

3.6 Infrastructure and services

Key concepts	
(1)	<i>Infrastructure</i> and services that are provided in a co-ordinated, timely and efficient manner, in conjunction with development.
(2)	Protection of major <i>infrastructure</i> corridors, <i>sites</i> and other elements.
(3)	Co-location of <i>infrastructure</i> corridors and facilities wherever possible.
(4)	Innovative water cycle infrastructure which reduces water consumption through source substitution and demand management measures.
(5)	Management of water through an integrated water management approach.
(6)	Reduction in the reliance on non-renewable energy sources with significant increases in local energy generation from renewable resources.
(7)	<i>Infrastructure</i> and services which maximise the efficient use of natural resources and avoid adverse impacts on the natural environment and local communities.
(8)	Establishment of high quality information technology and telecommunications infrastructure.
(9)	Reduction in waste generation with significant increases in recycling, reuse and energy recovery.
(10)	Continued development of high quality open space and community facility infrastructure networks that contribute to a sense of belonging and participation in community life.

3.6.1 Strategic outcomes

The strategic outcomes for the infrastructure and services theme are the following:-

- (a) In 2031, coordinated, timely and efficient *infrastructure* and services are provided to communities and places on the Sunshine Coast to meet the long-term needs of the community, support growth, maintain a quality lifestyle and facilitate regional economic development.
- (b) *Infrastructure* and services are designed to maximise the capacity and flexibility of existing and proposed networks, ensure the efficient use of natural resources and avoid or minimise adverse environmental and community impacts.
- (c) *Infrastructure* in major development areas is aligned with development to ensure communities are well serviced and connected from the first stages of the development. This *infrastructure* augments regional networks and addresses *infrastructure* shortfalls on the Sunshine Coast.
- (d) Major *infrastructure* corridors, *sites* and other elements that service the Sunshine Coast and other parts of metropolitan South East Queensland are protected and designed for co-location of services where possible.
- (e) Innovative water supply and sewage treatment systems service community needs whilst protecting community health, safety and the environment. Water consumption is minimised through reuse, use of alternative sources and demand reduction measures.
- (f) Stormwater is managed as part of an integrated water management approach to preserve environmental flows, protect and enhance water quality and maximise opportunities for the reclamation and reuse of stormwater.
- (g) The Sunshine Coast has reduced its reliance on non-renewable energy sources with the development of viable, low emission local energy generation through renewable sources such as solar farms.
- (h) A high speed digital telecommunications network is in place that supports technology based enterprise on the Sunshine Coast and a broader local economy within a global business and communications environment.

- (i) The Sunshine Coast has reduced its waste and maximised recycling, reuse and energy recovery to minimise the need for the disposal of waste to landfill.
- (j) Communities have access to high quality and well located open space and community facilities which are easy to access, contribute to the character and identity of places and improve opportunities for active living, community health and wellbeing and social inclusion.

Implementation framework

The elements and specific outcomes for the infrastructure and services theme are the following:-

3.6.2 Element 1 – Coordinated and sustainable infrastructure

3.6.2.1 Specific outcomes

- (a) *Infrastructure* is provided in a coordinated manner and in a sequence that is consistent with the preferred pattern of settlement.
- (b) Development occurs in a coordinated manner and logical sequence in order to:-
 - (i) maximise the use and capacity of existing *infrastructure*;
 - (ii) maximise the efficiency of new *infrastructure* provision; and
 - (iii) promote the long term social, economic, financial and environmental sustainability of the Sunshine Coast.
- (c) Development contributes a fair and equitable share of the cost of providing *infrastructure* in accordance with the local government infrastructure plan and any other applicable *infrastructure* instrument.
- (d) *Infrastructure* is designed with sufficient capacity and flexibility to accommodate future needs and maximise *infrastructure* delivery options.
- (e) *Infrastructure* is designed to respond to the needs, scale, character and identity of local communities including coastal urban, rural town and village, rural residential and rural communities.
- (f) *Infrastructure* is designed, constructed and operated to maximise the efficient use of water and energy.
- (g) *Infrastructure* is located, designed, constructed and operated to maintain public health and safety.
- (h) *Infrastructure* is located, designed, constructed and operated to avoid as far as practicable, or where avoidance is not practicable, minimise and mitigate, adverse environmental impacts.
- (i) *Infrastructure* is located and designed to protect the landscape amenity of the Sunshine Coast and make a positive contribution to the landscape character, identity and sense of place of the locality.
- (j) *Infrastructure* provision in major development areas is subject to a development specific *infrastructure* instrument.

3.6.3 Element 2 – Protection of infrastructure corridors and sites

3.6.3.1 Specific outcomes

- (a) Existing and planned major *infrastructure* corridors, *sites* and other elements, including those identified conceptually on **Strategic Framework Map SFM 4 (Infrastructure elements)**, are secured and protected to support the long-term *infrastructure* needs of the Sunshine Coast community.

- (b) Major *infrastructure* corridors, *sites* and other elements are managed in a manner that meets the needs of the community and avoids or minimises environmental and amenity impacts as far as practicable.
- (c) The co-location of *infrastructure* corridors, *sites* and services is achieved wherever practicable and appropriate.

3.6.4 Element 3 – Water supply and sewerage infrastructure

3.6.4.1 Specific outcomes

- (a) Water supply and sewerage infrastructure is provided in a manner that maintains the health and wellbeing of the community and environment.
- (b) Development in urban areas is connected to the reticulated water supply infrastructure network and sewerage infrastructure network, or has in place a separate urban water cycle management system approved by Unitywater.
- (c) Development in rural residential and rural areas has a sustainable on-site potable water supply system (where connection to the reticulated water supply system is not available) and an on-site effluent treatment and disposal system that protects human health, amenity and the natural environment.
- (d) Water consumption is minimised through the implementation of reuse, source substitution and demand reduction measures.
- (e) Development with high water use demands, but which does not require the use of potable water, maximises opportunities to use water from non-potable sources to meet the development's water needs.

3.6.5 Element 4 – Stormwater infrastructure

3.6.5.1 Specific outcomes

- (a) Stormwater infrastructure is provided in a manner that maintains the health and wellbeing of the community and environment.
- (b) Water sensitive urban design (WSUD) principles are effectively integrated into the layout and design of development to provide for the sustainable collection, treatment and conveyance of stormwater.
- (c) Stormwater infrastructure provides for stormwater capture, treatment, storage and re-use in accordance with an integrated water management plan.
- (d) Stormwater infrastructure provides for the conveyance of stormwater such that there is no ponding of stormwater on-site or any hazard to the safety of persons or property.
- (e) Stormwater is treated and managed in a manner that protects environmental flows, the health of natural ecosystems and the quality of terrestrial and coastal waters.

3.6.6 Element 5 – Energy infrastructure

3.6.6.1 Specific outcomes

- (a) The Sunshine Coast Region is serviced by energy infrastructure that meets the needs of the community.
- (b) Energy infrastructure is provided in a manner that maintains the health and wellbeing of the community.
- (c) Demand for centralised energy generation and *infrastructure* is minimised through development incorporating *best practice* energy efficient design and maximising the use of renewable and sustainable energy supplies and sources.

- (d) Development is encouraged to satisfy all or part of its energy needs from renewable energy sources.
- (e) Development for renewable energy projects is encouraged where appropriately located and sensitively designed to protect agricultural land and regional landscape values and avoid adverse amenity impacts.
- (f) Development within greenfield or infill major development areas provides land for energy infrastructure, including land for sub-stations and transmission lines, required to service or traverse the area.
- (g) In urban areas, and elsewhere where appropriate and practicable, electricity supply lines are located underground.

3.6.7 Element 6 – Telecommunications infrastructure

3.6.7.1 Specific outcomes

- (a) The Sunshine Coast Region is serviced by telecommunications infrastructure that meets the needs of the community and supports economic development.
- (b) The provision of high speed internet and telecommunications infrastructure is facilitated. Where technically feasible, development provides:-
 - (i) open access broadband telecommunications infrastructure including optic fibre to every premises; and
 - (ii) broadband wireless coverage to every premises.
- (c) Telecommunications infrastructure is:-
 - (i) located and designed to ensure its safe deployment and operation;
 - (ii) integrated in a sustainable and attractive manner which does not unduly impact on the amenity and landscape values of the area; and
 - (iii) co-located wherever possible.
- (d) Connection to telecommunications infrastructure is provided in accordance with the requirements of the relevant telecommunications service entity.

3.6.8 Element 7 – Waste management and recycling infrastructure

3.6.8.1 Specific outcomes

- (a) Waste management and recycling infrastructure and practices meet the needs of the community and avoid, or where avoidance is not practicable, otherwise minimise and mitigate, environmental impacts.
- (b) The generation of waste materials during construction and operational phases of development is minimised by incorporating measures that maximise opportunities for reuse, recycling and energy recovery.
- (c) Development provides storage and collection facilities for waste and recyclable materials that are appropriate and adequate for the type and amount of waste material generated.
- (d) Development provides for safe and efficient collection of waste and recyclable materials that minimises impacts on adjoining properties.
- (e) To protect the function and long term expansion opportunities of landfill and waste transfer station facilities, appropriate separation distances and *buffers* are provided and maintained to avoid encroachment by incompatible land uses and development.

3.6.9 Element 8 – Open space infrastructure

3.6.9.1 Specific outcomes

- (a) All communities are provided with equitable access to sport and recreation opportunities within the context of the planned open space infrastructure network.
- (b) Development provides and/or contributes to the provision of land and/or embellishments for *public open space* that meets the needs of the community and is consistent with the planned open space infrastructure network.
- (c) *Parks*, open space and sport and recreational facilities are appropriately located and designed to:-
 - (i) provide for a diverse range of open space values, functions, experiences and settings;
 - (ii) maximise integration with the broader open space network, community facilities, activity centres and residential areas to provide high levels of accessibility, proximity and connectivity for all users;
 - (iii) provide for the shared use of facilities where appropriate and practicable;
 - (iv) provide opportunities for markets, community gardens and community assembly and meeting places where appropriate and practicable; and
 - (v) enhance the character, lifestyle and environment attributes of the Sunshine Coast as a whole.
- (d) The open space and sport and recreation resources of the Sunshine Coast Region are protected from encroachment by incompatible land uses and other adverse impacts of development.
- (e) Development within major development areas contributes to establishing, maintaining and protecting green corridors of open space within urban areas to provide connectivity with the natural environment and landscape of the broader open space network of the Sunshine Coast Region.
- (f) Public park infrastructure and associated open space and sport and recreation facilities are designed and managed in accordance with *best practice* sustainability principles so as to:-
 - (i) maintain, protect and enhance the values and attributes of open space and *ecologically important areas*;
 - (ii) be compatible with the long term management of the values and other uses of the park;
 - (iii) maintain and protect the amenity of surrounding areas and land uses;
 - (iv) be safe for public use and maximise outdoor comfort for users; and
 - (v) minimise opportunities for crime and vandalism.

3.6.10 Element 9 – Community facilities infrastructure

3.6.10.1 Specific outcomes

- (a) All communities are provided with equitable access to a range of community facilities within the context of the planned community facilities infrastructure network.
- (b) Development provides and/or contributes to the provision of community facilities and/or land for community facilities that meets the needs of the community and is consistent with the planned community facilities infrastructure network.
- (c) Existing community facilities and future *sites* for community facilities are protected from encroachment by incompatible land uses and other adverse impacts of development.
- (d) Community and cultural facilities:-

- (i) are appropriately located to create community hubs which provide a focal point for community activity and interaction;
- (ii) provide for the co-location of complementary services where appropriate;
- (iii) maximise access and connectivity to public transport and *active transport* networks;
- (iv) are successfully integrated with other community facilities, recreational uses, residential areas and activity centres in the urban fabric; and
- (v) are designed to be attractive, address and enhance the public realm, be safe and user friendly and appropriate to the *site* and locality.

3.6.11 Strategic framework maps



Strategic Framework Map SFM 4 (Infrastructure elements) identifies elements of the strategic framework as relevant to the infrastructure and services theme¹² and in particular identifies the following existing and planned *infrastructure*:-

- (a) major water supply and sewerage infrastructure *sites* and corridors;
- (b) major energy infrastructure *sites* and corridors;
- (c) major telecommunications infrastructure *sites* and corridors; and
- (d) major resource recovery and waste management facilities.



¹² Editor's note—not all elements of the infrastructure and services theme can be spatially represented.

Strategic Framework Map 4 Infrastructure Elements



Major Water Supply and Sewerage Infrastructure

-  Water Supply Pipeline
-  Sewage Treatment Plant


Major Energy Infrastructure

-  Gas Pipeline (Easement Only)
-  High Voltage Electricity Transmission Line



Major Telecommunications Infrastructure

-  Broadband Infrastructure
-  Wireless Base Station








Major Waste Management Infrastructure

-  Resource Recovery and Waste Management Facility

Land Use Categories

-  Urban Area
-  Rural Residential Area

Other Elements

-  Local Government Area Boundary
-  Declared Master Planned Area (see Part 10 - Other Plans)
-  Land within Development Control Plan 1 - Kawana Waters which is the subject of the Kawana Waters Development Agreement (see Section 1.2 - Planning Scheme Components)
-  Priority Development Area (subject to the *Economic Development Act 2012*) (Note 1)
-  Ocean, Waterways and Waterbodies
-  Road
-  Rail

Note 1 :The Caloundra South Priority Development Area (PDA) is subject to the *Economic Development Act 2012*. The Infrastructure elements identified on this map for the Caloundra South PDA reflects the Caloundra South Priority Development Area Infrastructure Agreement (Local Government Infrastructure), dated 2 November 2015.

This Strategic Framework map graphically represents elements of the Infrastructure theme at a conceptual level and is not intended to be interrogated at the cadastre level.

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Approx Scale @ A1 1:120,000



Strategic Framework Map SFM4