APPENDICES



Meridian Urban

Appendix A - Spatial Analysis Methodology and Data Sources

1 Spatial Analysis Process

Spatial analysis was used in order to determine the exposure of bushfire hazard within the region. Exposure was measured utilising the State-wide bushfire prone areas mapping. Additional metrics to the mapping were incorporated including:

- Additional buffers around each hazard class of 50m, 70m and 100m
- Additional buffers around the bushfire prone area of 100m and 700m
- Breakdown of the 'potential impact buffer area' to identify the relevant hazard class of which the buffer relates to.

The above metrics were used to gain a greater appreciation of the relevant aspects of exposure within the region.

A number of different measures were used to determine the level of exposure including zoned land, vulnerable facilities, essential community infrastructure and residential dwellings.

For the purposes of zoned land, this was broken down into the following categories based off the proposed planning scheme zoning:

Residential land	Employment land	Rural living	Rural land
• Emerging communities • High density residential • Medium density residential • Low density residential	• District centre • High impact industry • Medium impact industry • Low impact industry • Local centre • Mixed use • Neighbourhood centre • Principal centre • Specialised centre • Waterfront and marine industry	• Rural residential	• Rural
Environmental land	**Land for community facilities**	**Limited development land**	**Recreation and open space land**
• Environmental management and conservation	• Community facilities	• Limited development (constrained land)	• Open space • Sport and recreation

The analysis of vulnerable facilities included the facilities:

- Aged care facilities
- Childcare facilities

- Schools
- Higher education facilities
- Hospitals
- Correctional facilities

The analysis of essential community infrastructure included the following assets:

- Electrical zone substations
- Sewer treatment plants
- Sewer pump stations
- Water treatment plants
- Water pump stations.

Relevant data sources are outlined in the following section.

2 Spatial Analysis Data Sources

Data Layer	Source	Comments
Building outlines	Fraser Coast Regional Council (supplied)	Included all structure outlines on a lot and which planning zone the building outline is situated in. All 'Residential' and 'Rural/Primary Production' were selected.
Ergon Energy Distribution Substations	Fraser Coast Regional Council (supplied)	
Ergon Energy Zone Substations	Fraser Coast Regional Council (supplied)	
Sewer Pump Stations	Fraser Coast Regional Council (supplied)	
Sewer Treatment Plants	Fraser Coast Regional Council (supplied)	
Water Pump Stations	Fraser Coast Regional Council (supplied)	
Water Treatment Plants	Fraser Coast Regional Council (supplied)	
Zones	Fraser Coast Regional Council (supplied)	
Council Facilities	Fraser Coast Regional Council (supplied)	All facilities with the type 'Community', 'Services' and 'Transport' were selected.
Community Facilities	Fraser Coast Regional Council (supplied)	All facilities with the type 'Childrens Services', 'Community', 'Education', 'Emergency Services', 'Health' and 'Transport' were selected.
Community Facilities	Fraser Coast Regional Council (supplied)	Differs from the dataset above. The two datasets were compared for similarities and anomalies. All facilities with the feature type 'Community Centre – Public Hall' were selected.
Road Hierarchy	Fraser Coast Regional Council (supplied)	The following road types were utilised: Controlled Distributor, Highway, Major Collector, Minor Collector, Rural Arterial, Rural Arterial MRD, Sub Arterial Main Street, Urban Arterial and Urban Arterial MRD.

Data Layer	Source	Comments
Statewide Bushfire Prone Area	Bushfire prone area – Wide Bay Burnett (QSpatial)	
Nursing homes	Aged care service list: June 2022 from the Australian Institute of Health and Welfare Aged Care dataset.	Excluding 'home care only' providers, the coordinates were plotted and aligned with the underlying land parcel. The dataset was also compared against the council provided 'Nursing Home – Respite to identify commonalities and anomalies for further investigation.
Correctional centre	Landmark areas (QSpatial)	All facilities identified as 'correctional centre' were selected.
Residential Dwellings	Various	Refer to report
Child care facilities	Queensland State register of approved services from the Australian Children's Education & Care Quality Authority.	The address was geocoded to create coordinates, the coordinates were plotted and aligned with the underlying land parcel. The dataset was compared against the 'Childrens Services' facility type from the supplied 'Community Facilities dataset.
Precincts	Fraser Coast Regional Council (supplied)	

Appendix B - Bushfire Prone Area Reliability Assessment