

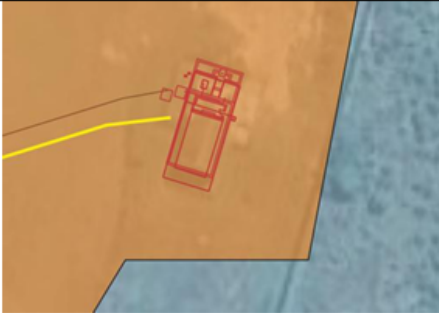




Site Development Plan, Environmental Sensitivities & Recommendations from the Aquatic Specialist (Confluent Environmental)

Image	Location	Description	Requirement for Further Consideration
	1. Western extent of Sandhoogte Road adjacent to natural drainage line and associated riparian zone.	The drainage line is on the northern, downslope side of the road. If sewer line placement can be on the upslope (cut side) of the road, then it will be located outside of the regulated area of the watercourse.	If the sewer line can be upgraded along the cut (upslope/southern) side of Sandhoogte Road then it will be located outside of the regulated area of the watercourse and will not require further assessment.
	2. Upgrade section crosses a channelled but well vegetated outflow of stormwater under Lang St. with some wetland vegetation, connected to the EFZ (See Figure 20). 34° 3'5.53"S, 22°12'53.65"E	Stormwater outflow supports wetland and estuarine plants connected to the EFZ with the result that construction and maintenance must be carefully undertaken at this point.	Provided excavations can be undertaken without disturbance to the existing stormwater channel, and all material for and from the trenching is placed on the northern side of the trench, then the risk to the estuary is considered very low. No further assessment would be required.
	3. Cricket field pump station to be upgraded or decommissioned (depending on Alternative 1a or 1b) is located close to the more natural edge of the EFZ. 34° 3'4.36"S, 22°12'59.50"E	The existing pump station is located 10m from the disturbed edge of the EFZ on entirely flat ground.	Provided activities can be restricted to the existing disturbance footprint of this area, the upgrade presents a very low risk to the EFZ and would not require further assessment. To mitigate the conceivable risk of leakage and overflow to the estuary, an emergency overflow reserve (tank), overflow alarms and concrete bunding should be included in the design.
	4. Tennis courts pump station to be constructed based on Alternative 2 (includes decommissioning Cricket field pump station). To be constructed within the EFZ on a completely transformed area but adjacent to drains which lead to the estuary. 34° 3'1.15"S, 22°12'54.15"E	The location of the proposed pump station is 168m from the disturbed edge of the EFZ. Located further away from the natural edge of the EFZ than the cricket field pump station. However, a stormwater drain surrounds the site which leads directly to the estuary.	Although this site is located within the EFZ it is entirely transformed and lacks any features associated with estuarine habitat. The adjacent stormwater drain links directly to the estuary however, and for this reason, the PS should be designed with emergency overflow reserve (tank), overflow alarms and concrete bunding to prevent leakage to the drain. Access by vehicles from the main road is excellent.

	<p>5. Eastern section of Lang St. which is adjacent to the natural edge of the EFZ (Figure 21).</p>	<p>No direct impacts expected, but indirect impacts associated with eroded material washing into the estuary from one large stormwater drain is possible (red arrow).</p>	<p>Provided the sewer line is located on the more developed (south-western) edge of the road then disturbance should be minimal. The stormwater outlet should be protected from silt/soil from entering the channel with the use of sandbags to demarcate the work area and to contain dirty water in the event of rainfall. If this potential impact can be effectively mitigated, then no further assessment is required.</p>
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Access, Lay Down & No-Go Areas delineated by the Aquatic Specialist (Confluent Environmental)

