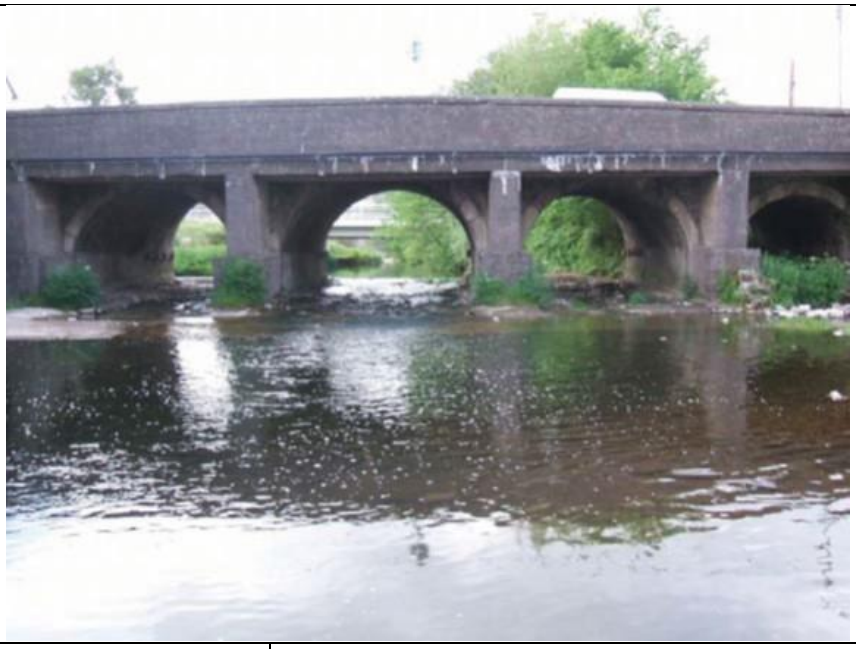
Name/model node label	**3OWE_1270_B**	
River Reach	Owenacurra	
Type of structure	Pedestrian bridge South of the N25 dual carriageway bridge	
Description	Flat steel bridge	
Survey Reference	3OWE_1270_B	
Irish Grid Reference(s)	187896.84, 72568.66	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	0.03 mOD
	Soffit level	3.5 mOD
	Springing level	3.0 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3OWE_1315B**	
River Reach	Owenacurra	
Type of structure	N25 dual carriage way bridge	
Description	Flat concrete road bridge with two concrete supports on either side of the channel	
Survey Reference	CFRAMS 3OWE_1315.4	
Irish Grid Reference(s)	187907.72, 72606.52	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	-1.78 mOD
	Soffit level	3.61 mOD
	Springing level	3.56 mOD
	Length	
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	3OWE_1983B	
River Reach	Owenacurra	
Type of structure	Pedestrian bridge	
Description	Flat foot bridge supported by a concrete columns raised above either side of the channel.	
Survey Reference	CFRAMS 3OWE_1983.4	
Irish Grid Reference(s)	187959.34, 73225.87	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	0.31 mOD
	Soffit level	2.78 mOD
	Springing level	2.74 mOD
	Length	
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3OWE_2281B**	
River Reach	Owenacurra	
Type of structure	Road access bridge to the commercial development	
Description	Flat concrete road bridge with supports on either side of the channel and one in the centre.	
Survey Reference	CFRAMS 3OWE_2281	
Irish Grid Reference(s)	187992.48, 73508.48	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	1.1 mOD
	Soffit level	3.49 mOD
	Springing level	3.41 mOD
	Length	
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3OWE_2564B**	
River Reach	Owenacurra	
Type of structure	Road bridge which links New Cork Road with the main area of the town	
Description	Concrete road bridge with 4 separate arches	
Survey Reference	CFRAMS 3OWE_2564.5	
Irish Grid Reference(s)	187926.53, 73776.38	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	2.52 mOD
	Soffit level	6.66 mOD
	Springing level	4.34 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3OWE_2634B**	
River Reach	Owenacurra	
Type of structure	Road bridge which links the Market Green development with the main area of the town	
Description	Flat concrete bridge sitting on columns on either side of the river.	
Survey Reference	CFRAMS 3OWE_2633.6	
Irish Grid Reference(s)	187922.16, 73852.91	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	2.33 mOD
	Soffit level	5.99 mOD
	Springing level	5.74 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3OWE_3380B**	
River Reach	Owenacurra	
Type of structure	Railway bridge	
Description	Flat steel bridge sitting on stone column supports on either side of the channel and in the centre of the channel.	
Survey Reference	CFRAMS 3OWE_3380.2	
Irish Grid Reference(s)	187563.59, 74263.32	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	4.77 mOD
	Soffit level	7.46 mOD
	Springing level	7.44 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3OWE_3521B**	
River Reach	Owenacurra	
Type of structure	Old vehicular access bridge to the now abandoned industrial site north of the Railway line	
Description	Flat concrete bridge with supports at the side of the channel	
Survey Reference	CFRAMS 3OWE_3521.1	
Irish Grid Reference(s)	187499.94, 74377.46	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	5.4 mOD
	Soffit level	7.78 mOD
	Springing level	7.73 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	3OWE_3561B (Northern Relief Road Bridge)
River Reach	Owenacurra
Type of structure	Underside of the bridge consists of a series of horizontal RC beams
Description	Northern Relief Road Bridge
Survey Reference	
Irish Grid Reference(s)	187507.69, 74404.15
Included in model	Yes
Photograph	Upstream face  Underneath the bridge 

	Downstream face 	
Dimensions & levels	***Invert Level***	4.153 mOD
	Soffit level	8.43 mOD
	Springing level	8.12 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3OWE_4978B (Moore's Bridge – downstream)**	
River Reach	Owenacurra	
Type of structure	Narrow vehicular bridge. Provides access to a number of private properties.	
Description	Flat concrete bridge by two concrete columns	
Survey Reference		
Irish Grid Reference(s)	187361.22, 75148.55	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	11.2 mOD
	Soffit level	14.06 mOD
	Springing level	14.02 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

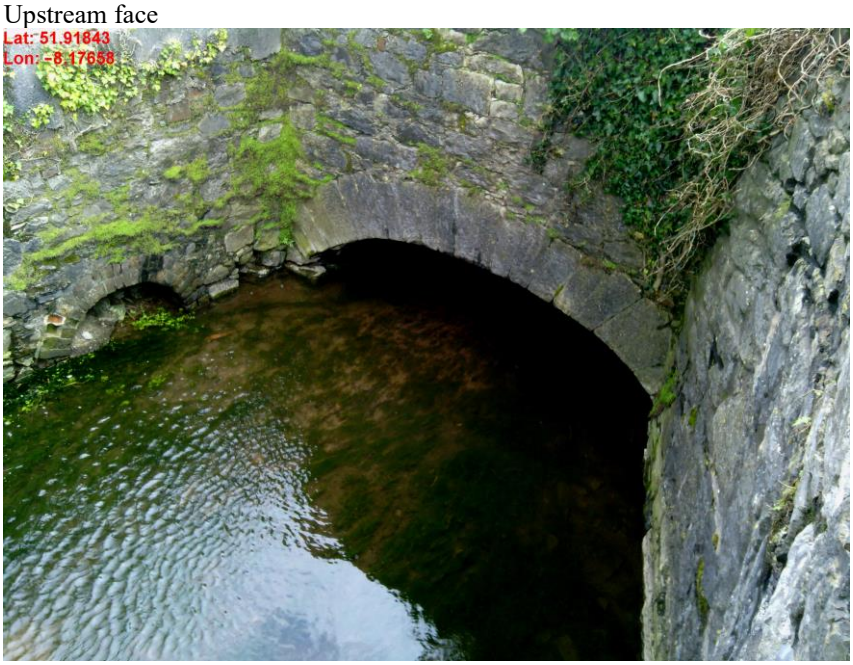
Name/model node label	**3OWE_4992B (Moore's Bridge – upstream)**	
River Reach	Owenacurra	
Type of structure	Vehicular access bridge to the Tir Cluain Housing Estate	
Description	Flat concrete bridge	
Survey Reference	CFRAMS 3OWE_4992.3	
Irish Grid Reference(s)	187358.31, 75160.14	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	11.39 mOD
	Soffit level	14.06 mOD
	Springing level	13.95 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**ELF_24B**	
River Reach	Elfordstown	
Type of structure	Vehicular access bridge/culvert	
Description	Flat concrete bridge with columns on either side of the river.	
Survey Reference	Infill Survey R6.00010	
Irish Grid Reference(s)	187665.5, 75652.71	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	16.601 mOD
	Soffit level	17.44 mOD
	Springing level	17.44 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	GLEN_160B	
River Reach	Glenathonacash	
Type of structure	Vehicular access bridge	
Description	Stone arch bridge	
Survey Reference	Infill Survey R5.00110	
Irish Grid Reference(s)	187364.56, 75400.43	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	12.974 mOD
	Soffit level	15.26 mOD
	Springing level	13.2 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	GLEN_1112B	
River Reach	Glenathonacash	
Type of structure	Vehicular access bridge/culvert	
Description	Flat concrete bridge	
Survey Reference	Infill Survey R5.01140	
Irish Grid Reference(s)	187636.67, 76144.99	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	21.995 mOD
	Soffit level	24.02 mOD
	Springing level	24.02 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**GLEN_1708B**	
River Reach	Glenathonacash	
Type of structure	Vehicular access bridge	
Description	Flat concrete slab type culvert	
Survey Reference	Infill Survey R5.01720	
Irish Grid Reference(s)	187596.09, 76680.12	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	28.045 mOD
	Soffit level	29.22 mOD
	Springing level	29.22 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	R10.215_CUL
River Reach	Owenacurra Millrace – downstream end
Type of structure	Culvert
Description	Irregular shaped culvert that formed part of the old Owenacurra Millrace
Survey Reference	Infill Survey
Irish Grid Reference(s)	187909.44, 73970.42
Included in model	Yes
Photograph	Upstream face 

<table>
<tr><td></td><td colspan="3">Downstream face
</td></tr>
<tr><td rowspan="4">Dimensions & levels</td><td></td><td>Upstream</td><td>Downstream</td></tr>
<tr><td>Invert Level</td><td>3.02 mOD</td><td>2.462 mOD</td></tr>
<tr><td>Soffit level</td><td>4.17 mOD</td><td>3.612 mOD</td></tr>
<tr><td>Culvert Length</td><td colspan="2">74.564 m</td></tr>
<tr><td>Manning's n</td><td colspan="3">Varies along the length</td></tr>
<tr><td>Modelled as</td><td colspan="3">Full Arch Conduit unit</td></tr>
</table>

Name/model node label	**R10.230**	
River Reach	Owenacurra Millrace	
Type of structure	Structure not presently in use. Unclear as to its original use.	
Description	Double arch stone bridge	
Survey Reference	Infill survey	
Irish Grid Reference(s)	187889.49, 74009.90	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	6.048 mOD
	Soffit level	7.79 mOD
	Springing level	7.32 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch bridge unit	

Name/model node label	**R10.250_B**	
River Reach	Owenacurra Millrace	
Type of structure	Pedestrian bridge	
Description	Elevated walkway bridge	
Survey Reference	Infill Survey R10.00250	
Irish Grid Reference(s)	187894.84, 74019.16	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	5.983 mOD
	Soffit level	7.57 mOD
	Springing level	7.52 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	USBPR Bridge unit	

Name/model node label	**R10.310_B**	
River Reach	Owenacurra Millrace	
Type of structure	Vehicular access bridge within an apartment complex	
Description	Arched Bridge	
Survey Reference	Infill Survey R10.00310	
Irish Grid Reference(s)	187862.83, 74062.69	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	6.037 mOD
	Soffit level	7.37 mOD
	Springing level	7.15 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**R10.560_CUL - R10.320_CUL**
River Reach	Owenacurra Millrace
Type of structure	RC box culvert
Description	Culvert forms part of the old Owenacurra Millrace
Survey Reference	Infill Survey R10.00560
Irish Grid Reference(s)	187730.66, 74243.3
Included in model	Yes
Photograph	

<table>
<tr><td></td><td colspan="3"></td></tr>
<tr><td rowspan="4">Dimensions & levels</td><td></td><td>Upstream</td><td>Downstream</td></tr>
<tr><td>Invert Level</td><td>6.5 mOD</td><td>6.05 mOD</td></tr>
<tr><td>Soffit level</td><td>7.32 mOD</td><td>6.87 mOD</td></tr>
<tr><td>Culvert Length</td><td colspan="2">250.3 m</td></tr>
<tr><td>Manning's n</td><td colspan="3">Varies across the length.</td></tr>
<tr><td>Modelled as</td><td colspan="3">Rectangular Conduit unit</td></tr>
</table>

Name/model node label	**R10.580_ACU- R10.580_BCU**		
River Reach	Owenacurra Millrace		
Type of structure	Twin Box Culvert		
Description	Double barrel culvert forms part of the old Owenacurra Millrace.		
Survey Reference	Infill Survey		
Irish Grid Reference(s)	187711.56, 74282.84		
Included in model	Yes		
Photograph			
Dimensions & levels		***Upstream***	***Downstream***
	Invert Level	6.06 mOD	6.06 mOD
	Soffit level	6.86 mOD	6.86 mOD
	Culvert Length	17.691 m	
Manning's n	Varies along the length.		
Modelled as	Rectangular Conduit unit		

Name/model node label	**R10.800_CUL - R10.600_CUL**
River Reach	Owenacurra Millrace – Entrance to the Millrace
Type of structure	Culvert with sluice gate
Description	Spring Arch stone culvert.
Survey Reference	Infill Survey
Irish Grid Reference(s)	187577.34, 74420.24
Included in model	Yes
Photograph	 

<table>
<tr><td></td><td colspan="3">Sluice gate at the entrance to the Mill race. At the time of our site visits it was in the permanently closed position. Water can therefore only enter the Mill race by overtopping of the structure.
</td></tr>
<tr><td rowspan="4">Dimensions & levels</td><td></td><td>Upstream</td><td>Downstream</td></tr>
<tr><td>Invert Level</td><td>7.5 mOD</td><td>6.47 mOD</td></tr>
<tr><td>Soffit level</td><td>8 mOD</td><td>6.97 mOD</td></tr>
<tr><td>Culvert Length</td><td colspan="2">197.502 m</td></tr>
<tr><td>Manning's n</td><td colspan="3">Varies along the length.</td></tr>
<tr><td>Modelled as</td><td colspan="3">Spring Arch Conduit unit</td></tr>
</table>

Name/model node label	**3DUN_12B**	
River Reach	Dungourney	
Type of structure	Vehicular road bridge	
Description	Single span flat deck concrete bridge	
Survey Reference	CFRAMS 3DUN_12	
Irish Grid Reference(s)	188077.75, 73161.25	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	0.14 mOD
	Soffit level	1.84 mOD
	Springing level	1.83 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3DUN_295B (Lewis Bridge)**	
River Reach	Dungourney	
Type of structure	Vehicular road bridge at Baby's Walk	
Description	Stone single arch bridge	
Survey Reference	CFRAMS 3DUN_295	
Irish Grid Reference(s)	188297.72, 73284.93	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	0.66 mOD
	Soffit level	3.21 mOD
	Springing level	2.54 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3DUN_478B**	
River Reach	Dungourney	
Type of structure	Pedestrian access bridge	
Description	Singe stone arch bridge	
Survey Reference	CFRAMS 3DUN_478	
Irish Grid Reference(s)	188465.69, 73372.25	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	1.58 mOD
	Soffit level	3.67 mOD
	Springing level	2.59 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3DUN_642**	
River Reach	Dungourney	
Type of structure	Arched Bridge	
Description	Flat Wooden foot bridge supported by concrete columns at the side of the channel.	
Survey Reference	CFRAMS 3DUN_642	
Irish Grid Reference(s)	188626, 73394	
Included in model	No. Justification for doing so: (1) improvement in model stability along this reach (2) Very limited impact on the hydraulics given its size (3) Area adjacent to the bridge is grassland with no critical receptors such that any localised head loss will not impact damages or modelled flood extent.	
Photograph		
Dimensions & levels	***Invert Level***	1.75 mOD
	Soffit level	3.16 mOD
	Springing level	3.29 mOD
Manning's n	N/a	
Modelled as	Not modelled	

Name/model node label	**3DUN_696**	
River Reach	Dungourney	
Type of structure	Local pedestrian access bridge	
Description	Flat Wooden foot bridge supported by stone columns at the side of the channel.	
Survey Reference	CFRAMS 3DUN_696	
Irish Grid Reference(s)	188687.5, 73401.86	
Included in model	No. Justification for doing so: (1) improvement in model stability along this reach (2) Very limited impact on the hydraulics given its size (3) Area adjacent to the bridge is grassland with no critical receptors such that any localised head loss will not impact damages or modelled flood extent.	
Photograph		
Dimensions & levels	***Invert Level***	1.91 mOD
	Soffit level	3.53 mOD
	Springing level	3.49 mOD
Manning's n	N/a	
Modelled as	Not modelled	

Name/model node label	**3DUN_1332B**	
River Reach	Dungourney	
Type of structure	Local access bridge	
Description	Flat concrete slab footbridge.	
Survey Reference	CFRAMS 3DUN_1330.7	
Irish Grid Reference(s)	189207.42, 73700.27	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	3.32 mOD
	Soffit level	4.87 mOD
	Springing level	4.73 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**3DU1_1075B**	
River Reach	Dungourney	
Type of structure	Local access road bridge	
Description	Stone double square opening bridge	
Survey Reference	CFRAMS 3DU1_1075	
Irish Grid Reference(s)	190499.13, 74673.57	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	8.14 mOD
	Soffit level	10.32 mOD
	Springing level	10.29 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	Arch Bridge unit	

Name/model node label	**2d_zsh_IDL_Bridge_Embankment_02_R**	
River Reach	Dungourney	
Type of structure	Bridge connection pipe network	
Description	Three arches bridge	
Survey Reference		
Irish Grid Reference(s)	189296.345, 73822.017	
Included in model	Yes	
Photograph		
Dimensions & levels	***Invert Level***	3.67 mOD
	Soffit level	7.7 mOD
	Springing level	5.12 mOD
Manning's n	Bed n of structure section = 0.032.	
Modelled as	2D embankment	

Name/model node label	**1d_nwk_IDL_Culvert_01_L**		
River Reach	Dungourney		
Type of structure	Culvert located at the IDL bridge embankment		
Description	Circular Culvert		
Survey Reference			
Irish Grid Reference(s)	189337.0035, 73800.2916		
Included in model	Yes		
Photograph	No photo available		
Dimensions & levels		***Upstream***	***Downstream***
	Invert Level	4.03 mOD	3.9 mOD
	Crown level	5.23 mOD	5.1 mOD
	Culvert Length	38 m	
Manning's n	Manning of the culvert = 0.015		
Modelled as	1D ESTRY circular culvert		

Name/model node label	**3OWE_3616**	
River Reach	Owenacurra	
Type of structure	Broad crested weir upstream of the Northern Relief Road. Constructed to facilitate water diversion into the Owenacurra mill race.	
Description	Broad crested weir with notch in centre	
Survey Reference	CFRAMS 3OWE_3616U	
Irish Grid Reference(s)	187550.36, 74467.5	
Included in model	Yes	
Photograph		
Dimensions & levels	***Crest elevation***	7.507 mOD
	Notch elevation	6.594 mOD
	Notch Width	1.462 m
Weir Coefficient	1.5	
Modelled as	Spill unit	

Name/model node label	**R10.00220_D**	
River Reach	Owenacurra Millrace	
Type of structure	Weir at downstream end	
Description	Broad crested weir. Left hand section of the weir is raised above the right hand side.	
Survey Reference	Infill Survey	
Irish Grid Reference(s)	187896.95, 73995.1	
Included in model	Yes	
Photograph		
Dimensions & levels	***Crest elevation***	6.419 mOD
	Notch elevation	6.165 mOD
	Notch Width	1.7 m
Weir Coefficient	1.2	
Modelled as	Spill unit	

Name/model node label	**2d_zsh_WRR_Road_01_R**	
River Reach	Dungourney	
Type of structure	Embankment of a road	
Description	Waterrock LIHAF road	
Survey Reference		
Irish Grid Reference(s)	186566.492, 74200.614	
Included in model	Yes	
Photograph		
Dimensions & levels	***Top of road***	11.99 mOD
Manning's n	Bed n of structure section = 0.03.	
Modelled as	2D embankment	

Name/model node label	**1d_nwk_WRR_Cul_01_L**		
River Reach	Dungourney		
Type of structure	Five culverts going under WRR road embankment		
Description	Circular Culvert		
Survey Reference			
Irish Grid Reference(s)	186564.8382, 74188.5411		
Included in model	Yes		
Photograph			
Dimensions & levels		***Upstream***	***Downstream***
	Invert Level	10.27 mOD (Sample levels the other 4 culverts are similar)	9.89 mOD (Sample levels the other 4 culverts are similar)
	Crown level	10.76 mOD (Sample levels the other 4 culverts are similar)	10.38 mOD (Sample levels the other 4 culverts are similar)
	Culvert Length	38 m	
Manning's n	Manning of the culvert = 0.015		
Modelled as	1D ESTRY circular culvert		