Part 4. Local Government infrastructure plan

4.1 Preliminary

(1) This local government infrastructure plan has been prepared in accordance with the requirements of the *Planning Act 2016*.

(2) The purpose of the local government infrastructure plan is to:

(a) integrate infrastructure planning with the land use planning identified in the planning scheme;

(b) provide transparency regarding a local government's intentions for the provision of trunk infrastructure;

(c) enable a local government to estimate the cost of infrastructure provision to assist its long term financial planning;

(d) ensure that trunk infrastructure is planned and provided in an efficient and orderly manner; and

(e) provide a basis for the imposition of conditions about infrastructure on development approvals.

(3) The local government infrastructure plan:

(a) states in Section 4.2 (planning assumptions) the assumptions about future growth and urban development including the assumptions of demand for each trunk infrastructure network;

(b) identifies in Section 4.3 (priority infrastructure area) the prioritised area to accommodate urban growth up to 2036;

(c) states in Section 4.4 (desired standards of service) for each trunk infrastructure network the desired standard of performance;

(d) identifies in Sections 4.5 (plans for trunk infrastructure) the existing and future trunk infrastructure for the following networks:

(i) water supply;

(ii) sewerage;

(iii) transport;

(iv) parks and land for community facilities;

(e) provides a list of supporting documents that assist in the interpretation of the local government infrastructure plan in Section 4.6 (extrinsic material).

4.2 Planning Assumptions

(1) The planning assumptions state the assumptions about:

(a) population and employment growth;

(b) the type, scale, location and timing of development including the demand for each trunk infrastructure network.

(2) The planning assumptions, together with the desired standards of service, form the basis for the planning of the trunk infrastructure networks and the determination of the priority infrastructure area.

(3) The planning assumptions have been prepared for:

(a) the base date (2021) and the following projection years to accord with future Australian Bureau of Statistics census years:

(i) mid 2026;

(ii) mid 2031;

(iii) mid 2036;

(b) the LGIP development types in column 2 that include the uses in column 3 of Table 4.2.1;

(c) the projection areas identified on Local Government Infrastructure Plan PIA-01 – Priority infrastructure area and projections map in Schedule 3 – Local government infrastructure plan mapping and tables.

Table 4.2.1—Relationship between LGIP development categories, LGIP development types and uses

Column 1 LGIP development category	Column 2 LGIP development type	Column 3 Uses
Residential development	Single Dwelling	Dwelling house Dual occupancy Caretakers accommodation
	Multiple Dwelling	Multiple dwelling Hotel (accommodation component) Short-term accommodation Rooming accommodation Retirement facility Relocatable home park
	Other	Dwelling unit Tourist park Community residence Nature based tourism (accommodation component) Non-resident workforce accommodation Resort complex (accommodation component) Rural workers' accommodation
Non-residential development	Commercial	Bulk goods: • Agricultural supplies store • Bulk landscape supplies • Garden centre • Hardware and trade supplies • Outdoor sales

Column 1 LGIP development category	Column 2 LGIP development type	Column 3 Uses
		• Showroom Office: • Office • Sales office
	Retail	Adult store Bar Food and drink outlet Resort complex (retail component) Service industry Service station Shop Shopping centre
	Industrial	Low impact industry Medium impact industry Research and technology industry Warehouse Marine industry High impact industry Special industry Low impact rural industry: • Animal husbandry • Cropping • Permanent plantation High impact rural industry: • Aquaculture • Extractive industry • Intensive animal industry • Intensive horticulture • Rural industry • Wholesale nursery • Winery
	Community	Places of assembly: • Child care centre • Club • Community care centre • Community use • Educational establishment • Function facility • Funeral parlour • Place of worship Entertainment: • Hotel • Nightclub entertainment facility • Theatre Sport and recreation: • Indoor sport and recreation

Column 1 LGIP development category	Column 2 LGIP development type	Column 3 Uses
		• Outdoor sport and recreation • Nature based tourism (recreation tourism component) Essential services: • Detention facility • Emergency services • Health care services • Hospital • Residential care facility • Veterinary services
	Other	Specialised uses: • Air services • Animal keeping • Brothel • Car wash • Crematorium • Market • Major sport, recreation and entertainment facility • Motor sport facility • Outstation • Parking station • Port services • Renewable energy facility • Tourist attraction • Transport depot • Utility installation Minor uses: • Cemetery • Environment facility • Home based business • Landing • Major electricity infrastructure • Park • Roadside stall • Substation • Telecommunications facility • Temporary use

(4) Details of the methodology used to prepare the planning assumptions are stated in the extrinsic material (refer Section 4.6).

4.2.1 Population and Employment Growth

(1) A summary of the assumptions about population and employment growth for the planning scheme area is stated in Table 4.2.1.1—Population and employment assumptions summary.

Table 4.2.1.1—Population and employment assumptions summary

Column 1 Description	Column 2 Assumptions				
	Base date 2021	2026	2031	2036	Ultimate development
Population	44,739	50,908	56,213	61,552	87,390
Employment	7,064	7,273	7,650	8,278	20,012

(2) Detailed assumptions about growth for each projection area and LGIP development type category are identified in the following tables in Schedule 3–Local government infrastructure plan mapping and tables:

(a) for population, Table SC3.1.1—Existing and projected population;

(b) for employment, Table SC3.1.5 —Existing and projected employees.

4.2.2 Development

(1) The developable area[1] is identified on Local Government Infrastructure Plan PIA-01–Priority infrastructure area and projections map in Schedule 3—Local government infrastructure plan mapping and tables.

(2) The planned density for future development is stated in Table SC3.1.3 in Schedule 3—Local government infrastructure plan mapping and tables.

(3) A summary of the assumptions about future residential and non-residential development for the planning scheme area is stated in Table 4.2.2.1—Residential dwellings and non-residential floor space assumptions summary.

Table 4.2.2.1—Residential dwellings and non-residential floor space assumptions summary

Column 1 Description	Column 2 Assumptions				
	Base date 2021	2026	2031	2036	Ultimate development
Residential dwellings	17,772	20,181	22,321	24,439	35,939
Non-residential floor space (m^2 GFA)	430,030	449,098	477,823	515,983	1,213,197

(4) Detailed assumptions about future development for each projection area and LGIP development type are identified in the following tables in Schedule–3 Local government infrastructure plan mapping and tables:

(a) for residential development, Table SC3.1.2;

(b) for non-residential development, Table SC3.1.4.

(1)

[1] Editor's note: Not all land within the identified Priority Infrastructure Area is suitable for development due to constraints. The identified Priority Infrastructure Area contains sufficient developable area to accommodate the assumed future urban growth. Further explanation of developable area is provided in the Livingstone Shire Council LGIP Assumptions Report which is identified as extrinsic material in 4.6.

4.2.3 Infrastructure Demand

(1) The demand generation rate for each planning scheme zone is stated for each trunk infrastructure network in Table SC3.1.3 in Schedule 3–Local government infrastructure plan mapping and tables.

(2) A summary of the projected infrastructure demand for each service catchment is stated in:

(a) for the water supply network, Table SC3.1.6 in Schedule 3–Local government infrastructure plan mapping and tables;

(b) for the sewerage network, Table SC3.1.7 in Schedule 3–Local government infrastructure plan mapping and tables;

(c) for the transport network, Table SC3.1.8 in Schedule 3–Local government infrastructure plan mapping and tables;

(d) for the parks and land for community facilities network, Table SC3.1.9 in Schedule 3– Local government infrastructure plan mapping and tables.

4.3 Priority Infrastructure Area

(1) The Priority Infrastructure Area identifies the area prioritised for the provision of trunk infrastructure to service the existing and assumed future urban development up to 2036.

(2) The Priority Infrastructure Area is identified on Local Government Infrastructure Plan PIA-01, PIA-02 and PIA-03 – Priority infrastructure area and projections maps in Schedule 3 — Local government infrastructure plan mapping and tables.

4.4 Desired Standards of Service

(1) This section states the key standards of performance for a trunk infrastructure network.

(2) More details about the standard of service for each trunk infrastructure network are identified in the extrinsic material included in Section 4.6.

4.4.1 Water Supply Network

(1) The key desired standards of service for the water supply network are detailed in Table 4.4.1.1.

(2) Livingstone Shire Council aims to design the water supply network in accordance with Council's adopted guidelines, standards and codes.

(3) Livingstone Shire Council aims to achieve the legislative requirements set by the Water Supply (Safety and Reliability) Act 2008 and the Water Supply Act 2000.

(4) Livingstone Shire Council aims to provide consumers with a continuous reliable supply, noting that interruptions and / or reduced service may be necessary when essential repair and maintenance work is being carried out.

(5) Ensure environmental impacts of the water supply network are minimised in accordance with legislative requirements and community expectations.

(6) Ensure the water supply network is able to provide a potable water supply to meet the demands imposed upon it by both the consumer and firefighting requirements.

Table 4.4.1.1 - Water Supply Network Design Criteria

Column 1 Design criteria	Column 2 Measure
Average Day (AD) Demand	500 litres per equivalent person per day (L/EP/Day)
Maximum Day (MD) Demand	1.9 x average day (AD) demand
Maximum Hour (MH) Demand	1/12 x maximum day (MD) demand

Column 1 Design criteria	Column 2 Measure
Minimum Service Pressure	22 metres at finished surface/ street elevation at the main location, building pad level or at the mean lot level, whichever is the highest.
Desirable Upper Service Pressure	50 metres head at the centroid of the residential lot during normal diurnal flow in the reticulation non-trunk network
Maximum Service Pressure	• 80 meters head at the centroid of the residential lot in the reticulation non-trunk network • 90 meters head for the trunk network
Fire Fighting Pressure	12 metres minimum in the reticulation non-trunk water supply network
Fire Flow for residential area in the reticulation non-trunk network	15 litres per second for a duration of two (2) hours at minimum pressure of 120 kilopascals (kPa)
Fire Flow for industrial/commercial area in the reticulation non-trunk network	30 litres per second for a duration of four (4) hours at minimum pressure of 120 kilopascals (kPa)
Pipeline design maximum velocity	Two (2) metres per second (1.5m/sec desirable for optimum energy useage)
Reservoir Capacity	One (1) Maximum Day (MD) demand for the supply zone
Trunk Water Main sizing	• Average Day (AD) supply to Trunk Dams Maximum Day (MD) supply to Reservoirs • Maximum Hour (MH) supply to reticulation mains

4.4.2 Sewerage Network

(1) The desired standards of service for the sewerage system are detailed in Tables 4.4.2.1, 4.4.2.2 and 4.4.2.3.

(2) Livingstone Shire Council aims to provide reticulated sewerage to the consumer to meet the demands imposed upon it by the consumers and the Environmental Protection Agency.

(3) The objective of the sewerage system is to transport sewage from domestic, commercial and industrial properties using gravity flow pipes and where this is not feasible, by pumping to the treatment plant.

Table 4.4.2.1 – Sewerage Network Design Criteria

Column 1 Design criteria	Column 2 Measure
One (1) equivalent person (EP)	200 litres per equivalent person per day (L/EP/day)
Average Dry Weather Flow (ADWF)	200 litres per equivalent person per day (L/EP/day)
Peak Dry Weather Flow (PDWF)	2.5 x Average Dry Weather Flow (ADWF)
Wet Weather Flow (WWF)	Five (5) x Average Dry Weather Flow (ADWF)
Sewage pump station emergency storage	Four (4) hours minimum
Total sewage pump station pumping capacity	2 pumps required. 1 pump operates at PDWF, and 2 pumps together operate at WWF.
Gravity Main Flow Capacity	75% of full depth at Wet Weather Flow (WWF) capacity
Gravity Main Minimum velocity at Peak Dry Weather Flow (PDWF)	0.7 m/sec at Peak Dry Weather Flow (PDWF) capacity
Rising main minimum scouring velocity	0.7 m/sec

Column 1 Design criteria	Column 2 Measure
Rising main maximum velocity	2 m/sec
Odour Protection	• Required for new trunk sewage pump stations where initial loadings cause long detention lines
Air Release and Air Scour	• Air Venting in all gravity sewer mains at locations of excessive turbulence – particularly where a steep (super-critical flow) meets a flat section (sub-critical flow), and discharge chambers • Air scours of rising mains air where air lock is a risk

Table 4.4.2.2 – Treated Water Quality

Column 1 Criteria	Column 2 Measure
Biological Oxygen Demand (BOD)	Less than 20 milligrams per litre
Dissolved Oxygen (DO)	Greater than 6 milligrams per litre
Suspended Solids (SS)	Less than 30 milligrams per litre
pH	6.5 – 7.5
Free chlorine residual	Less than 0.7 milligrams per litre

Table 4.4.2.3 – Sewerage Network Desired Standards of Service

Column 1 Measure	Column 2 Planning criteria (qualitative standards)	Column 3 Design criteria (quantitative standards)
Reliability	Livingstone Shire Council is to provide prompt, courteous and effective sewerage services to its customers. Staff make every effort to ensure the sewerage system operates adequately and with minimal disruption.	• Livingstone Shire Planning Scheme • Livingstone Shire Council – Sewer Asset Management 2024-2033
Quality of Treatment	Livingstone Shire Council uses every effort to continue to operate the sewerage system efficiently and effectively, ensuring the highest value for effluent is received for all sewerage treatment plants. The quality of treatment ensures the health of the community, the safe and appropriate level of treatment and proper disposal of treated effluent.	• Compliance with the requirements of the Environmental Protection Act 1994 • Livingstone Shire Council – Sewer Asset Management 2024-2033
Environmental impacts	Livingstone Shire Council uses every effort to continue to operate the sewerage system efficiently and effectively and minimise sewage overflows and interruptions. The environmental impacts of the sewerage network are minimised in	• Livingstone Shire Planning Scheme • Compliance with the requirements of the Environmental Protection Act 1994

Column 1 Measure	Column 2 Planning criteria (qualitative standards)	Column 3 Design criteria (quantitative standards)
	accordance with community expectations.	
Effluent reuse	Livingstone Shire Council reuses effluent wherever possible.	• Compliance with the requirements of the Environmental Protection Act 1994 • Queensland Water Recycling Guidelines – December 2005
Infrastructure design/ planning standards	Design of the sewerage network will comply with the established guidelines, codes and standards.	• Capricorn Municipal Development Guidelines – Design Specifications and Standard Drawings • Sewerage Reticulation Code of Australia (latest version) • Sewage Pumping Station Code of Australia (latest version) • Planning Guidelines for Water Supply and Sewerage (latest version) • Water Supply (Safety and Reliability) Act

4.4.3 Transport Network

(1) The transport network contains three integrated systems being roads, public transport, and the pedestrian and cycle network. The desired standards are below.

(a) Roads:

(i) The desired standards of service apply to all trunk infrastructure roads within the Livingstone Shire Council area in accordance with Table 4.4.3.1.

(ii) The desired standards of service for trunk roads are largely dependent on the road hierarchy classification, lanes, traffic loading, traffic pattern, and level of service (LOS) (shown in Tables 4.4.3.2 and 4.4.3.3);

(b) Public transport:

(i) Bus facilities are to include bus stopping treatments and shelters in accordance with Table 4.4.3.1.

(c) Pedestrian and cycle network:

(i) Desired standards of service for cycleways and pedestrian pathways concern geometric design considerations required for the construction of trunk infrastructure as defined by on-road and off-road facilities identified in the Capricorn Municipal Development Guidelines, and summarised in Table 4.4.3.1.

(2) It is acknowledged that in some cases, due to local circumstances, the desired standards of service may not be met. In these situations, transport trunk infrastructure aims to meet the standards to the greatest degree practicable.

Table 4.4.3.1 – Transport Network Desired Standards of Service

Column 1 Measure	Column 2 Planning criteria (qualitative standards)	Column 3 Design criteria (quantitative standards)
Road network design/ planning standards	The road network provides a functional urban and rural hierarchy that supports settlement patterns, commercial and	• Local government road design and development manual/standards/codes in the planning scheme, planning scheme policies and Capricorn Municipal Development Guidelines

Column 1 Measure	Column 2 Planning criteria (qualitative standards)	Column 3 Design criteria (quantitative standards)
	economic activities and freight movement. Design of the road system aims to meet minimum Level of Service (LOS) D at the Planning Horizon Peak Hour Pattern for the particular site.	• The Queensland Department of Transport and Main Roads Road Planning and Design Manual • Australian Standards • AUSTROADS guides • Maximum acceptable degree of saturation for intersections identified in Table 4.4.3.3 or minimum levels of service (LOS) D in Table 4.4.3.2 • Level of service (LOS) – Table 4.4.3.2
Public Transport design/ planning standards	Ensure development accommodates the access to and integration of public transport services. Provide bus stops including bus bays, shelters, seating and bus information systems in accordance with Council's adopted standards identified in the planning scheme.	• Local government road design and development manual/standards/codes in the planning scheme, planning scheme policies and Capricorn Municipal Development Guidelines • Design accords with the performance criteria set by Department of Transport and Main Roads • Queensland Government TRANSLINK Public transport infrastructure manual • AUSTROADS guides for road-based public transport and high-occupancy vehicles
Cycleway and pathway design/ planning standards	Cycleways and pathways provide a safe and convenient network that encourages walking and cycling as acceptable travel alternatives. Design of the network will comply with Council's adopted standards identified in the planning scheme.	• Local government road design and development manual/standards/codes in the planning scheme, planning scheme policies and Capricorn Municipal Development Guidelines • Australian Standards • AUSTROADS Guides • Complete Streets

Table 4.4.3.2 – Level of Service for Trunk Roads, Intersections, Pedestrian and Cycle Networks

Column 1 Level of service	Column 2 Short description	Column 3 Loading
A	Free flow	< 33 %
B	Reasonably free flow	< 50 %
C	Stable flow	< 65 %
D	Approaching unstable flow	< 80 %
E	Unstable flow	100 %
F	Forced or breakdown flow	

* Refer to Department of Main Road Planning and Design Manual

Table 4.4.3.3 – Maximum Degree of Saturation for Road Intersections

Column 1 Road network item	Column 2 Maximum degree of saturation
Traffic Signals	0.9
Roundabout	0.85
Priority controlled	0.8

Column 1 Road network item	Column 2 Maximum degree of saturation
Traffic signals (State-controlled)	0.9

4.4.4 Public Parks and Land for Community Facilities Network

(1) The desired standards of service for the public parks and land for community facilities trunk infrastructure are shown in Tables 4.4.4.1 to 4.4.4.6 – desired standards of service – public parks and land for community facilities, and they should be read in conjunction with Livingstone Shire Council's adopted technical standards – Capricorn Municipal Development Guidelines.

(2) It is acknowledged that in some cases, due to local circumstances, the desired standards of service may not be met. In these situations, public parks and land for community facilities trunk infrastructure aims to meet the standards to the greatest degree practicable.

Table 4.4.4.1 – Public Parks and Land for Community Facilities Network Desired Standards of Service

Column 1 Measure	Column 2 Planning criteria (qualitative standards)	Column 3 Design criteria (quantitative standards)
Functional network	A network of parks and community land is established to provide for the full range of recreational and sporting activities and pursuits.	• Parks and community land are provided at a local, district and local government area wide level • Parks and community land address the needs of both recreation and sport
Accessibility	Public parks and land for community facilities will be located to ensure adequate pedestrian, cycle and vehicle access. Co-locate land for multi-purpose community facilities with parks and recreation land and commercial/retail centres. Higher order parks and community facilities which are likely to generate a high amount of use are located in proximity to current or future high order transport routes.	• 2,000 square metres of land for community facilities is to be provided when such land is co-located with a district and regional park • Accessibility standards are identified in Table 4.4.4.3
• Land quality/ suitability • Area/ 1,000 persons • Minimum size • Shape of land • Minimum desired flood immunity • Maximum desired grade • Road frontage and visibility	Public parks and land for community facilities will be provided to a standard that supports a diverse range of recreational, sporting, community and health–promoting activities to meet community expectations. This includes ensuring land is of an appropriate size, configuration and slope, and has an acceptable level of flood immunity.	The rate of land provision is identified in Table 4.4.4.2. The minimum size, shape of land, minimum desired flood immunity, maximum desired grade and road frontage and visibility for land is identified in Table 4.4.4.4.

Column 1 Measure	Column 2 Planning criteria (qualitative standards)	Column 3 Design criteria (quantitative standards)
Facilities/ embellishments	Public parks and land for community facilities contain a range of embellishments to complement the type and purpose of the park.	Indicative embellishments for each type of park, land for community facilities and sports grounds are identified in Table 4.4.4.5 and Table 4.4.4.6.
Infrastructure design/ performance standards	Maximise opportunities to collocate recreational parks and land for community facilities in proximity to other community infrastructure, transport hubs and valued environmental and cultural assets.	• Local government standards in the planning scheme and planning scheme policies • Australian Standards

Table 4.4.4.2 – Rate of Land Provision

Column 1 Infrastructure Type	Column 2 Rate of Provision (Hectare per 1000 people)	
	District	Local Government-Wide
Recreation park	0.8	0.5
Sports Ground	2.5	2.5
Land for Community Facilities	Rate of provision to be determined by minimum land sizes and at least one (1) district facility per the following planning sectors: • Yeppoon • Emu Park	Rate of provision to be determined by minimum land sizes and at least one (1) regional facility per the following planning sectors: • Yeppoon

Table 4.4.4.3 – Accessibility Standard

Column 1 Infrastructure Type	Column 2 Accessibility Standard (km)	
	District	Local Government-Wide
Recreation park	2.5 kilometres in urban areas and within 500 metres of a public transport pick up/drop off point.	Local government area and within 500 metres of a public transport pick up/drop off point.
Sports ground	2.5 kilometres in urban areas and within 500 metres of a public transport pick up/drop off point.	Local government area and within 500 metres of a public transport pick up/drop off point.
Land for community facilities	Within 800 metres of a public transport pick up/drop off point.	Within 500 metres of a public transport pick up/drop off point.

Table 4.4.4.4 – Public Parks and Land for Community Facilities Characteristics

Column 1	Column 2		Column 3	
Characteristic	Recreation Parks and Land for Community Facilities		Sports Grounds	
	District	Regional	District	Regional
Minimum size of open space (hectares)	Two (2) hectares of usable space for parkland.	Six (6) hectares of usable space for parkland.	A minimum of three (3) hectares, sufficient to boast two (2) fields per one (1) oval collocating and room for ancillary facilities (club house, toilets, car parking).	A minimum of four (4) hectares, sufficient to boast three (3) fields per two (2) ovals collocating and room for ancillary facilities (club house, toilets, car parking).
	One (1) hectare of usable space for land for community facilities.	1.5 hectares of usable space for land for community facilities.		
Shape of land	The preferred shape for a park/land for community facilities is square to rectangular with the sides no greater than 2:1.		To maximise the area available for playing fields, a square or rectangular shape is considered most efficient.	
Minimum desired flood immunity for parks	At least twenty-five (25) per cent of total area above Q50 with main activity area/s above Q100.	At least fifty (50) per cent of total area above Q50 with main activity area/s above Q100 and free of hazards.	Free of hazards. Ninety per cent of land above Q20. Fields/courts above Q50. Built facilities above Q100.	
Maximum desired grade	Recreation parks — average grade of 1:14 for eighty (80) per cent of the area of the park to facilitate wheelchair access to parks. Variable topography is satisfactory for the remaining area No area of the park will have a grade greater than 1:6 Community facilities — a maximum grade of no more than six (6) per cent for the entirety of the site or ten (10) per cent for the footprint of the community facility.	Recreation parks — average grade of 1:20 for main use areas, 1:50 for kick about area, and variable topography for remainder No area of the park will have a grade greater than 1:6 Community facilities — a maximum grade of no more than six (6) per cent for the entirety of the site or ten (10) per cent for the footprint of the community facility.	Laser levelling to a maximum gradient of playing surface 1:100.	
Road frontage and visibility	Twenty-five (25) per cent of park perimeter to have direct road frontage, preferably on a collector road.	Fifty (50) per cent of park perimeter to have direct road frontage, preferably on a collector road.	Twenty-five (25) per cent of the ground perimeter to have direct road frontage.	

Table 4.4.4.5 – Indicative Embellishments for the Hierarchy of Recreation Parks and Land for Community Facilities

Column 1	Column 2	
Embellishment	Recreation Parks	
	District	Local Government-Wide
Internal roads	None.	As required to service car parking and access requirements.
Car parking	Forty (40) sealed car parks.	Minimum of 120 sealed car parks.
Fencing/bollards, lock rail	Fencing/bollards along road frontages and including a lock rail.	Fencing/bollards along road frontages and including a lock rail.
Lighting	Lighting to all roadways, parking, picnic nodes and primary pedestrian paths.	Lighting to all roadways, parking, picnic nodes and primary pedestrian paths.
Toilets/public amenities	One (1) toilet (location to be determined in consultation with Council).	Two (2) toilets (location to be determined in consultation with Council).
Pedestrian pathway access network	2.2 metre wide concrete shared pedestrian and cycle path through and around park connecting to adjacent pathways.	Entrance and access paths. Concrete shared pedestrian and cycle path (minimum 2.2 metre wide generally and minimum 3.5 metre wide in key, high use areas) connecting to adjacent pathways.
Bench seating	Minimum of four (4), located for supervision of any play area (if not otherwise serviced by sheltered tables), and/or along recreation corridors/pedestrian pathways to provide rest stops.	As determined in consultation with Council. Located for: • supervision of any play area (if not otherwise serviced by sheltered tables); and • along recreation corridors/pedestrian pathways to provide rest stops; and/or • enjoyment of views/amenity.
Shade structures or trees (over playgrounds)	Yes.	Yes.
Shelters/gazebo with tables and seating and bins	Minimum of six (6) shaded tables, seating and bins.	Minimum of fifteen (15) shaded tables, seating and bins (further provision to be determined in consultation with Council).
Tap/bubbler	Three (3) drinking fountain/bubbler and taps.	Ten (10) drinking fountain/bubbler and taps.
Barbeques	Three (3) barbeques.	Ten (10) barbeques (to be determined in consultation with Council – provision may consist of multiple double barbecues located to service picnic nodes for individuals, families and large groups).
Rubbish bins	As required to service activity areas, picnic nodes, key access/egress areas and pathway systems.	As required to service activity areas, picnic nodes, key access/egress areas and pathway systems.
Landscaping and turfing	Shade trees, landscaping and turfing to enhance amenity (determined in consultation with Council).	Shade trees, landscaping and turfing to enhance amenity (determined in consultation with Council).
Signage	Park identification and way finding signage, located at key entrances. Optional — interpretive signage (for nature appreciation areas) or trail signage (for example distance markers on recreation corridors).	Park identification and way finding signage, located at key entrances. Optional — interpretive signage and/or trail signage (for example distance markers on recreation corridors). Signage theme reflecting key features of the park.

Column 1	Column 2	
Embellishment	Recreation Parks	
	District	Local Government-Wide
Recreation activity areas	Mix of ten (10) recreation activity areas, clustered in two or more nodes (for example mix of toddlers, children, youth, picnic and barbecue area, dog off-leash, skate park, meeting area, older adults, pathway systems).	Mix of fifteen (15) recreation activity areas dispersed across well-defined nodes of activity focus (for example a mix of toddlers, children, youth, older adults, major picnic and barbecue area, dog off-leash, skate park, meeting areas, trail network, event area, nature appreciation area).
Irrigation	In identified high use areas.	In identified high use areas.
Bike racks	Three (3) bike racks for a minimum of fifteen (15) bikes.	Bike racks for a minimum of thirty (30) bikes.
Bus pull-through	No.	Yes (location to be determined in consultation with Council).
Bus parking	No.	Yes (location to be determined in consultation with Council).

Table 4.4.4.6 – Indicative Embellishments for the Hierarchy of Sport Parks

Column 1	Column 2	
Park element	Embellishment details	
	District	Local Government-Wide
Courts/fields	As a minimum, two (2) rectangular fields and capacity for additional facilities/courts (as determined in consultation with Council). Sports grounds and facilities meet accepted standards including dimensions, playing surface and subsurface drainage.	As a minimum, three (3) rectangular fields and capacity for additional facilities/courts (as determined in consultation with Council). Sports grounds and facilities meet accepted standards including dimensions, playing surface and subsurface drainage.
Goal posts/line marking	According to accepted standards.	According to accepted standards.
Irrigation	Main field as a minimum (to be determined in consultation with Council).	Two (2) main fields as a minimum (to be determined in consultation with Council).
Field/court lighting	Lighting for night sports.	Lighting for night sports.
Spectator seating	100 seats and earth mounds (determined in consultation with Council).	150 seats and earth mounds (determined in consultation with Council).
Tap/bubbler	Four (4) drink bubblers and taps located near activity areas and canteen/clubhouse area.	Eight (8) drink bubblers and taps located near activity areas and canteen/clubhouse area.
Sports clubhouse	Minimum of one (1) (exact provision to be determined in consultation with Council) including a toilet/change room, canteen, storage and administrative/office space.	Minimum of two (2) (exact provision to be determined in consultation with Council) including a toilet/change room, canteen, storage and administrative/office space.
Landscaping and turfing	Trees/shade provision for spectators, landscaping of boundaries to buffer noise/light spill to any surrounding properties.	Trees/shade provision for spectators, landscaping of boundaries to buffer noise/light spill to any surrounding properties.

Column 1	Column 2	
Park element	Embellishment details	
	District	Local Government-Wide
Feature paving/ concrete stencilling	Located at key entry areas or high use zones (to be determined in consultation with Council).	Located at key entry areas or high use zones (to be determined in consultation with Council).
Internal roads	Yes.	Yes.
Bus pull-through	Yes.	Yes.
Bus parking	Yes.	Yes.
Car parking	Minimum of sixty (60) sealed spaces for a two (2) field complex or twelve (12) per court.	Minimum of 100 sealed spaces for a three (3) field complex or twelve (12) per court.
Bike racks	Bike racks for a minimum of thirty (30) bikes.	Bike racks for a minimum of fifty (50) bikes.
Fencing/ bollards, lock rail	Fencing/bollards along road frontages and including a lock rail.	Fencing/bollards along road frontages and including a lock rail.
Security Lighting	Security lighting to all roadways, parking, picnic nodes and primary pedestrian paths.	Security lighting to all roadways, parking, picnic nodes and primary pedestrian paths.
Pedestrian pathway access network	Entrance and access paths, walking/cycling network. Minimum 2.2 metre wide concrete shared pedestrian and cycle path.	Entrance and access paths, walking/cycling network. Minimum 2.2 metre wide concrete shared pedestrian and cycle path.
Public artwork	To be determined in consultation with Council.	To be determined in consultation with Council.
Signage	Park identification and way finding signage, located at key entrances.	Park identification and way finding signage, located at key entrances.
Recreation activity areas (for example play spaces, fitness circuits, hit up walls)	Mix of three (3) recreation activity areas (for example play spaces, fitness circuits, half courts, free to use courts).	Mix of five (5) recreation activity areas (for example play spaces, fitness circuits, half courts, free to use courts).

4.5 Plans for Trunk Infrastructure

(1) The plans for trunk infrastructure (PFTI) identify the trunk infrastructure networks intended to service the existing and assumed future urban development at the desired standard of service up to 2036.

4.5.1 Plans for Trunk Infrastructure maps

(1) The existing and future trunk infrastructure networks are shown on the following maps. The maps are located in Schedule 3 – Local government infrastructure plan mapping and tables:

(a) Local Government Infrastructure Plan **Map WSN-01a** to **WSN-05a**—Plan for trunk water supply infrastructure

(b) Local Government Infrastructure Plan **Map SN-01a** to **SN-03a**—Plan for trunk sewerage infrastructure

(c) Local Government Infrastructure Plan **Map TN-01a** to **TN-04a**—Plan for trunk transport infrastructure

(d) Local Government Infrastructure Plan **Map PLCF-01a** to **PLFC-04a**—Plan for trunk parks and land for community facilities infrastructure

(2) The state infrastructure forming part of the trunk transport infrastructure network has been identified using information provided by the relevant state infrastructure supplier.

4.5.2 Schedules of Works

(1) Details of the existing and future trunk infrastructure networks are identified in the electronic Excel schedule of works model which can be viewed at Councils website (https://www.livingstone.qld.gov.au/).

(2) The future trunk infrastructure, derived from the schedule of works model, is summarised in the following tables in Schedule 3—Local government infrastructure plan mapping and tables:

(a) for the water supply network, Table SC3.2.1;

(b) for the sewerage network, Table SC3.2.2;

(c) for the transport network, Table SC3.2.3;

(d) for the parks and land for community facilities network, Table SC3.2.4.

4.6 Extrinsic Material

(1) Table 4.6.1 identifies the documents that assist in the interpretation of the local government infrastructure plan and are extrinsic material under the Statutory Instruments Act 1992.

Table 4.6.1 – Extrinsic Material

Column 1 Trunk Infrastructure Network	Column 2 Title of Document
Growth Projections, Planning assumptions and PIA (for all networks)	• Local Government Infrastructure Plan Planning Assumptions Report 2023 prepared by Livingstone Shire Council. Review Documentation based on the LSCPAM2021 V5 (undated).
Water Supply	• Local Government Infrastructure Plan Water Supply Network Extrinsic Material Report (Version 4) prepared by Livingstone Shire Council and dated 24/10/2024.
Sewerage	• Local Government Infrastructure Plan Sewerage Network Extrinsic Material Report (Version 4) prepared by Livingstone Shire Council and dated 24/10/2024.
Transport	• Local Government Infrastructure Plan Transport Network Extrinsic Material Report (Version 6) prepared by Livingstone Shire Council and dated 06/02/2025.
Public Parks and Land for community facilities	• Local Government Infrastructure Plan Plans for Public Parks and Land for Community Facilities Review Report (Version 4) prepared by Livingstone Shire Council (undated).