

EUCHANHEAD RENEWABLE ENERGY DEVELOPMENT

Technical Appendix 10.5: Schedule of Watercourse Crossings
Prepared for: ScottishPower Renewables

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1.0 Introduction

This Technical Appendix contains information relating to watercourse crossings at the proposed Development (illustrated in **EIAR Chapter 10, Figure 10.1 and Figure 10.5.1**).

Works associated with watercourse crossings are regulated under The Water Environment (Controlled Activities) (Scotland) (as amended) Regulations 2011. Within the application boundary there is an extensive network of existing access tracks and the proposed Development has sought to utilise these existing tracks wherever possible.

A survey of existing and proposed new watercourse crossings for the proposed Development was undertaken on 19 to 21 May and 08 October 2020 by an experienced SLR Hydrologist, the details of which are reported herein.









Section 2 provides details of crossings where improvement works are proposed (WX01 to 09, 16, 17, 20 to 24, and 35 to 43) or where new crossings (WX10 to 15, 18, 19 and 25 to 34) are required.











2.0 Watercourse Crossing Details













Table 2-1 presents information collected from the watercourse crossing survey conducted on 19 to 21 May and 08 October 2020.











Table 2-1: Watercourse Crossing Details









Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
Watercourse Crossing: WX01 Status: Existing NGR: NS 71247 06538 Watercourse Width: 0.4 m Watercourse Depth: 0.1 m Notes: Minor watercourse which runs adjacent to the road before it is culverted. The existing culvert is approximately 0.2 m in diameter.	Existing		
Watercourse Crossing: WX02 Status: Existing NGR: NS 69671 06685 Watercourse Width: 2.5 m Watercourse Depth: 0.2 m Notes: Existing bottomless single span bridge which is supported by wooden blocks underneath. The bridge is 3 m wide and 0.5 m high.	Existing		
Watercourse Crossing: WX03 Status: Existing NGR: NS 68977 06534 Watercourse Width: 1 m Watercourse Depth: 0.3 m Notes: Existing bottomless single span bridge which is supported by wooden blocks underneath. The bridge has a span of approximately 1.5 m and is 0.5 m high.	Existing		








Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
Watercourse Crossing: WX04 Status: Existing NGR: NS 68607 06330 Watercourse Width: 1.2 m Watercourse Depth: 0.2 m Notes: Large existing steel circular culvert which is approximately 0.9 m in diameter which is slightly corroded.	Existing		
Watercourse Crossing: WX05 Status: Existing NGR: NS 68222 05782 Watercourse Width: 1.1 m Watercourse Depth: 0.2 m Notes: Large existing steel circular culvert which is approximately 0.9 m in diameter.	Existing		
Watercourse Crossing: WX06 Status: Existing NGR: NS 68134 05632 Watercourse Width: 0.9 m Watercourse Depth: 0.2 m Notes: Large existing steel circular culvert which is approximately 0.8 m in diameter.	Existing		
Watercourse Crossing: WX07 Status: Existing NGR: NS 68208 05331 Watercourse Width: 3 m Watercourse Depth: 0.4 m Notes: An existing bottomless single span bridge which has a span of approximately 4 m and is 2 m high.	Existing		










Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
Watercourse Crossing: WX08 Status: Existing NGR: NS 68100 04882 Watercourse Width: 0.6 m Watercourse Depth: 0.2 m Notes: Small existing plastic circular culvert approximately 0.4 m in diameter. The culvert is very blocked on the upstream side.	Existing		
Watercourse Crossing: WX09 Status: Existing NGR: NS 67781 04399 Watercourse Width: N/A Watercourse Depth: N/A Notes: Small existing steel circular culvert which is approximately 0.4 m in diameter. The watercourse was noted as dry and overgrown.	Existing		
Watercourse Crossing: WX10 Status: New NGR: NS 67717 06025 Watercourse Width: 0.1 m Watercourse Depth: 0.4 m Notes: Minor watercourse located within a channel which extends to 1 m high and 1.5 m wide.			
Watercourse Crossing: WX11 Status: New NGR: NS 66797 05485 Watercourse Width: 0.4 m Watercourse Depth: 0.8 m Notes: Minor watercourse located within long grasses and reeds incised into peat.			













Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
Watercourse Crossing: WX12 Status: New NGR: NS 66745 04766 Watercourse Width: 0.9 m Watercourse Depth: 0.05 m Notes: Minor watercourse with long grasses and reeds. It is noted the water is very shallow over a broad area and the water was observed to be silty.			
Watercourse Crossing: WX13 Status: New NGR: NS 66695 04671 Watercourse Width: 0.3 m Watercourse Depth: 0.1 m Notes: Minor watercourse within a steeply sloping channel.			
Watercourse Crossing: WX14 Status: New NGR: NS 66664 04488 Watercourse Width: 0.5 m Watercourse Depth: 0.5 m Notes: Minor meandering watercourse with long grasses. It is noted that the watercourse is slightly wider both upstream and downstream of the crossing.			
Watercourse Crossing: WX15 Status: New NGR: NS 66829 04102 Watercourse Width: 0.6 m Watercourse Depth: 0.1 m Notes: Minor meandering watercourse located in a fairly broad channel with a small floodplain located on the south western side.			








Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
Watercourse Crossing: WX16 Status: Existing NGR: NS 66973 04053 Watercourse Width: 0.5 m Watercourse Depth: 0.2 m Notes: Existing plastic circular culvert to approximately 0.6 m in diameter. Silt fences are located on either side of the crossing.	Existing		
Watercourse Crossing: WX17 Status: Existing NGR: NS 66423 03721 Watercourse Width: 1.2 m Watercourse Depth: 0.2 m Notes: Large existing plastic circular culvert approximately 1.2 m in diameter. Evidence of some boulder migration into the culvert itself but a steady low flow was still observed. Silt traps are located on either side of the crossing location.	Existing		
Watercourse Crossing: WX18 Status: New NGR: NS 68266 02107 Watercourse Width: 1.5 m Watercourse Depth: 0.2 m Notes: Watercourse in a channel that extends to approximately 1 m high and 2 m wide. A small gorge feature is located on the eastern slope of the channel where the watercourse is confined to approximately 0.9 m wide.			
Watercourse Crossing: WX19 Status: New NGR: NS 68510 02157 Watercourse Width: N/A Watercourse Depth: N/A Notes: No defined watercourse found at the crossing location. The area comprised of soft waterlogged ground with reeds and long grasses.			









Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
<p>Watercourse Crossing: WX20</p> <p>Status: Existing</p> <p>NGR: NS 68429 01887</p> <p>Watercourse Width: 3 m</p> <p>Watercourse Depth: 0.3 m</p> <p>Notes: Large bottomless single span bridge which has a span of approximately 4 m and is 1 m high. Evidence of boulders within the channel and surface water ponding was observed on the top of the bridge.</p>	Existing		
<p>Watercourse Crossing: WX21</p> <p>Status: Existing</p> <p>NGR: NS 69058 01195</p> <p>Watercourse Width: 0.5 m</p> <p>Watercourse Depth: 0.2 m</p> <p>Notes: Small existing concrete circular culvert approximately 0.4 m in diameter. It is noted that the culvert is slightly blocked by vegetation and there is evidence of some sediment deposition immediately downstream of the culvert.</p>	Existing		
<p>Watercourse Crossing: WX22</p> <p>Status: Existing</p> <p>NGR: NX 69919 99940</p> <p>Watercourse Width: 1.2 m</p> <p>Watercourse Depth: 0.2 m</p> <p>Notes: Large existing steel circular culvert approximately 0.8 m in diameter. A small amount of water flow observed in the culvert. It is noted that a second culvert which has been blocked off is located adjacent to the existing crossing.</p>	Existing		
<p>Watercourse Crossing: WX23</p> <p>Status: Existing</p> <p>NGR: NX 69624 99441</p> <p>Watercourse Width: 0.5 m</p> <p>Watercourse Depth: 0.1 m</p> <p>Notes: Small existing plastic circular culvert approximately 0.4 m in diameter. Only a small amount of water observed in the culvert.</p>	Existing		





Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
Watercourse Crossing: WX24 Status: Existing NGR: NX 69474 99300 Watercourse Width: 0.6 m Watercourse Depth: 0.2 m Notes: Small existing plastic circular culvert approximately 0.2 m in diameter. Area of ponding noted both upstream and downstream of the culvert.	Existing		
Watercourse Crossing: WX25 Status: New NGR: NS 66713 05527 Watercourse Width: N/A Watercourse Depth: N/A Notes: No defined watercourse found at the crossing location. The area comprised of soft waterlogged ground with reeds and mosses.	N/A		
Watercourse Crossing: WX26 Status: New NGR: NS 65901 05082 Watercourse Width: 0.1 m Watercourse Depth: 0.2 m Notes: Minor watercourse located within a small channel comprising of long grasses and mosses.			

Watercourse Crossing Details	Photograph of New Watercourse Crossing Point		Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
Watercourse Crossing: WX27 Status: New NGR: NS 65726 05018 Watercourse Width: 0.2 m Watercourse Depth: 0.2 m Notes: Minor watercourse located within a small channel comprising of long grasses and reeds.				
Watercourse Crossing: WX28 Status: New NGR: NS 65610 05036 Watercourse Width: 0.5 m Watercourse Depth: 0.3 m Notes: Incised channel with steep sided slopes. Channel is approximately 8 m wide and 8 m high.				
Watercourse Crossing: WX29 Status: New NGR: NS 65457 05121 Watercourse Width: 0.2 m Watercourse Depth: 0.2 m Notes: Minor watercourse within a wider channel which is approximately 4 m wide and 2 m deep.				

Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
Watercourse Crossing: WX30 Status: New NGR: NS 65245 05353 Watercourse Width: 0.5 m Watercourse Depth: 0.5 m Notes: Minor watercourse which is located beneath peat at the crossing location.			
Watercourse Crossing: WX31 Status: New NGR: NS 65299 06284 Watercourse Width: 0.4 m Watercourse Depth: 0.2 m Notes: Minor watercourse with very low flow and evidence of pebbles and cobbles within the active channel. The broader channel comprises of long grasses and extends to approximately 0.5 m wide and 1 m high.			
Watercourse Crossing: WX32 Status: New NGR: NS 65320 06365 Watercourse Width: 0.3 m Watercourse Depth: 0.5 m Notes: Minor watercourse which was noted dry during the site visit. Evidence of pebbles and cobbles within the channel which extends to approximately 0.3 m high and 1.5 m wide.			
Watercourse Crossing: WX33 Status: New NGR: NS 65356 06900 Watercourse Width: 0.3 m Watercourse Depth: 0.1 m Notes: Minor watercourse located in a relatively broad shallow channel, which becomes more defined further downstream.			

Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
<p>Watercourse Crossing: WX34 Status: New NGR: NS 65355 06938 Watercourse Width: 0.2 m Watercourse Depth: 0.1 m Notes: Minor watercourse with low flow which is located in a steep sided channel comprising weathered bedrock and peat. The channel is approximately 2 m wide and 2.5 m high.</p>			
<p>Watercourse Crossing: WX35 Status: Existing NGR: NS 67938 11589 Watercourse Width: 1 m Watercourse Depth: 0.2 m Notes: Large existing circular culvert approximately 1.2 m in diameter. Only a small amount of water with low flow observed in the culvert.</p>	Existing		
<p>Watercourse Crossing: WX36 Status: Existing NGR: NS 67220 12392 Watercourse Width: 1.2 m Watercourse Depth: 0.2 m Notes: Large existing plastic circular culvert approximately 1.4 m in diameter. Only a small amount of water with low flow observed in the culvert.</p>	Existing		
<p>Watercourse Crossing: WX37 Status: Existing NGR: NS 67090 12438 Watercourse Width: N/A Watercourse Depth: N/A Notes: No existing watercourse was located in the area shown on the OS mapping. Likely that water has been diverted along the existing track to watercourse crossing WX36.</p>	Does not exist	Does not exist	Does not exist

Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
<p>Watercourse Crossing: WX38 Status: Existing NGR: NS 67075 12443 Watercourse Width: N/A Watercourse Depth: N/A Notes: Large existing plastic circular culvert which is approximately 0.9 m in diameter. Stagnant water was observed with no flow through the culvert. Immediately downstream of the crossing, the watercourse is culverted again underneath the field to the north. This culvert was noted as an open bottom plastic pipe and no flowing water was observed.</p>	Existing		
<p>Watercourse Crossing: WX39 Status: Existing NGR: NS 66904 12517 Watercourse Width: 1 m Watercourse Depth: 0.2 m Notes: Large existing plastic culvert which is approximately 1.2 m in diameter. Only a small amount of water with low flow observed in the culvert. The watercourse downstream of the culvert extends laterally into a small pool which is approximately 2.5 m wide.</p>	Existing		
<p>Watercourse Crossing: WX40 Status: Existing NGR: NS 66589 12575 Watercourse Width: 1.2 m Watercourse Depth: 0.2 m Notes: Large existing plastic culvert approximately 0.9 m in diameter. Only a small amount of water with low flow was observed in the culvert itself.</p>	Existing		
<p>Watercourse Crossing: WX41 Status: Existing NGR: NS 66351 12778 Watercourse Width: N/A Watercourse Depth: N/A Notes: Small existing plastic circular culvert approximately 0.2 m in diameter. The culvert was noted as partially blocked on the upstream side with vegetation and small boulders. Stagnant water was noted on the downstream end of the culvert. No flowing water was observed.</p>	Existing		

Watercourse Crossing Details	Photograph of New Watercourse Crossing Point	Photograph Looking Upstream of Watercourse Crossing	Photograph Looking Downstream of Watercourse Crossing
<p>Watercourse Crossing: WX42 Status: Existing NGR: NS 66131 12870 Watercourse Width: 0.2 m Watercourse Depth: 0.1 m Notes: Small existing concrete circular culvert which is approximately 0.2 m in diameter. The culvert was noted as half buried on the upstream end and a smaller pipe is also located through the centre of the culvert.</p>	Existing		
<p>Watercourse Crossing: WX43 Status: Existing NGR: NS 66050 12904 Watercourse Width: N/A Watercourse Depth: N/A Notes: Watercourse was noted dry during site visit. The crossing consists of an existing concrete circular culvert which is approximately 0.2 m in diameter with a smaller pipe running through the centre of the culvert.</p>	Existing		

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