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**Appendix 3C - Ahacronane Culvert –  
Principal Inspection Report**  
**Ballynisky Wind Farm Turbine Delivery Route**

**Ballynisky Green Energy Ltd.**

**December 2025**



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## 1. Introduction

MWP were commissioned by Ballyniskey Green Energy Ltd. to undertake a Principal Inspection of Ahacronane Culvert which is on the proposed turbine delivery route to the Ballyniskey Wind Farm site.

Ahacronane Culvert is a double span culvert with an out-to-out of 9.24m and a maximum span of 1.78m. The culvert carries the L-1222 over the Ahacronane River.

The crossing was surcharged at the time of inspection, with water levels exceeding the culvert soffit and reaching the headwall. As a result, visibility and access were severely restricted, preventing an inspection of the pier, barrel, and culvert deck.

MWP undertook an inspection of the bridge on 06/12/2024. The inspection was conducted in accordance with the requirements of TII guidance document AM-STR-06054, whereby individual components or collections of components of the bridge are assigned a condition rating on a scale of 0 – 5 (**Table 1-1**). An overall condition rating is assigned to the structure on the basis of the component condition ratings; and cannot be worse than the worst rated component or cannot be better than the worst rating for the deck slab, beams/girders/transverse beams, abutments, piers, and bearings. As this is a condition survey only, no repairs have been recommended.

**Table 1-1: Description of condition ratings**

Rating	Description
0	No or insignificant damage.
1	Minor damage but no need for repair.
2	Some damage, repair needed when convenient. Component is still functioning as originally designed. Observe the condition development.
3	Significant damage, repair needed very soon, i.e., within next financial year.
4	Damage is critical and it is necessary to execute repair works at once, or to carry out a detailed inspection to determine whether any rehabilitation works are required.
5	Ultimate damage. The component has failed or is in danger of total failure, possibly affecting the safety of the road user. It is necessary to implement emergency temporary repair work immediately or rehabilitation work without delay after the introduction of load limitation measures.

Components and elements of the structure will be referred to as 'left' or 'right' in the longitudinal sense, and 'upstream' and 'downstream' in the transverse sense. 'Left' and 'right' sides are orientated when the structure is viewed from the upstream side.

## 2. Site Location



Figure 2-1: Site Location - Crossing 7

### 3. Inventory

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**Inventory Report:**

Name of Structure:	<i>Ahacronane Culvert</i>		
Date Collected:	<i>06.12.2024</i>		
Initials of Inspectors:	<i>SR/AOD</i>		
ID & Name of Road:	<i>L-1222</i>		
Graphical Location of Bridge:	<i>X</i>	<i>529463</i>	<i>Y 647092</i>
Altitude (m)	<i>-</i>		
Direction of Primary Road:	<i>East – West</i>		
Over Bridge/Under Bridge:	<i>Under Bridge</i>		
ID & Name of Obstacle:	<i>Ahacronane River</i>		
Year of Construction/Reconstruction:	<i>Unknown</i>		
Access Equipment Required:	<i>None</i>		
Additional Details:			
Load Capacity:	<i>Unknown</i>		
Consultant/Designer:	<i>Unknown</i>		
Load Distribution Class:	<i>Distribution in 2 Directions</i>		
Technical Standards:	<i>Unknown Standard</i>		
Technical Installations:	<i>No Technical Installation</i>		
Geometry of Structure:			
Minimum Vertical Clearance (m):	<i>-</i>		
Number of Spans:	<i>2</i>		
Minimum Span Length (m):	<i>1.75</i>		
Maximum Span Length (m):	<i>1.78</i>		
Overall Length (m):	<i>4.03</i>		
Width of Approach (m):	<i>6.90</i>		
Skew (degrees):	<i>30</i>		
Width of Carriageway (m):	<i>6.90</i>		
Width of Soft Verge, U/S (m):	<i>-</i>		
Width of Soft Verge, D/S (m):	<i>-</i>		
Width of Footway, U/S (m):	<i>0.64</i>		
Width of Footway, D/S (m):	<i>0.55</i>		
Parapet Minimum Height (m):	<i>1.20</i>		
Width Kerb to Kerb (m):	<i>-</i>		
Width Out to Out (m):	<i>9.24</i>		
Bridge Curved Y/N:	<i>N</i>		

**Structure Details:**

<i>Superstructure, Principal Type</i>	
Standard Design Y/N:	<i>Y</i>
Design of Elevation:	<i>Unknown</i>
Design of Cross Section:	<i>Slab</i>
Material of Primary Members:	<i>Reinforced Concrete, Cast Insitu</i>
<i>Superstructure, Secondary Type</i>	

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Standard Design Y/N:		
Design of Elevation:		<i>Not Applicable</i>
Design of Cross Section:		<i>Not Applicable</i>
Material of Primary Members:		<i>Not Applicable</i>
<i>Substructure</i>		
Abutments	Type:	Abutment Wall, Integrated Wingwalls
	Material:	Reinforced Concrete
	Foundation Type:	Unknown
Piers	Type:	Single Column
	Material:	Reinforced Concrete
	Foundation Type:	Unknown
<i>Masonry Arch Details:</i>		
Springing Height Above Mud Line (m):		<i>Not Applicable</i>
Rise of Arch Barrel at Quarterpoints (m):		<i>Not Applicable</i>
Average Depth of Fill (m):		<i>Not Applicable</i>
Span Length (m):		<i>Not Applicable</i>
Rise of Arch Barrel at Crown (m):		<i>Not Applicable</i>
Thickness of Arch Barrel (m):		<i>Not Applicable</i>
Parapet Thickness D/S (m):		<i>Not Applicable</i>
Parapet Thickness U/S (m):		<i>Not Applicable</i>
<u>Arch Facing Stones:</u>		
Material:		<i>Not Applicable</i>
Square Cut or Rubble:		<i>Not Applicable</i>
Average joint Thickness (mm):		<i>Not Applicable</i>
Mortar Type Hard/Soft:		<i>Not Applicable</i>
<u>Arch Barrel Sheeting:</u>		
Material:		<i>Not Applicable</i>
Square Cut or Rubble:		<i>Not Applicable</i>
Average joint Thickness (mm):		<i>Not Applicable</i>
Mortar Type Hard/Soft:		<i>Not Applicable</i>
<u>Spandrel Walls:</u>		
Material:		<i>Not Applicable</i>
Square Cut or Rubble:		<i>Not Applicable</i>
Average joint Thickness (mm):		<i>Not Applicable</i>
Mortar Type Hard/Soft:		<i>Not Applicable</i>
Bridge Details:		
Fixed Bearings on Supports:		<i>Not Applicable</i>
Free Bearings on Supports:		<i>Not Applicable</i>
Type of Parapet:		<i>Aluminium Railing</i>
Type of Guardrails:		<i>No Guardrails</i>
Type of Wearing Surface:		<i>Bituminous Surface Dressing</i>
Type of Expansion Joint:		<i>Other</i>
Remarks:		
<ul style="list-style-type: none"> <li>• Culvert is located next to Joseph Hogans Roadstone.</li> </ul>		

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## 4. Inspection Report

Client:	Ballyniskey Green Energy Ltd.	Road No.:	L-1222
Area:	County Limerick	Structure Name:	Ahacronane Culvert
Date of Inspection:	06/12/2024	Inspectors:	AOD / SR
Weather:	Overcast + Wet	Year of Next PI:	

No.	Component Repair Work Damage Description <i>Type of damage</i>	Con rtg	Mtn req	Spe Ins	Repair Work			
					Qty	Cost	Year	Photos
1	<u>Bridge surface</u> A patch repair to the road on the downstream end. Some ravelling noted on upstream end of road with ponding of water occurring in wheelpaths. Road markings are very faint. See Photo 1.1 (looking left)	1	N	N	-	-	-	1
2	<u>Expansion joints</u> -	-	-	-	-	-	-	0
3	<u>Footways/median</u> Footways are in good condition. Some vegetation and ponding of water noted. See Photo 3.1 (looking right)	1	N	N	-	-	-	1
4	<u>Parapets/Safety barrier</u> Aluminium railing is in good condition with no signs of impact or damage to steel railing and posts. See Photo 4.1 (looking at upstream parapet)	0	N	N	-	-	-	1
5	<u>Embankment/Revetments</u> Significant overgrowth present. See Photo 5.1 (looking right)	1	N	N	-	-	-	1
6	<u>Wing/Spandrel/Retaining Walls</u> Wing walls were submerged under water therefore an assessment could not be made. See Photo 6.1 (looking right)	?	-	-	-	-	-	1
7	<u>Abutments</u> Abutment walls were submerged under water therefore an assessment could not be made.	?	-	-	-	-	-	-
8	<u>Piers</u> Pier was submerged in water and an assessment could not be made.	?	-	-	-	-	-	-

No.	<u>Component</u> Repair Work Damage Description <i>Type of damage</i>	Con rtg	Mtn req	Spe Ins	Repair Work			
					Qty	Cost	Year	Photos
9	<u>Bearings</u> -	-	-	-	-	-	-	-
10	<u>Deck/slab/arch barrel</u> The culvert was submerged beyond the soffit level, preventing a proper assessment.	?	-	-	-	-	-	-
11	<u>Beams/girders/transverse beams</u> -	-	-	-	-	-	-	-
12	<u>Riverbed</u> The water level was above the soffit of the culvert. Debris buildup was visible. See Photo 12.1 (Looking upstream)	1	N	N	-	-	-	1
13	<u>Other elements</u> -	-	-	-	-	-	-	-
14	<u>Structure in general</u> The following was noted: <ul style="list-style-type: none"> <li>- Culvert was submerged up to the level of the head wall. An assessment could therefore not be made regarding the condition of the barrel, pier, deck etc. however, no obvious defects were noted.</li> <li>- Bridge surface has a patch repair on downstream end. Ravelling and bleeding noted.</li> </ul>	?	N	N	-	-	-	-
<b>Total</b>								

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Component No.	1	Bridge surface
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A patch repair to the road on the downstream end. Some ravelling noted on upstream end of road with ponding of water occurring in wheelpaths. Road markings are very faint. See Photo 1.1 (looking left)

Condition/Maintenance. 1/N



Component No. 3 Footways/Median

Footways are in good condition. Some vegetation and ponding of water noted. See Photo 3.1 (looking right)

Condition/Maintenance. 1/N



Component No. 4 Parapets/Safety barrier

Aluminium railing is in good condition with no signs of impact or damage to steel railing and posts. See Photo 4.1 (looking at upstream parapet)

Condition/Maintenance. 0/N



Component No. **5** Embankment/Revetments

Significant overgrowth present. See Photo 5.1 (looking right)

Condition/Maintenance. 1 /N



Component No. 6 Wingwall/Spandrel/Retaining Walls

Wing walls were submerged under water therefore an assessment could not be made. See Photo 6.1 (looking right)

Condition/Maintenance. ?/N



Component No. 12 Riverbed

The water level was above the soffit of the culvert. Debris buildup was visible. See Photo 12.1 (Looking upstream)

Condition/Maintenance. 1/N

