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Ella Bay Road Underpass Design

Cassowary Road Crossings Survey

October & November 2008,

December 2009

October 2009 Revision 1





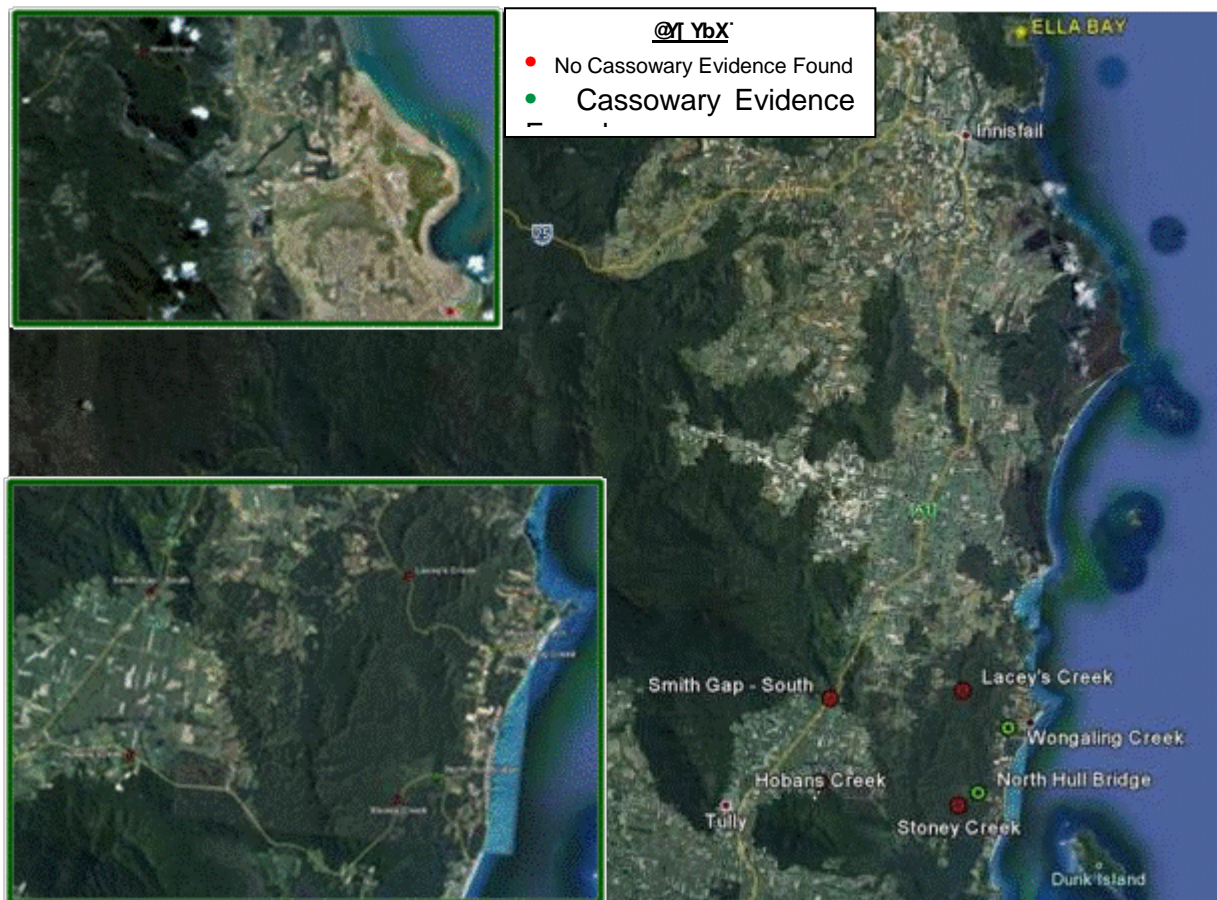
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Ella Bay Developments (EBD) conducted a survey of operational cassowary and wildlife road crossings in the Mission Beach, Kuranda and Evelyn area in North Qld. of known cassowary habit areas. The survey was undertaken on three separate occasions, October 2008, November 2008 and December 2009 (not all locations were visited all three times). The objective of this survey was to identify if cassowaries were using these man-made structures as pathways to the other side of road. The survey was conducted by Ella Bay environmental staff and the figure below illustrates the survey area and locations of road crossings. Each location and its surroundings were surveyed for signs of cassowary usage (scats and footprints) and the information and photos were recorded.



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In total there were eleven crossings points surveyed, however only two crossings showed evidence of cassowary activity. These two crossings were visited on a third occasion. The survey findings are described below:

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Streets Creek (Culverts)	-	-	n/a	No evidence of cassowaries was found. Spacious and extended in past 8 years, has funnelling strategies. Moore reported one sighting of a crossing. (p.comm. 2009)
Lacey's Creek (Box Culvert)	-	-	n/a	No evidence of cassowaries was found. Cassowaries can cross the road easily either side due to no directing fences or embankments.
Stoney Creek (Box Culvert)	-	-	n/a	No evidence of cassowaries was found. Cassowaries are able to cross the road on either side of the road as fence strategy has not been maintained and is ineffective. The culvert is dark and contrasts with the light. EPA reported tracks of adult with chicks (M.Goosem p.comm. 2009)
Smith Gap - South (Box Culvert)	-	-	n/a	No evidence of cassowaries was found. Culvert surface carries water flow and culvert is dark and contrasts with light.
Evelyn – A (Halfpipe Corrugated)	-	-	n/a	No evidence of cassowaries was found. Path was also blocked by fence wire placed by farmers. Report of research officer sighting cassowary attempting to use culvert (M.Goosem p.comm. 2009), however local residents report that cassowaries have not been sighted for a number of years.
Evelyn – B (Halfpipe Corrugated)	-	-	n/a	No evidence of cassowaries was found. Tracks of small macropods found.
Evelyn – C (Halfpipe Corrugated)	-	-	n/a	No evidence of cassowaries was found. Tracks of small macropods and birds found.
Evelyn – D (Halfpipe Corrugated)	-	-	n/a	No evidence of cassowaries was found. The fencing and farm stock & traffic movements contribute against wildlife movement.
North Hull Bridge (Bridge)	Scats	-	-	Three (3) separate scats were found.
Wongaling Creek (Bridge)	Tracks	Tracks	Tracks	Various foot print tracks evidence from different size cassowaries were found at all inspections.
Hobans Creek (Bridge)	-	-	n/a	No evidence of cassowaries was found. Cassowaries have been know to cross at this location

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@WUjcb' bZfa Ujcb. The North Hull Bridge is a three span bridge about six metres above the North Hull river stream. During all visits the river had a small constant water flow and conditions were cool and moist. There is no fencing or funnelling strategy at this location, however the area under the bridge and its surrounding was initially reshaped and vegetated for the purpose of fauna movement. However, it was noticed at the second visit (November 2008) many of the trees and palms planted for wildlife were cut down or poisoned as part of presumed maintenance regime.



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7 Uggck Ufm9 j]XYbWV. Evidence of Cassowary traffic under this bridge was found only in the presence of scattered scats during the October 2008 visit. The scats were old; one scat was located on the east bank, two on the west bank and one on the northern approach.



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@WUjcb' bZfa Ujcb. The Wongaling Creek Bridge is a three span bridge about 3.5 metres above the Wongaling Creek on the El Arish Rd. During the first visit (October 2008) the creek had low flows and conditions were cool and moist. During the second visit (November 2008) there was no water flow. The surface was boggy mud with recently poisoned grass within the water course. There is no fencing or funnelling strategy at this location. The creek banks and vegetation on banks are poor with no canopy cover over the creek which creates an open space and is the only method of path under the bridge that cassowaries can use.



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7 Uggck Ufni9 j JXYbWV. Evidence of Cassowary traffic under this bridge was found at all visits in the form of footprint tracks from different sized animals.

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3 Conclusion

The results from this survey show that cassowaries can and do use man-made road crossing as pathways to the other side of the road. However, the results identified that bridge structures were the only underpasses to record cassowary evidence despite anecdotal evidence of the use of culverts.

The dimensions of the Wongaling and North Hull Bridges offered similar low level 3 to 4m high clearance to cassowaries with relatively open appearance of 10 to 15m between support columns.

A fence and funnel strategy was not utilised at either of the two bridge location.