

EARBA STORAGE

A GILKES ENERGY COMPANY

Earba Pumped Storage Hydro Scheme EIA Report

Appendix 12.3: Schedule of Watercourse Crossings

February 2024



Quality Information

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Earba Pump Storage Scheme

Technical Appendix 12.3: Schedule of Watercourse Crossings

Earba Storage

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Basis of Report

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1.0 Introduction

This Appendix contains information relating to the existing and proposed new watercourse crossings at the Proposed Development.

It presents photographs and dimensions for each proposed new permanent crossing point and existing crossing points, which may be upgraded as part of the development. It includes watercourses which are shown on the 1:25,000 scale Ordnance Survey (OS) mapping and which are shown to be outside of the proposed inundation areas.

The report also details the likely form of the track crossing solution (e.g., culvert, arch culvert, or bridge), however, the final design of each crossing solution would be agreed with the Scottish Environment Protection Agency (SEPA) prior to construction and be determined as part of the detailed site design.

A survey of the proposed watercourse crossings was undertaken in July and August 2023 by experienced SLR hydrologists.

The location of the watercourse crossings is shown in **Figure 12.1: Local Hydrology** of the EIA Report.

SEPA regulate watercourse crossings shown on 1:50,000 scale OS maps (Landranger Series). All other watercourses are classed as “minor watercourse” and are exempt under the Controlled Activity Regulations (CAR).

The design, construction and/or improvements to the crossings would be agreed with SEPA prior to any construction works commencing in accordance with CAR as part of the detailed development design.



2.0 Watercourse Crossing Details

2.1 Existing Watercourse Crossings

Watercourse Crossing ID	WX01
Watercourse Crossing Details	NGR: NN 44075 82114 Status: Existing Culvert Diameter: 0.8 m Culvert Construction Type: Concrete, circular culvert. Watercourse Width: 0.8 - 1.2 m Watercourse Depth: 0.1 – 0.8 m Notes: Culvert half submerged on upstream entrance. Heavily vegetated
Photograph of Culvert Entrance from Upstream	 A photograph showing the upstream entrance of a culvert. The area is heavily overgrown with dense, tall grasses and various shrubs, making the entrance difficult to see. The culvert itself is partially submerged in the water.
Photograph Looking at Culvert Exit from Downstream	 A photograph showing the downstream exit of a culvert. The culvert is partially submerged in the water, and the surrounding area is heavily vegetated with tall grasses and ferns. The water is dark and still.



2.2 Permanent New Water Crossings

Watercourse Crossing ID	WX02
Watercourse Crossing Details	NGR: NN 43548 83089 Status: New Watercourse Width: 6 - 8 m Watercourse Depth: 1 m Notes: None.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Open Span Bridge Licence



Watercourse Crossing ID	WX03
Watercourse Crossing Details	NGR: NN 44780 81797 Status: New Watercourse Width: 0.5 m Watercourse Depth: 0.2 m Notes: Watercourse surveyed 20m downstream of the proposed crossing point. Watercourse sits within channel 0.5m deep.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX04
Watercourse Crossing Details	NGR: NN 45157 81401 Status: New Watercourse Width: 0.4 m Watercourse Depth: 0.3 m Notes: Watercourse sits within channel 1m deep which is heavily vegetated.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX05
Watercourse Crossing Details	NGR: NN 45299 81328 Status: New Watercourse Width: 0.4 m Watercourse Depth: 0.1 m Notes: Watercourse sits within channel 0.5m deep. No photographs available of crossing point. Form similar to WX04.
Photograph Looking Upstream	N/A
Photograph Looking Downstream	N/A
Proposed Crossing Type	Culvert
Likely Required CAR Authorisation	Registration



Watercourse Crossing ID	WX06
Watercourse Crossing Details	NGR: NN 46204 81279 Status: New Watercourse Width: 1 – 1.5 m Watercourse Depth: 0.2 m Notes: Watercourse situated within peat hags up to 1.2 m high.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Bottomless arch culvert or bridge Registration



Watercourse Crossing ID	WX07
Watercourse Crossing Details	NGR: NN 4623781249 Status: New Watercourse Width: 4 m Watercourse Depth: 0.1 - 0.2 m Notes: Watercourse situated within peat hags up to 1 m high.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Bottomless arch culvert or bridge Licence



Watercourse Crossing ID	WX08
Watercourse Crossing Details	NGR: NN 47268 81649 Status: New Watercourse Width: 0.1 m Watercourse Depth: 0.1 m Notes: Very low flow.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX09
Watercourse Crossing Details	NGR: NN 48836 83316 Status: New Watercourse Width: 3 m Watercourse Depth: 0.3 m Notes: Watercourse situated within channel 2 to 3 m high.
Photograph Looking Upstream	 A photograph showing a rocky watercourse flowing upstream. The water is turbulent as it flows over numerous large, dark, moss-covered rocks. The surrounding landscape is a grassy hillside under an overcast sky.
Photograph Looking Downstream	 A photograph showing a rocky watercourse flowing downstream. The water is turbulent as it flows over numerous large, dark, moss-covered rocks. The surrounding landscape is a grassy hillside under an overcast sky.
Proposed Crossing Type Likely Required CAR Authorisation	Bottomless arch culvert or bridge Licence



Watercourse Crossing ID	WX10
Watercourse Crossing Details	NGR: NN 48891 83374 Status: New Watercourse Width: 0.5 m Watercourse Depth: 0.1 m Notes: None
Photograph Looking Upstream	 A photograph showing a small, shallow watercourse flowing through a grassy field. The water is dark and still, reflecting the surrounding vegetation. The field is covered in green grass and some purple heather. Several large, light-colored rocks are scattered along the banks of the watercourse.
Photograph Looking Downstream	 A photograph showing a small, shallow watercourse flowing through a grassy field. The water is dark and still, reflecting the surrounding vegetation. The field is covered in green grass and some purple heather. Several large, light-colored rocks are scattered along the banks of the watercourse.
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX11
Watercourse Crossing Details	NGR: NN 49733 84406 Status: New Watercourse Width: 1.5 m Watercourse Depth: 0.1 – 0.3 m Notes: Steep watercourse which is incised in bedrock. Watercourse situated within larger channel approximately 8 m high.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Bottomless arch culvert or open span bridge Licence



Watercourse Crossing ID	WX12
Watercourse Crossing Details	NGR: NN 49745 84516 Status: New Watercourse Width: 0.5 m Watercourse Depth: 0.1 m Notes: Watercourse situated within channel up to 0.5 m high.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX13
Watercourse Crossing Details	NGR: NN 50338 85836 Status: New Watercourse Width: 0.6 m Watercourse Depth: 0.15 m Notes: Watercourse surveyed approximately 130m upstream of proposed crossing point. Watercourse incised in bedrock and situated within channel up to 0.5 m high.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX14
Watercourse Crossing Details	NGR: NN 50266 85942 Status: New Watercourse Width: 2 m Watercourse Depth: 0.1 m Notes: Surveyed approximately 230 m upstream of the proposed crossing.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Open span bridge Licence



Watercourse Crossing ID	WX15
Watercourse Crossing Details	NGR: NN 49155 84751 Status: New Watercourse Width: 0.3 m Watercourse Depth: 0.1 m Notes: Situated within channel 0.8 m high
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX16
Watercourse Crossing Details	NGR: NN 46967 82394 Status: New Watercourse Width: 0.2 m Watercourse Depth: 0.2 m Notes: Situated within channel 0.4 m high. Heavily vegetated.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX17
Watercourse Crossing Details	NGR: NN 46897 82331 Status: New Watercourse Width: 0.5 m Watercourse Depth: 0.1 m Notes: Situated within channel approximately 0.7m deep.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX18
Watercourse Crossing Details	NGR: NN 46509 80679 Status: New Watercourse Width: 5 - 10 m Watercourse Depth: 0.3 m Notes: Watercourse situated within wider channel approximately 2 m high. Surveyed approximately 50 m upstream of proposed crossing.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	At location of proposed aqueduct.



Watercourse Crossing ID	WX19
Watercourse Crossing Details	NGR: NN 46407 80541 Status: New Watercourse Width: 1 m Watercourse Depth: 0.2 m Notes: Surveyed approximately 100 m upstream of proposed crossing.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	At location of proposed aqueduct.



Watercourse Crossing ID	WX20
Watercourse Crossing Details	NGR: NN 46193 80333 Status: New Watercourse Width: 2.5 m Watercourse Depth: 0.2 m Notes: Watercourse situated within channel approximately 1.5 m high. Surveyed approximately 180 m upstream of the proposed crossing.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	At location of proposed aqueduct.



Watercourse Crossing ID	WX21
Watercourse Crossing Details	NGR: NN 48679 80652 Status: New Watercourse Width: 0.3 m Watercourse Depth: 0.1 m Notes: None
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX22
Watercourse Crossing Details	NGR: NN 48724 80605 Status: New Watercourse Width: 0.2 m Watercourse Depth: 0.1 m Notes: None
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Culvert Registration



Watercourse Crossing ID	WX23
Watercourse Crossing Details	NGR: NN 49126 80025 Status: New Watercourse Width: 0.8 m Watercourse Depth: 0.1 m Notes: Watercourse surveyed approximately 100 m upstream of the proposed crossing.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Bottomless arch culvert. Registration



Watercourse Crossing ID	WX24
Watercourse Crossing Details	NGR: NN 50779 79258 Status: New Watercourse Width: 4 m Watercourse Depth: 0.2 m Notes: Watercourse situated within a wider channel which is approximately 3 to 8 m high.
Photograph Looking Upstream	
Photograph Looking Downstream	
Proposed Crossing Type Likely Required CAR Authorisation	Downstream of the proposed Loch a Bhealaich Leamhain dam.



