





Table 1	Grid	Connection	Route -	Culvert	Crossings	Methodology	as shown i	n Figure 1	

Culvert Crossing Reference No.	Culvert Type	Cover from Road Level to Top of Culvert (m) ¹	Crossing Option Description	Crossing Option	Extent of In-Stream Works
1	600 mm diameter concrete and corrugated pipe	1.0	Where cable ducts are to be installed over an existing culvert and sufficient cover cannot be achieved, the ducts will be laid in a much shallower trench, the depth of which will be determined by the cover available at the culvert crossing location. Where sufficient deck cover is not available to fully accommodate the required ducts, it may be necessary to locally raise the pavement level.	Option 3	None. No in-stream works required.
2	225mm diameter corrugated pipe	1.5	Where cable ducts are to be installed over an existing culvert and sufficient cover cannot be achieved, the ducts will be laid in a much shallower trench, the depth of which will be determined by the cover available at the culvert crossing location. Where sufficient deck cover is not available to fully accommodate the required ducts, it may be necessary to locally raise the pavement level.	Option 3	None. No in-stream works required.
3	225mm diameter corrugated pipe	1.5	Where cable ducts are to be installed over an existing culvert and sufficient cover cannot be achieved, the ducts will be laid in a much shallower trench, the depth of which will be determined by the cover available at the culvert crossing location. Where sufficient deck cover is not available to fully accommodate the required	Option 3	None. No in-stream works required.

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			ducts, it may be necessary to locally raise the pavement level.		
4	600mm diameter corrugated pipe	4.0	Where adequate cover exists above a culvert, the standard trench arrangement will be used where the cable ducts pass over a culvert without any contact with the existing culvert or water course. The cable trench will pass over the culvert in a standard trench.	Option 1	None. No in-stream works required.
5	300mm diameter concrete pipe	2.0	Where adequate cover exists above a culvert, the standard trench arrangement will be used where the cable ducts pass over a culvert without any contact with the existing culvert or water course. The cable trench will pass over the culvert in a standard trench.	Option 1	None. No in-stream works required.
6	600mm diameter corrugated pipe	2.0	Where adequate cover exists above a culvert, the standard trench arrangement will be used where the cable ducts pass over a culvert without any contact with the existing culvert or water course. The cable trench will pass over the culvert in a standard trench.	Option 1	None. No in-stream works required.
7	300mm diameter corrugated pipe	3.0	Where adequate cover exists above a culvert, the standard trench arrangement will be used where the cable ducts pass over a culvert without any contact with the existing culvert or water course.	Option 1	None. No in-stream works required.

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			The cable trench will pass over the culvert in a standard trench.		
8	900mm diameter corrugated pipe	1.5	Where cable ducts are to be installed over an existing culvert and sufficient cover cannot be achieved, the ducts will be laid in a much shallower trench, the depth of which will be determined by the cover available at the culvert crossing location. Where sufficient deck cover is not available to fully accommodate the required ducts, it may be necessary to locally raise the pavement level.	Option 3	None. No in-stream works required.
9	300mm diameter corrugated pipe	1.5	Where cable ducts are to be installed over an existing culvert and sufficient cover cannot be achieved, the ducts will be laid in a much shallower trench, the depth of which will be determined by the cover available at the culvert crossing location. Where sufficient deck cover is not available to fully accommodate the required ducts, it may be necessary to locally raise the pavement level.	Option 3	None. No in-stream works required.
10	1000mm diameter corrugated pipe	3	Where adequate cover exists above a culvert, the standard trench arrangement will be used where the cable ducts pass over a culvert without any contact with the existing culvert or water course. The cable trench will pass over the culvert in a standard trench.	Option 1	None. No in-stream works required.

