Utilities and strategic infrastructure

Strategic infrastructure development

Infrastructure is necessary across all parts of island-life, underpinning the social, environmental and economic construct. It varies significantly in its physical form, including roads, ports, schools, open spaces and the utilities and services, such as water, drainage, and electricity services.

To make progress in understanding the island's current and future infrastructure needs, the Infrastructure Capacity Study (ICS)[1] has been undertaken. The ICS 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 changes in Jersey's population, demographic profile and economic outlook.

Specifically, the ICS:

- 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; and
- establishes, in the form of an Infrastructure Delivery Schedule, what infrastructure is required, when, and who will be responsible to deliver it.

For infrastructure needs beyond this bridging Island Plan period, the Infrastructure Capacity Study will be considered alongside the findings of the 2021 Census, future economic and population policies, and technological developments. This will be set out in a long-term infrastructure roadmap for Jersey, which would be used to inform future Island Plans and other strategic planning workstreams across Government (SP5 – an infrastructure roadmap for Jersey[2]).

The development of the ICS has been useful to better understand near- to mid-term infrastructure requirements. Where these are clearly known, the plan has made provision to deal with them. There is, however, always a possibility for new or different infrastructure needs to arise during the plan period, and there is a need for the plan to provide some flexibility to be able to accommodate this, should it arise.

Larger or more strategic scale infrastructure needs inevitably present greater, more complex planning challenges. It is important for the plan to have sufficient scope to deal with those needs, where their delivery is in the interests of the community, particularly where a coast or countryside location will be necessary.

[1] Infrastructure Capacity Study

[2] See Strategic proposal 5 – an infrastructure roadmap for Jersey in Volume one

Policy UI1 – Strategic infrastructure delivery

Development proposals for strategically significant infrastructure will be supported where:

1. the development is proven to meet a strategic need, in the interests of the community;
2. the development will be in the built-up area;
3. in the case of the development outside the built-up area, sufficient work has been undertaken to consider reasonable alternative sites for the development, and that the selected site represents the most appropriate and sustainable option;
4. its landscape and amenity impact will be acceptable; and
5. its environmental impact has been appropriately identified and mitigated against, where possible, and compensated for, where necessary.

Proposals that do not appropriately meet these criteria will not be supported.

Utilities infrastructure facilities

Utility companies in the island provide services to supply water, electricity, gas and telecommunications to homes and businesses. Each of the utility companies will have different land-use requirements during the plan period. These requirements may be part of an ongoing programme of development by the company, or a result of changes in technology that may occur.

The development of utility infrastructure that cannot be met within existing service infrastructure over the plan period should, where possible, be provided within the grounds of existing facilities; or, where this is not feasible, located within the built-up area.

Where new or extended facilities are required, particularly where they have a coastal or countryside location, there will need to be sufficient operational justification for development in such a location having regard to the proven need for the new or extended facility and a full and detailed exploration of alternative methods of meeting that need. Where required, this may form part of an environment impact assessment, depending on the scale and form of the infrastructure to be provided.

An Infrastructure Capacity Study[3], and a Minerals, Waste and Water Study[4] have been undertaken to inform the Island Plan. Together, they outline a range of inter-related infrastructure requirements that are likely to unfold over time, some of which may come forward for development as proposals over the plan period, such as water and wastewater infrastructure, and ongoing developments for telecommunications.

Requirements for more significant water utility infrastructure development beyond the grounds of existing facilities may emerge during this, or in the subsequent plan period. The need for a water strategy for the island is recognised and will be prioritised during the plan period (see Proposal – water resource management strategy later in this chapter). This, coupled with other water resource policies, will be critical to ensuring the longer-term sustainability of water resources and the adequacy of the associated infrastructure. In recognition of the longer-term supply challenges and the lead-in time for major utility

[3] Infrastructure Capacity Study
[4] Minerals Waste and Water Study

infrastructure improvements, and in light of the findings of the Integrated Minerals, Waste and Water Study, the plan supports the principle of enhancing existing water infrastructure, specifically:

- increased capacity at Val de La Mare Reservoir;
- increased capacity at La Rosière desalination plant (or a new desalination plant); and
- continued leakage reduction works.

Policy UI2 – Utilities infrastructure facilities

Proposals for the development of new, extended or altered utility infrastructure facilities will be supported where it is:

1. within the built-up area;
2. on the site of existing utility infrastructure.

Proposals for the development of new utility infrastructure facilities outside the built-up area or a site of existing utility infrastructure facilities will only be supported in exceptional circumstances, where:

1. the proposed development is required to meet a proven island need; and
2. it can be demonstrated that the development is essential to the delivery and continuation of services and cannot reasonably be met through alternative sites, service delivery arrangements, or co-location with other services.

The alternative development of utility infrastructure facilities will only be supported where it can be demonstrated that they are no longer required for utility infrastructure purposes.

Water resource management

Analysis by Jersey Water[5] identifies 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, and this is associated with increased water consumption and less predictable rainfall. Simultaneously, the population is expected to continue to grow over the coming decades.

In 2017, Jersey Water supplied approximately 7.3 billion litres of mains water to approximately 40,500 homes and businesses. It is estimated that approximately 92% of households in the island are supplied by Jersey Water. In recent years, total water consumption has gradually decreased, despite a growing population. However, consumption in the 2015-2017 period was elevated. This is attributed to issues associated with a rise in leakage recorded by an increase in customer metering.

Water for treatment by the company 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 an 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.

[5] Jersey Water IPR submission (2019)

Whilst the water network is generally oversized and could accommodate further demand, there are pinch points at certain points of the network, and there are predicted deficits to available supply under severe drought conditions.

Jersey Water propose that action needs to be taken to address a current and increasing supply and demand deficit. As part of their submission to the Island Plan Review Strategic Issues and Options consultation the company also emphasised the need to act on both the supply-side and the demand side.

In response to this submission, the Government of Jersey undertook an integrated Minerals, Waste and Water Study[6], which sought to understand the current and future issues in relation to strategic water resource infrastructure needs, within the context of linked pressures arising from the island's minerals and waste resources. The recommendations of the Minerals Waste and Water Study include the need to develop a water resource management strategy, with Jersey Water, to inform future infrastructure planning and the subsequent Island Plan.

Proposal – A water resource management strategy for Jersey

The Government of Jersey and Jersey Water will work together to prepare a water resource management strategy for Jersey in order to inform the next Island Plan.

The strategy will consider:

- both supply and demand, including water efficiency-related planning policies and building bye-laws, and demand management through non-household water efficiency and intensive media campaigns; and
- potential requirements for infrastructure enhancement, expansion, or provision.

The supply and use of water

No development should be permitted unless it can be shown that adequate water supplies are available. In most cases, it will be necessary to connect to the treated mains water supply and, where appropriate, advice will be sought from Jersey Water on whether or not the proposals will have an unacceptable impact on the capacity of mains water supplies.

There are clear advantages to be had from using water more efficiently and reducing the amount of water that is wasted, both for the customer (in terms of reduced bills) and the supplier. However, there are also wider and longer-term sustainability advantages associated with reducing the consumption of energy as a result of the processes required for providing water of drinking quality.

Jersey Water has in place an extensive programme to reduce the waste of treated water, involving renewing and repairing leaks in mains, installing water meters when properties change ownership, hosepipe charges and public information material on using water wisely. However, land use planning and building bye-laws also have an important role to play by reducing consumption and encouraging greater use of grey water and attenuated storm water, and more efficient use of white water, in new developments. A wide variety of measures can be included in new developments to minimise water consumption, including:

[6] Minerals Waste and Water Study

- installation of economical and efficient fixtures and appliances (e.g. effective showers, 'water saving' washing machines, low flush WCs and spray taps);
- use of low-quality grey and storm water for toilet flushing, and reduced capacity of toilet flushes; and
- provision for the collection, storage and use of storm water for landscaping; and recycling of waste water for certain uses.

Where the production of wastewater cannot be avoided, every effort should be made to minimise the volumes that have to be managed, and thereby reduce demand on surface and foul water drainage systems. This is also important for households which rely on tight tanks, septic tanks and other private sewerage systems.

Policy UI3 – Supply and use of water

Development will only be supported where adequate public water supply can and will be made available prior to the first use and occupation of the development.

New development should incorporate all practicable water conservation and management measures to reduce water consumption and help conserve the island's water resources.

Large-scale development proposals (with a floorspace of 200sqm and above, or five or more dwellings) that require a water supply will only be supported where they clearly demonstrate how water consumption will be minimised to the lowest practicable levels including how grey and/or storm water recycling has been incorporated into the design.

A water conservation statement must be provided, as part of a design statement or statement of sustainability and will be subject to conditions to ensure the implementation of water conservation and management measures prior to the first occupation and use of the development.

Telecommunications and other masts and equipment

The Government of Jersey supports 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, increasing productivity and consequently, improving the living standards of islanders.

To continue making progress, it is likely that an increase in physical telecommunication infrastructure will be required over the coming years. This will be through ongoing improvements to the 4G network and an eventual rollout of new infrastructure with enhanced capabilities.

Whilst still a developing technology, the size and appearance of the antennae required to make significant enhancements to the capability and capacity of our telecoms infrastructure will inevitably require a densification and proliferation of equipment. To what degree this happens will be defined by the extent of Jersey's ambition to advance its digital capabilities, and the extent of technological change. In any event, we can expect a growing tension between the need to deliver the infrastructure required to continue to

improve digital capabilities, and the desire to protect the island's urban and rural landscape character from the impacts of mast and equipment proliferation.

The previous Island Plan sought to encourage network sharing with the objective to reduce the amount of additional infrastructure needed across the island. However, it is recognised that the planning system cannot single-handedly effect the change needed to secure a high degree of uptake in network sharing arrangements, and more work is required to ensure that it is actively incentivised, both before and throughout the planning process, in order to properly control infrastructure proliferation in the long-term.

Consequently, in addition to the policy framework established by the Island Plan, the Minister for the Environment will also undertake further work with the Minister for Economic Development, Tourism, Sport and Culture to review and improve incentives and regulatory requirements in relation to network sharing, which will extend to reviewing the form of planning regulation required for new and replacement infrastructure. The key aim of this review will be to ensure that the controls and incentives that surround telecoms are designed to manage the potential impact of infrastructure proliferation adequately and reasonably.

Proposal – Review of telecommunication infrastructure incentives and requirements

The Minister for the Environment will work with the Minister for Economic Development, Tourism, Sport and Culture to achieve improved incentives and requirements for network sharing across service providers. The review will also explore:

- how changes might be made to the Planning and Building (General Development) Order to improve and simplify how upgrades to existing infrastructure can be dealt with, whilst supporting the delivery of a sufficient and reliable telecoms network for Jersey; and
- how new supplementary planning guidance might help manage the visual impact associated with telecommunications and other masts, satellites and antennae.

With regard to health concerns raised in relation to new masts and antenna, all new and existing infrastructure on the island will continue to be subject to ICNIRP[7] certification as a requirement of both licencing and the grant of planning permission.

Policy UI4 – Telecoms and other masts and equipment

New telecommunication equipment and other masts and antenna will be supported where the proposed development is designed and sited in the least-visually intrusive way, having regard to its urban, rural or coastal context, whilst also considering the technical requirements for the location of the infrastructure and the need for functionality. In some instances, this may include specific measures to disguise or shroud the equipment in a way that is appropriate to its setting.

In respect of telecommunications, network sharing will be expected in order to reduce the necessity for additional infrastructure. The development of new, individual, telecommunication equipment and other masts and antenna will only be supported where it can be demonstrated that all practicable possibilities of sharing existing

[7] International Commission for Non-Ionising Radiation Protection

facilities have been fully explored and found to be unfeasible or unacceptable. Development may not be supported if it is apparent that the equipment will not allow for future network sharing opportunities.

Where network sharing is not possible, co-location of equipment will be encouraged, where this is appropriate.

In respect of proposals to serve an individual development such as large housing schemes, carefully sited communal infrastructure should be provided, which must be adequate upon first occupation of the development, to avoid unnecessary visual clutter associated with a proliferation of individual masts, satellites and antennae.