for a shorter period of time than the usual 10-year Island Plan, it will nevertheless be equally as comprehensive in scope and applied in the same way, to further the purpose of the Planning and Building (Jersey) Law 2002.

This Infrastructure Capacity Study supports a number of important workstreams (see Section 1.1) and not just the bridging Island Plan. However, the evidence

from the Infrastructure Capacity Study will be crucial in ensuring the adequacy of the bridging Island Plan and that infrastructure requirements are properly considered in planning policy.

1.4 Structure

This Infrastructure Capacity Study is structured as follows:

Section 2 outlines the context for the delivery of infrastructure, including a demographic portrait of Jersey.

Section 3 summarises the methodology used to produce the Infrastructure Capacity Study.

Section 4 summarises the findings of the topic-specific sections (Sections 5-12).



Section 5 covers transport.

Section 6 covers education.



Section 7 covers health.

Section 8 covers community facilities.



Section 9 covers open space.

Section 10 covers emergency services and justice.



Section 11 covers utilities.

Section 12 covers waste, flood protection and drainage.



Section 13 presents the Infrastructure Delivery Schedule.

2 Context

2.1 Demographic Portrait

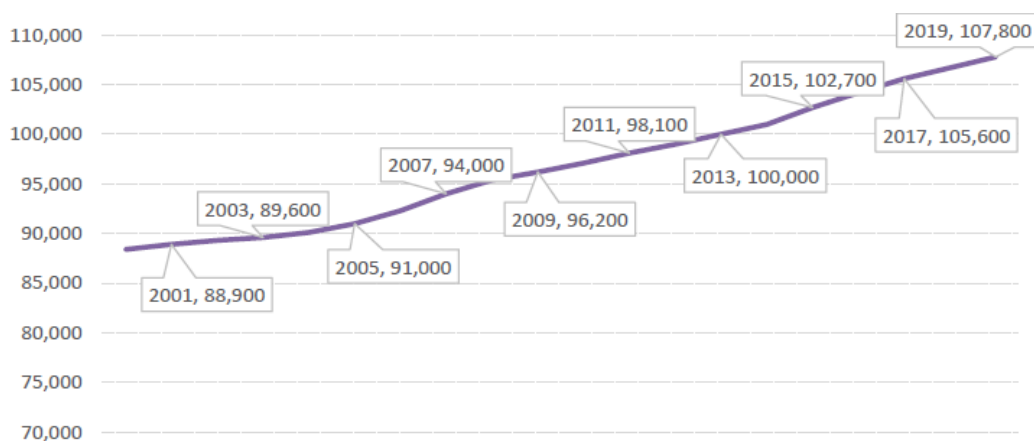
The resident population of Jersey at year-end 2019 was estimated at 107,800. During 2019, the resident population increased by around 1,100 people: net inward migration accounted for 1,000 of this annual increase; whilst natural growth (births minus deaths) accounted for the remainder. Natural growth in 2019 was the lowest since 2002.

The total net inward migration in 2019 was comprised of approximately:

- 500 net inward ‘licensed’ employees and their dependents
- 500 net inward ‘registered’ employees and their dependents

The resident population of Jersey has increased by 11,700 over the last 10 years (see Figure 1 **Error! Reference source not found.**). Net inward migration has accounted for four-fifths (80%) of the increase in the resident population over this time period.

Figure 1 Total resident population at year-end, 2000 to 2019



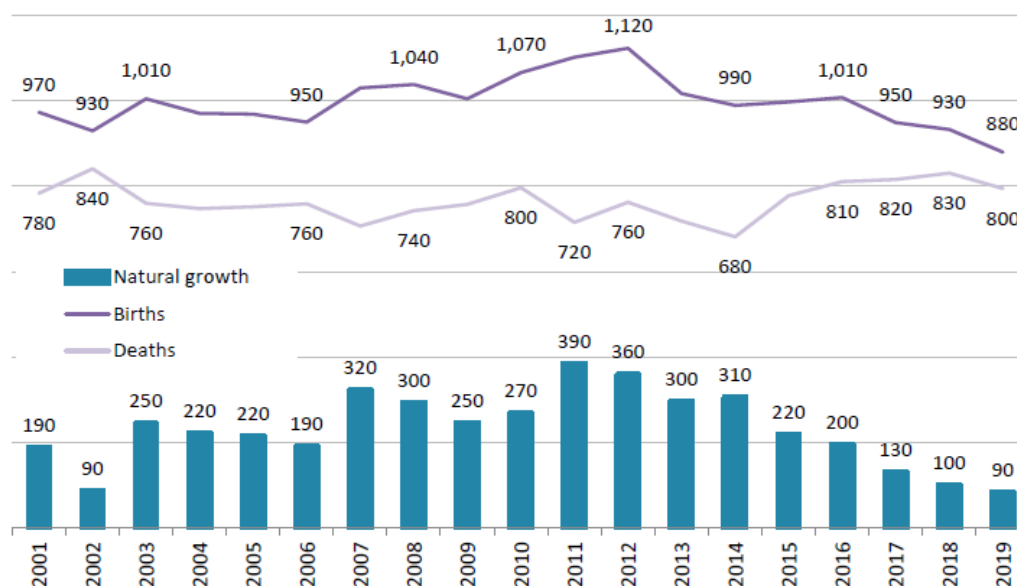
Source: Statistics Jersey, Jersey Resident Population 2019 Estimate

The average increase in the resident population during the latest four-year period (2016 to 2019 inclusive), at 1,300 per year, is around four times that at the start of the previous decade (2001 to 2004: 400 per year) and similar to that seen during the middle of that decade (2005 to 2008: 1,300 per year).

2.1.1 Natural Growth

Natural growth is calculated by the number of births minus the number of deaths. Natural growth in Jersey has declined since its peak of almost 400 in 2011 to around 90 in 2019. Figure 2 **Error! Reference source not found.** below shows the numbers of births and deaths in the Island and the natural growth for each year from 2001 to 2019.

Figure 2 Births, deaths and natural growth, 2001 to 2019



Source: Statistics Jersey, Jersey Resident Population 2019 Estimate

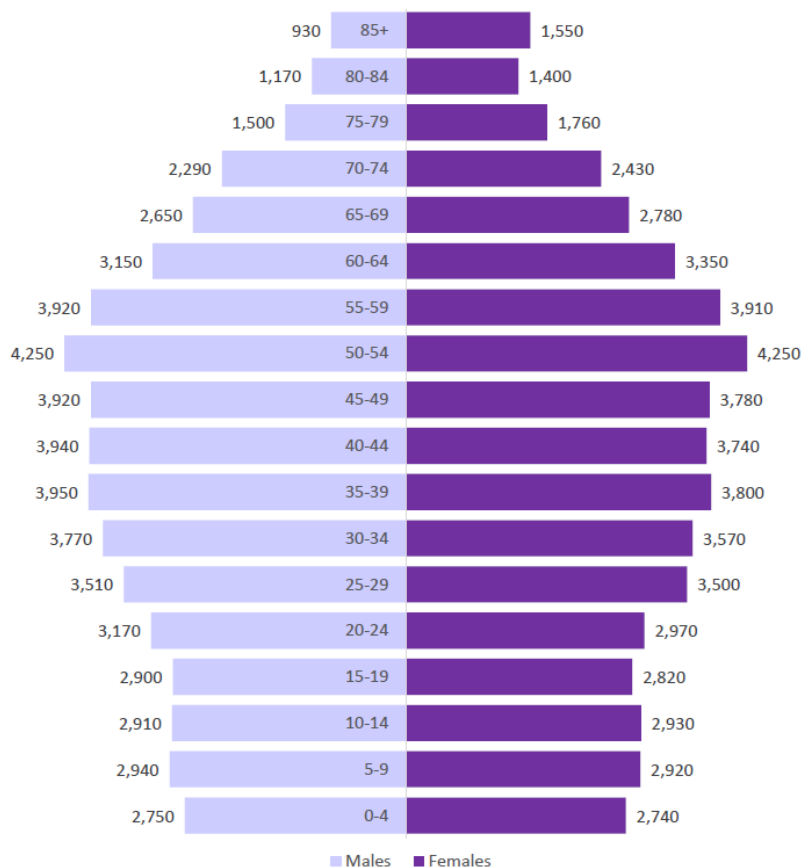
Using annual birth and death rates, the crude birth rate (CBR) and crude death rate (CDR) are calculated as the number of live births and the number of deaths per 1,000 residents per annum. In Jersey, the CBR in 2019 was 8.2 and was lower than in any of the preceding 18 years. Between the given time period (2001 - 2019), the CBR was at its highest in 2012 where it reached 11.3.

2.1.2 Age and Sex

Statistics Jersey have produced estimates of the number of people in each age and sex group by applying the age-sex distributions of the population projections to the estimate of the total population.

Figure 3 **Error! Reference source not found.** shows that as of 2019, it was estimated that the largest age group was 50-54 year olds and the smallest age group were those 85+. Interestingly, the number of females aged 85+ on the Island is approximately 67% higher than that of males aged 85+.

Figure 3 Population by age and sex, year-end 2019



Source: Statistics Jersey, Jersey Resident Population 2019 Estimate

Statistics Jersey's 2016 Population Projections document looked at the overall impact of a range of net migration levels on the age breakdown of the island. It found that, by 2035, the number of Jersey residents aged over 65 could reach up to 30,000 depending on the migration scenario (compared to around 18,500 at present).

2.1.3 Dependency Ratio

The 'dependency ratio' refers the ratio of non-working age to working age persons in the population. Statistics Jersey calculate the dependency ratio as the number of children aged under 16, plus the number of persons aged 65 years or over (i.e. 'dependent persons'), divided by the number of people aged 16 to 64 years inclusive¹. A high dependency ratio represents a high number of non-working age being supported by a relatively small number of working-age residents.

¹ To assist in interpretation of trends, Statistics Jersey do not take into account the increase in pensionable age to 67 by 2031.

The dependency ratio in Jersey was 50% at year-end 2015². The dependency ratio in the future will depend on patterns of net migration, as well as wider natural change in population on the Island.

Statistics Jersey's 2016 Population Projections document looked at the overall impact of a range of net migration levels on the dependency levels. It found that, by 2035, the dependency level could be anywhere between 57% and 71% depending on the level of migration.

2.1.4 Health and Wellbeing

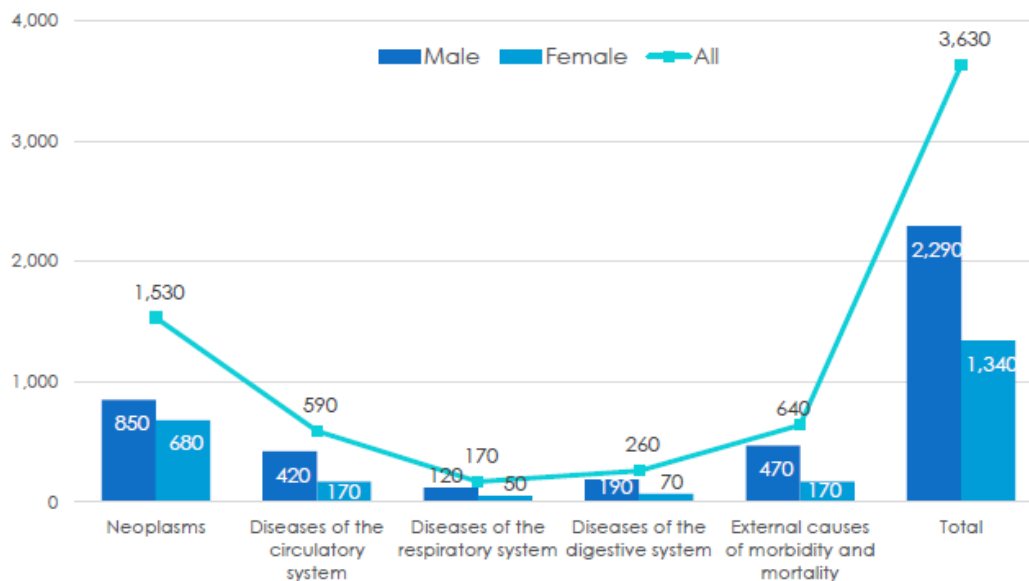
Jersey Public Health Strategy Unit produce a Health Profile which provides a set of key indicators for the health status of children and adults in Jersey between a given time period. The most recent Health Profile was produced in 2016 and covers a time period of 2013 to 2015. The Health Profile considers a range of factors that influence health, such as education, employment, income, air and water quality, safety and social isolation.

Overall, the Health Profile rates the overall health higher than the UK in many areas: stillbirth and infant mortality rates are low; life expectancy is high; there are very low teenage conception rates; childhood immunisation coverage is high; there are decreasing numbers of deaths from heart disease; and unemployment rates are low. However, the Health Profile also acknowledges that within these positive population level statistics there are likely sub-populations who may experience poorer health outcomes.

Conversely, the Health Profile also reveals that Jersey has one in six babies living in homes where they are at risk from passive smoking; deaths from suicide and accidents resulting in many valuable years of working life lost; a high level of premature deaths from liver disease; one in three children and one in three pensioners live in relative low income; and cancers and heart disease are major causes of death. Figure 4 **Error! Reference source not found.** reveals the annual average of years of life lost due to premature death with the highest being as a result of Neoplasms (tumours, both cancerous or benign).

² Statistics Jersey, Jersey population projections 2016 release (October 2016)

Figure 4 Years of life lost due to premature deaths (under 75 years), annual average 2013-2015



Source: Jersey Public Health Strategy Unit, Health Profile

Many of the factors known to cause ill health were found to be decreasing in 2016, however 51 per cent of the population were recorded to be overweight or obese.

2.2 Planning for Infrastructure

As set out in Section 1.1, infrastructure, in all its forms, is an essential requirement to support society and to achieve Jersey's wider aspirations. The current Island Plan recognises the important of infrastructure, which forms a thread running through the whole of the Plan.

The current Plan acknowledges, in Policy SP 1, that the ability to invest in higher and higher levels of public infrastructure is unsustainable in the long term. The Plan therefore sets out an overall sequential strategy of reducing demand, managing the impact of development more effectively and, only then, investing in new infrastructure.

- The first principle relates to the need to reduce demand for the use of natural resources, reduce the amount of waste, reduce the demand for travel, reduce the amount of water requiring treatment and reduce the amount of energy required to live in new development.
- The second principle relates to the management of demand in a more efficient way. This means evolving infrastructure and changing patterns of behaviour - evolving the transport network to allow more efficient travel, managing waste and energy more efficiently, ensuring surface water is managed efficiently, increasing recycling and encouraging modal shift away from private car travel.
- The final principle embodied within the Plan is to allow investment only once these other measures have, as far as practicable, mitigated the impact from

new development. Through these demand management measures, demand will be reduced, and less new infrastructure will be required.

The Plan sets out specific requirements in terms of energy, land and buildings within detailed policies relating to transport, waste management and natural resources, design and planning obligations. There are also numerous policies concerning social infrastructure, including those relating to specialist housing, open space, species and landscape protection, educational, healthcare and community facilities.

Policy GD 4 of the Island Plan relates to the need for additional infrastructure and places a requirement for the provision of financial contributions to off-site infrastructure and facilities, including the provision of amenity space, public parking, measures to assist public transport, cyclists or pedestrians, or to alleviate traffic impacts. Development proposals that do not make satisfactory provision for infrastructure or amenities that are required as a direct result of the proposed development will be refused planning permission.

The Plan recognises that the application of these principles goes beyond planning and, to be effective, will require the commitment of the Island's operators of infrastructure, including other government departments. The Government's Department of Infrastructure has a diverse role in this respect, with responsibility over many types of physical and social infrastructure (including: waste water networks, treatment and disposal; the main highways network and public transport; and maintenance of open and public spaces). However, there are several other Government departments which are also responsible for types of infrastructure on the Island.

3 Methodology

3.1 Scope

The Infrastructure Capacity Study covers the following infrastructure topics as set out in Table 1.

Table 1 Infrastructure Capacity Study scope

Topic	Infrastructure Type
Transport	Highways
	Sustainable Transport (including public transport and active transport)
	Air Travel
	Sea Travel
Education	Early Years
	Primary Education
	Secondary Education
	Special Educational Needs
	Tertiary and Higher Education and Adult Education and Skills
Health	Primary Care
	Secondary Care
Community Facilities	Community Facilities
	Sports and Leisure
	Cultural and Tourism Facilities (including libraries)
Open Space	Open Space (including children's play)
Emergency Facilities and Justice	Police Services
	Fire and Rescue Services
	Ambulance Services
	Justice Facilities
Utilities	Energy
	Water
	Waste Water
	Digital and Communications
Safety	Waste
	Flood Protection and Drainage

More information on the what is included in the Infrastructure Capacity Study and the rationale for doing so is provided in each of the topic-specific sections (Sections 5-12).

3.2 Overview of Methodology

This work largely focusses on understanding the current infrastructure provision across Jersey, whether it is adequate to meet the needs of the current population, any planned improvements in infrastructure provision, and the implications of all this on the Island Plan review (in the context of an increased population etc.).

A combination of quantitative and qualitative sources have been utilised as part of a review data sources. The evidence base used for each type of infrastructure is stated at the start of each sub-section of Sections 5-12. This analysis was supplemented by discussions with key stakeholders and service providers, as well as indicative provision standards for some types of infrastructure. Where this has been used, the future requirements are tested against the spatial distribution of set out in Table 2 and Table 3.

Work has already been undertaken by the Government of Jersey to look at how the bridging Island Plan might meet the Island's housing requirement. This includes identifying a supply of land for expected development needs and opportunities, having regard to different sources of housing supply. The following has been considered:

- sites under construction;
- sites with planning permission;
- the capacity of St Helier (private sector development yield, including those within the South West St Helier Planning Framework);
- the release and development of Government of Jersey-owned sites;
- the capacity of other urban areas (based on windfall trend data);
- the capacity of rural areas (based on windfall trend data); and
- the planned release of land (rezoning).

As well as sources of supply, in seeking to deliver the most sustainable form and pattern of development in the Island, it is also important to consider the potential spatial distribution of the potential supply of homes. The spatial distribution of growth set out in Table 2 reflects both expected sources of supply (including those currently under construction and with planning permission but where construction has not yet commenced) and a justified sustainable pattern of development. Included in Table 2 is a figure of 450 homes to be delivered on rezoned sites. The locations of these sites will be determined through the Call for Sites Process, and so their place in the hierarchy is not yet certain.

The relationship between population and homes is not straightforward, and includes considerations around sizes and types of houses delivered declining household sizes, concealed households (where a lack of suitable housing restricts the ability of new households to be formed), and vacancy rates. For the purposes of identifying infrastructure requirements across the island, the expected additional population of 4,000 (five years of +800 population growth) has been homes which are currently under construction or which have planning permission but where construction has not commenced. The actual distribution of population

may not in reality match this exactly; however for the purposes of this strategic study it is considered sufficiently robust.

Table 2 Spatial distribution of growth over the bridging Island Plan period

Settlement type	Categorisation	Bridging Island Plan housing growth	Bridging Island Plan population growth
Primary centre	Town of St Helier	1,690 (45%)	1,803 (45%)
Secondary centre	Les Quennevais/ Red Houses/ La Moye	248 (6%)	258 (6%)
Tertiary centre	Beaumont-First Tower; Greve D'Azette – La Rocque; Ville es Renauds – La Rocque; St Aubin's Village; Sion; Maufant; Carrefour Selous; Gorey Village and Harbour; St Peter's Village; St Ouen's Village; St Mary's Village; Trinity Village; St John's Village; St Martin's Village; St Lawrence Church	798 (21%)	851 (21%)
Other built-up area	Victoria Village; Rue des Landes; Ville Emphrie / Clos des Ormes; Mont Felard; Clos de Mont Sejour; St Saviour's Hospital; Teighmore Park; Grouville Arsenal / Clos de Roncier; Grouville Church; Petit Port; La Pulente; Les Fourneaux; Mont es Croix; Route des Genets / Longfield Avenue; St Brelade's Bay; Les Ruisseaux / Route de Noirmont; St George's Church; Mont Mado	58 (2%)	62 (2%)
Countryside	Countryside	512 (14%)	546 (14%)
Rezoning	Not yet known	450 (12%)	480 (12%)
Total		3,750	4,000

For the period beyond the bridging Island Plan (2025-2034), for the purposes of long-term infrastructure planning a broadly drawn planning assumption of average annual population growth of **+1,000 per year** has been used to inform this Infrastructure Capacity Study³. The spatial distribution of this growth is not clear. For the purposes of the Infrastructure Capacity Study, the same distribution of growth (by proportion of total growth) is assessed – see Table 3.

³ Refer to the Preferred Strategy Report for further information.

Table 3 Indicative spatial distribution of growth beyond the bridging Island Plan period (2026-2035)

Settlement type	Categorisation	Subsequent Island Plan population growth
Primary centre	Town of St Helier	4,507 (45%)
Secondary centre	Les Quennevais/ Red Houses/ La Moye	661 (6%)
Tertiary centre	Beaumont-First Tower; Greve D'Azette – La Rocque; Ville es Renauds – La Rocque; St Aubin's Village; Sion; Maufant; Carrefour Selous; Gorey Village and Harbour; St Peter's Village; St Ouen's Village; St Mary's Village; Trinity Village; St John's Village; St Martin's Village; St Lawrence Church	2,128 (21%)
Other built-up area	Victoria Village; Rue des Landes; Ville Emphrie / Clos des Ormes; Mont Felard; Clos de Mont Sejour; St Saviour's Hospital; Teighmore Park; Grouville Arsenal / Clos de Roncier; Grouville Church; Petit Port; La Pulente; Les Fourneaux; Mont es Croix; Route des Genets / Longfield Avenue; St Brelade's Bay; Les Ruisseaux / Route de Noirmont; St George's Church; Mont Mado	155 (2%)
Countryside	Countryside	1,365 (14%)
Rezoning	Not yet known	1,200 (12%)
Total		10,000

Section 13 brings together the strategic infrastructure required to deliver the level of growth expected over the Plan period, in the form of an Infrastructure Delivery Schedule.

4 Summary of Baseline Findings

4.1 Overview

This section summarises the findings of the topic-specific sections (Sections 5-12), particularly on the implications for Government of Jersey initiatives including the bridging Island Plan. Further details of the baseline and implications in each of the subsequent sections.

4.2 Summary of Findings

Transport (Section 5)

- There are no planned schemes relating to increasing highways capacity over the period of the new Island Plan – such schemes, would be prohibitively expensive and difficult to implement.
- The Sustainable Transport Strong Start Delivery Plan 2020 includes a number of projects relating to bus services, including a pilot school shuttle bus operating from the west of St Helier to the St Saviour schools area, a bus priority scheme design for buses heading both west and east from Liberation Station, and a number of bus stop improvements. It will be important to consider whether additional projects are required to support growth in certain locations. Further engagement should continue to take place as growth comes forward, to understand:
 - Impact on the bus network and capacity.
 - Measures required to meet additional demand – both in terms of hard infrastructure (e.g. bus priority measures, bus stops, and walking routes to buses) and enhanced services.
- (For this reason, the Infrastructure Delivery Schedule in Section 13 includes general bus infrastructure and service upgrades rather than specific interventions.)
- The Island Plan could also encourage better public transport provision more generally (for example, by requiring Travel Plans, setting bus stop accessibility standards, or requiring developers to contribute to enhanced provision).
- The current Island Plan includes a policy to guide the provision of a new park and ride facility, should one come forward. Given the conclusions of the previous Sustainable Transport Policy, it is not clear whether such a scheme is necessary or required, or is promoted or encouraged by the Government of Jersey.
- Consideration of the Port of Jersey masterplan should be made in developing policies for St Helier.

Education (Section 6)

- Future growth is expected to impact on the amount of education places required, although complex demographic trends (both for existing residents and for in- and out-migrants) and the complex education system (with pupils spread across non-fee-paying, fee-paying, private and home schooling) means that the impact of growth is not straightforward.
- As a whole, Jersey is currently well served by education provision and there are no parts of the Island which have current ‘shortfalls’ in capacity. Some individual primary schools are at or near capacity, and may not have capacity on site to expand; there is also the risk of increasingly unsustainable travel patterns for pupils to access available school places.
- However, in the case of additional growth, pressure on individual schools is expected to be alleviated by changes to the way school places are allocated across the Island, and the staffing of individual schools.
- Reorganisation of St Helier primary schools is currently being considered (which may require new or replacement school(s)), and in the longer term reorganisation of the secondary school system is also expected. which may include new or replacement school(s). Discussions with officers has confirmed that these plans will include sufficient additional capacity to accommodate expected future growth.
- There are a number of additional education projects in the pipeline, some of which require sites or designations in the bridging Island Plan (see Section 13).

Health (Section 7)

- As work progresses on bringing forward the new hospital, consideration should be given on the implications for the bridging Island Plan including on:
 - whether the site should be allocated in the bridging Island Plan;
 - whether a specific criteria-based policy is required to guide development of the new hospital; and
 - the future of other secondary healthcare sites across the Island.
- As work progresses on implementing the new Jersey Care Model, consideration should be given on the implications for infrastructure including on the adequacy of existing facilities and the need for new facilities, and whether minor upgrades (e.g. access arrangements) are required to certain GP surgeries, parish halls or other community floorspace in order to allow them to host some services.
- Demand for GPs and other primary healthcare services will grow over the bridging Island Plan and beyond. Although the Government of Jersey cannot compel individual businesses to expand, or provide the infrastructure required to do so, it is expected that the market will continue to cater for the needs of the Island. (For this reason, a general requirement is included in the Infrastructure Delivery Schedule in Section 13.)

Community Facilities (Section 8)

- Additional population could result in an increased demand for community facilities, such as community halls and libraries. However, extra floorspace may not be required; additional demand may instead be met by increasing capacity of existing facilities through altered opening hours or minor upgrades, or making use of existing spare capacity.
- As work progresses on the new arts and culture strategy and on the future strategy for delivering sport on the Island, consideration should be given on the implications for the Island Plan including on whether particular projects (including major projects such as the new Island Stadium) should be included in the Plan and/or specific policies are required.
- Consideration should be given to the status of the future of Fort Regent.

Open Space (Section 9)

- Additional population over the bridging Island Plan period will result in an increased demand for open space, and in particular parks, amenity greenspace and play space. Consideration should be given to how the Island Plan should respond. This will be particularly important where there are already known shortfalls in provision.
- Access to high quality public space should be prioritised areas that might experience a higher proportion of growth over the plan period (which is likely to include St Helier).

Emergency Services (Section 10)

- Engagement with the emergency services should continue to take place to allow them to assess the impact of a larger population on the delivery of emergency services including on response times.
- As work progresses on the potential new ‘blue light’ (fire and rescue and ambulance services) facility, consideration should be given on the implications for the bridging Island Plan. This includes whether a specific site should be allocated in the Island Plan, and/or whether specific policies are required.

Utilities (Section 11)

Energy

- The Island Plan should support the commitment towards a zero-carbon future through its strategic policies and detailed development management policies. In particular, policies must encourage the efficient use of resources, recycling, energy efficient design and the use of renewable technologies.
- Support could be given for a large-scale renewable energy generation project and encouragement for domestic scale renewables would assist with self-sufficiency and managing demand.

Water

- An integrated approach to water – taking into account the Island’s requirements for minerals and inert waste management – is required.
- The long term solution to water supply and storage needs is likely to be: increased capacity at Val de La Mare Reservoir; increased capacity at La Rosière de-salination plant (or a new de-salination plant); and continued leakage reduction.
- Softer measures will also be required, including water efficiency-related planning policies in the bridging Island Plan and beyond and managed water demand through non-household water efficiency and intensive media campaigns.
- Close working with Jersey Water will be required to continue to develop interventions.

Waste water

- Although the new sewage treatment plant at Bellozanne will increase capacity to adequately cover the bridging Island Plan and beyond, the bridging Island Plan will need to consider whether it should set a longer term commitment for additional capacity.
- The Island Plan should explore options for reducing demand on the sewer and waste water system. Policies requiring adherence to building bye-laws with regard to water use and efficiency should be adopted to encourage the efficient design of buildings and early consideration of such issues.
- The Island Plan should also retain policies which discourage the use of septic tanks.

Digital Infrastructure

- The Island Plan should define a strategic direction for the development of communications infrastructure including 5G technology. Policies should be sufficiently robust to accommodate future changes to technology, as it is not yet known what form of 5G infrastructure will be required.
- Policies might also be designed to encourage sharing of infrastructure between providers.

Waste, Flooding and Drainage (Section 12)

- An integrated approach to inert waste management – taking into account the Island’s requirements for minerals and potable water – is required.
- The long term solution to inert waste management is likely to be: dual use of La Gigoulande Quarry as a minerals extraction site and inert waste facility; development of an integrated extraction, waste management and restoration operation at Simon Sand and Gravel; continued / extended operations of existing private facilities; and extraction of the area of high-value materials (site suitable for reprocessing and resale as secondary aggregates) from La

Collette, freeing up space for material which has no value as a secondary material.

- In addition, demand management of inert waste processing requirements should be used, including through planning policies.
- Once the upcoming waste strategy has been progressed, further engagement will be required to understand its relationship with the bridging Island Plan.
- Flood risk should be a key consideration in the assessment of options for future strategic growth locations in the Island Plan. The Shoreline Management Plan should be built upon to take account of different spatial distributions of growth.
- The Island Plan should include a policy relating to Sustainable Drainage Systems (SuDS), based on detailed analysis of surface water flood impact. Policies relating to flood resilient design should also be developed.
- Opportunities for use of inert waste to develop Shoreline Management Plan projects should be explored.

5 Transport

5.1 Overview of Infrastructure

This Infrastructure Capacity Study covers the following types of transport provision:

- Highways
- Air travel
- Sea travel
- Sustainable transport
- Active transport

5.2 Highways

Evidence Base

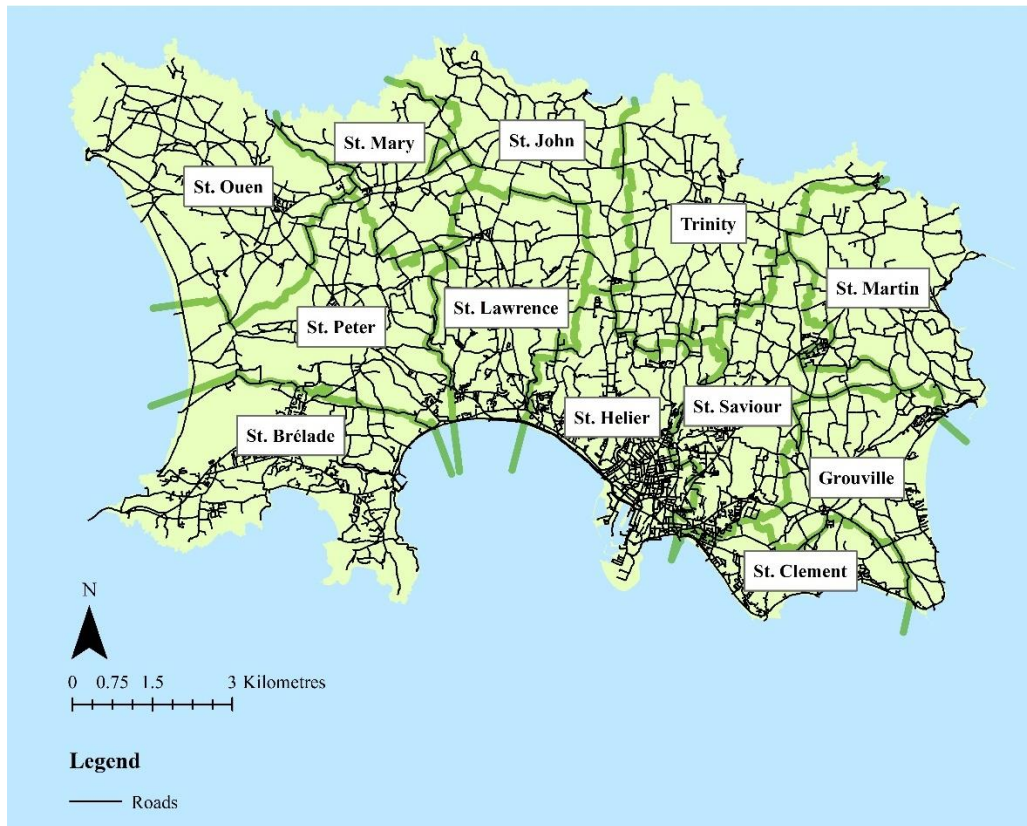
The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Government of Jersey Transport Policy (2029)
- Government of Jersey Carbon Neutral Strategy (2020)
- The Sustainable Transport Policy (2010)
- The Government Plan 2020-2023 (2019)
- The Government Plan 2021-2024 (2020)
- Government of Jersey Planning Obligation Agreements Supplementary Planning Guidance: advice note (2017)
- Engagement with Government of Jersey officers

Overview and Strategic Issues

There are effectively thirteen separate highways authorities: the Government of Jersey (who manage the strategic distribution network throughout the Island, as well as regulating taxis and car parks); and the twelve parishes (responsible for local roads within their administrative areas). The Ports of Jersey also maintain the roads within their estate.

Figure 5 Jersey highways network



Source: Arup, with Government of Jersey data

The Government of Jersey adopted its Sustainable Transport Policy in March 2020, which signalled a move away from a reliance on private motor vehicles, and that the ‘entire transport system must be re-designed following the principles of sustainable wellbeing’. It states that there is a need to decarbonise transport methods as 32% of Jersey’s greenhouse gas emissions come from road transport. The Carbon Neutral Strategy envisions that the remaining emissions from road transport will be driven by emissions from the remaining petrol and diesel vehicle fleet which has not yet been replaced, alongside the carbon footprint of electricity used to power EVs, and through the emissions from diesel vehicles which cannot be replaced by an electric substitute.

While the population in Jersey is increasing, cars are also increasing in size, which the Sustainable Transport Policy suggests will continue to contribute to problems of congestion. The earlier Sustainable Transport Policy (2010) states that congestion has a negative impact on Jersey’s economy and the quality of life of residents. It is estimated that each morning around 10,000 vehicles enter St Helier and around 10,000 leave – around 70% of private vehicles are single occupancy. At peak hours, there is about a 50% difference in congestion levels between term times and school holidays, albeit only a 15% reduction in traffic – this suggests the system at present is at tipping point and that a relatively small decrease in traffic could have a large impact.

However, while there is an aim to move away from private cars in Jersey, the Government Plan 2020-2023 (2019) lists one of the priorities for the next Island Plan 2021-2030 as providing appropriate investment in critical infrastructure, including the maintenance of existing highways. Furthermore, the Sustainable Transport Policy notes that the majority of adults that live in rural and suburban parishes travel by car for most of their journeys (79% and 68% respectively), with current limitations to public transport methods available (or a public perception of such).

All of Jersey's utilities networks run under the highways network. Consultation with the Government of Jersey has indicated that approximately 5500 permits are granted per year by the 13 highway authorities. Around 80% of these permits are for works which do not include excavation and are undertaken at 'off-peak' times. The introduction of Trafficworx electronic permit system (in 2010) and the new 'Road Works & Events (Jersey) Law 2016' (in force since 2018) increased the extent of regulation (via road work permits) over more non-utility work activity (e.g. wall repairs, buildings cleaning, tree cutting, etc). This has an impact both on quality of road structure and disruption and congestion levels. Due to the lack of arterial routes on the Island, it is difficult to displace traffic from one road to other roads, and the width of highways usually means the whole road needs to close for resurfacing.

Additionally, the Government of Jersey's plan to build a new hospital on the Island will have significant impacts on the current highway network. Therefore, further highway analysis and modelling will be required once the location for the new hospital is confirmed.

Key Shortfalls in Provision and Future Requirements

Whilst there are a number of areas on the Island where the concentration of traffic exceeds road capacity, causing congestion and delay, solutions to this will be expensive, difficult to achieve (in terms of land take, engineering feasibility, etc.), and may ultimately increase demand further. Therefore, the Government of Jersey's view is that priority should instead be to reduce the demand for the roads, through methods of active travel and public transport (see Section 5.3 and Section 5.4).

Consultation with the Government of Jersey has confirmed that there are no planned schemes relating to increasing highways capacity over the period of the bridging Island Plan, or the period beyond this⁴. Road schemes that do take place will be related to road safety (rather than capacity), and may include some limited widening in rural areas to allow for vehicles to pass more smoothly. The locations of such schemes have not yet been defined. In essence, there is no additional highways capacity available or planned for.

⁴ There may be, however, road projects which relate to enhancing sustainable and active transport, for example bus priority measures or localised footpath schemes along roads. These are covered elsewhere in Section 5.

The 2021-24 Government Plan allocated funding towards maintenance and refurbishment of public car parking and states that the ‘modernisation’ programme is expected to restart in 2022.

The Sustainable Transport Strong Start Delivery Plan 2020 included a number of interventions related to more environmentally friendly road travel, including:

- Extension of the Eco Permit Scheme and provision of free parking for electric vehicles for the first year post registration into the island (and then half price parking for subsequent years) to encourage the early uptake of electric vehicles.
- Supporting the development of public electric vehicle charging points and installation of additional electric car priority parking spaces in public car parks.

Future Infrastructure Delivery: The Future of Vehicles and Highways

Electric Vehicles

Electric vehicles can include a variety of modes, including cars, trains, lorries, aircraft, cycles etc. and are powered through the charging of a battery, which then power the vehicles wheels through an electric motor. It should be acknowledged, that while an electric vehicle does not produce pollution when in use, the increased demand for them will contribute to an increased demand for energy generation. Therefore, in the future it will be important for Jersey to consider the source of its electricity.

To contribute towards the aim of becoming carbon neutral by 2030, the **Carbon Neutral Strategy** lists the following measures for transport:

- escalating existing fuel taxes to discourage the use of petrol and diesel vehicles;
- providing financial incentive(s) for the purchase of EVs, either in the form of a purchase grant, and/or in the form of a scrappage payment for owners of fossil fuel vehicles;
- imposing a ban on the registration of new or second-hand petrol and diesel vehicles, so that they are gradually replaced by electric vehicles over time; and
- facilitating the use of second generation biodiesel for all diesel vehicles, subject to further feasibility works.

Hybrid buses are not yet viable in Jersey, due to the Islands restricted road network which means that standard hybrid bus sizes do not fit the rural roads and bespoke hybrid buses would need to be developed. However, costs may reduce if they become more commonplace in other jurisdictions.

It is clear that if electric cars are to be feasible in Jersey, there must be investment into the appropriate infrastructure. This includes through the delivery of charging points for electric vehicles; currently, there are only 13

charging points in public car parks. The options for renewable energy generation, which could be used to power electric cars should be considered.

The 2021-24 Government Plan outlines that Ministers are proposing to increase fuel duty in this Budget by the rate of inflation and to levy an additional two pence per litre for the Climate Emergency Fund. Early work has also begun to assess the suitability of tax measures to address the climate emergency.

Autonomous Vehicles

The Proposed Sustainable Transport Policy suggests that Jersey should plan for potential changes in transport methods, as technological changes could lead to the increase of autonomous vehicles, and perhaps an intermediate action could be planning for connected vehicles. These are vehicles which use a wireless internet connection to provide a number of enhancements to the driving experience.

The Transport Policy suggests that the increase in use of autonomous vehicles will lead to a significant improvement in road safety in Jersey. However, it should be noted that the use of connected and autonomous vehicles may have implications on the existing road networks, such as: remote operation; separation of connected and autonomous vehicles with normal vehicles; and solutions in case they were to break down. Considerable planning is therefore essential in ensuring their success.

Smart Roads

Smart roads are an increasingly common development for highways. They use technology to monitor and manage the flow of traffic, often controlled from regional control centres, which can change signs and variable speed limits. It is believed that the use of smart roads enables traffic to flow more smoothly.

While these methods are increasingly common currently, there are a number of major developments to smart road technologies predicted to be present in the future. These could include schemes such as solar panels being used as road materials, to generate and store electricity, while also having the ability to melt snow, and charge electric vehicles when driving.

The investment into smart road technologies is also expected to improve road safety, improve congestion and make driving more energy efficient. However, the investment into these infrastructures will be costly, and therefore, perhaps while these complex schemes may be more of a longer-term aspiration for the Island.

5.3 Sustainable Transport

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Government of Jersey Sustainable Transport Policy (2019)

- Government of Jersey Proposed Sustainable Transport Strong Start Delivery Plan (2020)
- Jersey's Sustainable Transport Policy (2010)
- Sustainable Transport Policy Progress Report (2015)
- Government of Jersey Planning Obligation Agreements Supplementary Planning Guidance: advice note (2017)
- Engagement with Government of Jersey officers

Overview, Strategic Issues and Key Shortfalls in Provision

The Government of Jersey adopted its Sustainable Transport Policy in March 2020, consisting of two parts: a Framework for a Sustainable Transport System 2020-2030, which presents a vision and supporting principles; and a Sustainable Transport Strong Start Delivery Plan 2020, which outlines a programme of work to achieve the vision. The Strategy looks at the following types of transport issues:

- active travel (walking and cycling);
- public transport;
- road safety;
- parking;
- network management (controlling the movement of traffic on the roads);
- asset management (maintaining and repairing the roads); and
- future technologies (autonomous vehicles).

The Framework states that an 'entirely sustainable transport system that promotes the sustainable wellbeing of future generations' must be created. This will include developments to the bus services, including bus priority measures to cut through congestions, and supporting the transition to electric vehicles, while cutting emissions from buses. The Sustainable Transport Policy states that through investing in a better bus system that more people want to use, and is accessible for all, this will contribute towards delivering a world class sustainable transport system. Aided by discouraging the use of petrol and diesel cars and encouraging the use of electric and other low emission vehicles to reduce pollution.

The bus service in Jersey is de-regulated and the franchise is operated under 'LibertyBus', a subsidiary of the HCT group which is a social enterprise in the transport sector. If LibertyBus operate above a profit margin then the profit is shared between the Government of Jersey and HCT, both of whom reinvest the profit into bus transport infrastructure. Bus travel on the Island has grown over the recent decade, with ridership up by around 40% since 2010. However, the Sustainable Transport Policy has highlighted the need to go much further to encourage and enable use of bus travel. It states that bus ridership is increasing, from 3.6 million passenger journeys in 2013 to approx. 5 million in 2019, due to the successful commercial partnership with LibertyBus. The 2015 update to the Sustainable Transport Policy (2015) showed that peak hour bus travel has increased by 33% since 2010, partly due to improvements to the bus services,

including through increased capacity due to the introduction of more double decker buses, more bus shelters, and better information available at bus stops.

Consultation with the Government of Jersey revealed that the bus routes on the Island have changed little since buses were first introduced to the Island. This is due to a range of factors including, geography, custom and practice, parish orders limiting buses to one-way routes and a lack of bus turning circles across the Island. Furthermore, it was noted that adapting the bus fleet and introducing smaller bus vehicles to allow for alternative and more flexible routes would not be a viable solution. This is because smaller buses would decrease ridership capacity whilst bus driver wages would remain the same. During consultation, bus stops on the Island were acknowledged to have evolved based predominantly on custom and practice, and a root and branch review based on need and new development has never been undertaken.

Benefits of an improved sustainable transport system will include the reduction in congestion and pollution, dealing with some of the issues set out in Section 5.2.

To help fund infrastructure projects, the Government of Jersey utilise Planning Obligation Agreements (POAs). POAs are legal agreements used to secure the direct provision of, and/or funding for, additional infrastructure, facilities or services that will be needed as a result of development. The Planning Obligation Agreements Supplementary Planning Guidance: advice note (2017) outlines indicative costs for a range of transport infrastructure types, including what type and scale of development is likely to trigger each requirement. The type of transport contributions sought through POAs and indicative costs include:

- Roadside footpath/pavement enhancement - £225 per m² of new path, £2,500 tactile paving/dropped kerb crossing point (various triggers for each development type)
- Bus shelter - £11,500 standard shelter including post, notice board, seat and lighting (various triggers for each development type)
- Eastern Cycle Route Corridor - £1,350 per residential unit, £1,800 per 100m² of all over development types (various triggers for each development type)

Future Requirements

Engagement with the Government of Jersey has identified the following barriers to increasing the proportion of bus travel on the Island:

- The non-standard vehicle size (smaller than used in other places, in order to be compatible with country lanes in the rural area) means there is difficulty in expanding the fleet by buying new vehicles ‘off the shelf’.
- There are challenges in increasing service frequencies as buses can't always pass each other well in rural areas. As such, the current bus network is little changed since the introduction of buses and is not responsive to demand.

- There is sometimes a conflict between an effort to provide affordable car parking spaces in the town centre of St Helier, and efforts to increase public transport ridership.
- Bus services are needed later to support the night-time economy – but there are challenges around making this viable.
- There are a number of issues with the current design of public buses for those with limited mobility and other impairments, e.g. dropped kerb is too high, location of some bus stops on narrow roads without footpaths etc.
- There is a need to consider the future of bus stops, moving away from just thinking about a 'safe and comfortable wait' to also consider walking routes. There are precedents on the Island of this approach being used to release pent-up demand for bus travel – for example, new footpaths and bus stops in St Mary's leading to a 30% increase in bus use.

The Sustainable Transport Policy (2010) stated that a bespoke park and ride scheme is not considered appropriate as such schemes depend on the availability of large areas of low value land for surface car parking, which is not readily available in Jersey. However, one of the recommendations for public transport on the Island includes encouraging residents to drive to out of town car parks, and use the bus to travel into town centres, which would give similar benefits of having an official park and ride scheme, through reduced congestion in town centres.

To help fund infrastructure projects, the Government of Jersey utilise Planning Obligation Agreements (POAs). POAs are legal agreements used to secure the direct provision of, and/or funding for, additional infrastructure, facilities or services that will be needed as a result of development. The 'Planning Obligation Agreements Supplementary Planning Guidance: advice note' (2017) outlines indicative costs for a range of transport infrastructure types, including what type and scale of development is likely to trigger each requirement. The type of public transport contributions sought through POAs include:

- Bus shelter - £11,500 standard shelter including post, notice board, seat and lighting (various triggers for each development type).

Planned Projects

The Sustainable Transport Strong Start Delivery Plan 2020 includes a number of projects relating to bus services, including a pilot school shuttle bus operating from the west of St Helier to the St Saviour schools area, a bus priority scheme design for buses heading both west and east from Liberation Station, and a number of bus stop improvements.

The bridging Island Plan could include policies which help guide future measures, or else encourages better public transport provision more generally (for example, by requiring Travel Plans, setting bus stop accessibility standards, or requiring developers to contribute to enhanced provision).

The current Island Plan includes a policy to guide the provision of a new park and ride facility, should one come forward (Policy TT 6). Given the conclusions of the

previous Sustainable Transport Policy, it is not clear whether such a scheme: i) is necessary or required; ii) is promoted or encouraged by the Government of Jersey; iii) is likely to come forward within the plan period; and iv) requires a specific policy.

5.4 Active Transport

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Government of Jersey Transport Policy (2019)
- The Government Plan 2020-2023 (2019)
- The Government Plan 2021-2024 (2020)
- Jersey's Sustainable Transport Policy (2010)
- Engagement with Government of Jersey officers

Overview and Strategic Issues

The Sustainable Transport Policy suggests that the Island's small size provides a great opportunity to encourage the use of active travel, which includes travel by bike and on foot. This will also contribute to aims of reducing congestion, and increasing sustainable methods of travel throughout the Island, especially if active travel methods are encouraged for frequent journeys such as to school and work. The Government Plan supports the Sustainable Transport Policy in that it states it will 'implement schemes that encourage changes in how we travel, increasing cycling and walking'.

As well as showing how active travel will benefit the environment, the Sustainable Transport Policy explores the link between active travel and health and wellbeing. It states that in Jersey, 46% of adults and 81% of children and young people do not meet the World Health Organisation's guidelines for physical activity, and this can have impacts on physical health, through chronic diseases, as well as mental health, including depression. Therefore, by increasing access to active travel in Jersey, this is an easy method of increasing activity levels and in turn, improving health and wellbeing for residents.

Key Shortfalls in Provision, Future Requirements and Planned Projects

The Revised Island Plan 2014 includes a policy on the Eastern Cycle Route, to which any new developments of five or more homes and employment uses of over 250sqm in the corridor are required to contribute to. Some sections of this Eastern Cycle Route have now been completed. The Sustainable Transport Strong Start Delivery Plan 2020 commits to continuing and accelerating delivery of the route.

As set out in Section 5.3, the Government of Jersey utilise Planning Obligation POAs to secure the direct provision of, and/or funding for, additional infrastructure. The type of active travel contributions sought through POAs include:

- Roadside footpath/pavement enhancement - £225 per m² of new path, £2,500 tactile paving/dropped kerb crossing point (various triggers for each development type).
- Eastern Cycle Route Corridor - £1,350 per residential unit, £1,800 per 100m² of all over development types (various triggers for each development type).

The Sustainable Transport Strong Start Delivery Plan 2020 also includes projects to ensure safer cycle routes to the Les Quennevais School site and additional covered cycle parking.

5.5 Air Travel

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Civil Aviation Authority 2018 datasets
- Jersey Airport (Ports of Jersey) website
- Engagement with Ports of Jersey

Overview and Strategic Issues

Jersey Airport was opened in 1937 and has been added to and improved incrementally over time. The runway has been lengthened several times over the years, reaching its current length of 1,690m in 1976 and with additional taxiways added in subsequent years. However, due to its restricted length, the Airport cannot accommodate some aircrafts and services – for instance, Thomsonfly withdrew some services as it introduced a larger Boeing 737-800 model to its fleet.

CAA data indicates there were approximately 42,400 aircraft movements and 1.66 million passengers at the airport during 2018. According to Jersey Airport, the following destinations were served in Summer 2019⁵:

- Aberdeen
- Belfast
- Birmingham
- Bournemouth
- Bristol

⁵ The global impact of Covid-19 has had a significant impact on routes in 2020; it is too early to say what the long term impact will be.

- Cardiff
- Doncaster Sheffield
- Dublin
- Durham Tees Valley
- Dusseldorf, Germany
- East Midlands
- Edinburgh
- Exeter
- Funchal, Madeira, Portugal
- Glasgow
- Guernsey
- Humberside
- Inverness
- Leeds Bradford
- Liverpool
- London (City, Gatwick, Luton and Southend)
- Malaga, Spain
- Manchester
- Munich, Germany
- Newcastle
- Newquay
- Norwich
- Palma, Majorca, Spain
- Southampton
- Tenerife, Spain
- Zurich, Switzerland

Key Shortfalls in Provision, Future Requirements and Planned Projects

Ports of Jersey has a current programme of works to create an integrated arrivals and departures terminal, with the aim to addressing aviation compliance issues, provide a modern facility and to enhance overall passenger journey experience. The works include:

- Construction of a new arrivals facility and relocation of the airport's rescue and fire service building. These buildings are deemed to be 'obstacles', compromising the safe operation of flights in and out of Jersey. Planning permission was granted in February 2014 to remove the current arrivals facility. These are phased so that the rescue and fire service building will sit on the site of the current arrivals hall (albeit outside of the obstacle zone).
- Removal of other airfield obstacles.
- Improvements to the air passenger pier.
- Allow for expected business growth, including accommodating much larger aircraft and dealing with the increasing traffic flow of aircraft and passengers during 'peak' times. This includes extending the existing departures terminal

building with the creation of a mezzanine floor to create an integrated building housing both arrivals and departures facilities.

- Some changes to hangars, including removal of an end-of-life hangar and development of hangars for private use.
- Changes to the airport forecourt to introduce a 30m security exclusion zone.

The programme for these works is around five years, with the integrated arrivals and departures terminal expected to be delivered within about three years. Despite not significantly increasing floorspace, the changes will increase capacity of the airport to around 3.6 million passengers per year (largely as a result of the two-storey passenger pier and changes in the way gates can be utilised), compared to current demand of 1.2 million per year. This future demand is far larger than the forecast growth of demand over the next 25 years and so it is not expected that further projects to expand capacity will be required over the plan period.

The current length and the width of the runway means there are some restrictions on the size of aircraft able to take off and land at the airport and their loading. Whilst runway extension is difficult given surrounding land uses, there are reconfiguration options which would remove some restrictions. However, there are no current plans to do so.

5.6 Sea Travel

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Ports of Jersey website
- Government of Jersey sea and air transport statistics

Overview and Strategic Issues

In 2016, there were around 668,000 sea passengers (arrivals and departures), around 105,000 less than 2015. Of the total sea passengers, there were approximately 3,100 cruise ship passengers, a decrease of over 5,000 compared to 2015.

There were 413,000 tonnes of freight shipped through Jersey Harbours in 2016, of which around 332,000 tonnes were import and 81,000 export. This is an increase on previous years. The majority of freight is loaded or unloaded via ‘roll on, roll off’ (ro-ro), as opposed to ‘lift on, lift off’ (lo-lo). It is estimated by Ports of Jersey that the current figure is around 500,000 tonnes annually, including 340,000 tonnes of ro-ro throughput.

Around 90,000 tonnes of fuel passed through the port in 2016, in the following proportions:

- 32% diesel

- 24% petrol
- 18% heavy fuel oil
- 18% aviation fuel
- 15% propane
- 7% kerosene⁶

There are two passenger terminals at Jersey Harbours: Elizabeth Terminal and Albert Terminal. Elizabeth Terminal operates year-round passenger and car ferry services, whilst Albert Terminal operates seasonal passenger ferry services. Both terminals have a range of services and facilities for departing and arriving passengers.

There are five commercial working berths:

- Tanker berth, accommodating vessels of up to 105 metres.
- Numbers 6 and 7 berths, with a total berth length is 158 metres. Number 7 is the discharge berth for feeder services from the UK and international ports. Number 6 is used for the discharge of bulk cargoes.
- East and west cross berths, within the main harbour on the Victoria Pier. The east cross is used as a discharging berth for cement carriers, as well as a back-up berth for the discharge of containers if there is a breakdown on the main discharge berth.
- Two ro-ro berths, on the east side of the main harbour. Both berths can accommodate vessels of up to 136 metres.
- Numbers 2 and 3 berths, reserved for small passenger vessels and cruise ships.

The commercial port is open around the clock for working vessels.

The Ports of Jersey also have responsibility for every marina, harbour and slipway on the Island.

Key Shortfalls in Provision, Future Requirements and Planned Projects

The Port has an overall capacity of 550,000 tonnes per year, which means that current activity levels are nearing capacity (and ro-ro levels currently exceed capacity). Compounding this, wider changes on the Island are likely to impact on traffic through the Port – for example:

- future changes to minerals and sand extraction are likely to mean that more building materials are likely to need to be imported;
- there has been a recent trend for more fuel to arrive containerised rather than through the fuel pipe; and

⁶ Taken from the Government of Jersey sea and air transport statistics – note, figures do not round to 100%.

- there is a current shortage of leisure berths.

There are also a number of long term maintenance and life-cycle issues that require addressing, including replacement of the east ro-ro ramp and the New North Quay deck.

There is a masterplan for expansion of the port, increasing overall capacity to 1.2 million tonnes and allowing some land to be able to be released for redevelopment.

The masterplan includes plans to invest in a deck over the spending beach, which initially allows the port to meet the capacity requirements in Elizabeth Terminal. Replacing the east ro-ro ramp and relocating it to the eastern end of Elizabeth Terminal, enables the relocation of lo-lo to Elizabeth. This enables a combined freight handling area with increased capacity supporting anticipated freight requirements to 2042 and well beyond.

Overall, these proposals enable a clear segregation of leisure and commercial activities in the harbour, making it safer and more operationally efficient.

The overall cost for this expansion was estimated in 2019 to be around £300-400m, of which around £139m relates to the operational port, and is due to be delivered in phases over the next decade – with upgrades to Elizabeth Terminal coming first, followed by New North Quay and Victoria Pier and La Collette.

The expansion of the port fits into the wider Southwest St Helier Planning Framework, which serves to facilitate development that secures the long-term future and resilience of the ports and harbours of St Helier. It supports a much stronger connection to town through improved connectivity, placemaking and development of public space, and unlocks key opportunity sites for development.

5.7 Implications

There are no planned schemes relating to increasing highways capacity over the period of the new Island Plan, and it has been noted through consultation that such schemes may be prohibitively expensive and difficult to implement.

It will be important to consider whether additional bus infrastructure schemes (beyond the Strong Start 2020 document) are required to support growth in certain locations. Further engagement should continue to take place as growth comes forward, to understand:

- **Impact on the bus network and capacity.**
- **Measures required to meet additional demand – both in terms of hard infrastructure (e.g. bus priority measures, bus stops, and walking routes to buses) and enhanced services.**

For this reason, the Infrastructure Delivery Schedule (Section 13) includes general bus infrastructure and service upgrades as well as the specific interventions included in the Strong Start 2020 document.

The Island Plan could also encourage better public transport provision more generally (for example, by requiring Travel Plans, setting bus stop accessibility standards, or requiring developers to contribute to enhanced provision). The need for a specific policy on park and ride facilities should also be further considered.

The current Island Plan includes a policy to guide the provision of a new park and ride facility, should one come forward. Given the conclusions of the previous Sustainable Transport Policy, it is not clear whether such a scheme is necessary or required, or is promoted or encouraged by the Government of Jersey.

Consideration of the Port of Jersey masterplan should be made in developing policies for St Helier.

6 Education

6.1 Overview of Strategic Infrastructure

This Infrastructure Capacity Study covers the following types of education provision:

- Early years
- Primary education
- Secondary education
- Special educational needs
- Tertiary and higher education, and adult education and skills

6.2 Early Years

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- An Outcomes Framework for Early Childhood in Jersey (2018)
- Early Years Childhood Partnership Task and Finish Group, Review of Early Childhood Education in Jersey (2017)
- National Children’s Bureau website
- Government of Jersey website

Overview and Strategic Issues

20 out of 22 primary schools have nursery classes providing a total of 617 places – in addition, St Mary’s School is due to open a nursery class in September 2021. The only primary school without a nursery class or plans to open one is Les Landes (although money is allocated in the Government Plan for one). These places are set out in Table 4.

Table 4 Nursery classes

Nursery Class	Current Roll	Current Physical Capacity (Premises)	Current Operational Capacity (Staffing)
Bel Royal	18	Under review by Government of Jersey	30
d'Auvergne	45		45
First Tower	34		40
Grands Vaux	20		30

Nursery Class	Current Roll	Current Physical Capacity (Premises)	Current Operational Capacity (Staffing)
Grouville	31		30
Janvrin	30		30
La Moye	29		30
Mont Nicolle	23		30
Plat Douet	39		40
Rouge Bouillon	30		30
Samares	27		30
Springfield	26		26
St Clement's	29		30
St John's	16		30
St Lawrence	30		30
St Martin's	19		20
St Peter's	22		30
St Luke	27		30
Trinity	24		26
Total	549		617

Source: Government of Jersey (CYPES 2019 school census)

There is also private and voluntary early years education and childcare on the Island. In 2017 there were 23 day nurseries (open 51/52 weeks a year) providing 1,237 places, and 7 pre-schools (open 38 weeks a year) providing 169 places. There are also 80 registered child minders, offering 256 places (of which 154 are for children aged birth to 12, rather than being early years-specific).

There is no catchment area priority for nursery places. Where primary schools have an associated nursery, parent often choose to apply there to remove the need to transfer later; however, if your child gets a nursery place at a certain school, it doesn't guarantee or give priority for a place in that school's reception class.

Children can receive up to 20 hours of free Government-funded nursery education (during term time) in the school year that they turn four years old. Free places are available at Government primary school nurseries or at a Nursery Education Fund-registered nursery in the private or voluntary sector.

Key Shortfalls in Provision

The Review of Early Childhood Education in Jersey identified in 2017 the following shortfalls in early years provision:

- There is a high demand for places in town nurseries, particularly at Rouge Bouillon, Janvrin and Springfield.

- Two-form entry schools have higher demand for their one-form entry nurseries – for example, Rouge Bouillon and Grouville.
- Take-up of capacity changes through the day – there tends to be lower take up of afternoon places, results in some nurseries often being only half full.
- Some parents struggle to pay for additional hours provided in the private sector over and above the 20 hours of free Government-funded nursery education.

Future Requirements and Planned Projects

The Government Plan 2020-2023 includes £1,000,000 for delivery of a nurse at Les Landes Primary School, which would be delivered within the existing site. This would mean that all non-fee-paying primary schools have associated early years provision.

6.3 Primary Education

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Government of Jersey, Schools, pupils and their characteristics: Academic year 2016/2017 (no date)
- Government of Jersey website
- The Government Plan 2020-2023 (2019)
- The Government Plan 2021-2024 (2020)
- Engagement with Government of Jersey officers

Overview and Strategic Issues

Schools in Jersey can be split into two categories:

- Government schools are schools maintained by the Government of Jersey Education Department, and include:
 - Non-fee-paying schools
 - Fee-paying schools (funding through a combination of fees and public grant, but where the staff remain Government employees and the premises remain under the ownership of the Government)
 - Special schools
- Non-maintained schools (often known as private, independent or non-Government schools) are not administered by the Government of Jersey Education Department, and retain the right to select their pupils and are funded by charging fees.

There are currently 22 non-fee-paying (Government-run) primary schools on the Island, set out in Table 5 and on Figure 6. There are also two fee-paying primary schools, which are both academically selective. It should be noted that the numbers of pupils in each catchment, desire for school type and individual schools, can have a large impact on the balance between supply and demand for places across the schools – and this fluctuates over time.

Table 5 Primary schools by settlement or parish

Settlement / Parish	Primary School	Current Roll	Current Physical Capacity (Premises)	Current Operational Capacity (Staffing)
Non-fee-paying				
Settlement				
St Helier	d'Auvergne	422	546	442
	First Tower	338	364	364
	Janvrin	346	364	364
	Rouge Bouillon	355	364	364
	Springfield	213	208	208
St Saviour	Grands Vaux	143	182	182
	Plat Douet	399	390	390
	St Luke	179	182	182
St Clement	Samares	203	364	208
St Laurence	Bel Royal	195	208	182
St Brelade	La Moye	350	364	364
	Mont Nicolle	239	234	234
St Ouen	Les Landes	181	182	182
Parish				
St Clement	St Clement's	180	182	182
Grouville	Grouville	373	364	364
St John	St John's	176	182	182
St Laurence	St Laurence	187	182	182
St Martin	St Martin's	189	182	182
St Mary	St Mary's	158	182	182
St Peter	St Peter's	188	182	182
St Saviour	St Saviour's	183	182	182
Trinity	Trinity	184	182	182
Fee-paying				
St Helier	Jersey College Preparatory School	374	374	374

Settlement / Parish	Primary School	Current Roll	Current Physical Capacity (Premises)	Current Operational Capacity (Staffing)
	Victoria College Preparatory School	277	300	300
Total		6,032	6,446	6,160

Source: Government of Jersey (CYPES 2019 school census)

Figure 6 Primary schools

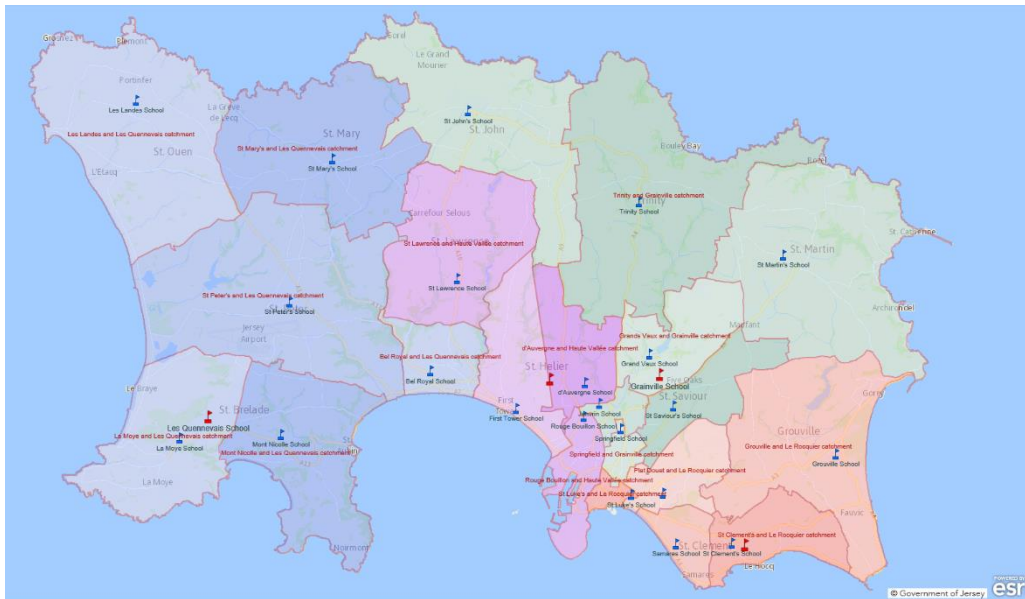


Source: Arup, with Government of Jersey data

There are also seven private primary schools (Beaulieu, De La Salle, FCJ Primary, Helvetica, St George’s, St Michael’s and St Christopher’s).

The Government of Jersey operate a schools catchment system. Primary school catchments are shown in Figure 7.

Figure 7 Primary school catchments map



Source: Government of Jersey website

The Education (Jersey) Law (amended 2007) allows for the education of children other than at school (i.e. home schooling). Article 13 of the Law states that if a child is educated somewhere other than at school *'the instruction to be received by the child is at least equal to the instruction that a child of the same age would receive in a provided school'*. The level of home schooling remains comparatively low (at around 50 pupils of compulsory school age, compared with an overall roll of around 11,500). The number of pupils which are home schooled has increased over the last five years, thought in part to be down to improvements in technology and connectivity.

Key Shortfalls in Provision

Based on engagement with Government of Jersey officers, it is understood that there are no significant current shortfalls in provision, when taken across the primary education system as a whole. However, there may be opportunities to reconsider the delivery of primary places across St Helier (see Planned Projects) to improve efficiency and effectiveness etc.

Future Requirements and Provision Standards

The Government of Jersey undertakes demographic modelling to understand future requirements for primary schools. Whilst there has been a recent bulge in primary school places demand, birth rates have dropped significantly over the last two years and the net migration level for children remains close to zero. Given demographic fluctuations, it remains difficult to undertake long term planning beyond around three years.

Jersey's primary schools range from between 1-3 forms of entry, which is largely a result of opportunities which have been taken to expand schools where capacity

issues or bulges have arisen (see above). There is no formal guidance on the overall size of primary schools, although there is an aspiration of an average class size across the Island of 26 pupils (though this can fluctuate between classes and schools to provide flexibility). BB99 (Briefing Framework for Primary Schools) is used to inform space requirements for new and expanded primary schools on the Island.

In recent years, there has been a small trend away from fee-paying towards non-fee-paying primary schools, therefore increasing the demand for non-fee-paying places. Whilst this has been manageable based on current places, a continuation or exacerbation of this trend may lead to a need for more capacity. It is too early to say what the impact of the economic and social crises caused by Covid-19 may have in this regard.

Planned Projects

The Government of Jersey is considering a reorganisation of St Helier primary schools, which may include new or replacement school(s). The purpose of this reorganisation is to better serve the needs of the south and west of St Helier and to ensure efficient use of resources. Discussions with officers has confirmed that these plans will include sufficient additional capacity to accommodate expected future growth in St Helier.

The Government Plan 2021-2024 also identifies a project to replace Victoria College Preparatory School. The replacement of the school has been under review since 2012, when the condition of the existing school was rated as below average. Since then there has been an updated feasibility study which reviewed different options to improve the school, but this needs to be updated. The Government Plan includes funding both for feasibility works and for the rebuild itself.

There are also plans for further capital investments (following on from scoping studies) for development or maintenance of the following primary school assets:

- St John School site extension for new school fields;
- extending La Moye School hall and addition of two additional classrooms; and
- additional music facilities and new playing fields for Jersey College for Girls and Jersey College Preparatory School (also included in secondary education below).

In addition, feasibility funding has been allocated for the rebuilding of Victoria College Preparatory School.

An independent review of school funding is currently being undertaken.

6.4 Secondary Education

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Government of Jersey, *Schools, pupils and their characteristics: Academic year 2016/2017* (no date)
- Government of Jersey website
- The Government Plan 2020-2023 (2019)
- The Government Plan 2021-2024 (2020)
- Engagement with Government of Jersey officers

Overview and Strategic Issues

There are currently five non-fee-paying (Government-run) secondary schools on the Island:

- Grainville (ages 11-16)
- Haute Vallee (ages 11-16)
- Hautlieu (ages 14-18, academically selective)
- Les Quennevais (ages 11-16)
- Le Rocquier (ages 11-16)

In addition, there are also two fee-paying secondary schools (Jersey College for Girls and Victoria College), and two private secondary schools (Beaulieu Convent and De La Salle College). St Michael's School also offers places until the end of Year 9.

Table 6 Secondary schools

Secondary School	Current Roll	Current Physical Capacity (Premises)	Current Operational Capacity (Staffing)
Non-fee-paying			
Grainville	713	750	725
Haute Vallee	560	750	575
Hautlieu	276	300	300
Les Quennevais	726	850 (replacement site – see source note below)	750 (replacement site – see source note below)
Le Rocquier	770	900	800
Fee-paying			
Jersey College for Girls	536	600	Unknown
Victoria College	507	600	Unknown
Total	4,088	4,650	3,138 (excluding fee-paying schools)

Source: Government of Jersey (CYPES 2019 school census – updated to reflect Les Quennevais school replacement)

Figure 8 Secondary schools



Source: Arup, with Government of Jersey data

The Government of Jersey operate a schools catchment system. For secondary education, non-fee-paying secondary schools are linked to a pool of primary schools as set out in Table 7. Hautlieu School has an Island-wide catchment as it is academically selective. Hautlieu’s 14-18 intake causes some inefficiencies across the system as a whole as it results in decreased Years 10 and 11 cohorts across the other four schools. However, there are no plans to change the system.

Table 7 Secondary education catchments

Secondary School	Linked Primary School
Grainville	Grands Vaux Janvrin Springfield St John St Martin St Saviour Trinity
Haute Vallee	d’Auvergne First Tower Rouge Bouillon St Lawrence

Secondary School	Linked Primary School
Les Quennevais	Bel Royal La Moye Les Landes Mont Nicolle St Mary St Peter
Le Rocquier	Grouville Plat Douet Samares St Clement St Luke

Source: Government of Jersey website

A new (replacement) secondary school at Les Quennevais, opened in September 2020. The new school will have a greater overall capacity than the existing Quennevais School (up to 850 places, compared with 550 of the previous school). This additional capacity will both alleviate existing pressures and accommodate an expected bulge of around 825 at its peak. It is expected that the school roll will average at around 750 in the longer term.

Key Shortfalls in Provision

The pupil roll at the previous Quennevais School exceeded the school's original planned capacity (though within the current capacity through the use of temporary classrooms in the playground). This has been addressed through the new Quennevais School (see above). Demand is currently high for the Quennevais given it is new, but it is expected to even out over time and there is capacity in the system as a whole.

In the medium to long term, the Government of Jersey is considering a reorganisation of secondary school provision across the Island. The purpose of this reorganisation is to ensure efficient use of resources, and to consider how best to serve key stage three, four and five needs.

Future Requirements and Provision Standards

In a similar manner for primary education, the Government of Jersey undertake demographic modelling to understand future requirements for secondary schools, taking into account pupils working through the primary system. There is expected to be a 'bulge' in secondary places in 2024 due to demographic trends (i.e. pupils already in the primary system).

There is no formal guidance on the overall size of secondary schools, although they tend to be around 700 pupils. BB98 (Briefing Framework for Secondary Schools) is used to inform space requirements for new and expanded secondary schools on the Island.

Planned Projects

There are also plans for further capital investments (following on from scoping studies) for development or maintenance of the following secondary school assets:

- extension of Jersey College for Girls School Hall;
- investment at Le Rocquier School and community sports facilities⁷;
- Grainville School site extension for new school fields;
- additional music facilities and new playing fields for Jersey College for Girls and Jersey College Preparatory School (also included in primary education above).

6.5 Special Educational Needs

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- The Government Plan 2020-2023 (2019)
- The Government Plan 2021-2024 (2020)
- Engagement with Government of Jersey officers

Overview and Strategic Issues

Special schools provide education for pupils whose needs cannot be met within mainstream schools i.e. pupils with special education needs or those that need one to one provision or are not engaging with learning in a mainstream school. Jersey currently has two facilities:

- Mont à l'Abbé School (nursery – age 19), focussing on learning difficulties; and
- La Sente (Years 3-9, and Years 10-11), focusing on social, emotional and mental health needs.

Jersey has an inclusive education policy and seeks to retain pupils with special educational needs within mainstream schools (at least in part) where possible. There are a number of specialist centres across mainstream non-fee-paying primary and secondary schools, as set out in Table 8.

Table 8 Specialist centres within mainstream schools

School	Need(s) met	Age / year group
Bel Royal	Physical and medical needs	Nursery to Year 6

⁷ This relates to wider sports and leisure upgrades set out in Section 8. Funds allocated in the Government Plan; however, a condition survey is being undertaken to understand the full extent of investment.

School	Need(s) met	Age / year group
Rouge Bouillon	Autism and social communication needs	Nursery and Reception
St Clement	Deaf / hearing impaired needs (combined with Le Rocquier)	Nursery to Year 6
St Saviour	Autism and social communication needs	Nursery to Year 6
Grainville	Autism and social communication needs	Years 7 to 11
Haute Vallee	Autism and social communication needs	Years 7 to 11
Le Rocquier	Deaf / hearing impaired needs (combined with St Clement)	Years 7 to 11
Les Quennevais	Physical and medical needs	Years 7 to 11

Source: Government of Jersey website

In January 2017, around one in seven (14.8%) pupils of compulsory school age in Government schools in Jersey were classified as having Special Education Needs. This represents 1,497 pupils, of which 200 had a Record of Need (where a formal assessment of their special educational needs has been made). Unlike mainstream school places, the varying need of pupils with special educational needs can mean that looking at the overall ‘capacity’ of the system is more challenging. However, it felt by the Government of Jersey that there are sufficient places across Jersey to meet current expected and future needs.

Planned Projects

The Government Plan 2020-2023 includes the extension of Mont à l'Abbé School. This is largely to remove temporary accommodation and to allow adaptations to enhance access for people with disabilities.

6.6 Tertiary and Higher Education and Adult Education and Skills

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- The Government Plan 2020-2023 (2019)
- The Government Plan 2021-2024 (2020)
- Skills Jersey Skills Strategy 2017-2022 (2017)
- Engagement with Government of Jersey officers

Overview and Strategic Issues

A Levels are offered at Hautlieu School and at the four fee-paying schools on the Island. Beyond this, the main provider of tertiary and higher education and adult education and skills is Highlands College. The College offers the following types of courses:

- **Sixth form:** vocational further education courses including Diplomas, BTECs and other qualifications.
- **University College Jersey:** a range of higher education courses (both undergraduate and postgraduate). Note, these courses are not accredited by Highlands College itself.
- **Professional courses:** vocational-focussed qualifications and courses.
- **Adult and community education:** a range of types of courses including language lessons, arts and crafts, sports and recreation, and technology.

In addition, there are a number of private providers of professional courses, particularly for legal and financial/accountancy training.

Skills Jersey produced a five-year Skills Strategy in 2017. It recognises that the shift to the provision of higher-level skills is not happening fast enough. Without change, it states that there will be a shortfall of local people with skills that employers are increasingly require and which would therefore need to be filled through in-migration. The Strategy also notes a shortfall in applicants in key sectors in the economy (such as hospitality, construction and social care) where other particular skills are required. It sets five strategic themes:

- developing world-class skills;
- transitions to employment;
- attracting and retaining talent;
- raising business and individual investment in skills; and
- responsive skills and employment system.

Priorities to meet these themes include: raising resident participation rates in higher education, improving access and take up of Higher and Degree Apprenticeships, and improving graduate retention.

Planned Projects

The current Highlands College campus buildings are approaching the end of their economic life and in some cases the learning environments they offer are not fit for purpose (in terms of meeting the reasonable expectations of students and reflecting the skills needs of the Island. businesses and workforce. There are therefore plans for a new purpose-built set of facilities. Feasibility work has begun with money allocated within the Government Plan 2020-2023. Feasibility work will include consideration of whether the College should be retained on the same site or relocated to a new site or sites, and whether it should include residential options for courses to attract overseas students.

6.7 Implications

Future growth is expected to impact on the amount of education places required, although complex demographic trends (both for existing residents and for in- and out-migrants) and the complex education system (with pupils spread across non-fee-paying, fee-paying, private and home schooling) means that the impact of growth is not straightforward.

As a whole, Jersey is currently well served by education provision and there are no parts of the Island which have current ‘shortfalls’ in capacity. Some individual primary schools are at or near capacity, and may not have capacity on site to expand; there is also the risk of increasingly unsustainable travel patterns for pupils to access available school places. However, in the case of additional growth, pressure on individual schools is expected to be alleviated by changes to the way school places are allocated across the Island, and the staffing of individual schools.

Reorganisation of St Helier primary schools is currently being considered (which may include new or replacement school(s)), and in the longer term reorganisation of the secondary school system is also expected. which may include new or replacement school(s). Discussions with officers has confirmed that these plans will include sufficient additional capacity to accommodate expected future growth.

There are a number of additional education projects in the pipeline, some of which require sites or designations in the bridging Island Plan (see Section 13).

As feasibility work on the replacement Highlands College campus progresses, the relationship with the Island Plan should be considered – including on whether a site should be zoned and/or a specific policy is required.

7 Health

7.1 Overview of Strategic Infrastructure

This Infrastructure Capacity Study covers the following types of health provision:

- Primary care, including General Practice (GP) surgeries, dentist, pharmacies, optometrists and community care
- Secondary care, including hospitals and mental health services

7.2 Primary Care

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Jersey Care Model (2019)
- A Sustainable Primary Care Strategy for Jersey 2015 – 2020 (2015)
- Government Plan 2020-2023 (2019)
- Government Plan 2021-2024 (2020)
- Government of Jersey website
- Engagement with Government of Jersey officers

Overview and Strategic Issues

Primary healthcare provides the first point of contact for communities with the healthcare system. It is central to the diagnosis of health conditions, their subsequent management and any on-going care. Primary care services provide GP, pharmacy, dentistry, optometry, and community care. Together, these services work to support a healthy population.

Primary care differs from other areas of health and social care because it is predominantly provided by non-Government actors. In Jersey, GP surgeries are private businesses and therefore visitors must pay to see them. This is also true of dentists and optometrists. Providing healthcare through individual contractors has (thus far) delivered a good quality of healthcare on the Island. However, this model of provision can mean a lack of integration between actors, as well as a tendency towards reactive rather than proactive care.

Following the White Paper ‘Caring for each other, caring for ourselves’ (2012) and ensuing Proposition to the States ‘A New Way Forward for Health and Social Care’ (2012), Jersey has reinforced its commitment to providing affordable,

accessible and quality health and social care. Yet providing affordable, accessible and quality health and social care is complicated by a number of factors. The Government of Jersey recognises these key factors as:

- An ageing population: by 2035, the number of Jersey residents aged over 65 is expected to significantly increase (refer to the demographic information in Section 2 for further information).
- An increase in multiple-morbidities with age: over half of Jersey's population has at least one of 40 long-term health conditions. As populations age, there is a trend towards multiple compounding health issues.
- A disjointed system of provision: lack of total integration hinders efficiency and worsens patient experience.
- The inadequacy of current funding mechanisms: pressures arising from demographic changes mean that existing funding does not adequately cover the costs of service provision.
- Workforce shortfalls: recruitment issues may exacerbate shortfalls between healthcare demand and provision.
- The current system of co-payment, which requires Islanders to contribute towards the cost of visiting a GP, leads to a perverse incentive for patients to instead seek hospital care, which is free, exacerbating pressure on the hospital. This is often the case for conditions which can be more cost-effectively cared for in primary care. For example, in 2018 the hospital dealt with:
 - Around 30,000 Emergency Department patient visits that weren't emergencies
 - At least 40,000 outpatients visits to treat long-term conditions that could have been better managed by GPs

With explicit recognition of the changing landscape of healthcare requirements on the Island, the new Jersey Care Model for Health and Community Services was published in Autumn 2019, setting out a number of reforms to healthcare provision that will be delivered over the next five years. At the core of the Jersey Care Model lies a proposal to shift the delivery of some health and social care services into the community, enabling the hospital to focus on specialist and emergency care, intensive care and maternity services. The focus is to be on preventative care. Delivery of this new model requires close collaboration between the Government of Jersey Health and Community Services and community providers – including: GPs, dentists, opticians, pharmacists, community and mental health nurses, and community and voluntary sector partners. It may also involve changes to the way residential and care home places are commissioned and their role in providing healthcare.

In addition to, and to be implemented alongside, the Jersey Care Model the 2021 Government Plan commits to designing and implementing a sustainable funding model for primary care costs in 2021, for approval by the 2022-25 Government Plan.

GP Surgeries

GPs treat all common medical conditions and refer patients to hospitals and other medical services for specialist or urgent treatment. Surgeries in Jersey are private businesses. The Jersey Online Directory lists nineteen GP surgeries in Jersey (Table 9); in addition, there are three surgeries not included on the Directory which are known to exist (shown in italics).

Table 9 GP surgeries

GP Surgery	Address
Indigo Medical	2-8 Oxford Road, St Helier, JE1 4HB
Cleveland Clinic – St Helier	12 Cleveland Road, St Helier, JE1 4HD
Clifdon House Surgery	24 Vauxhall Street, St Helier, JE2 4TJ
Atlantic Surgery at Como Villa	7 Clarendon Road, St Helier, JE2 3YW
Island Medical Centre	14 Gloucester Street, St Helier, JE2 3QR
Lister Surgery	7-8 The Parade, St Helier, JE2 3QP
Co-operative Medical Care – St Helier	Bath Street Health Centre, 87-91 Bath Street, St Helier, JE2 4SU
Out-of-hours GP Co-op service	Gwyneth Huelin Wing, General Hospital, The Parade, St Helier, JE1 3QS
Health Plus Surgery	Queens Road Health Centre, Queens Road, St Helier, JE2 4HY
Island Medical Centre – St Brelade	Unit 2, Centre Point, La Route de Genets, St Brelade, JE3 8LB
Cleveland Clinic	Unit B Millennium Properties, Arcade, Red Houses, St Brelade, JE3 8LL
Leodis Surgery – Indigo Medical	La Route des Quennevais, St Brelade, JE3 8LL
Lister Surgery – Les Quennevais	8 Quennevais Parade, Quennevais, St Brelade, JE3 8FX
Lido Medical Practice	Suite 3.06 Lido Medical Centre, St Saviour's Road, St Saviour, JE2 7LA
The Route Du Fort Surgery	Lido Medical Centre, Suite 2.2, St Saviour's Road, St Saviour, JE2 7LA
Co-operative Medical Care – St Clement	New Era Health Centre, Victoria Road, St Clement, JE2 6QG
Island Medical Centre – St John	3b Temple Court, Rue de Temple, St John, JE3 4BJ
Co-operative Medical Care – St Peter	St Peter Health Centre (Grand Marché St Peter), Rue de L'Eglise, St Peter, JE3 7AG
Little Grove Clinic – Indigo Medical	La Rue de Haut, St Lawrence, JE3 1JZ
Island Medical Centre – Grouville	Fernlea Surgery, La Grande Route des Sablons, Grouville, JE3 9FR
Cleveland Clinic – St Ouen's Village Surgery	Route de Marais, St Ouen, JE3 2GG
<i>Windsor Medical Practice</i>	<i>Suite 3.05 Lido Medical Centre, St Saviour's Road, St Saviour, JE2 7LA</i>

GP Surgery	Address
Allardice Doctors	La Rue De Haut, St Lawrence, JE3 1JZ
7 David Place	7 David Place, St Helier, JE2 4TD

The Government of Jersey does not commission GP places or care, although it goes retain some quality assurance powers.

Pharmacies

Pharmacies can provide treatment advice about a range of common ailments and minor injuries, in addition to dispensing medicines. must be registered under Jersey law to legally operate. In total, there are 32 pharmacies listed on the Government of Jersey website (Table 10).

Table 10 Pharmacies

Trading Name	Address
Boots	23 - 29 Queen Street, St Helier, JE2 4WD
Boots	62 King Street, St Helier, JE2 4WE
Boots	Rue Des Pres, St Saviour, JE2 7PN
Boots	Centenary House, La Grande Route De St Pierre, St Peter, JE3 7AZ
Boots	11 Quennevais Parade, La Route De Quennevais, St Brelade, JE3 8FX
Castle Quay Pharmacy	Le Capelaine House, Rue De L'eau St Helier, JE2 3EH
CITRiche Limited	2A Dumarais Corner, St Ouen, JE3 2GG
Cleveland Pharmacy	12 Cleveland Road, St Helier, JE1 4HD
Island Pharmacy	14 Gloucester Street, St Helier, JE2 3QR
Le Quesne's Pharmacy	25 Don Street, St Helier, JE2 4TR
Little Grove Pharmacy	Little Grove Clinic, Rue De Haut, St Lawrence, JE3 1JZ
Lloyds Pharmacy	1 Centre Point, La Route Des Genets, St Brelade, JE3 8LB
Lloyds Pharmacy	7 - 8 The Parade, St Helier, JE2 3QP
Lloyds Pharmacy	Glenside, La Grande Route Des Sablons Gorey Village, Grouville, JE3 9EP
Lloyds Pharmacy	7 - 8 Les Quennevais Parade, La Route Des Quennevais, St Brelade, JE3 8FX
Lloyds Pharmacy	10 David Place, St Helier, JE2 4TD
Lloyds Pharmacy	2 - 8 Oxford Road, St Helier, JE1 4HB
LV Pharmacy	24 Beresford Street, St Helier, JE2 4WN
Millbrook Pharmacy	Lisbon House, St Lawrence, JE3 1LL
Pharmacy Locale	La Rue De L'Eglise, St Peter, JE3 7AG
Pharmacy Locale	New Era Health Centre, Victoria Road St Clement, JE2 6QG

Trading Name	Address
Pharmacy Locale	Grand Marche, La Rue Le Masurier St Helier, JE2 4YE
Pharmacy Locale	87 - 91 Bath Street, St Helier, JE2 4SU
Queens Road Pharmacy	Queens Road Health Centre, Queens Road, St Helier, JE2 4HY
Reid's Pharmacy	76 New Street, St Helier, JE2 3TE
Reid's Pharmacy	16 Charing Cross, St Helier, JE2 3RP
Reid's Pharmacy	7 Miladi Parade, Longueville St Saviour, JE2 3QW
Reid's Pharmacy	The Lido Medical Centre, St Saviours Road, St Helier, JE2 3QW
Reid's Pharmacy	8 Bagatelle Parade, Bagatelle Road, St Saviour, JE2 7TP
Roseville Pharmacy	7 Roseville Street, St Helier, JE2 4PJ
St Clements Pharmacy	School Road, St Clement, JE2 6FE
St John's Pharmacy	1 Temple Court, St John, JE3 4BJ

In addition to the pharmacies listed above, the General Hospital Pharmacy at the General Hospital in St Helier can dispense medicine on receipt of prescriptions given only at hospital appointments (as opposed to prescriptions written by GPs).

Dentistry

The vast majority of dentistry services are provided by privately-owned dentist surgeries on the Island. The Dental Department at Jersey General Hospital provides dental treatment for children of primary school age or younger. Upon completion of primary school, children's dental care must be transferred to a private dentist. However, the Jersey Dental Fitness Scheme contributes towards the cost of routine dental treatment for young people still in full-time education. Entitlement to this scheme depends on a range of factors beyond educational status, including total annual family income and time lived on the Island.

Figure 9 Dentists



Source: Arup, with Government of Jersey data⁸

Optometry

Optometrists are primary health care specialists providing eye care. In Jersey, optometry services are privately-run and must be paid for.

Community Care

The Jersey Care Model Project proposes decentralising certain forms of primary care from the General Hospital, providing them instead in communities through GP surgeries and community or voluntary partners. ‘Health hubs’ have also been proposed, which would be distributed around the Island and deal with non-urgent issues, as well as some outpatient appointments. It is thought that refocusing efforts on community-based care will help to alleviate pressure on the hospital and better equip Jersey to managing the healthcare demands of an ageing population.

Key Shortfalls in Provision

There is currently around one GP per 1,000 people on the Island, which is considered to be a good level of provision (and certainly is compared with ratios in the UK). The Government of Jersey believe the system as a whole is running at about 85% capacity.

⁸ Location of dentists and related services compiled using key words search of JLPI: ‘dental’; ‘dentist’; ‘denture’; ‘orthodontist’; ‘smile’; ‘tooth’; and ‘teeth’.

There are no known shortfalls for other types of primary care.

Future Requirements, Provision Standards and Planned Projects

The Sustainable Primary Care Strategy draws attention to changing demographics on the Island. More residents are reaching retirement age and people are living longer. By 2035, this could result in the number of over 65s reaching 28,000, compared to 14,000 in 2010. Additionally, the number of over 85s is predicted to more than double from 2,000 to 5,000. These demographic changes bring with them increased demand on primary care services, as well as changing the nature of the services demanded. Jersey's primary care service must adapt accordingly.

Long term conditions are defined as ones which cannot currently be cured but can be managed with the use of medication and/or other therapies. An increase in the number of people with one or more long-term conditions is associated with the increase in the number of residents living longer⁹. Patients with two or more long-term conditions, also referred to as 'multi-morbid patients', present a challenge for healthcare provision by placing greater demands on care services.

The GP sector has successfully grown over recent years to maintain a broadly consistent level of service. It is felt that the current level of provision (i.e. one GP for every 1,000 population) remains broadly correct and it is hoped that it will be maintained. Applying this standard to the growth scenarios set out in Section 3 would lead to a requirement for around an addition 3.5 FTE GPs in the bridging Island Plan period, and 8.8 FTE GPs for the subsequent Island Plan period. Although the Government of Jersey cannot compel individual businesses to expand, it could choose to incentivise GPs to work in Jersey by offering medical indemnity or allowing surgeries to buy into the Government pension.

As the Jersey Care Model is implemented, it is likely that some services currently provided in the General Hospital will be re-located into GP surgeries. The Government of Jersey is not responsible for GP estate and is unlikely to deliver new facilities to allow this; however, it is possible that the Government may play a role in facilitating estate changes where required (e.g. offering capital funding as part of commissioning). Services might also be housed within existing community facilities (e.g. parish halls), and so not requiring new infrastructure per se.

Future Infrastructure Delivery: Healthcare

In the future, the use of technology in healthcare provision is hoped to create more efficient, cheaper and better-quality healthcare. Some suggest that this will be achieved is through more remote and digital access to healthcare, through telehealth, skype consultations and even remote surgery.

Jersey is planning for the future of healthcare and its provision, through a Digital Health Team, whose role is to develop a 'world-leading' digital health

⁹ In Jersey there is a clear pattern of increasing morbidities with age in the population, as set out in the Multimorbidity Briefing Note Health Intelligence Unit, Public Health Directorate (2015).

service for Jersey. The Digital Health Team has produced a booklet¹⁰ setting out their aims, and one of which is through the delivery of 'HealthNet' to allow secure access to health and care data, across the Island, which will aim to reduce the reliance of the single hospital building.

In addition to this, a Jersey Care Record will give patients access and control, as well as the ability to restrict access to their medical information. These services will include the ability of telemedicine, video consultations, electronic prescribing and digital prescriptions, and self-care through diabetes monitoring, blood pressure monitoring and smart watches. These measures aim to create one of the most digitally advanced healthcare systems in the world.

In order to achieve these goals set out by the Digital Health Team, Jersey must invest into its existing online networks, including a new hospital Wi-Fi system, which will support enhancements to mobile computing and data access, while also considering how best to ensure cyber security for patients.

Furthermore, it must also be considered that not all the population will have access to the internet, or have the appropriate skills to use it, and therefore consideration must go into ensuring these users have suitable access to the adapting healthcare system.

7.3 Secondary Care

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Jersey Care Model (2019)
- Health and Social Services: Acute Service Strategy (2015)
- A Mental Health Strategy for Jersey 2016 – 2020 (2015)
- The Sustainable Primary Care Health Strategy (no date)
- Government Plan 2020-2023 (2019)
- The Government Plan 2021-2024 (2020)
- Government of Jersey website
- Engagement with Government of Jersey officer

¹⁰ Available at:

<https://www.gov.je/SiteCollectionDocuments/Health%20and%20wellbeing/B%20Digital%20Health%20Booklet%20-%20Developing%20a%20World%20Leading%20Health%20Service%20in%20Jersey%2020200120%20AM.pdf> (retrieved January 2020).

Overview and Strategic Issues

Secondary healthcare services include the following: urgent and emergency care; planned hospital care; rehabilitative care; community health services; and mental health services.

The General Hospital provides a wide range of healthcare services, including but not limited to the Emergency Department, intensive care, maternity, routine surgery, and X-ray, mammography, MRI, CT, and ultrasound scans. The General Hospital is located on The Parade, St Helier.

In January 2020, the General Hospital was put on amber alert for two days, signalling a state of pressure on hospital services which had led to scheduled treatments being cancelled. Islanders were warned only to visit the Emergency Department if they had a genuine medical emergency, in order to relieve capacity pressure. One identified area of capacity shortfall was hospital bed availability.

There are a number of other secondary health facilities on the Island:

- Overdale Hospital, located on Westmount Road, St Helier, provides a number of services including rehabilitation, pain clinic, diabetes, and administrative psychology services.
- St Saviour's campus, which is currently split in two. The south site includes acute mental health (in the form of Orchard House and Rosewood House) and key worker accommodation. The north site includes dementia and clinical older people care. There are plans to consolidate uses on to the northern site.
- The Child and Adolescent Mental Health Service (CAHMS), which is based at Liberté House, St Helier.
- Non-clinical support services (including sterilised services, laundry services and stores) are housed at Five Oaks.

In response to the Covid-19 global pandemic, additional secondary healthcare services were established:

- Urgent Treatment Centre
- Nightingale Wing at the General Hospital

These are likely to be temporary facilities operated for the duration of this pandemic. The 2021-2024 Government Plan has committed to funding the Nightingale Ward until at least March 2021 to ensure sufficient hospital capacity.

Figure 10 Secondary healthcare



Source: Arup, with Government of Jersey data

A Mental Health Strategy for Jersey 2016 – 2020 (2015) recognises that improving mental health and treating mental illness are two major public health challenges facing the Island. Both the Jersey Care Model and Government Plan reinforced the Government’s commitment to improving mental health services. The Government Plan committed to piloting a ‘listening lounge’ to provide a dedicated space for people seeking early support with issues that impact upon their mental health and wellbeing. The lounge opened in St Helier in November 2019.

In response to the Covid-19 pandemic, several initiatives and facilities for mental health care have been brought forward. These include:

- Expedited the delivery of a community ‘Street’ triage as part of the Mental Health Crisis Prevention service.
- Set up a temporary 24/7 Child and Adolescent Mental Health Service (CAMHS) Inpatient Unit for children and young people, who would have usually been managed in either Jersey General Hospital or off-Island.
- The expansion of the Liaison Team to offer 24/7 support to those with mental health issues both at home and in clinics.

Key Shortfalls in Provision, Future Requirements and Planned Projects

The Sustainable Primary Care Strategy for Jersey (2015) notes that existing hospital bed capacity is likely to be exceeded in the 'very near future'. Longer term, demand for beds is forecast to increase by a substantial 72% by 2040. One factor contributing to the shortage in hospital beds is Jersey's ageing population. This will further exacerbate pressure on hospital services because of the evidenced relationship between ageing populations and the prevalence of multiple long-term illnesses, which require a range of complex care needs.

In 2012, planning for a new hospital to replace the General Hospital began. By December 2017, the Government of Jersey approved the use of £446 million of funding from the strategic reserve to build the new hospital, in addition to borrowing £275 million. The existing Overdale Hospital site has been proposed as the preferred site for the new hospital. The site was chosen because:

- it offers sufficient size and scope for flexibility in design and future development;
- it allows the project to be completed by 2026;
- the acquisition of private property and impact on nearby residents is limited;
- access challenges can be overcome;
- it is more financially viable compared to alternatives; and
- it does not involve building on protected open space.

A funding plan will be devised, and a planning application will be submitted in September 2021, subject to the preferred site being agreed by the States Assembly in November 2020.

The Jersey Care Model contains an aspiration to bring the main hospital, mental health facilities, cancer centre and training facilities onto a single campus. The hospital proposals may also include a new crematorium facility.

While detailed plans for the new hospital remain undecided, the Government Plan (2019) committed capital investment to supporting a programme of upgrade work to maintain the existing General Hospital. These works do not increase capacity.

Other upgrades are also planned, including:

- Investment in Jersey's mental health provisions and infrastructure at the existing facility at St Saviours. £3,930,000 has been allocated in the Government Plan for this works.
- Maintenance works at the non-clinical support services facility at Five Oaks - £3,500,000 has been allocated in the Government Plan.

The campus has a number of redundant buildings and there are ongoing maintenance issues.

7.4 Implications

As work progresses on bringing forward the new hospital, consideration should be given on the implications for the bridging Island Plan including on:

- whether the site should be allocated in the bridging Island Plan;
- whether a specific criteria-based policy is required to guide development of the new hospital; and
- the future of other secondary healthcare sites across the Island.

Demand for GPs and other primary healthcare services will grow over the bridging Island Plan and beyond. Although the Government of Jersey cannot compel individual businesses to expand, or provide the infrastructure required to do so, it is expected that the market will continue to cater for the needs of the Island. For this reason, a general requirement is included in the Infrastructure Delivery Schedule (Section 13).

As work progresses on implementing the new Jersey Care Model, consideration should be given on the implications for infrastructure including on the adequacy of existing facilities and whether minor upgrades (e.g. access arrangements) are required to certain GP surgeries, parish halls or other community floorspace in order to allow them to host some services.

8 Community Facilities

8.1 Overview of Strategic Infrastructure

This Infrastructure Capacity Study covers the following types of community facilities provision:

- Community halls
- Sports and leisure facilities
- Cultural and tourism facilities (including libraries)

The Revised Island Plan defines community facilities as ‘those buildings which, in most cases, provide an open and flexible space that can be used for a variety of functions and which might be met by parish halls, schools, churches and church halls, youth centres and sports halls’. Sustaining local facilities is vital to maintain a vibrant community, and until existing community facilities stop meeting the needs of the local community, they will be retained and enhanced, over being replaced. The protection, maintenance and enhancement of the Island’s community facilities will support well-being and quality of life, while the provision and quality of community facilities can have a considerable bearing on the quality of neighbourhoods.

8.2 Community Halls

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Halls for Hire website¹¹
- The Government Plan 2020-2023 (2019)
- The Government Plan 2021-2024 (2020)
- Government of Jersey website
- Engagement with Government of Jersey officers

Overview and Strategic Issues

There are forms of community halls in every parish on the Island, with provision set out in Table 11.

¹¹ Available at: <https://www.hallshire.com/jersey> (accessed January 2020)

Table 11 Community halls (including youth centres)¹²

Community Halls	Parish
Grouville Parish Hall	Grouville
Gorey Youth Centre	Grouville
St Aubins Methodist Church Hall	St Brelade
Communicare Community Centre	St Brelade
St Clement Parish Hall	St Clement
Caldwell Hall	St Clement
St Helier Town Hall	St Helier
St Andrews Community Centre	St Helier
St Paul's Centre	St Helier
La Pouquelaye Youth and Community Centre	St Helier
St John Parish Hall	St John
St Lawrence Community Centre (also provision of outdoor sport facilities)	St Lawrence
St Lawrence Parish Hall	St Lawrence
The Berni Centre	St Martin
St Martin's Public Hall	St Martin
St Mary's Community Centre (also provision of outdoor sport facilities)	St Mary
St Ouen's Community Centre	St Ouen
St Peters Youth and Community Centre	St Peter
Maufant Community Centre	St Saviour
The Bridge Child and Family Centre	St Saviour
Grands Vaux Youth Centre	St Saviour
St Luke's Church Hall	St Saviour
Trinity Parish Hall	Trinity

¹² This list of community halls has been compiled through evidence collected from the Halls for Hire website: <https://www.hallshire.com/jersey> and Government of Jersey website: <https://www.gov.je/Pages/default.aspx> (accessed January 2020). There are other youth services (set out here: <https://www.gov.je/Leisure/YouthClubsProjects/Pages/WhereYouthProjects.aspx#anchor-0>, retrieved January 2020), but these have only been included where they consist of a separate dedicated space.

Key Shortfalls in Provision

There are no known shortfalls in provision relating to community halls. However, it is understood that there can be issues around accessing community space in some locations within St Helier. Overall, need for community space is met through balancing need across efficient use of existing assets across the island.

Future Requirements and Planned Projects

The Government of Jersey does not have any provision standards for access to community space. However, applying an indicative standard of 60 sqm per 1,000 population (taken from reflective English local authorities) to the growth scenarios set out in Section 3 would lead to the future requirements set out in Table 12.

Table 12 Future community space requirement

	Bridging Island Plan (sqm)	Subsequent Island Plan (sqm)
Primary	108	270
Secondary	15	39
Tertiary	51	128
Other Built-up Area	4	9
Countryside ¹³	33	82
Zoning	29	72
Total	211g	528

However, it should be noted that this ‘requirement’ may not necessarily be delivered, and additional demand may instead be met by increasing capacity of existing facilities through altered opening hours or minor upgrades.

The Government Plan 2020-2023 makes provision for a new North of St Helier Youth Centre, largely to meet the needs of expected expansion in young residents as a result of planned development in the area. The Government Plan also includes upgrades to the Le Squez Youth Centre (which might comprise of extensive modernisation of the existing building or a new building).

The Revised Island Plan stated that the development of a new headquarters facility for the Jersey Sea Cadets at the St Galots site in St Helier would be beneficial, and therefore it is appropriate to safeguard the land for this purpose. (Note, this is not included in the Infrastructure Delivery Schedule in Section 13.)

There are no other known projects relating to community halls, beyond ongoing maintenance of existing facilities.

¹³ It would not be expected that community space would be delivered in rural areas.

8.3 Sports and Leisure

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Community Sports Hub and Island Stadium Feasibility Study (2020)
- Sports Facilities Delivery Report (2018)
- Inspiring an Active Jersey (2020)
- Fit for the Future: A Five-Year Strategy for Sport and Physical Activity in Jersey (2013)
- Outdoor Open Space, Sport and Recreation Study (2008)
- Engagement with Government of Jersey officers

Overview and Strategic Issues

The Inspiring an Active Jersey strategy includes an aim for Jersey to be a healthier, more productive and fairer society by being one of the most physically active populations in the world, with a target of increasing physical activity by 10% by 2030.

Participation in sport on the Island is high; the Sports Facilities Delivery Report states that 55% of adults use public facilities to undertake moderate intensity sport or physical activity at least once per week, suggesting that there is a demand for sports facilities in the Island. Across the Island, there are a number of facilities covering a wide range of sports and leisure uses (Table 13).

Table 13 Sport provision¹⁴

Indoor sports facility	Use	Parish	Ownership
Jersey Rugby Club	4 Rugby Pitches 1 Training Area	St Peter	Private Sector Owned
Jersey Squash and Racquetball Club	5 Squash Courts	St Clement	Private Sector Owned
Planet Pool and Snooker	Pool and snooker tables Dart Boards	St Helier	Private Sector Owned
First Tower Billiards & Snooker Club	Snooker Tables Billiard tables	St Helier	Private Sector Owned
Jersey Mechanics Club	8 Full Size Snooker Tables 4 x 8 ball pool tables 1 x American 9 ball table	St Helier	Private Sector Owned

¹⁴ Evidenced through the Sports Facilities Delivery Report (2018).

Indoor sports facility	Use	Parish	Ownership
	2 Carom Tables Darts Bar Billiards		
Fort Regent	Queens Hall – 6 badminton courts Gloucester Hall – (10 badminton courts or 2 sports hall and 2 badminton) Large fitness suite Sauna/Steam Dance studios 4 trampolines Spin studio 6 Squash courts Meeting room Dojo Outdoor ball court Shooting Range Snooker Table Pool Tables Various Martial Art Rooms that are sub-let.	St Helier	State Owned
Les Quennevais Sports Centre and Playing Fields	8-lane 25m pool with spectator seating Teaching pool Fitness suite 1 x studio 1 x Spin Studio 5-court sports hall 2 x glass backed squash courts Cycle track 10 x outdoor changing rooms 2 x floodlit outdoor netball courts 2 x floodlit MUGAs 2 x tennis courts 1 x sand dressed floodlit hockey AGP 4 x cricket nets 2 x cricket squares 2 x softball pitches 8 x grass pitches – mostly laid out for football in various sizes but including 1 x rugby pitch. One full sized grass football pitch is floodlit Bowling green - leased to St Brelade's Bowling Club 2 x Croquet lawns – leased to Jersey Croquet Club 4 x Petanque courts -leased to Jersey Petanque Club	St Brelade	State Owned

Indoor sports facility	Use	Parish	Ownership
	4 x outdoor tennis courts leased to Les Mielles TC		
Springfield Stadium and Sports Centre	Meeting Room 4-court sports hall Fitness suite (but no studio space) 3G football pitch (with grandstand and seating capacity for 992) Hospitality suite; part of the stadium; separate from the main leisure facility.	St Helier	State Owned
Les Quennevais School	Fitness suite Dance studio Gymnasium Sports hall (Marked for various sport plus cricket nets) 1/2 size 3G flood lit 3/4 tarmac ball court (3 netball courts on it) 3 tennis Courts 1 full size football pitch 2 under 12 pitches	St Brelade	State Owned
Langford Sports Centre	Sports hall (Marked for various sport plus cricket nets) 5-lane 25m pool Dance studio Gymnasium with climbing wall Small Fitness Suite Outdoor court area	St Saviour	State Owned
Haute Vallee Pool and 3G pitch	Swimming pool 9 v 9 sized floodlit 3G pitch	St Helier	State Owned
St John's Recreation Site	Skatepark Indoor Shooting Football Pitch (see St John FC) Sports Hall (see Jersey Gymnastics)	St John	State Owned
Oakfield Sports Centre	Sports Hall with various markings Small Fitness suite Fitness studio All weather court Grass football pitch	St Saviour	State owned
Aquasplash	6 lane 25m pool Leisure pool with flumes and wave machine Sauna and steam room Outdoor leisure pool	St Helier	State owned and Private Sector operated
Havre Des Pas Lido	Open-air sea water pool	St Helier	State owned and Private Sector operated

Indoor sports facility	Use	Parish	Ownership
Les Quennevais School	Fitness suite Dance studio Gymnasium Sports hall (2 cricket nets, 4 badminton, marked for volleyball, basketball and netball as well) 1/2 size 3G flood lite 3/4 tarmac ball court (3 netball courts on it) and 3 tennis Pitch has 1 full size soccer and 2 under 12 pitches	St Brelade	State Owned
St Georges School	10m x 5m Indoor pool Outdoor Ball Court Football Pitch Sports Hall	St Peter	Private Sector Owned
St Michael's School	Dance Studio/Gym Sports Hall (1 netball court/4 cricket nets/3 badminton courts/basketball court 2 Tarmac outdoor netball courts/ 2 tennis courts marked on it - only one with tramlines 1 outdoor hockey pitch Pitches multi use 2 Rugby pitches /3 Football - 2 mini/1 junior no full size football pitches Cricket pitch	St Martin	Private Sector Owned
Grainville School and Playing Fields	4-court sports hall Practice hall Dance studio 3 sets of double tennis/netball courts on different levels Rugby/ Gaelic Pitch 1 Junior Football Pitch 1 Cricket Pitch or 3 Junior Football pitches 2 x Cricket Nets	St Saviour	State Owned
Le Rocquier School	4-court sports hall Practice hall Dance studio (located on the 'main school site' separate from the sports centre Outdoor netball tennis courts (one set in good condition the other in poor/average condition; neither is floodlit 3 grass football pitches (two football, one rugby).	St Clement	State Owned

Indoor sports facility	Use	Parish	Ownership
De La Salle Colleges	Multi Sports Hall Indoor Astro Football Pitch Fitness Suite Gymnasium Small playing Field - Junior School	St Saviour	Private Sector Owned
Beaulieu School	1 small hockey astro 1 astro netball court 2 hard netball courts 1 Primary Gym	St Saviour	Private Sector Owned
Grainville Tennis Club	6 Tennis Courts	St Saviour	State Owned – privately operated
Crabbe	Muzzle Loaders Range Clay Pigeon Shooting Rifle Range Smallbore Range Archery Pistol Range	St Mary	State Owned
Eastern Air Rifle Club	Air gun shooting	Grouville	Private Sector Owned
Lecq Clay Target Club	Outdoor Clay Target Shooting	St Ouen	Private Sector Owned
Grouville Minature Rifle Club	Indoor Shooting Range	Grouville	Private Sector Owned
Jersey Air Rifle Club	Indoor Shooting Range	St Brelade	Private Sector Owned
Leoville Sports	Indoor Shooting Range Snooker Table 2 Pool Tables	St Ouen	Private Sector Owned
St Lawrence Minature Rifle Club	Indoor shooting Range	St Lawrence	Private Sector Owned
Western Minature Rifle Club	Indoor shooting Range	St John	Private Sector Owned
St Saviour's Bowls Club	Bowls	St Saviour	State Owned – privately operated
Sun Bowls	Bowls	St Helier	State Owned – Privately Operated

Indoor sports facility	Use	Parish	Ownership
Trinity Bowls Club	Bowling	Trinity	Private Sector Owned
Jersey Bowl	18 Lane tenpin bowling alley	St Peter	Private Sector Owned
Farmers Cricket	Cricket Pitch	St Martin	Private Sector Owned
College Field Cricket	Cricket Pitch	St Saviour	Private Sector Owned
Healthhaus	2 x Milon circuits Virtual Indoor Cycling Weights Room 15 m Infinity Pool Jacuzzi Hot Pool Cold Plunge Pool Sauna/Steam Room Studio	St Helier	Private Sector Owned
Soulgenic (Anytime Fitness from 1st Oct 2020)	5 Studios Fitness Suite	St Helier	Private Sector Owned
Rad Fitness Gym and Health Care (Radisson Blu Hotel)	Fitness Suite Heated Pool	St Helier	Private Sector Owned
South Hill Gym	Boxing Ring Punch bags Weights Speedballs	St Helier	State Owned – privately operated
Elevate	Fitness Suite	St Helier	Private Sector Owned
Merton Leisure Club and Aquadome	Fitness Suite Sauna/Steam Indoor Leisure Pool Outdoor Leisure Pool	St Saviour	Private Sector Owned
Curves	Cardio Circuit	St Helier	Private Sector Owned

Indoor sports facility	Use	Parish	Ownership
Carrefour Health Clubs	2 Fitness Suites 3 Studios	St Lawrence	Private Sector Owned
Jersey Indoor Bowling Stadium	Indoor 6-risk venue with spectator and social facilities	St Saviour	Private Sector Owned
Geoff Reed Table Tennis Centre	12 competition standard tables with championship standard LED lighting and specialist flooring	St Saviour	State Owned
New Gilson Hall	Purpose-build 5 court facility	St Helier	State Owned
Fitness First	Fitness suite with 100+ stations Group fitness studios	St Helier	Private Sector Owned
DW Health Club	100+ stations A group fitness/spinning studio and functional training areas A 20m pool	St Brelade	Private Sector Owned
CrossFit	Fitness suite, 6,00sqft facility	St Helier	Private Sector Owned
Les Ormes Leisure Village	Small shallow water-based teaching pool Indoor tennis/netball courts A small, relatively basic fitness space 9-hole golf course	St Brelade	Private Sector Owned
Les Landes Racecourse	Racecourse	St Ouen	State Owned – Private Operated
Airport Playing Fields	1 Small Football Pitch 1 Training Area 1 Rugby Pitch	St Brelade	State Owned
Les Creux Millennium Country Park	BMX track and bike jumps for children (free public access) 2 bowling greens	St Brelade	State Owned
Body-Rox	Fitness Suite Studio	St Helier	Private Sector Owned
FB playing fields	400m athletics track and all field events Geoff Reed Table Tennis Centre 2 cricket pitches in summer 1 junior cricket pitch in summer 4 open cricket nets several football pitches in winter	St Clement	State Owned

Indoor sports facility	Use	Parish	Ownership
	2 Netball Courts		
Football clubs:			
First Tower United	Football Pitch	St Brelade	Private Sector Owned
Grouville	Football Pitch	Grouville	
JTC Wanderers	Football Pitch	St Peter	
Rozel Rovers	Football Pitch	St Lawrence	
Sporting Academics/ St Martin	Football Pitch (shared)	St Saviour	
St Brelade	Football Pitch	St Brelade	
St Clement	Football Pitch	St Clement	
St John	Football Pitch	St John	
St Lawrence	Football Pitch	St Lawrence	
St Ouen	Football Pitch	St Ouen	
St Paul's	Football Pitch	St Saviour	
St Peter	Football Pitch	St Peter	
Trinity	Football Pitch	Trinity	
Darts	Various Public Houses	Various	Private Sector Owned
Jersey Gymnastics Club	Operate from St John's Rec	St John	Private Sector Owned
De Mond Gymnastics	Gymnasium	St Mary	Private Sector Owned
St Clements Golf and Sports Centre	9 hole parkland golf course measuring 2637 yards (par 33) 3 hole Academy Golf course Practice Area 9 Tennis Courts (2 of which are floodlit) 2 Paddle Tennis Courts	St Clement	Private Sector Owned
Les Ormes	40 indoor trampolines Reaction Climbing Tower 9 Hole Golf Course Indoor Swimming Pool Outdoor Swimming Pool	St Brelade	Private Sector Owned
Les Mielles and Country Club	Driving Range Bungee Trampolines 18 Hole Mini Golf 18 Hole Crazy Golf 18 Hole Golf Course Laser Clay Pigeon Shooting Segways	St Ouen	Private Sector Owned

Indoor sports facility	Use	Parish	Ownership
Longueville Golf Range	20 bay floodlit Driving Range	St Clement	Private Sector Owned
Wheatlands	9 Hole Golf Course	St Peter	Private Sector Owned
Jersey Royal Golf Club	18 Hole Golf Course	Grouville	Private Sector Owned
Valley Adventure Centre	Arial Trekking Zip Wire King Swing Laser Combat Archery and Axe Throwing	St Brelade	Private Sector Owned
St Helier Yacht Club	Clubhouse Dinghies Keelboats Catamarans Trimarans	St Helier	Private Sector Owned
Royal Channel Islands Yacht Club	Clubhouse Private Sector Ownedly owned boats	St Brelade	Private Sector Owned
St Catherine Sailing Club	Clubhouse Dinghies	St Martin	Private Sector Owned
Jersey Sea Sport Centre	Based on La Haule slip 8 Jetskis 2 skiboats Wakeboards / Donuts	St Brelade (St Aubin)	Private Sector Owned
Go Sail Jersey	7 Boats: Lady Catherine – Beneteau Oceanis 41 Farways – Fontaine Pajot Athena 38 Galear- Axopar 24 TT Solis Ortus – Jeanneau Sunfast 3600 Super G- Brig Navigator 610 Princess Leia – Dufour 360 GL Ventura – Avon Adventura 6.2	St Helier	Private Sector Owned
Absolute Adventures (Sun & Surf Watersports Ltd)	Blokarts Kayaks Stand Up Paddleboards Boat (RIB) Fun inflatables	St Brelade	Private Sector Owned
Gorey Watersports Centre	Operating from Longbeach @ Gorey: Waterski equipment Wakeboards	Grouville	Private Sector Owned

Indoor sports facility	Use	Parish	Ownership
	Kayaks Stand Up Paddleboards		
Jersey Kayak Adventures	Kayaks Canoes	St Clement	Private Sector Owned
Jono's Watersports	Operating from Wayside slipway Kayaks Stand up paddleboards Body Boards	St Brelade	Private Sector Owned
Jersey Surf School	Surfboards Bodyboards Wetsuits	St Ouen	Private Sector Owned
Splash Surf Centre	Surfboards Bodyboards Wetsuits	St Ouen	Private Sector Owned
Laneez Surf Centre	The White Hut school Surfboards Bodyboards Wetsuits	St Ouen	Private Sector Owned
Le Port Surf School	Surfboards Kitesurf equipment Windsurf equipment	St Peter	Private Sector Owned
The Surf Yard	School Hut Shop Surfboards Wetsuits	St Ouen	Private Sector Owned
Windmadness	Kitesurf boards and kites Stand Up Paddleboards	St Brelade	Private Sector Owned
Jersey Adventures (Wild Adventures Jersey)	Kayaks Boat (RIB) Blokarts Stand Up Paddleboards Safety equipment for Coasteering Abseiling equipment Climbing equipment Bushcraft (Wilderness Survival Skills)	St Martin	Private Sector Owned
Bouley Bay Dive Centre	Clubhouse Shop Tank Air fill facility Boat (RIB) Paddleboards Full Diving kits (incl.Tanks/Weights) Snorkelling kits	Trinity	Private Sector Owned

Indoor sports facility	Use	Parish	Ownership
	Wetsuits		
Dive Jersey	Full Diving kits (incl. Tanks/Weights) not snorkel and mask.	St Helier	Private Sector Owned
Jersey Fresh Water Angling Association	Fishing for members only at: St Lawrence Dannemarch Reservoir (Waterworks Valley) Millbrook Reservoir (Waterworks Valley) St Catherine's Reservoir Val de la Mare Reservoir Queens Valley Reservoir	St Helier	Private Sector Owned Assoc. but Reservoirs owned by Jersey New Water Works Company

Key Shortfalls in Provision

For its population, Jersey is well-served by sports and leisure facilities. Issues around the delivery of sports facilities are more around maintenance of existing buildings (including Fort Regent and Springfield Stadium which were not built for their current uses). However, the Sports Facilities Delivery Report (2018) and the Community Sports Hub and Island Stadium Feasibility Study (2020) highlight a number of areas of shortfall:

- Whilst there is sufficient sports hall space to meet current demands on the service, there is an expected substantially increased demand from netball due to removal of netball from Les Ormes in 2022.
- The current level of participation and distribution of gymnastics provision on the Island requires the need for two permanent gymnastics facilities.
- There is a lack of provision of swimming pools for teaching and an ongoing challenge for clubs in accessing Les Quennevais for club galas at weekends.
- The hockey pitch at Claremont fields has no floodlighting, which according to the association, restricts club development.
- Indoor cricket is an important winter sport on the island and is currently limited by the size of the indoor facilities available.
- There is a requirement for two additional floodlit full-sized 3G football pitch provision (based on the FA model for affiliated team training). These pitches should be in the east and west of the Island, and one should also be dually compliant with World Rugby certification to be used by the Island Jersey Royals Rugby Club.
- Springfield Stadium, home to Jersey Bulls FC, requires incremental changes in line with ground grading requirements.
- The professional rugby team Jersey Reds has identified a need for an improved stadium and better hospitality facilities. Jersey Reds has identified willingness to share such a facility with football.

- The amateur rugby club, Jersey Rugby Club, has identified a need for sufficient pitch provision to accommodate training and fixtures for the various adult and junior sections of the club.
- Membership in beach volleyball has grown from 40 to 200 participants over the past 5 years and there is a need for a permanent facility with 4 courts.
- The health and fitness offer at the Government-owned leisure facilities is of below average quality and in need of significant improvement in order to compete with the private sector and to ensure that lower-income generating or high cost activity areas (e.g. pools) can be cross-subsidised by high income generating fitness provision.

Future Requirements and Planned Projects

The Sports Facilities Delivery Report suggests that the Fort Regent facility is no longer ‘fit for purpose’ as its aim of providing an extensive range of uses has led to it struggling to provide any good quality facilities. As a result of the maintenance needed, and the cost of staff, it is unlikely that this facility will remain viable in the long-term, and therefore a replacement (along with a replacement of Aquasplash) will be necessary to meet demand. The Report included a specification for this new facility, including: an 8 lane 25m pool; a large teaching pool; multiple sports halls with seating; fitness suites and studios; squash courts; a permanent mat area for judo etc.; soft play facilities; and ancillary facilities including a café. However, emerging proposals undertaken since the Sports Facilities Delivery Report and outlined in the Community Sports Hub and Island Stadium Feasibility Study (2020) would see the needs currently served by Fort Regent met through enhanced facilities across the Island at the following locations:

- Les Quennevais Sports Centre;
- Le Rocquier;
- Springfield Stadium and Sports Centre;
- A new site within St Helier town centre;
- A potential new Island Stadium for football and rugby (with adequate shared or ‘back to back’ spectator capacity, and associated infrastructure to service matchday but some training requirements of the Jersey FA and Jersey Rugby Club), on a site to be determined.

Upgrades at these centres would not only meet demand currently served at Fort Regent but would also represent strategic improvements to key indoor sports centre sites across the Island in their own right, as well as ensuring the sports and leisure offer as a whole remains sustainable and commercial.

The Community Sports Hub and Island Stadium Feasibility Study (2020) notes that the other key conclusions which need to be considered include:

- Beach volleyball has not been included within the facility mix for any of the sites. This is on the basis that the peripheral activity around the sport may

cause conflict with neighbours (e.g. loud music and BBQ). Therefore, an alternative venue for beach volleyball will need to be determined.

- In spite of the significant capital investment identified above, consideration also needs to be given to other investment required, especially on outdoor sports pitch sites and key schools.
- Depending on the agreed timescales for delivery, the Government will also incur additional capital investment costs if temporary facility solutions are required for specific deadlines.

The Government Plan makes provision for feasibility works on the future of Fort Regent and on other sports facilities. An alternative use is required for Fort Regent; this is likely to be mixed use leisure and residential, but is unlikely to retain sports facilities. The 2021-24 Government Plan includes a commitment to carry out pre-feasibility work at Fort Regent ahead of an overall review of sports provision, to allow for evaluation of options and achieving ‘quick wins’.

Jersey do not use formal provision standards with regards to sports and leisure, but do seek guidance from sports governing bodies for advice when required¹⁵. If the upgrades are set out above are brought forward there will be a significant amount of space capacity and so further works (beyond ongoing maintenance) are not expected to be required over the plan period.

8.4 Cultural and Tourism Facilities

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- States Cultural Strategy Review (2010)
- Jersey Culture, Arts and Heritage Strategic Review and Recommendations (2018)
- Government of Jersey website
- Engagement with Government of Jersey officers
- Engagement with Chief Librarian

Overview and Strategic Issues

Cultural and tourism facilities currently present in Jersey, these include:

- Jersey Museum and Art Gallery.
- Jersey Opera House – a 625-650 seat theatre.

¹⁵ The Sports Facilities Delivery Report applied some standards in order to assess current adequacy of some sports and leisure facilities.

- Jersey Arts Centre – aiming to foster the development of the arts on-Island and beyond, including a 250 person venue.
- The Maritime Museum.
- The Jersey Archive – the Island’s national repository holding archival material from public institutions as well as private businesses and individuals.
- Elizabeth Castle – a Tudor-era castle in St Aubin’s Bay.
- Mont Orgueil Castle – a medieval castle at Gorey.
- Hamptonne Country Life Museum.
- La Hougue Bie – a Neolithic and medieval site near Maufant.
- Occupation Tapestry Gallery – celebrating the 50th anniversary of the Island’s liberation.
- Wider tourism facilities including National Trust for Jersey properties, Jersey Zoo, and a number of activities-based facilities.

Fort Regent is occasionally used for larger events, with temporary stands and staging used. It typically takes around 5 days for rigging and de-rigging the venue.

There are three public libraries present in Jersey, comprising:

- Jersey Public Library
- Les Quennevais Library
- the Mobile Library.

Jersey Public Library is the national library and is also a legal deposit library. It also provides space for public events and lectures, exhibitions and performances etc. ‘Eagle Lab’, within the Jersey Public Library, provides access to services and technology including 3D printers, 3D scanners, a laser cutter, a vinyl cutter and a hot press for the community. The library hosts, on average, around 700 visitors per day, and up to 1500 visitors during the summer period.

Key Shortfalls in Provision

While Jersey has a rich heritage with associated assets, the Jersey Culture, Arts and Heritage Strategic Review and Recommendations states that there are fewer cultural and tourism facilities in Jersey than comparator areas. It also suggests that culture, arts and heritage are increasingly being used to benefit a variety of objectives, including tourism, health and wellbeing, and planning and environmental developments.

The report states that the comparatively small presence of cultural and tourism facilities in Jersey is predominately due to the lack of investment. It states that the Isle of Man’s expenditure on culture per capita is 72% higher than that of Jersey. However, it should also be noted that the *Jersey Culture, Arts and Heritage Strategic Review and Recommendations* advises that there is no evidence to suggest that capacity within the existing assets has been met. The funding for cultural facilities has recently been increased in reflection of its importance.

The States Cultural Strategy Review stated in 2010 that if records transferred to the Jersey Archive stabilise at the 2009 rate, the repository would be full by 2017. A £3.5million extension commenced in 2018, providing storage to meet the needs for 25 years.

In terms of libraries, the existing provision is constrained to two sites and there is no network of branches across the Island. Until recently, the mobile library operated on an historic timetable, with a stop in every parish, regardless of demand. The Covid-19 pandemic has allowed for the opportunity to refine the stopping patterns of the mobile library to better reflect demand and allow for longer dwell periods at specific sites. There is now also a book delivery service, reaching a greater number of people than was the case previously.

The central library in St Helier, with the current opening hours, struggles to accommodate the demand from students. This is particularly challenging during the summer period. Additional capacity, supplemented by a network of branches, would assist in meeting this demand. The challenges of social distancing will impact future service provision.

Future Requirements

Both Jersey Opera House and Jersey Arts Centre require maintenance and upgrades, for which funding has not yet been committed. The closure of both facilities during the Covid-19 pandemic has allowed the opportunity to undertake full condition surveys and establish the extent of works required. It is understood that funding is to be sought soon to enable some of the essential works to take place during the current period of closure. The Opera House is not due to be operational again before 2021.

In the longer term, there have been discussions around the requirements for a new cultural hub and/or art gallery (potentially within or close to the international finance centre or on the waterfront), although a case for these still needs to be made. Such a decision is highly dependent upon decisions regarding the future hospital and Fort Regent. If new facilities come forward it is not clear whether the Island could support them and its existing facilities; given the repairs required on existing facilities, this might provide an opportunity for replacement with more fit-for-purpose facilities. (Given the uncertainty around these proposals, they have not been included in the Infrastructure Delivery Schedule in Section 13).

Future Infrastructure Delivery: Digital Libraries

As an increasingly digital society, the way we access and consume information has changed, which has the potential to impact the role that libraries play. It has even been questioned whether libraries are now needed, as more people use the internet for research and read books through e-readers and apps. However, perhaps while the functions of many libraries must adapt in how they serve the public, they still provide necessary spaces for members of the community to meet, while providing access to information and knowledge.

It is clear though, that in order for libraries to survive, they must be innovative in how they adapt to meet the needs of the current society. One method of this

could be through the provision of a public Wi-Fi and computers for the public to use. As not all members of society have access to the internet (through being unable to afford it or not having the skills required to use it), the use of a library providing these resources will enable all of society to use and understand these changing digital technologies.

Jersey's libraries have already begun evolving their services, as they already offer free internet for all users, they provide training sessions on how to use computers and they also offer studying facilities for the European Computer Driving License (ECDL), while being a test centre, enabling users to gain key computer skills, and then sit the relevant exams¹⁶.

Furthermore, the Jersey Culture, Arts and Heritage Strategic Review and Recommendations (2018) states that the Jersey Library is exploring how to adapt into the twenty-first century, which they are achieving through providing a space for public events and lectures, exhibitions and performances and serving as a host venue for the annual Jersey Festival of Words. In addition to this, the new Eagle Design Lab has been opened, which is a collaborative workspace area, with 3D printers and scanners, laser cutters and vinyl cutters, which aims to support the public through providing services and technology for small and start-up businesses.

While there may not be any major additional infrastructure requirements needed for libraries to adapt, it will be necessary to also have a more skilled workforce present, in order to aid the public in using the services and technology provided. There may also be opportunities to co-locate library services alongside other uses which reflect this change in offer – e.g. alongside tertiary and higher education institutions or incubator workspace (for example, Digital Jersey).

The Covid-19 pandemic has increased the demand for access to digital services within the library and it is likely that these services would be prioritised in the future, should restrictions on movement and services be introduced again at any point in the future.

Planned Projects

The Government of Jersey will be producing a new arts and culture strategy in 2021. This is expected to include looking at opportunities for commercialisation and increased joint working (for example shared staff between organisations), but may also include physical infrastructure.

The Government is seeking to build a network of community libraries across the Island. The library which is currently attached to a school at the previous Les Quennevais is to be separated from the school, given the opening of the new secondary school. A dedicated site is therefore required for the provision of a new library in this area. Plans are underway to create two new community libraries in the east and west, and these are expected to be delivered by the end of 2021.

¹⁶ The gov.je website provides an insight into how Jersey's libraries are adapting, available at: <https://www.gov.je/Leisure/Libraries/Pages/index.aspx> (retrieved January 2020).

8.5 Implications

Additional population could result in an increased demand for community facilities, such as community halls and libraries. However, extra floorspace may not be required; additional demand may instead be met by increasing capacity of existing facilities through altered opening hours or minor upgrades, or making use of existing spare capacity.

As work progresses on the new arts and culture strategy and on the future strategy for delivering sport on the Island, consideration should be given to the implications for the bridging Island Plan including whether particular projects should be included in the Plan and/or specific policies might be required. In particular, consideration should be given to the status of the future of Fort Regent and the potential for a new Island Stadium.

The existing ‘percentage for art’ policy (Policy GD 8) should be reviewed to assess whether it is successful in its aim and aligned with wider cultural aims.

9 Open Space

9.1 Overview of Strategic Infrastructure

This Infrastructure Capacity Study covers the following types of open space provision:

- Parks
- Amenity greenspace
- Play space
- Natural greenspace

9.2 Open Space

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Outdoor Open Space, Sport and Recreation Study (2008)
- The Revised Island Plan (2014)
- St Helier Open Space Audit (2018, unpublished)
- The Government Plan 2020-2023 (2019)
- The Government Plan 2021-2024 (2020)

Overview and Strategic Issues

Open space is a broad term which covers a number of types of spaces. The Outdoor Open Space, Sport and Recreation Study, developed in 2008, uses the following categorisation of open space:

- **Parks:** formal parks with public access. This includes People's Park, West Park, and Coronation Park.
- **Outdoor sports facilities:** seasonal and fixed outdoor sports spaces, both privately and publicly owned (including commercial sports facilities and golf courses)¹⁷.
- **Amenity greenspace:** open space that is available for free and spontaneous use, but not managed as a park, playing field or habitat – for example informal grassed areas in housing estates.
- **Play space:** equipped children's space (pre-teens) and space for teenagers.

¹⁷ Note, these facilities are included as part of Section 8.3.

- **Natural greenspace:** all natural greenspace that has some form of public access. On Jersey, this includes meadows, woodland and copse, coastal cliffs, commons and sand dunes.

The Outdoor Open Space, Sport and Recreation Study gives proposed standards for these types of open space, through the comparison of the standards used by authorities which have similar mix of rural and urban settlements, population size and practicality. These comparison authorities include East Hampshire District Council, Winchester City Council, Forest Heath District Council and Carrick District Council.

There are other types of open space which were not assigned standards in the Study but are important to Jersey. These include:

- **Linear open space:** Quantity standards were not proposed because many of the routes consist of footpaths which traverse existing open space.
- **Cemeteries, churchyards and burial grounds.** A number of churches have open space, and there are a number of additional standalone cemeteries and burial grounds. These areas provide opportunity for walking and relaxation. Quality standards were not proposed because it was unlikely to lead to new or relocated provision.
- **Civic space.** These tend to be focused in more built-up areas and particularly in St Helier. Quantity standards were not proposed because their provision is subject to many other influences including regeneration initiatives and urban design.
- **Beaches.** Beaches are particularly important as a source of open space in Jersey, for both local people and visitors. As there are no opportunities for improving the actual quantity of beaches, a quantity standard is not appropriate.
- **Allotments.** Areas for people to grow their own produce and plants.

In order to support development of the previous Island Plan, a study into the open space standards for the future requirements of open space in St Helier was produced as part of the unpublished St Helier Open Space Audit. This was completed through calculating the need for each open space category based up different population scenarios, comparing the standards included in the Outdoor Open Space, Sport and Recreation Study and the (more ambitious) Fields in Trust Standards. Overall, it was found that the Fields in Trust standards would be unfeasible for Jersey, and so the locally derived standards of the 2008 Study are expected to be retained. Further details on the findings of the forthcoming St Helier Open Space Audit.

The Revised Island Plan suggests that the provision of more formal open space facilities such as parks, amenity greenspace and play spaces have more significance in urban settlements, as many of the rural areas benefit from access to natural greenspace and beaches.

Key Shortfalls in Provision, Future Requirements and Provision Standards

Parks

Within the Outdoor Open Space, Sport and Recreation Study, the standard of 0.50 hectares of parks per 1,000 of the population was proposed. The study found that (at the point of publication) there was around 0.39 hectares of parks per 1,000 of the population, showing an existing shortfall. The unpublished St Helier Open Space Audit demonstrated that St Helier met this standard in 2018; however, it is considered that any spare capacity in St Helier has since been overtaken by continued population growth over the intervening years.

The current Island Plan alludes to the fact that meeting standards in St Helier is more important than in rural areas (which are more proximate to open countryside and/or beaches). It is also acknowledged in the Study that in rural areas, development may be minimal and therefore it may be unreasonable to achieve this standard.

As there is currently under provision of parks throughout the Island, the Outdoor Open Space, Sport and Recreation Study suggests that future provision should be focused in urban settlements with larger populations. This is due to rural parishes generally having good access to natural greenspace, beaches and outdoor sports facilities. Instead of a quantitative increase in the hectarage of parks in more rural areas, it was suggested that improvements in quality could be the priority.

The study states that of the larger urban settlements with higher populations, only St Helier meets the proposed standard of 0.50 hectares per 1,000 of the population (though see conclusion above). In developing future projects, consideration should therefore be given to St Saviour, St Brelade and St Clement.

Given the growth scenarios set out in Section 3 and the parks standard of 0.50 ha per 1,000 population, the expected requirements over the bridging Island Plan period and beyond are set out in Table 14.

Table 14 Future parks requirement

	Bridging Island Plan (ha)	Subsequent Island Plan (ha)
Primary	0.90	2.25
Secondary	0.13	0.32
Tertiary	0.43	1.06
Other Built-up Area	0.03	0.08
Countryside	0.27	0.68
Zoning	0.24	0.60
Total	1.76	4.40

Amenity Greenspace

Through comparison of local authorities with similar characteristics to the Island, the Outdoor Open Space, Sport and Recreation Study proposed a standard of 0.25 hectares of amenity greenspace per 1,000 of the population. The Study suggests that there is a current average provision of 0.26 hectares per 1,000 of the population, showing a slight over-provision of amenity greenspace on the Island. However, the St Helier Open Space Audit suggests that St Helier currently has an under-supply of amenity greenspace.

Similar to the provision of parks in Jersey, the provision of amenity greenspace varies across the Island. While many of the rural parishes which have a nominal under-provision of amenity greenspace, this is generally offset by the provision of natural greenspace and/or beaches. The provision of amenity greenspace in larger settlements is more of an issue, particularly in St Helier.

Given the growth scenarios set out in Section 3 and the amenity greenspace standard of 0.25 ha per 1,000 population, the expected requirements over the bridging Island Plan period and beyond are set out in Table 15. This is above and beyond the existing shortfall identified in the forthcoming St Helier Open Space Audit.

Table 15 Future amenity greenspace requirement

	Bridging Island Plan (ha)	Subsequent Island Plan (ha)
Primary	0.45	1.13
Secondary	0.06	0.16
Tertiary	0.21	0.53
Other Built-up Area	0.02	0.04
Countryside	0.14	0.34
Zoning	0.12	0.30
Total	0.88	2.20

Play Space

The Outdoor Open Space, Sport and Recreation Study shows that the proposed standard for play space on the Island is 0.1 hectares per 1,000 of the population, compared to the average provision (at time of publication) being 0.03 hectares per 1,000 of the population – a significant under-provision. Under-provision of play space is an issue in every parish. It is also worth noting that semi-private supply (for example, delivered as part of housing developments) makes up a considerable proportion of supply, particularly in St Helier – and as such, issues around access, maintenance and so on may occur.

The Study suggested that the use of the proposed standards will ensure new developments contribute towards play space provision for a wider range of ages.

Given the growth scenarios set out in Section 3 and the amenity greenspace standard of 0.25 ha per 1,000 population, the expected requirements over the bridging Island Plan period and beyond are set out in Table 16.

Table 16 Future play space requirement

	Bridging Island Plan (ha)	Subsequent Island Plan (ha)
Primary	0.18	0.45
Secondary	0.03	0.06
Tertiary	0.09	0.21
Other Built-up Area	0.01	0.02
Countryside	0.05	0.14
Zoning	0.05	0.12
Total	0.35	0.88

Natural Greenspace

The Outdoor Open Space, Sport and Recreation Study's proposed standard for natural greenspace in Jersey is 1.0 hectares per 1,000 of the population, while the existing average provision (at time of population) was found to be 10.48 hectares per 1,000 of the population. This shows a large over-provision of natural greenspace provision on the Island. However, it should be acknowledged that the distribution of natural greenspace is uneven due to being concentrated in part in a few large tracts of natural greenspace. A few parishes fall below the proposed standard, including St Saviour, St Clement and St Helier (though St Helier has good access to a beach, and therefore the under-provision of natural greenspace is less of an issue).

Given the large oversupply on the Island, it is considered that additional natural greenspace is not required as a result of additional housing and population associated with the bridging Island Plan. However, there may be local interventions to the quality of, or access to, natural greenspace which would allow more people to access existing assets.

Planned Projects

The Government Plan 2020-2023 includes £785,000 for a new skatepark. Funding has been partially deferred to 2021 as a result of Covid-19.

Andium Homes has recently gained planning consent for the development of the Jersey Gas site, plans for which include a significant extension to the Millennium Town Park. Designs for the extension are currently being developed, taking into account public consultation.

9.3 Implications

Additional population will result in an increased demand for open space, and in particular parks, amenity greenspace and play space. Consideration should be given to how the Island Plan should respond. This will be particularly important where there are already known shortfalls in provision.

Access to high quality public space should be prioritised in areas that might experience a higher proportion of growth over the plan period (which is likely to include St Helier).

10 Emergency Services and Justice

10.1 Overview of Strategic Infrastructure

This Infrastructure Capacity Study covers the following types of emergency services and justice provision:

- Police services
- Fire and rescue services
- Ambulance services
- Coastguard
- Justice

10.2 Police Services

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Policing Plan (2019)
- Policing Plan (2018)
- Jersey Police Annual Report (2018)
- HM Inspectorate of Constabulary and Fire and Rescue Services, An Inspection of the Government of Jersey Police (2019)
- Government of Jersey website (crime and policing statistics)
- Engagement with Government of Jersey officer

Overview and Strategic Issues

As an Island with its own government and legislation, Jersey has a unique policing context. The States of Jersey Police are required to develop and maintain public services that would, in larger jurisdictions, often be co-delivered through police service infrastructure spanning a range of geographical scales. As such, the States of Jersey Police have specialisms including cybercrime and financial crime, and officers are trained in specialist skills over and above those needed for their normal duties (including include firearms, surveillance, siege negotiation and family or sexual offence liaison) so that they can respond to any demand for specialist roles.

The 2018 and 2019 Policing Plan identified four priorities for Jersey's police:

1. Protecting and Preventing: protecting vulnerable social groups and the community at large from crime and public safety risks.

2. Our community: strengthening engagement, understanding and communication with Islanders.
3. Partnerships: working collaboratively with other agencies to secure better outcomes.
4. Your Police Service: investing in the employees and technology of the police force to improve services.

The only police station on Jersey is located in St Helier, which is the headquarters for the approximately 189 police officers and 100 civilian staff who comprise the States of Jersey Police. The building is relatively new and so generally meets the requirements of the police well. Police also make use of parish halls, schools and other facilities for community surgeries.

Figure 11 Police station



Source: Arup, with Government of Jersey data

As well as States of Jersey Police, each parish has its own police force made up of ‘honorary’ officers. Parish forces focus on community safety, including monitoring licensed premises, welfare and property checks, community patrols, and traffic management.

Key Shortfalls in Provision

The States of Jersey Police were subject to an independent inspection by the HM Inspectorate of Constabulary and Fire and Rescue Services in 2019. Whilst most

of the recommendations do not relate directly to infrastructure, there are a couple which may be relevant:

- The States of Jersey Police should revise its policing model to provide a small but dedicated community unit.
- Once the Government of Jersey has created an appropriate place of safety for people in mental health crisis, the States of Jersey Police should evaluate their triage scheme.

Future Requirements and Planned Projects

The States of Jersey Police have identified two new facilities required in the future:

- First, an accredited firearms range. An on-Island facility will reduce the requirement to train staff in England. It is expected that the facility will cost around £1m; a site has not been identified but will need to be outside and in the countryside. Preparatory feasibility work has been undertaken and it is understood that funding is likely to be committed imminently.
- Second, a new off-site sexual assault centre in St Helier (known as Dewberry House). The Government Plan allocates £2.55million to the project, with site selection and feasibility work about to commence.

One particular initiative of note is the SMARTpolice project, which has seen police capabilities and capacities enhanced through technology. Technologies introduced include electronic pocket notebooks and remote crime recording, which will enable the police to work more efficiently and therefore dedicate more time to being out on patrol. Over time this could reduce the infrastructure requirement (e.g. number of desk spaces) required.

10.3 Fire and Rescue Services

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Fire and Rescue Service Annual Review (2014)
- Justice and Home Affairs Business Plan (2019)
- Government of Jersey website (Jersey Fire and Rescue Service statistics)
- Engagement with Government of Jersey officer and Chief Fire Officer

Overview and Strategic Issues

The States of Jersey Fire and Rescue Service responds to around 1,100 emergencies each year including, on average, 200 fires and almost 500 ‘non-fire’ emergencies. The incidence of non-fire emergency is high in comparison to the

average in England. Jersey's isolation means that the Service maintains a wide array of technical fire and rescue skills.

The headquarters of the Fire and Rescue Service is located in St Helier. An additional station of retained (voluntary) firefighters is located on the western side of the Island at St Brelade. The St Brelade station predominantly operates during the night.

Figure 12 Fire stations



Source: Arup, with Government of Jersey data

Following the Fire and Rescue Service Law 2011, the role of the Fire and Rescue Service was expanded to include a responsibility to respond to a wider range of emergency situations, as well as promoting community fire safety awareness. The fire protection team enforce fire safety laws and regulations, as well as providing support and technical advice on licensing, pyrotechnics, and planning and building matters.

Key Shortfalls in Provision

No shortfalls in provision have been identified.

Future Requirements and Planned Projects

The Justice and Home Affairs Business Plan notes that demographic changes are expected to change demand for the Fire and Rescue Service, particularly as risk to life from fire and other emergencies increases with age.

There are developing plans to co-locate the Ambulance and Fire and Rescue Services. A site for this headquarters is yet to be selected, with three preferred sites currently being considered. If located in a geographically appropriate place, the need for a station at St Brelade may be removed (although this would need to be subject to further assessment of response times etc.).

There are no significant upgrades planned for Fire and Rescue fleet. On an on-going basis, the Service renews its service vehicles every twelve years. Additionally, the Service is considering replacing their high reach appliance, which currently has a maximum extension height of 32 metres, with one able to reach 45 metres. This would enable better responses to buildings of greater height and mass.

10.4 Ambulance Services

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Justice and Home Affairs Business Plan (2019)
- Government of Jersey webpage ‘Ambulance service statistics’
- Engagement with Government of Jersey officer

Overview and Strategic Issues

The States of Jersey Ambulance Service provides front line emergency medical and urgent care by attending 10,000 emergency calls each year and handling and triaging 14,800 medical and fire 999 calls in the Combined Control Room. In addition, the Patient Transport Service manages all bookings and transports thousands of patients across the community.

The Ambulance Service is headquartered in St Helier. As noted, there are emerging plans to co-locate the Ambulance and Fire and Rescue Service headquarters. The location of this facility is yet to be decided.

In response to the Covid-19 pandemic, a second ambulance station was opened at the St John Ambulance headquarters in Midvale Road. The Jersey Ambulance Service has also taken control of St John Ambulance and Normandy Rescue so that their resources, assets and volunteers are shared and can work together.

Figure 13 Ambulance station



Source: Arup, with Government of Jersey data

The Ambulance Service is comprised of:

- seven emergency ambulances
- three single response cars
- two major incident vehicles
- one four-wheel drive with major incident trailer

Three ambulances are available between 7am and 10pm and two are available at all other times.

In addition to the emergency response vehicles listed above, Jersey also has a Patient Transport Service and an intermediary crew. The Patient Transport Service operates 12 mini-buses and four hospital car service vehicles, while the intermediary crew provides a service for patients that need charter flights with a medical team on board. The intermediary crew also support frontline crews when required. The new Jersey Care Model, which aims to deliver decentralised healthcare throughout communities, along with the future hospital, will have implications for the Patient Transport Service.

Key Shortfalls in Provision

No shortfalls in provision have been identified.

Future Requirements and Planned Projects

The Justice and Home Affairs Business Plan notes that demographic changes are expected to change demand for ambulance services. In recent years there has been a 5-6% per year increase in demand for the Ambulance Service, with an increasing demand for patient transport services also. The new and evolving Jersey Care Model may also impact on the role the Ambulance Service plays on the Island.

The main planned project is the potential project to co-locate the Ambulance and Fire and Rescue Services – refer to Section 10.3.

10.5 Justice Services

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Justice and Home Affairs Business Plan (2019)
- Government Plan 2020 – 2023 (2019)
- The Government Plan 2021-2024 (2020)
- Report on an announced inspection of La Moye Prison, Jersey (2017)
- Youth Justice Review (2019)
- Government of Jersey website
- Engagement with Government of Jersey officers

Overview and Strategic Issues

The States of Jersey Prison Service receives on average 240 prisoners annually and aims to provide a secure, safe, healthy, positive environment to manage sentences, pre-release and re-integration.

HM Prison La Moye, near St Brelade, is the only prison on the Island. It is operated by the Jersey Prison Service, which is an arm of the Government. As Jersey's only prison, La Moye houses men, women, young offenders and vulnerable prisoners. Its certified capacity is 200 people. The inspection carried out by HM Chief Inspector of Prison's in 2017 recorded a total of 142 inmates at the time, which suggests that there is no impending shortage of capacity within the prison. Greenfields is a secure children's home, based in St Saviour, with 11 beds. The Youth Justice Review (2019) welcomed the fact that most children facing custodial sentences are placed in Greenfields rather than La Moye Prison. However, the Review still raised several problems in need of address at Greenfields, including high levels of social isolation and inadequate access to education, training and other 'enriching experiences'.

The Courts of Jersey are responsible for the administration of justice across the Island. The principal court is the Royal Court, which exercises both civil and criminal jurisdiction. The Royal Court exercises a supervisory and an appellate jurisdiction over the Island's lower criminal and civil courts. The three lesser courts are the Magistrate's Court, the Petty Debts Court and the Youth Court. The former deals with cases involving traffic offences, assaults and petty thefts, as well as hearing evidence to decide whether a case warrants being heard at the Royal Court. The Petty Debts Court hears cases involving claims for sums of money of up to £30,000. Finally, the Youth Court, located within the Magistrate's Court building in St Helier, deals specifically with young people.

In addition to the courts, Jersey's Justice System has a unique process of Parish Hall Enquiry. The Parish Hall Enquiry, which has an 800-year history, refers to the process of preliminary investigation conducted by a Centenier to decide whether there is sufficient evidence to justify a prosecution and therefore whether to present the case before court. It deals with both youth offending and minor offences committed by adults, offering an informal alternative to formal court processing.

Key Shortfalls in Provision

No shortfalls in provision were identified.

Future Requirements and Planned Projects

The Justice and Home Affairs Business Plan states that current configuration of between 140 to 200 prison places provides sufficient capacity and flexibility for the future; additional places are unlikely to be required. The Government Plan 2020-2023 includes investment in a suite of prison improvement works (specifically, Phase 6b, Phase 7 and Phase 8).

The Government Plan also allocates funding to undertake a feasibility study for a new family court, Piquet House, as well as the conversion of courtroom 1 in the Magistrates Court. Piquet House is a publicly owned building which has been consistently underused since the States voted against its sale in 2014. With the existing family court facilities in the Royal Court Building deemed inadequate, the Government Plan outlined that £1.7 million would be allocated to refurbish and redevelop Piquet House into a family court centre, beginning in 2021.

The Government of Jersey are also investing in the modernisation of the public sector, including the judicial system, through digital technologies. By enhancing the digital capacities of the judicial network, for example providing video links between Court and La Moye Prison, demands on capacity will be reduced.

10.6 Implications

Engagement with the emergency services should continue to take place to allow them to assess the impact of a larger population on the delivery of emergency services including on response times. The form of development should also be considered, particularly for the assessment of the requirement

for States of Jersey Fire and Rescue Service’s high reach appliances (i.e. higher or more dense development in St Helier may impact on the number or specification of appliances required.)

As work progresses on the potential new ‘blue light’ (fire and rescue and ambulance services) facility, consideration should be given on the implications for the Island Plan. This includes whether a specific site should be allocated in the Island Plan, and/or whether specific policies are required.

11 Utilities

11.1 Overview of Strategic Infrastructure

This Infrastructure Capacity Study covers the following types of utilities provision:

- Energy
- Water
- Waste Water
- Digital Communications

11.2 Energy

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Jersey Energy Trends (2019)
- Pathway 2050: An Energy Plan for Jersey (2014)
- Tackling the Climate Emergency Initial Report (2019)
- Government of Jersey Carbon Neutral Strategy (2019)
- Off-shore Wind Pre-Feasibility Study (2018)
- Tidal Stream Industry Update (2018)
- Population Scenarios 2080: Environmental resource and infrastructure assessment.
- Engagement with Government of Jersey officers and Jersey Electricity

Overview and Strategic Issues

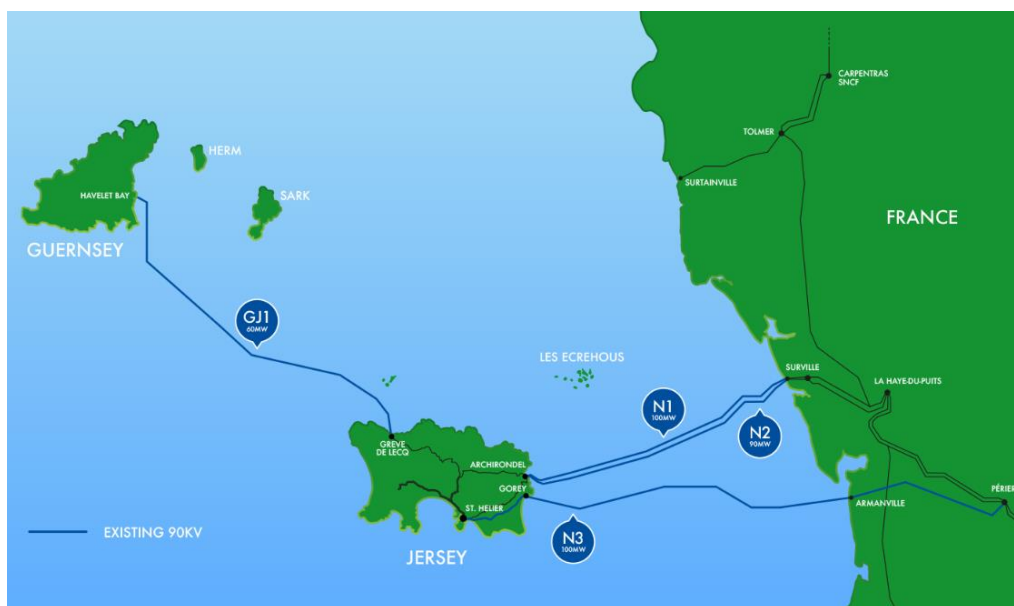
Almost all of Jersey's energy supply is imported, with a very small percentage (2% of 2018's supply) produced on-Island through the Energy from Waste Facility. According to Jersey Energy Trends (2019), of the energy supplied to Jersey almost two-thirds (62%) is petroleum-based. The remaining 38% is made up of electricity. Around 70% of the imported electricity is nuclear generated, and around 30% is certified renewable generation from the tidal barrage at La Rance in Brittany, France. There are three interconnector routes from France (shown in Figure 14):

- Normandie 1 (N1) is a 100MW route for energy originating from La Haye-Du-Puits, through to Surville, and then via a submarine cable from France to Jersey, at Archirondel. From Archirondel, an underground cable distributes

energy to La Collette, via a sub-station at South Hill, which also services a large sub-station at Rue des Pres.

- Normandie 2 (N2) is a 90MW interconnector for energy also originating at La Haye-Du-Puits and arriving at Jersey at Archirondel. From Archirondel, an underground cable travels to a large substation at Queens Road in St Helier, then travelling north through the Island to Greve de Lecq. A submarine cable then links with Guernsey through the formation of the Channel Islands Electricity Grid.
- Normandie 3 (N3) is a 32km submarine cable with a more southern route. It connects to a different part of the French network through an underground cable from Périers to enhance network security for Jersey. This cable links Armanville to Gorey in Grouville Bay through a precision route (travelling around the edge of the Natura 2000 protected area and areas of aquaculture at Pirou Plage). It then connects with the South Hill Switching Station in St Helier.

Figure 14 Electricity connections to Jersey



Source: Jersey Electricity

Energy consumption per head of resident population was 1.4 tonne of oil equivalent (toe), a quantity lower than that of the UK average (2.1 toe). More than a third (38%) of energy was consumed by households. A similar proportion (33%) was consumed for transportation (predominantly road vehicles), while 29% was used by industry and government.

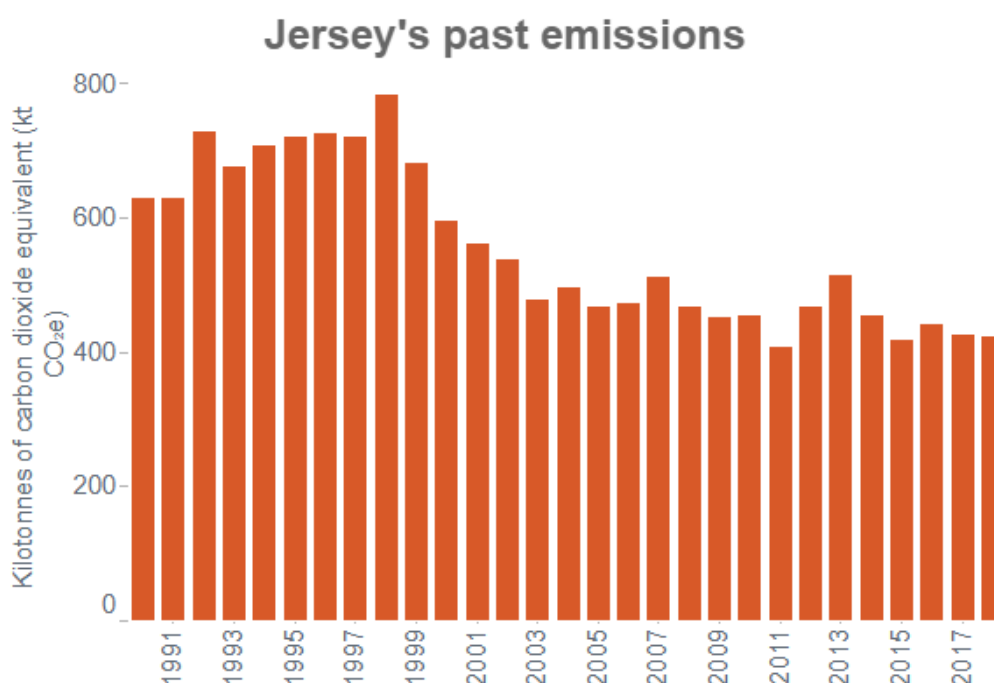
Jersey's Pathway 2050: An Energy Plan for Jersey, published in 2014, outlined the Island's intentions to reduce its carbon emissions in line with its international commitment. Jersey subsequently became a signatory to the Doha amendment to the Kyoto protocol in 2018 and has requested that the Paris agreement is extended to Jersey through the UK in line with the process for ratification of international conventions. As well as addressing the environmental impact of the Island's

energy use, the document also focused on the availability and affordability of energy, with the aim of achieving ‘secure, affordable and sustainable energy’.

The overarching target of the Energy Plan is to reduce emissions by 80% compared to 1990 levels by 2050, by using secure, affordable and sustainable energy. The Plan stated that without comprehensive action across all sectors, a ‘business as usual’ scenario means that emissions in all sectors are far above the reduction target, excluding power stations. The Energy Plan recognised the development of offshore renewable energy as a long-term aim.

Since the implementation of the Energy Plan, emissions have been reduced by 7% relative to 1990 figures despite an increase in population, as illustrated in Figure 15.

Figure 15 Annual on-Island emissions 1990-2018



Source: Aether (2020) available at: <https://www.aether-uk.com/Resources/Jersey-Infographic>

In addition to the targets of the Energy Plan, in declaring a climate emergency in May 2019, the Government of Jersey committed to the aim of becoming carbon-neutral by 2030. The Carbon Neutral Strategy sets: an ambition for a ‘people-powered’ approach to becoming carbon neutral; the policy objectives and rationale; the process to be followed; and the roles and responsibilities of different groups, including a mandate for Jersey’s first citizens’ assembly. The Strategy sets out an initial delivery plan of policies, to be implemented in 2020 (refer to Planned Projects below).

The introduction of a greater number of micro-renewable energy generation projects into the grid could increase issues with intermittency. A report by Nera (2018) concluded that the introduction of a ‘standby charge’ for those using micro-renewables was reasonable – to cover the fixed costs for transmission and

distribution of mains electricity used as a back-up for those also generating their own energy. This is to ensure that those who cannot afford to have private micro-generation do not have to bear the cost of maintaining an energy network (effectively subsidising it) on behalf of those who can. This could act as a deterrent to installing micro-renewables, which must be considered by the Government when prioritising renewable energy. There is no ‘feed-in tariff’ system on Jersey.

Jersey Electricity has invested in solar energy schemes (through partnerships with agricultural businesses and other ‘rent-a-roof’-style schemes).

Future Requirements and Planned Projects

As Jersey moves towards carbon-neutrality, there will be an additional demand for electricity – up to 230GWh may be required, according to the Off-shore Wind Pre-Feasibility Study. The Carbon Neutral Strategy sets out that accelerating the departure from the use of hydrocarbons, and significantly increasing the use of centrally generated electricity using existing infrastructure, is the only realistic, achievable and affordable route to carbon neutrality in Jersey by 2030.

There are three key opportunities that may be open to Jersey in the future:

- Jersey has the potential to utilise off-shore wind technology to meet future electricity demand. Extracting energy from 5% of Jersey’s waters would satisfy over three times Jersey’s current annual demand. However, it should be noted that any energy generated in Jersey’s waters would likely be sold back into the continental grid rather than directly serving the Island – this is because ‘on-shoring’ energy would require considerable infrastructure to be built on the Island, which would have significant land requirements. The most viable strategy for any wind farm would be for Jersey to lease a site to France for development, with the energy generated being exported to France in return for a subsidy. The future development of a wind farm will be reliant on forming a viable commercial case for a project of an environmentally and socially acceptable scale.
- Energy generation from a tidal lagoon may also be feasible in Jersey’s waters and could provide a long-term solution to energy security and resilience in addition to climate change mitigation.
- The development of a tidal stream turbine off the coast of Jersey could provide an additional source of energy. The 2018 Tidal Stream Industry Update concludes that, whilst the flow speeds at the chosen site may not be favourable in comparison to other sites in the UK more widely, the resource may be of interest commercially in the future, however a tidal stream development would be unlikely to provide a competitive return in comparison to other renewables such as wind and tidal lagoons.

Whilst none of these options have any current active proposals associated with them, they represent opportunities which could be explored.

Jersey Electricity have undertaken modelling to understand future requirements for electricity to 2030 – to serve existing residents (e.g. gradual move towards

electric heating), expected population growth, and the demand for electricity as part of decarbonisation. There is currently capacity in both the 11kV and low voltage networks on the Island, as well as the undersea supply cables and on-Island generation. Jersey Electricity are confident that through upgrades defined in their business plans they will be able to meet future demand. Over the longer term, there may be requirements for asset replacement of one of the undersea cables and on-Island generation assets. (Given uncertainty over requirements and timescales, these are not included in the Infrastructure Delivery Schedule in Section 13.)

Investment in the existing infrastructure is likely to be for certain levels of population growth (although electricity supply does not suggest an absolute carrying capacity for the Island). Jersey Electricity take a proactive approach to low voltage network reinforcement.

It will be necessary to manage the demand in local electricity and, in particular, to take account of new agricultural practices such as hemp farming which are increasing the demand on the grid in rural areas.

Additional infrastructure may be required to support energy from hydrocarbons – such as bulk import and storage facilities. The Carbon Neutral Strategy commits to further work to understanding the long-term requirements of Jersey’s energy market, and the role of hydrocarbons in the energy mix. For this reason, it is premature to assess future requirements and so infrastructure relating to this has not been included in this Infrastructure Capacity Study.

Implications

The bridging and subsequent Island Plans will need to support the commitment towards a zero-carbon future through their strategic policies and detailed development management policies. In particular, policies must encourage the efficient use of resources, recycling, energy efficient design and the use of renewable technologies.

Support could be given for a large-scale renewable energy generation project and encouragement for domestic scale renewables would assist with self-sufficiency and managing demand. Planning policies and legislation reform could also be considered to expand the scope of permitted development rights to encourage the development of renewables, although this would need to be considered alongside any challenges this raises for controlling supply and demand peaks across the Island.

11.3 Water

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Jersey Water Water Quality Report (2018)

- Water Resource Management Plan (2010)
- Water Resource Management Plan (2014)
- Jersey Water Annual Report and Financial Statements (2018)
- Water Resources and Drought Plan: Stakeholder Meeting Presentation (2019 – not published)
- Jersey Water Island Plan Review Representations to Strategic Issues and Options Paper (2019)
- Engagement with Jersey Water

Overview and Strategic Issues


Jersey Water is the sole supplier of treated mains water to the Island. In 2017, the company supplied 7.3 billion litres of mains water to approximately 40,000 homes and businesses, via a 580km network of mains. In recent years, total water consumption in Jersey has steadily decreased, despite a growing population. This is largely attributable to the universal installation of water meters and efforts to reduce leakage across the supply network.

Water is predominantly supplied through the collection and storage of surface water in reservoirs. A very small proportion of water is extracted from boreholes. When full, the Island's six main reservoirs hold approximately 120 days' supply, based on average daily demand. The Island's water supply can be supplemented by the desalination plant at La Rosière, which, following its upgrade in 2016, has the capacity to provide up to 50% of daily demand. The output water from the desalination plant is not potable, but instead supplements raw water reservoirs.

Figure 16 Jersey Water infrastructure



Legend

 Stream Abstraction Point	 Raw Water Storage Tank
 Raw Water Storage Reservoir	 Treated Water Service Reservoir
 Laboratory Operations	 Ground Water Resource
 Desalination Plant	
 Water Treatment Plant	
 Headquarters	

Source: Jersey Water

The water supplied by Jersey Water in 2018 was of a very high quality, registering an overall compliance rate of 99.99%. No incidents of pesticide or nitrate levels exceeding regulatory limits were recorded. Throughout the year, Jersey Water undertook approximately 15,000 regulatory treated water analyses to assess quality – of these, just one was outside of the respective regulatory parameter, yet still fell short of posing a risk to health.

Key Shortfalls in Provision

At present, not all of the Island is supplied by treated water mains. Whilst approximately 80% of the population is connected to the mains network, a further 20% are predominantly served by private boreholes. Jersey Water is pursuing a mains extension programme, which tends to extend the total network by approximately 1km per year.

Whilst the water network is generally oversized and could accommodate further, there are pinch points at certain points of the network.

Future Requirements and Planned Projects

Both the Water Resource Management Plan (2010, 2014) and Water Resource and Drought Management Plan (2019) identify a changing climate and population growth as key factors influencing the availability of water resources over the next 25 years. The Island is facing longer, drier periods (associated with increased water consumption), coupled with less predictable rainfall. Simultaneously, the population is expected to continue to grow over the coming decades. In the 2010 Management Plan, Jersey Water predicted that by 2032, if no action is taken, the Island would face a shortfall in water available for use equivalent to approximately 26% of the forecast daily demand. This shortfall is based on a forecast reduction in water available for use (as a result of global warming) of 11% and an increase in demand of 15% driven by population growth and lifestyle demands. It is important to note that net migration since the 2010 plan has been well in excess of the forecast used in the demand modelling.

Similarly, Phase 1 of the Water Resource and Drought Management Plan (2019) quantified up-to-date projections of future water supply availability and demand over the next 25 years. Table 17 presents these findings, which involved assessment of demand components, weather scenarios and uncertainty scenarios. It is important to note that these calculations are based on severe drought conditions and that choice of population growth scenario has a substantial impact on the demand forecast.

Table 17 Jersey Water supply-demand forecast

Supply-Demand Balance Component (m ³ /day)	2018	2025	2035	2045
Water available for use (including climate change effects)	19,209	18,784	18,176	17,569
Dry weather demand	20,456	21,432	22,690	23,877
Uncertainty planning allowance	1,026	1,255	1,563	1,847
Supply-demand balance	-2,273 (deficit)	-3,903 (deficit)	-6,077 (deficit)	-8,155 (deficit)

Source: Adapted from Jersey Water information

Further details on the work undertaken by Jersey Water with regard to future requirements will be set out in the upcoming Government of Jersey Minerals, Waste and Water Study.

In addition to the mains extension programme, Jersey Water are pursuing an extensive capital expenditure programme to maintain and upgrade their physical assets. This includes replacing up to 2.5km of old mains annually to minimise leakage and burst risks, as well as proactively investing in equipment renewal and resilience throughout the entire water system.

Following Phase 1 of the Water Resource and Drought Management Plan (2019), Phase 2 is identifying strategic and operational measures needed to address the supply deficit forecast in Phase 1. Distilling from the original ‘unrestrained’ list of possible measures, Jersey Water is assessing various short-listed options. These options are both supply-side and demand-side.

The upcoming Government of Jersey Minerals, Waste and Water Study will include an integrated assessment of how demand for potable water over the next two decades – alongside minerals and inert waste management – should be met. This draws on the Phase 1 and Phase 2 Water Resource and Management Plan work undertaken by Jersey Water, as well as engagement with them.

The upcoming Minerals Waste and Water Study concludes that the following should be considered:

- Increased capacity at Val de La Mare Reservoir.
- Increased capacity at La Rosière de-salination plant (or a new de-salination plant).
- Water efficiency-related planning policies.

- Managed water demand through non-household water efficiency and through intensive media campaigns.
- Continued leakage reduction.

Implications

An integrated approach to water is required, taking into account the Island's requirements for minerals and inert waste management. The long-term solution to water supply and storage needs is likely to be: (a) increased capacity at Val de La Mare Reservoir; (b) increased capacity at La Rosière de-salination plant (or a new de-salination plant); and (c) continued leakage reduction. Softer measures will also be required, including water efficiency-related planning policies in the bridging Island Plan and beyond and managed water demand through non-household water efficiency and intensive media campaigns.

Close working with Jersey Water will be required to continue to develop interventions.

11.4 Waste Water

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Jersey's Waste Water Strategy (2013)
- Revised Island Plan 2011 (2014)
- Engagement with Government of Jersey officers

Overview and Strategic Issues

Waste water treatment refers to the treatment of both domestic and commercial waste water, including from toilets, baths, and washing machines, as well as industrial waste. It can also be rainwater run-off from roads and other impermeable surfaces such as roofs and pavements. Left untreated, this water can contaminate the local water system, causing significant adverse impacts on nature and health. Effective and well-funded waste water infrastructure is therefore required to preserve Jersey's environment, while improving public health.

The current system for transporting and treating water-borne sewage on the Island involves an extensive network of pipes, 116 pumping stations and the treatment plant at Bellozanne. The pumping stations are required to ensure that sewage flows in the direction towards the sewage treatment works. The sewage treatment works treats the water and then discharges the clean water into St Aubin's Bay. The First Tower Pumping Station, one of the Island's most crucial, is currently being upgraded to increase its capacity.

An important asset within the waste water network is the Cavern – a large underground water storage facility in St Helier. Constructed in the 1990s, this facility has capacity to hold 25,000m³ during wet weather, thereby limiting overflow of untreated water into the marine environment to one in ten years. However, no such attenuation cavern exists on the eastern side of the island, aside from smaller attenuation facilities at the pumping stations.

The sewerage system is comprised of a mixture of combined (foul and surface water) and separate foul and surface water systems. Those parts of the Island which are most densely populated are served by the foul sewerage system. However, in less densely populated areas, a number of properties rely on private sewage treatment or disposal, septic tanks or tight tanks. The Waste Water Strategy, published in 2013, reported that (as of 2011) approximately 87% of the resident population was connected to the public sewerage system. Under the drainage laws, new development must provide separation and dispose of surface water within the site itself. Where this is not possible or practicable, development is expected to attenuate and discharge, or pay a financial contribution towards discharging to the existing system and upgraded attenuation downstream.

Key Shortfalls in Provision

The existing sewage treatment works at Bellozanne was commissioned in 1959 and originally designed with a population capacity of 57,000 in mind. Over the last 60 years, the facility has been upgraded a number of times to respond to improved technologies, higher environmental standards and a rising Island population. However, this facility has reached the end of its original design life and is increasingly unsuited to its purpose. The treatment plant is failing to meet the nitrogen discharge limit for its treated effluent. Additionally, when faced with heavy surface water flows, the system becomes overloaded and the existing sewage treatment works is only capable of partially treating overflow. As a result, untreated water flows into the Island's surrounding aquatic environment, deteriorating water quality. A new sewage treatment works is currently under construction (see Planned Projects below).

Work is also underway to identify and map surface water hotspots and form a management plan – likely to be produced by the end of 2021.

Future Requirements and Provision Standards

Engagement with the Government of Jersey has concluded that the network capacity of the waste water system is reaching full capacity, with any current additional capacity effectively safeguarded for planned extensions to the network to serve existing properties not on the network.

Growth is likely to require works to increase this capacity. The exact interventions required will vary depending on geography, although on a broad level it will be easier to increase capacity in St Helier and other urban areas than in the countryside. The current infrastructure could not adequately accommodate growth outside of St Helier. Unlike the rest of the island, within St Helier a combined sewer operates and the capacity on this combined network could be increased

more easily. However further development within St Helier could increase surface water flows, which may increase the need for additional pumps to safeguard parts of the town from storm events in high tide scenarios.

The First Tower Pumping Station is currently being upgraded to increase capacity. However, in the long term, it will not be able to accommodate the increase in flows unless separation of the foul and surface water takes place to remove surface water flows from the network. The riser mains within the station will also need replacing, as a minimum.

On the eastern side of the Island, a further pumping station/s is/are required in order to provide adequate attenuation.

Potential solutions to the lack of capacity and limited attenuation capacity could involve; an acceleration of ongoing works to separate waste water and surface water flows; additional satellite treatment plant(s); and/or upstream attenuation. Further consideration is required to understand the requirements and constraints.

When considering the future requirements arising from new dwellings, Jersey applies British Water standards for flows and loads¹⁸, including an assumption of 150l/day flow rate for residential properties.

The new sewage treatment works (see Planned Projects below) has been sized to meet the needs of 118,000 people plus a buffer of 20% to meet the requirements of tourism Band economic growth. This is compared with a current population of around 107,800 (Jersey Statistics 2019 estimate).

Planned Projects

A new sewage treatment works is under construction at the Bellozanne site, with completion set for mid-2022. The construction is phased, and the existing sewage treatment works continues to operate during the construction of the new one. Once it becomes operational, the existing works will be decommissioned and demolished.

The proposed new sewage treatment works is expected to bring a number of environmental, economic and social benefits:

- Increased capacity for sewage treatment by 35% (capacity for 118,000 people plus a 20% buffer).
- Reduction of the risk of partially treated sewage discharge during storm events by 97%, improving the quality of bathing waters in St Aubin' Bay.
- Consistent control of the levels of nitrogen released into St Aubin's Bay, supporting the health of marine life.
- Reduction of operation and maintenance costs, including reducing energy requirement by 30%.
- Reduction of odours by 18%.

¹⁸ British Water Code of Practice: Flows and Loads 4 – Sizing Criteria, Treatment Capacity for Sewage Treatment Systems (2013)

Implications

Although the new sewage treatment plant at Bellozanne will increase capacity to adequately cover the bridging Island Plan and beyond, the bridging Island Plan will need to consider whether it should set a longer term commitment for additional capacity.

The Island Plan should explore options for reducing demand on the sewer and waste water system. Policies requiring adherence to building bye-laws with regard to water use and efficiency should be adopted to encourage the efficient design of buildings and early consideration of such issues. The Island Plan should also retain policies which discourage the use of septic tanks.

11.5 Digital and Communications

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- A Telecoms Strategy for Jersey (2018)
- Jersey Digital Policy Framework (2017)
- Digital Jersey's response to Strategic Issues and Options consultation (2019)
- Engagement with Government of Jersey advisor
- Engagement with Digital Jersey officer

Overview and Strategic Issues

There are currently three fixed-line service operators in Jersey:

- Jersey Telecom (JT)
- Sure
- Newtel

The JT Group is a state-owned entity and is the oldest and largest telecoms operator in the Channel Islands. In 2018, the company completed the *Gigabit Isles* project which was part funded by the Government of Jersey. The project involved disabling the old copper network and installing over 3,000km of fibre optic cables across the Island, enabling full fibre connectivity to all properties in Jersey.

All three mobile networks in Jersey provide widespread 4G coverage. Jersey operators provide over 95% indoor and outdoor population coverage. This difference is likely to be partly driven by the higher average population density of Jersey, which means that the unit cost of covering population is likely to be lower. Mobile network operators are developing plans for the roll-out of a 5G network on the Island.

In addition to the on-Island fixed-line and mobile telecommunications network, Jersey also benefits from off-Island connectivity. Undersea cables link the Island to the UK, France, and Guernsey. The existence of multiple cables ensures resilience in off-Island connectivity, which is particularly important in attracting high-growth sectors (such as the digital industry) to Jersey. In 2016, a ship dragging its anchor on the seabed in the English Channel cut the three main internet cables, resulting in all traffic using a single connection and having a severe and prolonged impact on services. The multitude of cables are therefore crucial in ensuring resilience.

Digital connectivity is of great importance to the economy and society of Jersey. The Government of Jersey has prioritised growing the digital economy to improve the living standards of Islanders and reverse the economic decline experienced over the past two decades. Whilst Jersey has high internet speeds, enabling infrastructure is also necessary to host resilient physical networks, and appropriate cultural and working amenities are necessary to maintain economic progress in the digital sector. If the current trend of homeworking continues as part of a ‘new normal’ then residential connections will become more important. There is an apparent tension between providing physical infrastructure (such as masts) in order to provide high quality and reliable connectivity, and preserving Jersey’s high quality natural environment. However, to a great extent this can be managed through carefully considered planning and design policies and individual planning application determination (where development does not fall under permitted development).

Key Shortfalls in Provision

Whilst the telecommunications network on the Island is generally of a high quality, it has been reported in 2018 that, at peak times, some operators of 4G services reduce speeds and/or data allowances, to accommodate the peak number of users.

The existence of three independent networks may not prove sustainable in rolling out technological upgrades, including iterations of 4G and subsequently 5G. It is likely that network sharing will need to be explored in order to deal with the demand for evolving technology.

In this respect, the existing physical infrastructure will not be suitable for long-term re-use as part of a 5G rollout which will ultimately need to form part of a standalone network. The existing networks will need to evolve to be able to provide the future digital connectivity that all jurisdictions need. This evolution will require changes to not only the network technology but also the physical infrastructure needed to provide 5G and other forms of future connectivity.

In terms of the developing digital economy, access to appropriate and affordable office space is limited at present. In addition, there is a lack of affordable housing to accommodate those working in the digital sector, or to accommodate students or short-term employees.

Future Requirements and Provision Standards

The Government of Jersey is committed to the creation of a thriving digital sector, which will provide Jersey with additional high-value jobs and encourage the spread of new technology to other industries, accelerating economic growth and increasing productivity. The Digital Policy Framework sets out the following principles and requirements to achieve this aim:

- Support projects that improve digital infrastructure.
- Encourage affordable services, with appropriate choice for homes and businesses.
- Promote innovation in the delivery of next-generation networks and services.
- Maintain resilience and capacity of Jersey's digital infrastructure.

In order to achieve this aim, significant increase in the physical telecommunication infrastructure will be required. The rollout of 5G may require densification and proliferation of infrastructure, including base stations. The infrastructure likely to be required will be dependent upon the operator and minimum coverage and speed requirements set out in future terms of licensing. In addition, the size and appearance of the antennae required for the 5G network will differ. There may be a tension between delivering the infrastructure required to continue to improve communications technology, and a desire to protect the Island's valuable natural environment and landscape. Initiatives and incentives to encourage operators to share networks may be an option to reducing this tension.

In addition, enhanced 'soft' infrastructure will be required in order to facilitate the face-to-face interaction, strong social networks and intra-firm communication required to create successful clusters of tech and digital businesses. This could include the following:

- Creation of key worker/student accommodation
- Enhanced co-working facilities
- A recognised digital business district

Future Infrastructure Delivery: Digital connectivity

5G Services

The Telecoms Strategy for Jersey lists one of their five policy principles as encouraging the rollout of mobile next generation technologies, such as 5G. It notes that Jersey's relatively small size will act as an advantage for the delivery of 5G, and suggests that the use of 5G will help to deliver wider policy aspirations (e.g. allowing remote healthcare, an aim of the Digital Health Team).

However, where this is seen as a priority, some operators are unable to cope with the existing demand for 4G, and are having to reduce speeds and/or data allowances to accommodate growth. As there are currently three operators, it is

believed that without any network sharing, it is unlikely that 5G will be commercially viable. The Telecoms Strategy has set out a rough estimate of how much the delivery of 5G would cost, without any network sharing. It lists this cost as £16.7m, but it is acknowledged that if there was network sharing, some of this cost could be split between the operators, making 5G more commercially viable.

5G broadband will, in some cases, replace the ‘last mile’ physical connection with a wireless 5G network connection. This ‘last mile’ is currently the most problematic as bottlenecks occur. The replacement with 5G broadband would improve average speeds to 80-100Mbps, but it is noted that these speeds could also be achieved through an upgrade to the fibre network. It is believed that 5G broadband will be more consistent, cheaper for users, but may be more expensive for operators to maintain. This switch to 5G broadband will be expensive initially, and therefore to ensure it is commercially viable, it is likely that there will be a need of network sharing.

Increased demand for digital services

The internet is now being used to assist in all aspects of life, through changing working patterns and telecommuting, to shifting methods of retail consumer patterns with online shopping, as well as growing numbers of people watching TV through broadband and mobile internet connections rather than broadcast networks. The demand for internet services and mobile communication infrastructure has increased dramatically over the last few years, as individual consumers and businesses demand these new technologies. As we move towards an ‘Internet of Things’, the total demand for connectivity (both in terms of coverage, and in speed of download etc.) is expected to continue to increase. The impact of the Covid-19 pandemic has accelerated many of these changes as working from home and home-schooling have increased.

Implications

The Island Plan should define a strategic direction for the development of communications infrastructure including 5G technology. Policies should be sufficiently robust to accommodate future changes to technology, as it is not yet known what form of 5G infrastructure will be required. Policies might also be designed to encourage sharing of infrastructure between providers.

12 Waste, Flooding and Drainage

12.1 Overview of Strategic Infrastructure

This Infrastructure Capacity Study covers the following types of safety infrastructure provision:

- Waste
- Flood protection and drainage

12.2 Waste

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Solid Waste Strategy (2005)
- Government of Jersey website
- Engagement with Government of Jersey officers

Overview and Strategic Issues

The waste management service broadly includes industrial, construction and demolition materials, commercial and household refuse, incinerator ash and agricultural, clinical and hazardous waste. Each of the Island's twelve parishes has the primary responsibility for procuring the collection and transportation of waste within their parish, which often involves contracting private parties. The Government of Jersey is responsible for the provision of waste disposal and recycling facilities.

The majority of the Island's solid waste management operations are found at La Collette reclamation site. La Collette houses: an Energy from Waste (EfW) facility; a green waste composting area; a waste metals recycling facility; a clinical waste incinerator; secure pits for inert hazardous waste; a landfill site; and a household recycling and re-use site. The EfW facility opened in 2011 and accepts most of the Island's residual 'non-inert' waste (that which remains after recycling and composting have been attempted). The EfW has around 20 years remaining of operational design life and has the capacity to process up to 105,000 tonnes of residual waste a year.

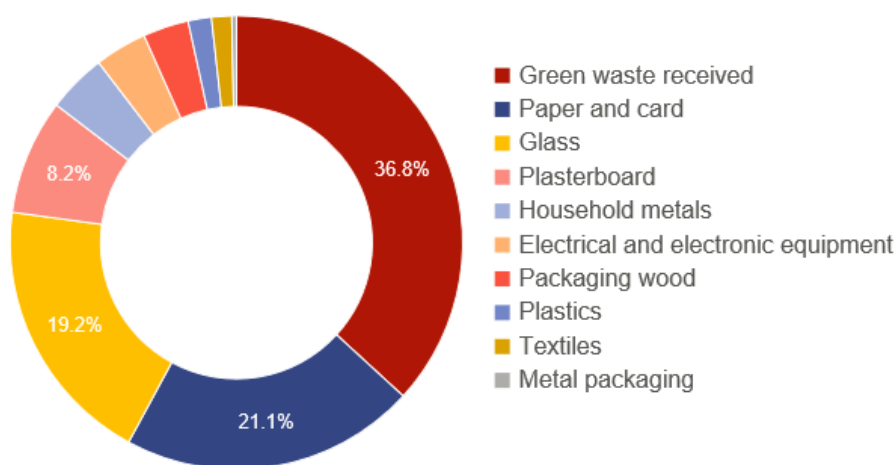
Overall, Jersey is producing less waste per person than a decade ago. However, reductions have plateaued over the last five years. Waste management in Jersey is aligned with the principles of the waste hierarchy, which sets out the preferences for dealing with waste:

- Prevention (most preferable)

- Preparing for re-use
- Recycling
- Other recovery
- Disposal (least preferable)

In 2018, 30% of the Island’s waste was recycled. This figure falls short of the target aimed for in 2019 (a 36% recycling rate). A breakdown of which materials were recycled is shown in Figure 17.

Figure 17 Materials recycled by tonnage, 2018



Source: Government of Jersey

‘Bring Banks’ (community mini-recycling centres) have been established at a number of sites around Jersey. They are specifically created for people and businesses to bring their segregated waste materials for recycling. A list of all Bring Bank locations is provided in Table 18.

Table 18 Bring bank locations

	Paper	Plastic bottles	Metal packaging	Textiles	Glass	Cardboard	Batteries
St Ouen Parish Depot	✓	✓	✓	✓	✓	✓	✓
St Peter’s Community Centre	✓	✓	✓	✓		✓	✓
Les Quennevais Precinct Car Park	✓	✓	✓				✓
Les Creux Country Park	✓	✓	✓	✓	✓	✓	✓
St Aubin Car Park	✓	✓	✓	✓			✓
Goose Green Car Park	✓	✓	✓	✓		✓	✓
Organic Kids Car Park (St Lawrence)	✓	✓	✓				✓
St Peter’s Valley	✓	✓	✓	✓		✓	✓
St Mary Community Centre Car Park	✓	✓	✓	✓			✓

	Paper	Plastic bottles	Metal packaging	Textiles	Glass	Cardboard	Batteries
St John Precinct Car Park	✓	✓	✓				
St Lawrence Community Centre Car Park	✓	✓	✓	✓			✓
Les Jardins Car Park	✓	✓	✓	✓			✓
Esplanade Car Park	✓	✓	✓	✓			✓
Acorn, Trinity	✓	✓	✓	✓		✓	✓
Grainville Car Park	✓	✓	✓	✓	✓	✓	✓
St Saviour Parish Depot	✓	✓	✓		✓	✓	✓
FB Fields Car Park	✓	✓	✓	✓		✓	✓
Le Marais	✓	✓	✓	✓			✓
St Clement Car Park	✓	✓	✓				✓
St Martin Public Hall Car Park	✓	✓	✓	✓		✓	✓
Holme Grown	✓	✓	✓	✓		✓	✓

Key Shortfalls in Provision

The 2011 Island Plan noted that the landfill site for inert waste at La Collette would be full by 2016. While this has not yet occurred, the site is very close to capacity.

In terms of recycling capacities on-Island, certain metals and glass are recycled at the La Collette site. Batteries, cardboard, household metal packaging, plastic bottles and paper are sent to the UK to be recycled. However, this is not a ‘shortfall’ per se.

Future Requirements Planned Projects

The upcoming Government of Jersey Minerals, Waste and Water Study will include an integrated assessment of how demand for inert waste management over the next two decades – alongside minerals and potable water – should be met. This draws on engagement with the Government of Jersey and inert waste management providers.

The upcoming Minerals, Waste and Water Study concludes that the following should be considered:

- Dual use of La Gigoulande Quarry as a minerals extraction site and inert waste facility.
- Development of an integrated extraction, waste management and restoration operation at Simon Sand and Gravel.
- Extended operations of AAL Recycling at La Collette and continued operations at WP Recycling and Barette Plant Hire.

- Extraction of the area of high-value materials (site suitable for reprocessing and resale as secondary aggregates) from La Collette, freeing up space for material which has no value as a secondary material.
- Demand management of inert waste processing requirements through using the planning process as well as regulatory and fiscal measures (e.g. higher gate fees or an operator's landfill tax) to require developers to utilise recycled inert materials in projects and better control of inert waste.
- In the longer term, use of inert waste to develop sea defences (Shoreline Management Plan projects etc.) and exploration of further opportunities to use inert waste to replace use of non-waste (when such opportunities arise).

The Shoreline Management Plan recommends 'advance the line' (where new sea defences are built seaward of existing defences) in a number of locations. There is an emerging proposal for a land reclamation scheme in St Aubin's Bay, which would – if brought forward – also unlock additional inert waste management capacity. The Port masterplan (see Section 5) may also require inert fill to be delivered. Further details are provided in Section 12.3.

12.3 Flood Protection and Drainage

Evidence Base

The following evidence has been reviewed as part of this Infrastructure Capacity Study:

- Shoreline Management Plan (2020)
- Grands Vaux Flood Plan (2018)
- Engagement with Government of Jersey officers

Overview and Strategic Issues

Jersey's territorial waters cover almost 2,000 square kilometres; a surface area of over seventeen times greater than its territorial land mass. The Jersey coastline is around 70km in length and includes 17 ecological and 22 geological Sites of Special Interest (SSIs) and a Ramsar site. Several parts of the coastline are also designated as Coastal National Park, which encompasses ecologically sensitive and valuable areas of the coastline.

The coast of Jersey is essential to the functioning of the Island as a whole. The coast hosts activities of community value, including ferry services, recreational opportunities and heritage sites. The large settlements located close to the coastline rely on local road networks, which are at risk from coastal flooding and erosion. The protection of these assets is essential to business continuity, access to homes, schools, amenities and the future successful growth of Jersey. The visitor economy is also reliant on coastal tourism, with Jersey benefitting from an array of unique coastal attractions and beaches.

St Helier is built on low lying land and will become increasingly vulnerable to coastal flooding as sea levels rise. Ensuring St Helier is climate resilient is

especially important for the businesses and residents of the town area who are more likely to be impacted by climate change in the town centre.

Climate change is predicted to cause rising sea water levels, influencing the boundaries between the land and the sea. The Island will experience increased wave heights and an increased severity and occurrence of storms. This will increase the risk of coastal flooding on the Island in the future.

A Shoreline Management Plan has been developed and was agreed in January 2020. It provides a coastal management strategy for Jersey for the next 100 years, through the selection of appropriate management policies, following baseline studies to understand the risk of flooding and coastal erosion to the Island. It identifies that areas at highest risk of coastal flooding (from the projected rise in still water level to 2120, with the current levels of sea defence), are:

- St Aubin Harbour
- St Helier
- Havre des Pas
- Greve D'Azette
- Le Hocq (East)
- Royal Bay of Grouville Slipway (South)

The Shoreline Management Plan details that a total of 460 properties on the Island are currently at risk of coastal flooding, increasing to 2,822 by 2120 as a result of climate change (with present levels of management). There is the potential for additional GVA / business disruption losses for economy of up to £110m over the next ten years. The implementation cost of the Shoreline Management Plan would be approximately £198m over the next 100 years and would result in approximately £2.7bn benefits over the next 100 years. Further details on the assumptions used in the Shoreline Management Plan are set out in the box below.

In terms of inland flooding, a Strategic Flood Risk Assessment has been prepared for Jersey, considering pluvial, groundwater, sewer and reservoir flood risks.

One of the main areas of risk for inland flooding is at Grands Vaux. Grands Vaux Reservoir forms the parish boundary of St Helier and St Saviour and was constructed in 1952 by Jersey Water. It is located approximately 2.5km to the north east of the Town of St Helier. The catchment area of Grands Vaux represents about 10% of the Island's land mass, and the reservoir basin is small and can fill very rapidly during inclement weather. Therefore, the flood volume in severe weather can be greater than the capacity of the basin. The existing drainage network can accommodate low return events like the Mean Annual Flood but would be unable to handle severe and extreme floods.

The current management responsibilities associated with the Grands Vaux Reservoir are undertaken by Jersey Water. The Grands Vaux Flood Plan outlines the multi-agency response to a surface water flooding event in this location, which incorporates the States of Jersey Emergency Measures Plan, Emergency

Reception Centre Plan, Evacuation and Transport Plan and the States of Jersey Police Major Incident Plan.

This plan outlines the response and coordination arrangements for a predicted and spontaneous flooding event in the Grands Vaux Reservoir catchment area. The Plan identifies responses to minor and major flooding levels and highlights that Jersey Water are to ensure Grands Vaux Reservoir is operating safely and correctly in accordance to any specialist advice given, participate in any multi-agency response and provide support to the emergency responders.

Future Infrastructure Delivery: Sea Level Rise and Coastal Flooding

The longer-term predictions for the rise in sea level, and potential of coastal flooding around the coast of Jersey have been set out in the Jersey Shoreline Management Plan, which is a policy framework aiming to manage the risks of coastal flooding over the next 100 years.

Climate change is predicted to lead to further rises in sea levels, which will increase the risk of coastal flooding on the Island. There are a number of larger urban settlements with connecting road networks which are at risk from coastal flooding, having the potential to impact business continuity, access to homes, schools and amenities. Therefore, it is important that these areas are protected through comprehensive and effective policy to reduce the threat of flooding.

The SMP states the aim of protecting the shoreline from coastal flooding to a 1:200 year return period event, meaning a storm event which is predicted to occur, on average, once every 200 years. Furthermore, it states that all new flood defences will be designed to allow their adaptation in the future, to be able to protect against higher intensity storms if necessary. The risks will be reviewed every ten years, to ensure the coastlines are protected.

The Shoreline Management Plan has used the UK National Oceanography Centre guidance, using the prediction of a sea level rise of 0.83m by 2120. In addition to this, in areas such as Portelet, where there is soft geology and no coastal defences, a future erosion buffer zone of 30m over the next 100 years has been implemented.

Key Shortfalls in Provision

The Shoreline Management Plan divides the coastline into six ‘process units’ called Coastal Management Areas (CMAs). The key current shortfalls in flood protection and associated flood risk for each of the CMAs are identified in Table 19.

Table 19 Coastal flood risk by Coastal Management Area

Coastal Management Area	Geographical Extent	Characteristics and associated Coastal Flood Risk
1 – South Coast Eastern end of Portelet Beach to La Rocque	Eastern end of Portelet Beach to La Rocque	Residential and commercial properties are predicted to be at risk from flooding from both overtopping and still water levels.

Coastal Management Area	Geographical Extent	Characteristics and associated Coastal Flood Risk
2 – Grouville Bay	La Rocque to the northern end of Mont Orgueil Castle land	Mostly defended coastline, up to Mont Orgueil Castle. Small areas of flood risk from overtopping and still water levels.
3 – St Catherine’s	Northern end of Mont Orgueil Castle land to La Coupe	Small areas of flood risk and coastal erosion.
4 – North Coast	La Coupe to Le Pulec	Large areas of undefended cliffs and small defended bays.
5 – St Ouen’s Bay	Le Pulec to Gorselands	Large defended bay that is a popular recreation location. Undefended natural headlands.
6 – St Brelade	Gorselands to the eastern end of Portelet Beach	Areas of undefended cliffs. Sensitive area at risk - St Brelade’s Bay and Portelet Bay beaches, La Cotte de St Brelade geological SSI and several ecological SSIs, including Portelet Common.

There are no known current constraints for pluvial and fluvial flooding on Jersey and no significant infrastructure is required. The Strategic Flood Risk Assessment does highlight site and building measures which are important in managing flood risk:

- Site measures: 16 metre buffer strips alongside areas of coastline or coastal defences; 8 metre buffer strips alongside watercourses; consideration of vulnerability of proposed uses; land raising and landscaping; sustainable drainage (SuDS); and methods to reduce risk from sewers.
- Building measures: flood-resilient design; finished floor levels; use of property flood protection devices; and flood evacuation plans.

The Strategic Flood Risk Assessment identifies that catchment woodlands and instream large woody structures in the two streams that flow into the Grands Vaux Reservoir would help to mitigate flood risk related to the reservoir. It also states that a natural flood storage area could be implemented to the north of Beaumont, which could mitigate the rate of flow in the watercourse through Beaumont. Instream mitigation and flood woodland would be suitable for the other watercourses along the south of the island which flow into Millbrook and Bellozanne. (These projects are at an early stage of thinking; for this reason, the Infrastructure Delivery Schedule (Section 13) includes general flood risk management interventions rather than specific interventions.)

Future Requirements and Provision Standards

The Environment Agency in England intends to move away from a ‘resistive’ approach to coastal management to improve resilience, accepting that in some locations, settlements will need to be moved away from the coast to reduce the

risks of coastal flooding and erosion. In contrast, there are reasons for Jersey to do things differently compared to England, including:

- The Island is small and space is precious; losing land and moving settlements away from the coast would not be practical.
- Maintenance of the coastal fringe is essential to protect residential, business and tourism assets, which are critical to the Island's functioning.
- Jersey has a different funding approach for coastal defences and is better able to support building new defences.

The Shoreline Management Plan, once implemented, will ensure that the impact of the interactions between the physical structure of the coast and the processes taking place are fully considered and coastal flood risk adequately mitigated. There are a number of projects which will be progressed in order to address these future requirements (see Planned Projects).

Future requirements for fluvial and pluvial flooding, will be considered on a case-by-case basis. Work looking at the impact of climate change on fluvial flooding is at an early stage.

Planned Projects

The SMP sets out 4 approaches to managing flood risk:

- 'No Active Intervention' – no investment by the government in coastal defences or maintenance. Unprotected shorelines will naturally evolve from their current state without intervention.
- 'Maintain the Defence Line' – existing coastal defences are maintained. The level of flood protection may decrease over time as flood risk increases due to the changing coastal processes and impacts of climate change.
- 'Adaptive Management' – coastal flood and erosion risk will be proactively managed through various management schemes or initiatives, depending on the level of risk and the circumstances.
- 'Advance the Line' – new sea defences are built seaward of existing defences. This policy will only be implemented in areas where there is a significant risk of coastal flooding or erosion, or where it will deliver additional benefits for the community, environment and economy (such as creating a new amenity space).

Adaptive Management and Advance the Line infrastructure policies and projects are proposed at the locations set Table 20. It should be noted that the work underpinning these proposed projects assumes a continuation of current development patterns.

Table 20 Proposed coastal flood defence projects

Location	Proposed Project
St Aubin's Harbour, St Aubin's Bay	New 'Advance the Line' coastal defence structures are to be constructed closer to the sea to provide longer term protection from overtopping and still water level flood risk. This will protect the road infrastructure along the La Neuve Route and Victoria Avenue which is facing a significant flood risk.
St Helier	A setback defence alignment behind the port will be constructed, to protect the town from flooding. The development of any defences in front of this alignment will be the responsibility of the Ports of Jersey, and will not receive any funding from the Government of Jersey
Havre Des Pas	The preferred policy option for this area will involve engaging with the community to improve the defences to a 1:200 year standard of protection in the present day and maintaining the defences in the future up to 2120.
La Greve d'Azette and Le Hocq / Pontac	The preferred policy option for this area is 'adaptive management' in the form of a community awareness scheme, to engage the community and encourage improvement of the defences.
Archirondel Tower	The Archirondel electricity substation is at risk of overtopping flood risk. The existing defences here are to be improved in order to increase the resilience of this crucial piece of infrastructure.
St Brelade's Bay	The preferred policy option for this area is 'adaptive management' in the form of a community awareness scheme, to engage the community and encourage improvement of the defences.

These proposed projects are at an early stage and will continue to be developed over time. Of these, proposals in St Aubin's Bay are the most advanced and would involve management of tidal flood risk as well as delivery of developable land. The scope of the scheme is still at an early stage, and it has not been committed to.

12.4 Implications

An integrated approach to inert waste management – taking into account the Island's requirements for minerals and potable water – is required.

The long term solution to inert waste management could be: dual use of La Gigoulande Quarry as a minerals extraction site and inert waste facility; development of an integrated extraction, waste management and restoration operation at Simon Sand and Gravel; continued / extended operations of existing private facilities; and extraction of the area of high-value materials (site suitable for reprocessing and resale as secondary aggregates) from La Collette, freeing up space for material which has no value as a secondary material.

In addition, demand management of inert waste processing requirements should be used, including through planning policies.

Once the upcoming waste strategy has been progressed, further engagement will be required to understand its relationship with the bridging Island Plan.

Flood risk should be a key consideration in the assessment of options for future strategic growth locations in the Island Plan. The SMP should be built upon to take account of different spatial distributions of growth.

The Island Plan should include a policy relating to Sustainable Drainage Systems (SuDS), based on detailed analysis of surface water flood impact. Policies relating to flood resilient design should also be developed.

Opportunities for use of inert waste to develop SMP projects should be explored.

13 Infrastructure Delivery Schedule

This section provides the Infrastructure Delivery Schedule (Table 21) for Jersey. It consists of those projects already planned (as set out in previous sections of the Infrastructure Capacity Study), as well as additional projects required to support expected housing and population growth over the bridging Island Plan and the immediate period beyond it.

The Infrastructure Delivery Schedule is – by its very nature – a ‘snapshot in time’. As different infrastructure providers respond to their own unique challenges, the information that they provide will naturally date and alter over time, reflecting changing needs. The Infrastructure Delivery Schedule should be viewed as a ‘live document’ with the information contained within the Schedule noted as indicative rather than prescriptive. As such the requirements to support growth at the time of writing will naturally evolve.

Over time, there may be a number of reasons why the contents of the Infrastructure Delivery Schedule may change, for example:

- New sources of data and information
- Changes in current service provision
Updated related evidence base documents
- Progression of infrastructure interventions, providing more certainty around costs and phasing
- New delivery partners and funding sources

Table 21 Infrastructure Delivery Schedule

Reference	Topic	Project Description	Scheme Status	Delivery Partners	Cost	Secured Funding and Source	Phasing	2021 – 2025 (Pre-BIP and BIP)	2026 – 2035 (Post-BIP)	Notes	Site / designation required?
TR1	Transport: Public Transport	General bus infrastructure and network upgrades	Not started	Government of Jersey / LibertyBus (HCT)	Unknown		Unknown	Unknown	Unknown	The Sustainable Transport Strong Start Delivery Plan 2020 includes a number of projects relating to bus services, including a pilot school shuttle bus operating from the west of St Helier to the St Saviour schools area, a bus priority scheme design for buses heading both west and east from Liberation Station, and a number of bus stop improvements. More projects might be required to serve growth locations or to otherwise improve bus operations and the attractiveness/accessibility of bus travel.	No
TR2	Transport: Active Transport	Eastern shared cycle and walking route	Ongoing	Government of Jersey / Direct delivery by private developers as part of planning obligations	Unknown	£250,000 (Planning Obligation Agreements / Public Car Park Fund)	Ongoing – some sections complete.	✓	✓ (expected)	Sustainable Transport Policy (2019) commits to accelerating delivery of the route.	Yes – policies required in bridging Island Plan
TR3	Transport: Air Travel	Jersey Airport redevelopment Integrated arrivals and departures terminal, and project to addressing aviation compliance issues.	Ongoing	Ports of Jersey	£42,000,000	Funded by Ports of Jersey	Ongoing – full redevelopment expected to be completed in 2025, with integrated arrivals and departures terminal by 2023	✓		The delivery of the new arrivals and departures facilities will be phased to minimise disruption to passengers and impact on the live airport environment. The final phase is the demolition of the existing arrivals terminal building to address regulatory issues.	No – within existing site
TR4	Transport: Sea Travel	Ports of Jersey expansion Masterplan for expansion of the port, increasing overall capacity to 1.2 million tonnes and allowing some land to be able to be released for redevelopment	Feasibility	Ports of Jersey	£300,000,000 - £400,000,000	Funded by Ports of Jersey	Complete by 2029		✓		Yes – site defined through Ports of Jersey masterplanning
ED1	Education: Early years	Nursery at St Mary's Primary School	Ongoing	Government of Jersey	Unknown		2021	✓			No – within existing school site
ED2	Education: Early years	Nursery at Les Landes Primary School	Feasibility	Government of Jersey	£1,000,000	£1,000,000 – Government of Jersey (Government Plan)	Unknown	✓			No – within existing school site

Reference	Topic	Project Description	Scheme Status	Delivery Partners	Cost	Secured Funding and Source	Phasing	2021 – 2025 (Pre-BIP and BIP)	2026 – 2035 (Post-BIP)	Notes	Site / designation required?
ED3	Education: Primary Education	Expected reorganisation of St Helier primary schools	Feasibility	Government of Jersey	Unknown		Unknown	✓ (expected)		The Government of Jersey is considering a reorganisation of St Helier primary schools, which may include new or replacement school(s). The purpose of this reorganisation is to better serve the needs of the south and west of St Helier and to ensure efficient use of resources.	To be confirmed
ED4	Education: Primary Education	Replacement of Victoria College Preparatory School	Not started	Government of Jersey	£17,150,000	£17,150,000 – Government of Jersey (Government Plan)	Unknown	✓			Yes – site to be defined
ED5	Education: Primary Education	Extension of St John School site for new school fields	Feasibility	Government of Jersey	Unknown	£800,000 (for both St John and Grainville) – Government of Jersey (Government Plan)	Unknown	✓			Yes – site defined
ED6	Education: Primary Education	Extension of La Moye School hall and 2 additional classrooms		Government of Jersey	£2,000,000	£2,000,000 Government of Jersey (Government Plan)	2022	✓			No – within existing school site
ED7	Education: Primary Education	Additional music facilities and new playing fields for Jersey College for Girls and Jersey College Preparatory School		Government of Jersey	£1,836,000	£1,836,000 – Government of Jersey (Government Plan)	2022	✓			Yes – site defined
ED8	Education: Secondary Education	Expected reorganisation of secondary school provision	Not started	Government of Jersey	Unknown		Unknown	Unknown	Unknown	In the medium to long term, the Government of Jersey is considering a reorganisation of secondary school provision across the Island. The purpose of this reorganisation is to ensure efficient use of resources, and to consider how best to serve key stage three, four and five needs.	To be confirmed
ED9	Education: Secondary Education	Extension of Jersey College for Girls school hall		Government of Jersey	Unknown	£260,000 – Government of Jersey (Government Plan)	2021	✓			No – within existing school site
ED10	Education: Secondary Education	Investment at Le Rocquier School and community sports facilities	Feasibility	Government of Jersey	Unknown		Unknown	✓		Funds allocated in the Government Plan; however, a condition survey is being undertaken to understand the full extent of investment.	Yes – site defined

Reference	Topic	Project Description	Scheme Status	Delivery Partners	Cost	Secured Funding and Source	Phasing	2021 – 2025 (Pre-BIP and BIP)	2026 – 2035 (Post-BIP)	Notes	Site / designation required?
ED11	Education: Secondary Education	Extension of Grainville School site for new school fields	Feasibility	Government of Jersey	Unknown	£800,000 (for both St John and Grainville) – Government of Jersey (Government Plan)	Unknown	✓			Yes – site defined
ED12	Education: Special Educational Needs	Extension of Mont à l'Abbé School site at Haute Vallée Additional classrooms and reception area.		Government of Jersey	£1,750,000	£1,500,000 – Government of Jersey (Government Plan)	2022	✓		In the longer term, it is expected that Mont à l'Abbé primary and secondary facilities will be co-located (see ED13), and that this space will be used by Haute Vallée secondary school.	No – within existing school site
ED13	Education: Special Educational Needs	Co-location of Mont à l'Abbé primary and secondary facilities	Not started	Government of Jersey	Unknown		Unknown –		✓ (expected)		To be confirmed
ED14	Education: Tertiary and Higher Education and Adult Education and Skills	New purpose built facilities at Highlands College	Feasibility	Government of Jersey	Unknown	£29,900,000 – Government of Jersey (Government Plan)	2024	✓ (expected)			To be confirmed
HE1	Health: Primary Care	Around 5.7 FTE GPs To serve larger population over the Plan period and retain existing GP:patient ratios	N/A	GP surgeries	N/A		N/A	✓		Although the Government of Jersey cannot compel individual GP businesses to expand, it is felt that the current level of provision (i.e. one GP for every 1,000 population) remains broadly correct and it is hoped that it will be maintained by the market.	Not expected to require sites to be identified
HE2	Health: Primary Care	Additional dentistry, optometry and pharmacy services as required To serve larger population over the Plan period	N/A	Individual businesses	N/A		N/A	✓		Although the Government of Jersey cannot compel individual businesses to expand, it is hoped that the current level of provision will be maintained by the market.	Not expected to require sites to be identified
HE3	Health: Primary and Secondary Care	Potential minor upgrades to facilitate the Jersey Care model	Not started	Government of Jersey / GP surgeries / Parishes	Unknown	Government of Jersey	Unknown	Unknown	Unknown	The Government of Jersey is not responsible for GP estate and is unlikely to deliver new facilities in relation to the Jersey Care Model. However, it is possible that the Government may play a role in facilitating estate changes where required (e.g. offering capital funding as part of commissioning, or minor improvements to parish halls or other community floorspace)	No – within existing sites

Reference	Topic	Project Description	Scheme Status	Delivery Partners	Cost	Secured Funding and Source	Phasing	2021 – 2025 (Pre-BIP and BIP)	2026 – 2035 (Post-BIP)	Notes	Site / designation required?
HE4	Health: Secondary Care	New hospital at Overdale to replace the General Hospital	Feasibility	Government of Jersey	Unknown	£20,000,000 (£8,380,000 in 2021 and circa. 3mil per year until 2023) – Government of Jersey (Government Plan)	TBC	✓			Yes – site identified
HE5	Health: Secondary Care	Investment in mental health provision and infrastructure at St Saviours	Feasibility	Government of Jersey	£3,930,000	£3,930,000 – Government of Jersey (Government Plan)	TBC	✓			No – within existing site
HE6	Health: Secondary Care	Maintenance work at Five Oaks	Feasibility	Government of Jersey	£3,500,000	£3,500,000 – Government of Jersey (Government Plan)	TBC	✓			No – within existing site
CO1	Community Facilities: Community Halls	Around 340 sqm additional community space To serve larger population over the Plan period (see Notes)	Not started	Government of Jersey / Parishes	Unknown		Unknown	✓		Based on provision standards from elsewhere, the additional population expected over the Plan period would lead to an additional demand for community floorspace of 340 sqm. However, this may not necessarily be delivered, and additional demand may instead be met by: increasing capacity of existing facilities through altered opening hours or minor upgrades, or through the youth centre projects in CO2 and CO3 below.	No
CO2	Community Facilities: Community Halls	Around 300 sqm additional community space To serve modelled additional population beyond the Plan period (see Notes)	Not started	Government of Jersey / Parishes	Unknown		Post BIP		✓	Based on a post-BIP population scenario of +1,000 per year (see Section 3). The notes for CO1 also apply.	No
CO2	Community Facilities: Community Halls	New North of St Helier Youth Centre	Feasibility	Government of Jersey	£4,250,000		£2 million in 2021, £1.25 million in 2022 and £1 million in 2023	✓			To be confirmed
CO3	Community Facilities: Community Halls	Upgrades to Le Squez Youth Centre	Feasibility	Government of Jersey	£4,300,000		£2 million in 2022 and £2.3 million in 2023	✓			To be confirmed
CO4	Community Facilities: Sports and Leisure	Strategic sports and leisure upgrades across the Island Programme of works set out in the	Feasibility	Government of Jersey	Unknown	£49,950,000 – Government of Jersey	£1.2m in 2021, £16.2m in 2022, £22.1m in 2023	✓		Sports needs currently served by Fort Regent met through enhanced facilities across the Island at the following locations: Les Quennevais Sports Centre;	Yes (for some upgrades) – redevelopment of Les Quennevais

Reference	Topic	Project Description	Scheme Status	Delivery Partners	Cost	Secured Funding and Source	Phasing	2021 – 2025 (Pre-BIP and BIP)	2026 – 2035 (Post-BIP)	Notes	Site / designation required?
		Community Sports Hub and Island Stadium Feasibility Study.				(Government Plan)	and £10.45m in 2024			Le Rocquier; Springfield Stadium and Sports Centre; a new site within St Helier town centre; and a potential new Island Stadium for football and rugby (with adequate shared or 'back to back' spectator capacity, and associated infrastructure to service matchday but some training requirements of the Jersey FA and Jersey Rugby Club), on a site to be determined.	Sports Centre, new facilities as Les Rocquier, and new combined sports stadium. Other upgrades on existing sites.
CO5	Community Facilities: Cultural and Tourism Facilities	Southwest St Helier combined swimming and fitness facility	Not started / Masterplanning	Government of Jersey	Unknown		Unknown	Unknown	Unknown		Yes – subject to masterplanning
CO6	Community Facilities: Cultural and Tourism Facilities	Maintenance and upgrades to the Jersey Opera House	Feasibility	Government of Jersey	Unknown		Unknown	Unknown	Unknown	The Opera House is not due to be operational again before 2021.	No – within existing site
CO7	Community Facilities: Cultural and Tourism Facilities	Maintenance and upgrades to the Jersey Arts Centre	Feasibility	Government of Jersey	Unknown		Unknown	Unknown	Unknown		No – within existing site
CO8	Community Facilities: Cultural and Tourism Facilities	Southwest St Helier Cultural Hub	Not started / Masterplanning	Government of Jersey / Jersey Development Company	Unknown		Unknown	Unknown	Unknown		Yes – subject to masterplanning
CO9	Community Facilities: Cultural and Tourism Facilities	Two new community libraries In the east and the west of the Island	Ongoing	Government of Jersey	Unknown		2021	✓			Yes – sites identified
OP1	Open Space	Around 28,600 sqm (2.86 ha) additional parks To serve larger population over the Plan period	Not started	Government of Jersey / Parishes / Direct delivery by private developers	Unknown		Unknown	✓		Based on provision standards from elsewhere, the additional population expected over the Plan period would lead to an additional demand for open space. The location of additional space will depend on the distribution of growth. Some of this requirement could be met through the delivery of OP7.	Yes – various, may form part of development sites
OP2	Open Space	Around 25,000 sqm (2.50 ha) additional parks To serve modelled additional population beyond the Plan period (see Notes)	Not started	Government of Jersey / Parishes	Unknown		Post BIP		✓	Based on a post-BIP population scenario of +1,000 per year (see Section 3).	Yes – various, may form part of development sites

Reference	Topic	Project Description	Scheme Status	Delivery Partners	Cost	Secured Funding and Source	Phasing	2021 – 2025 (Pre-BIP and BIP)	2026 – 2035 (Post-BIP)	Notes	Site / designation required?
OP3	Open Space	Around 14,300 sqm (1.43 ha) additional amenity greenspace To serve larger population over the Plan period	Not started	Government of Jersey / Parishes / Direct delivery by private developers	Unknown		Unknown	✓		Based on provision standards from elsewhere, the additional population expected over the Plan period would lead to an additional demand for open space. The location of additional space will depend on the distribution of growth.	Yes – various, may form part of development sites
OP4	Open Space	Around 12,500 sqm (1.25 ha) additional amenity greenspace To serve modelled additional population beyond the Plan period (see Notes)	Not started	Government of Jersey / Parishes	Unknown		Post BIP		✓	Based on a post-BIP population scenario of +1,000 per year (see Section 3).	Yes – various, may form part of development sites
OP5	Open Space	Around 5,700 sqm (0.57 ha) additional children’s playspace To serve larger population over the Plan period	Not started	Government of Jersey / Parishes / Direct delivery by private developers	Unknown		Unknown	✓		Based on provision standards from elsewhere, the additional population expected over the Plan period would lead to an additional demand for open space. The location of additional space will depend on the distribution of growth. Some of this requirement could be met through the delivery of OP7.	Yes – various, may form part of development sites
OP6	Open Space	Around 5,000 sqm (0.50 ha) additional children’s playspace To serve modelled additional population beyond the Plan period (see Notes)	Not started	Government of Jersey / Parishes	Unknown		Post BIP		✓	Based on a post-BIP population scenario of +1,000 per year (see Section 3).	Yes – various, may form part of development sites
OP7	Open Space	Millennium Town Park extension	Design development	Andium Homes / Government of Jersey	Unknown		Unknown	✓		Andium Homes has recently gained planning consent for the development of the Jersey Gas site, plans for which include a significant extension to the Millennium Town Park. Designs for the extension are currently being developed.	Yes – site identified
OP8	Open Space	New skate park	Feasibility	Jersey Development Company and Ports of Jersey	£785,000	£785,000 Government of Jersey (Government Plan)	2021	✓			Yes – site to be identified
EM1	Emergency Services and Justice: Police Services	Accredited firearms range	Pre-feasibility	States of Jersey Police	£1,000,000		Unknown	Unknown	Unknown	It is expected that the facility will cost around £1m; a site has not been identified but will need to be outside and in the countryside. Preparatory feasibility work has been undertaken and it is understood that funding is likely to be committed imminently.	Yes – site to be identified
EM2	Emergency Services and Justice: Police Services	Sexual assault referral centre in St Helier (Dewberry House SARC)	Feasibility	States of Jersey Police	£2,300,000	£2,300,000 - Government of Jersey (Government Plan)	2022	✓			No – within existing site

Reference	Topic	Project Description	Scheme Status	Delivery Partners	Cost	Secured Funding and Source	Phasing	2021 – 2025 (Pre-BIP and BIP)	2026 – 2035 (Post-BIP)	Notes	Site / designation required?
EM3	Emergency Services and Justice: Fire and Rescue Services	New headquarters for the co-location of the Ambulance and Fire and Rescue Services	Pre-feasibility stage	States of Jersey Fire and Rescue Service / States of Jersey Ambulance Service	Unknown		Unknown	Unknown	Unknown	There are developing plans to co-locate the Ambulance and Fire and Rescue Services. A site for this headquarters is yet to be selected, with three preferred sites currently being considered. If located in a geographically appropriate place, the need for a station at St Brelade may be removed (although this would need to be subject to further assessment of response times etc.).	To be confirmed
EM4	Emergency Services and Justice: Justice Services	Prison improvement works	Ongoing	States of Jersey Prison Service / Government of Jersey - Justice and Home Affairs	Unknown		Ongoing	✓			No – within existing site
EM5	Emergency Services and Justice: Justice Services	Potential new family court and conversion of Courtroom 1 in the Magistrates Court	Not started - delayed	Government of Jersey - Justice and Home Affairs	Unknown		Unknown	Unknown	Unknown	This project has been deferred as it was deemed to be of a lower priority to either other planned activity or activity arising in response to Covid-19. The Courtroom 1 Project is intended to increase the size and functionality of Court Number 1 in the Magistrate's Court to allow it to be used as a Jury Trial room. No work has yet to be undertaken and it has now been deferred to 2021.	No – within existing site
UT1	Utilities: Water	Potable water capacity (supply and storage) interventions Defined in the Government of Jersey Minerals, Waste and Water Study	Pre-feasibility	Jersey Water	Unknown		Unknown – beyond bridging Island Plan		✓	The upcoming Government of Jersey Minerals, Waste and Water Study includes an integrated assessment of how demand for potable water over the next two decades – alongside minerals and inert waste management – should be met. It included: increased capacity at Val de La Mare Reservoir; increased capacity at La Rosière de-salination plant (or a new de-salination plant); and continued leakage reduction.	Yes – sites identified

Reference	Topic	Project Description	Scheme Status	Delivery Partners	Cost	Secured Funding and Source	Phasing	2021 – 2025 (Pre-BIP and BIP)	2026 – 2035 (Post-BIP)	Notes	Site / designation required?
UT2	Utilities: Waste Water	New sewage treatment works at Bellozanne	New tanker import facility now complete	Government of Jersey	£26,800,000	£7,800,000 Capital projects	First phase due for completion late 2021, overall completion end of 2022	✓			No – site already under construction
UT3	Utilities: Digital	Ongoing rollout of 5G infrastructure	Ongoing	Jersey Telecom / Sure / Newtel / Government of Jersey	Unknown		Ongoing	✓	✓ (expected)	It is likely that network sharing will need to be explored in order to deal with the demand for evolving technology.	No
SA1	Safety: Waste	Inert waste management capacity upgrades Defined in the Government of Jersey Minerals, Waste and Water Study	Not started	Government of Jersey / Private operators	Unknown		Unknown –	✓	✓	The upcoming Government of Jersey Minerals, Waste and Water Study includes an integrated assessment of how demand for potable water over the next two decades – alongside minerals and inert waste management – should be met. It included: increased capacity at Val de La Mare Reservoir; increased capacity at La Rosière de-salination plant (or a new de-salination plant); and continued leakage reduction.	Yes – sites identified
SA2	Safety: Flood Protection and Drainage	Construction of coastal defence structures along La Neuve Route and Victoria Avenue	Pre-feasibility	Government of Jersey	Unknown		Unknown	Unknown	Unknown	Project proposed in the Shoreline Management Plan.	To be confirmed
SA3	Safety: Flood Protection and Drainage	Construction of setback defence alignment behind port of St Helier	Not started	Government of Jersey	Unknown		Unknown	Unknown	Unknown	Project proposed in the Shoreline Management Plan.	To be confirmed
SA4	Safety: Flood Protection and Drainage	Construction of a setback defence alignment behind the port at St, Helier	Not started	Government of Jersey	Unknown		Unknown	Unknown	Unknown	Project proposed in the Shoreline Management Plan.	To be confirmed
SA5	Safety: Flood Protection and Drainage	Improvement and maintenance of defences at Havres Des Pas	Not started	Government of Jersey	Unknown		Unknown	Unknown	Unknown	Project proposed in the Shoreline Management Plan.	To be confirmed
SA6	Safety: Flood Protection and Drainage	Improvement of existing defences at Archirondel electricity substation	Not started	Government of Jersey	Unknown		Unknown	Unknown	Unknown	Project proposed in the Shoreline Management Plan.	To be confirmed

Reference	Topic	Project Description	Scheme Status	Delivery Partners	Cost	Secured Funding and Source	Phasing	2021 – 2025 (Pre-BIP and BIP)	2026 – 2035 (Post-BIP)	Notes	Site / designation required?
SA7	Safety: Flood Protection and Drainage	Inland flood risk management interventions	Not started	Government of Jersey	Unknown		Unknown	Unknown	Unknown		To be confirmed

Appendix A

Superseded Indicative Future Infrastructure Requirements

A1 Superseded Indicative Future Infrastructure Requirements

As part of an earlier stage of work, in the absence of the planning assumption, an assessment was undertaken which – at a high level – considered the requirement for new infrastructure based on different scenarios of planning growth (measured in population). The theoretical scenarios which have been tested were:

- Low: net increase of +800 people per annum.
- Medium: net increase of +1,000 people per annum.
- High: new increase of +1,500 people per annum.

Given a distribution of growth was not set at this point, the assessment took a ‘whole Island’ approach. This has two important implications:

- It may underestimate the infrastructure requirements to service future growth – e.g. if all growth is in one location and all current capacity in an infrastructure type is in another distant location, this may not be acceptable.
- It does not allow consideration of ‘networks’ (e.g. for utilities or active transport) that might be required to service growth in particular locations.

The assessment used committed projects (or with a level of certainty that they will come forward, e.g. funding for feasibility works provided in the Government Plan 2020-2023) – set out in the Infrastructure Capacity Study – as a given, and only considers what might be required above and beyond these commitments.

The findings of the assessment are presented in Table A1.

Table A1 Infrastructure requirements by scenario – Is there a requirement for additional infrastructure?

Topic	Sub-Topic	Scenario 1 (net +800 ppa)	Scenario 2 (net +1,000 ppa)	Scenario 3 (net +1,500 ppa)
Transport	Highways	No – highways schemes are likely to be prohibitively expensive and difficult to implement, and against ambitions towards sustainable transport.	No – highways schemes are likely to be prohibitively expensive and difficult to implement, and against ambitions towards sustainable transport.	No – highways schemes are likely to be prohibitively expensive and difficult to implement, and against ambitions towards sustainable transport.
	Sustainable Transport	Yes – an increase in population coupled with ambitions towards sustainable transport means measures to meet additional demand are likely to be required. These may or may not require hard infrastructure (e.g. bus priority measures). It is not possible to estimate what the requirements would be at this stage.	Yes – an increase in population coupled with ambitions towards sustainable transport means measures to meet additional demand are likely to be required. These may or may not require hard infrastructure (e.g. bus priority measures). It is not possible to estimate what the requirements would be at this stage.	Yes – an increase in population coupled with ambitions towards sustainable transport means measures to meet additional demand are likely to be required. These may or may not require hard infrastructure (e.g. bus priority measures). It is not possible to estimate what the requirements would be at this stage.
	Air Travel	No – existing upgrade plans at Jersey Airport meet the need well beyond that of the enlarged population.	No – existing upgrade plans at Jersey Airport meet the need well beyond that of the enlarged population.	No – existing upgrade plans at Jersey Airport meet the need well beyond that of the enlarged population.
	Sea Travel	No – The Port of Jersey’s expansion plans are expected to meet future need well beyond that of the enlarged population.	No – The Port of Jersey’s expansion plans are expected to meet future need well beyond that of the enlarged population.	No – The Port of Jersey’s expansion plans are expected to meet future need well beyond that of the enlarged population.
	Early Years	Yes - future growth is highly expected to impact on the amount of education places required, although complex demographic trends and the complex education system (with pupils spread across non-fee-paying, fee-paying, private and home schooling) means that the impact of growth may not be straightforward. The Department for Children, Young People, Education and Skills will need to advise on the future infrastructure requirements.		
Education	Primary Education			
	Secondary Education			
	Special Educational Needs			
	Tertiary and Higher Education and Adult Education and Skills	Unknown – Highlands College redevelopment is likely to meet the needs of an enlarged population, although its places capacity should be considered as plans progress.		

Topic	Sub-Topic	Scenario 1 (net +800 ppa)	Scenario 2 (net +1,000 ppa)	Scenario 3 (net +1,500 ppa)
Health	Primary Care	Unknown – As the Jersey Care Model is implemented, it is likely that services currently provided in the General Hospital will be re-located into GP surgeries, and/or housed within existing community facilities (e.g. parish halls). The infrastructure requirements are therefore not known at this stage.		
	Secondary Care	No – upgrades as part of the new hospital are expected to meet future need well beyond that of the enlarged population.	No – upgrades as part of the new hospital are expected to meet future need well beyond that of the enlarged population.	No – upgrades as part of the new hospital are expected to meet future need well beyond that of the enlarged population.
Community Facilities	Community Facilities	Unknown – demand for community facilities (e.g. parish halls and youth centres) will be heavily influenced by the location of future growth, as well as the current usage and quality of existing facilities.		
	Sports and Leisure	No – upgrades set out in Sport Facility Report would meet future need well beyond that of the enlarged population.	No – upgrades set out in Sport Facility Report would meet future need well beyond that of the enlarged population.	No – upgrades set out in Sport Facility Report would meet future need well beyond that of the enlarged population.
	Cultural and Tourism Facilities (including libraries)	Unknown – if standards applied in other jurisdictions were applied ¹⁹ it would mean an increase of 200 sqm of library space over the plan period; however, other models of provision could be considered.	Unknown – if standards applied in other jurisdictions were applied it would mean an increase of 250 sqm of library space over the plan period; however, other models of provision could be considered.	Unknown – if standards applied in other jurisdictions were applied it would mean an increase of 375 sqm of library space over the plan period; however, other models of provision could be considered.
Open Space	Open Space (including children's play)	Yes – if the standards set out in the Outdoor Open Space, Sport and Recreation Study were met for new development, it would mean a requirement of 4ha parks, 2ha amenity greenspace, 0.8ha play space. However, this does not take into account local existing over/underprovision and further consideration on how the Island Plan will respond is required.	Yes – if the standards set out in the Outdoor Open Space, Sport and Recreation Study were met for new development, it would mean a requirement of 5ha parks, 2.5ha amenity greenspace, 1ha play space. However, this does not take into account local existing over/underprovision and further consideration on how the Island Plan will respond is required.	Yes – if the standards set out in the Outdoor Open Space, Sport and Recreation Study were met for new development, it would mean a requirement of 5ha parks, 2.5ha amenity greenspace, 1ha play space. However, this does not take into account local existing over/underprovision and further consideration on how the Island Plan will respond is required.
Emergency Services and Justice	Police Services	Yes – accredited firearms range and sexual assault centre required (note, required to meet emerging needs and not explicitly related to an enlarged population).	Yes – accredited firearms range and sexual assault centre required (note, required to meet emerging needs and not explicitly related to an enlarged population).	Yes – accredited firearms range and sexual assault centre required (note, required to meet emerging needs and not explicitly related to an enlarged population).

¹⁹ Standards vary by English local authority – examples include 23 sqm per 1,000 population for Oxfordshire, 30 sqm per 1,000 population for Essex and around 21.5-37.5 sqm per 1,000 population for Cambridgeshire Council. For the purposes of this assessment, a standard of 25sqm per 1,000 population has been used across the scenarios.

Topic	Sub-Topic	Scenario 1 (net +800 ppa)	Scenario 2 (net +1,000 ppa)	Scenario 3 (net +1,500 ppa)
	Fire and Rescue Services	No – plans for joint Ambulance and Fire and Rescue facility would meet future need the enlarged population. If located in a geographically appropriate place, the need for a station at St Brelade may be removed.	No – plans for joint Ambulance and Fire and Rescue facility would meet future need the enlarged population. If located in a geographically appropriate place, the need for a station at St Brelade may be removed.	No – plans for joint Ambulance and Fire and Rescue facility would meet future need the enlarged population. If located in a geographically appropriate place, the need for a station at St Brelade may be removed.
	Ambulance Services	No – plans for joint Ambulance and Fire and Rescue facility would meet future need the enlarged population. An increased population may result in an additional demand for patient transport services, however, this has not been quantified.	No – plans for joint Ambulance and Fire and Rescue facility would meet future need the enlarged population. An increased population may result in an additional demand for patient transport services, however, this has not been quantified.	No – plans for joint Ambulance and Fire and Rescue facility would meet future need the enlarged population. An increased population may result in an additional demand for patient transport services, however, this has not been quantified.
	Justice Facilities	No – existing facilities expected to be able to meet future need of the enlarged population.	No – existing facilities expected to be able to meet future need of the enlarged population.	No – existing facilities expected to be able to meet future need of the enlarged population.
Utilities	Energy	Yes – infrastructure likely to be required to import or generate electricity required to meet net zero targets.	Yes – infrastructure likely to be required to import or generate electricity required to meet net zero targets.	Yes – infrastructure likely to be required to import or generate electricity required to meet net zero targets.
	Water	Yes – intervention is required to meet future water needs (projects to be assessed and confirmed in Phase 2 of the Water Resource and Drought Management Plan).	Yes – intervention is required to meet future water needs (projects to be assessed and confirmed in Phase 2 of the Water Resource and Drought Management Plan).	Yes – intervention is required to meet future water needs (projects to be assessed and confirmed in Phase 2 of the Water Resource and Drought Management Plan).
	Waste Water (treatment²⁰)	No – population expected to be (just) within the 118,000 ²¹ capacity of the new Bellozanne sewage treatment works.	Yes – population expected to exceed the 118,000 capacity of the new Bellozanne sewage treatment works (although within the additional buffer capacity).	Yes – population expected to exceed the 118,000 capacity of the new Bellozanne sewage treatment works (although within the additional buffer capacity).

²⁰ As set out in Section 4.3, network capacity is not considered as part of this Island-wide assessment.

²¹ Calculations based on an end-2018 population of 106,800 (Statistics Jersey) and an assumed population growth in 2019 and 2020 of +1,200 each year (based on 2018 trends), and therefore a population at the start of the plan period of 109,200. Further work by Statistics Jersey may refine population estimates for the start of the plan period.

Topic	Sub-Topic	Scenario 1 (net +800 ppa)	Scenario 2 (net +1,000 ppa)	Scenario 3 (net +1,500 ppa)
	Digital and Communications	Yes – rollout of 5G technology will require additional infrastructure (note, required to meet needs of changing technology and not explicitly related to an enlarged population).	Yes – rollout of 5G technology will require additional infrastructure (note, required to meet needs of changing technology and not explicitly related to an enlarged population).	Yes – rollout of 5G technology will require additional infrastructure (note, required to meet needs of changing technology and not explicitly related to an enlarged population).
Safety	Waste	Yes – additional infrastructure for solid waste management required.	Yes – additional infrastructure for solid waste management required.	Yes – additional infrastructure for solid waste management required.
	Flood Protection and Drainage	Yes – long term intervention set out in the Shoreline Management Plan (note, required to meet changing environmental conditions and not explicitly related to an enlarged population).	Yes – long term intervention set out in the Shoreline Management Plan (note, required to meet changing environmental conditions and not explicitly related to an enlarged population).	Yes – long term intervention set out in the Shoreline Management Plan (note, required to meet changing environmental conditions and not explicitly related to an enlarged population).

