A1: Investigate installation of 2 x 1.8m (w) x 0.9m (h) or equivalent capacity culverts as part of future Maude Road upgrade in this area.

A2: Provide drainage channel immediately downstream of Maude Road (approximately 800m length) to connect to existing natural flow path Channel to have 4m³ flow conveyance area at the 1974 design flood level of 85.7m AHD. Requires further investigation.

A3: Provide 16m³ flow conveyance area through channel at the 1974 design flood level of 87.2m AHD (syphon required). The required conveyance area can be achieved with a 10m wide opening in the channel at the average design flood depth of approximately 1.0m.

A4: Provide 8m³ flow conveyance area through channel at the 1974 design flood level of 85.6m AHD (syphon required). The required conveyance area can be achieved with a 10m wide opening in the channel at the average design flood depth of approximately 0.8m.

A5: Provide 1 x 0.8m diameter culvert under access road.

A6: Provide 10m² flow conveyance area through channel at the 1974 design flood level of 85.5m AHD (syphon required). The required conveyance area can be achieved with a 10m wide opening in the channel at the average design flood depth of approximately 0.8m.

OVERVIEW OF FULL FLOOD EXTENT

1974 Flood Extent Under Existing Conditions
1974 Flood Extent [Depth (m)] With Improvement Measures

High > 5.0
Low ≤ 0.0
B2: Maintain the existing channel opening to ensure a minimum flow conveyance area of 65m² at the 1974 design flood level of 78.8m AHD. The required conveyance area can be achieved by maintaining a minimum 15m wide opening in the channel at the average design flood depth of approximately 1.7m. Monitor during future floods. (Note: The channel beyond the opening overtops for a distance of approximately 80m in the design flood.)
FIGURE C3
DETAILS OF IMPROVEMENT MEASURES AT SITE C
“LANG’S CROSSING” (“KERRINGAL” ESCAPE)

NOTES:
C1: Investigate installation of larger caisson with 150 m² flow conveyance area at the 1974 design flood level of 93.8 m AHD as part of future Surf Highway upgrade in this area.
C2: Investigate installation of larger caisson with 550 m² flow conveyance area at the 1974 design flood level of 92.5 m AHD as part of future Surf Highway upgrade in this area.
C3: Provide flood flow connectivity by lowering part of embankment (over Zone A Floodway width) to a maximum of 300 mm above natural ground level and providing improved drainage.
C4: Provide flood flow connectivity by lowering part of embankment (over Zone A Floodway width) to a maximum of 300 mm above natural ground level.
C5: Maintain flood flow connectivity/drainage (existing and future works) at critical locations identified on Figure C3. Monitor during future floods.

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D1: Investigate installation of coordinated program of flood flow connectivity/drainage works including a causeway through the Mid Western Highway and associated works along the Northern Flood Runner as part of future highway upgrade in this area. (Note: Pending the outcome of future investigation it is likely that some of the required works will be classified as controlled works and subject to the provisions of Part 6 of the Water Act.)
FIGURE C5
DETAILS OF IMPROVEMENT MEASURES AT SITE E
"PEVENSEY" ACCESS ROAD
(SOUTHERN FLOODPLAIN D/S OF "PEVENSEY" ACCESS ROAD)

E1: Provide 200m (w) causeway, 1m below average road level (equivalent flow conveyance area of 170m at the 1974 design flood level of 85.4m AHD)

E2: Maintain the existing channel opening width to ensure a minimum flow conveyance area of 40m at the 1974 design flood level of 85.1m AHD. The required conveyance area can be achieved by maintaining a minimum 45m wide opening in the channel at the average design flood depth of approximately 1.5m.

1974 Flood Extent Under Existing Conditions
1974 Flood Extent [Depth (m)] With Improvement Measures

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