

**Soldiers Club Culvert upgrades (FM5)**

**Option Description:** Council is currently investigating options to upgrade the drainage infrastructure around the Batemans Bay soldiers club. The potential benefits associated with the proposed upgrade design could be investigated in this FRMS.

**Flood Issue Addressed:** In the area near the Soldiers Club, sections of Old Princes Highway, Beach Road and Flora Crescent experience flood depths of up to 0.4 m in the 1% AEP event.

**Village Centre Carpark Emergency Response Recommendations (EM1)**

**Option Description:** It is recommended that flood emergency response aspects are considered in the operation of this carpark.

**Flood Issue Addressed:** It was identified that the Village Centre carpark gets inundated following heavy rainfall events.

**Review of Flood Immunity of Princes Highway (FM4)**

**Option Description:** Transport for NSW to be provided with information on the flood affectation of highway. It is recommended that the flood study results are reviewed to consider recent road improvements and ensure the results adequately represent the flood impacts in this road.

**Flood Issue Addressed:** The flood study results indicate that sections of Princes Highway within the Surfside Creek Catchment are expected to be overtopped in the PMF event.

**Wharf Road Raising/ Access Improvement (FM3)**

**Option Description:** Raise Wharf Road at Surfside Creek crossing. There may be an opportunity to include the road raising works as a design element of the proposed Surfside Beach Levee (FM2)

**Flood Issue Addressed:** Wharf Road is key access routes for Surfside Beach residents. The section of Wharf Road near the Surfside Creek gets inundated in relative frequent flood events (5% AEP).

**Culvert maintenance at Cullendulla Drive crossing of Cullendulla Creek (FM15)**

**Option Description:** Maintain culvert capacity through weed growth management.

**Flood Issue Addressed:** Reduce flows overtopping Cullendulla Drive. This is the only access route to Long Beach and Maloney's Beach communities.

**Surfside Beach Levee (FM2)**

**Option Description:** Levee along north-east portion of Surfside Beach, set at the 1% AEP level.

**Flood Issue Addressed:** Properties located at the low-lying portions of Surfside Beach suburb are subjected to considerable flood risk due to coastal storm events.

**Northcove Road Raising/ Access Improvement (FM1)**

**Option Description:** Raise low-lying section of Northcove Road, near watercourse crossing.

**Flood Issue Addressed:** Northcove Road is expected to be inundated in relative frequent flood events (5% AEP), potentially leading to the isolation of the Maloneys Beach community.

**CBD Open Channel upgrades (FM6)**

**Option Description:** Increase the capacity of the open channel through channel widening and vegetation management.

**Flood Issue Addressed:** Sections of Old Princes Highway and Flora Crescent experience flood depths of up to 0.4 m in the 1% AEP event. Commercial properties around this area are also flood affected in the 1% AEP event. The channel was observed during site inspections to be heavily choked with weed growth.

**Golf course levee/bund (north-west) (FM7)**

**Option Description:** This option involves positioning a levee at the at location where the flows break out from the golf-course.

**Flood Issue Addressed:** In the 1% AEP catchment flood event, the properties between Heradale Parade and Herarde Street experience flood depths of up to 0.6 m. The greater depths at this location are a result of excess runoff flowing down from the Hanging Rock Creek catchment and breaking out at the north-east boundary of the Catalina Club golf course.

**Golf course levee/bund (north-east) (FM8)**

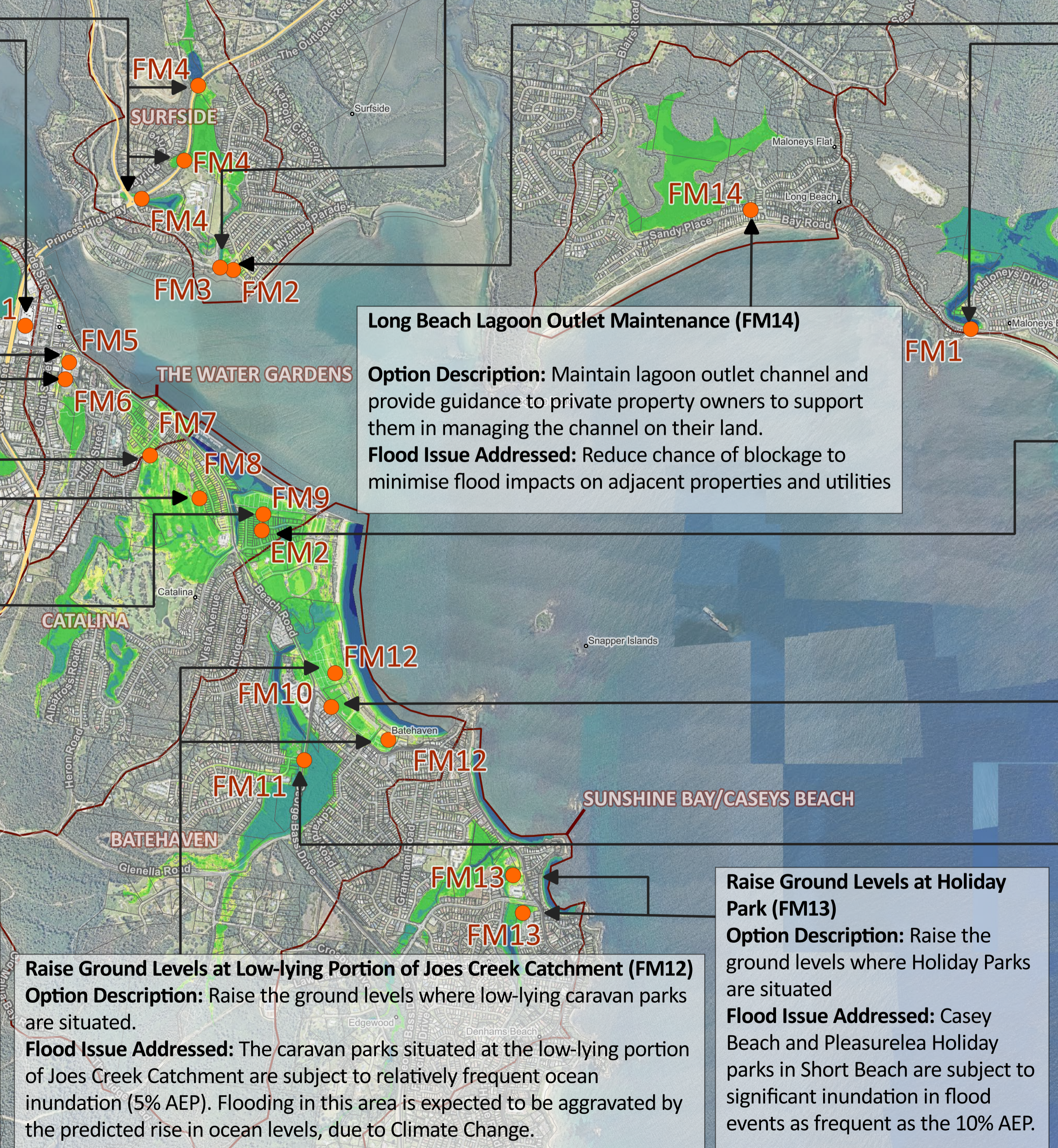
**Option Description:** Implementation of a small levee/bund following the north-eastern boundary of the golf course.

**Flood Issue Addressed:** The properties in Golf Links Drive experience flood impacts in events as frequent as the 5% AEP. These properties are inundated by flood waters flowing across the north-eastern boundary of the Catalina Country Club Golf course.

**Landform adaptation at low-lying portion of Hanging Rock Creek Catchment (FM9)**

**Option Description:** Gradually fill the low lying area to increase the ground levels. This would be achieved by implementing planning controls with higher ground level requirements for properties. Overtime, properties would be re-developed and set at a higher level. Once most properties in the street are raised, the street level can be subsequently raised by Council.

**Flood Issue Addressed:** The low-lying portion of the Hanging Rock Creek area (east of Beach Road) is subject to relatively frequent ocean inundation (5% AEP). Based on current predictions of future sea level rise, it is possible that a significant area will be impacts by the high tides by 2100.



**Long Beach Lagoon Outlet Maintenance (FM14)**

**Option Description:** Maintain lagoon outlet channel and provide guidance to private property owners to support them in managing the channel on their land.

**Flood Issue Addressed:** Reduce chance of blockage to minimise flood impacts on adjacent properties and utilities

**Emergency Response Recommendations for low-lying portion of Hanging Rock Creek (EM2)**

**Option Description:** A long-term flood mitigation option for the low-lying portions of Hanging Rock creek is presented in FM9. In the short-term, the impacts of flooding in this area can be mitigated by implementing emergency response measures such as: sand-bagging, flood warning systems, evacuation plans, among others.

**Flood Issue Addressed:** The low-lying portion of the Hanging Rock Creek area (east of Beach Road) is subject to relatively frequent ocean inundation (5% AEP).

**Beach Road Raising /Access Improvement (FM10)**

**Option Description:** Raise low-lying sections of Beach Road (between Caitlin Avenue and Edward Road).

**Flood Issue Addressed:** Beach Road is key access route within the Joe's creek catchment. Lower sections of Beach Road, between Caitlin Avenue and Edward Road, are expected to be inundated in relative frequent flood events (20% AEP). The potential impacts of this option on flood levels upstream of the road will need to be considered

**George Bass Drive Raising /Access Improvement (FM11)**

**Option Description:** Raise low-lying sections of George Bass Drive (near Joe's Creek Crossing).

**Flood Issue Addressed:** George Bass Drive is key access route within the Joe's creek catchment. The section of George Bass Drive near the Joes Creek crossing is expected to be inundated in relative frequent flood events (20% AEP). In the 1% AEP event a section of approximately 300 m is potentially flood affected.

**Raise Ground Levels at Low-lying Portion of Joes Creek Catchment (FM12)**

**Option Description:** Raise the ground levels where low-lying caravan parks are situated.

**Flood Issue Addressed:** The caravan parks situated at the low-lying portion of Joes Creek Catchment are subject to relatively frequent ocean inundation (5% AEP). Flooding in this area is expected to be aggravated by the predicted rise in ocean levels, due to Climate Change.

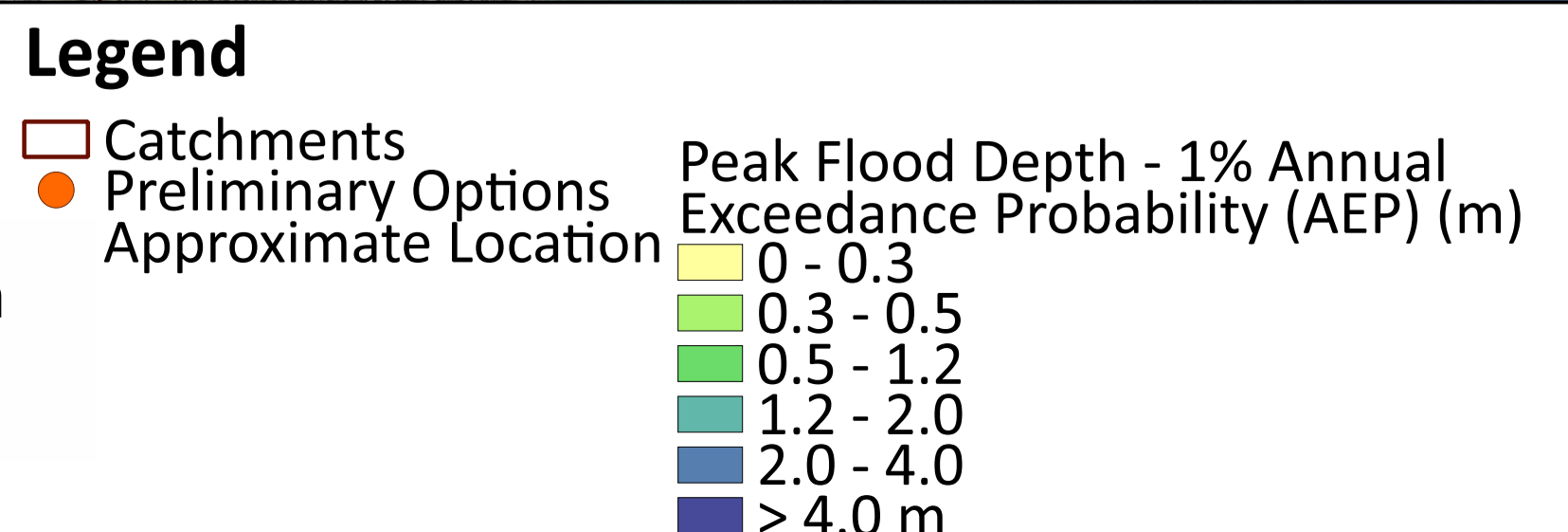
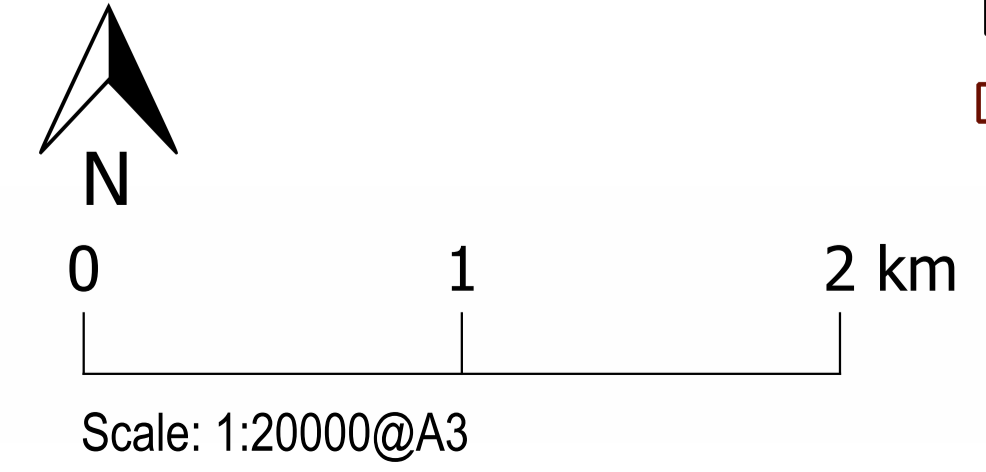
**Raise Ground Levels at Holiday Park (FM13)**

**Option Description:** Raise the ground levels where Holiday Parks are situated

**Flood Issue Addressed:** Casey Beach and Pleasurelea Holiday parks in Short Beach are subject to significant inundation in flood events as frequent as the 10% AEP.



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**Batemans Bay Floodplain Risk Management Study and Plan**

**Preliminary Options**

**RG-00-004**

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