



Appendix 13.4: Watercourse Crossings

Schedule of Watercourse Crossings

Kintore Hydrogen Ltd

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Basis of Report

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Appendices

Appendix A Location of Watercourse Crossings



1.0 Introduction

This appendix contains information relating to the proposed and existing watercourse crossings required to facilitate the proposed development.

This report presents photographs and dimensions for each crossing point. The final design of new each crossing solution would be agreed with 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 June 2024 by experienced SLR hydrologists.

The location of the watercourse crossings is shown in Appendix A.

1.1 Relevant Legislation

The Water Framework Directive (2000/60/EC) (WFD) has been transposed into Scottish legislation as the Water Environment and Water Services (Scotland) Act 2003 (or WEWS) and has given Scottish ministers powers to introduce regulatory controls over activities in order to protect and improve Scotland's water environment. The water environment includes wetlands, rivers, lochs, transitional waters (estuaries), coastal waters and groundwater. These regulatory controls, known as the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) came into force in 2011 and have since been amended in 2013, 2017, and 2021.

With respect to watercourse crossings, CAR requires that all engineering works in inland surface waters and wetlands are subject to authorisation and allow for proportionate risk-based regulation which is outlined in the CAR Practical Guide. The authorisation process operates at three levels:

- General Binding Rules (GBR):
 - Minor bridges with no construction on bed or banks.
- Registration:
 - Bridges across rivers and lochs where no part of the structure encroaches on the bed (e.g., no piers or in-channel supports). In addition, the total length of the structures on both banks should not be more than 20 m. This category includes bottomless arch culverts; and
 - Closed culverts used for single-track tracks, footpaths and/or cycle routes, where the affected river is not more than 2 m wide.
- Licence (Simple/Complex):
 - All other bridges, fords or causeways; and
 - This category would include bridges affecting more than 20 m total bank lengths, bridges with in-stream supports or closed culverts for crossings not specified above.



SEPA provides authorisation for watercourse crossings shown on the 1:50,000 scale Ordnance Survey (OS) maps (Landranger Series). All other watercourses are classed as "minor watercourse" and are exempt under CAR.




2.0 Watercourse Crossing Details

Watercourse Crossing ID	WX01
Watercourse Crossing Details	<p>NGR: NJ 81430 14856 Status: New Permanent Crossing Watercourse Width: 0.8m Watercourse Depth: 0.1m Notes: Located within a wider channel up to 3.8m wide.</p>
Photograph Looking Upstream	
Photograph Looking Downstream	





Watercourse Crossing ID	WX02
Watercourse Crossing Details	<p>NGR: NJ 78037 14537</p> <p>Status: Existing Crossing</p> <p>Culvert Diameter: 1.8m wide, soffit 1.3m above water level</p> <p>Culvert Construction Type: Square stone open span culvert</p> <p>Watercourse Width: 1.4m</p> <p>Watercourse Depth: 0.1m</p> <p>Notes: Entrance of culvert was partially blocked during the survey.</p>
Photograph Looking at Culvert Entrance	
Photograph Looking at Culvert Exit from Downstream	





Watercourse Crossing ID	WX03
Watercourse Crossing Details	<p>NGR: NJ 78107 14317</p> <p>Status: Existing Crossing</p> <p>Culvert Diameter: 1.6m wide, 0.4m high</p> <p>Culvert Construction Type: Twin square stone open span culverts</p> <p>Watercourse Width: 0.8m to 2.5m</p> <p>Watercourse Depth: 0.1m</p> <p>Notes: A confluence of two watercourses is present immediately upstream of the culvert causing a larger ponding of water.</p>
Photograph Looking at Culvert Entrance from Upstream	
Photograph Looking at Culvert Exit from Downstream	



Watercourse Crossing ID	WX04
Watercourse Crossing Details	<p>NGR: NJ 79239 13127</p> <p>Status: New Permanent Crossing</p> <p>Watercourse Width: approximately 2m to 3m</p> <p>Watercourse Depth: unknown</p> <p>Notes: Heavily vegetated and banks very steep making access difficult during the survey. Watercourse located in a wider channel approximately 10m wide.</p>
Photograph Looking Upstream	 A landscape photograph showing a grassy field with a fence line. In the foreground, there are tall green grasses and a cluster of bright yellow flowers. The field extends to a horizon line under a blue sky with scattered white clouds.
Photograph Looking Downstream	 A landscape photograph showing a grassy field with a fence line. In the foreground, there are tall green grasses and a cluster of bright yellow flowers. The field extends to a horizon line under a blue sky with scattered white clouds.





Watercourse Crossing ID	WX05
Watercourse Crossing Details	<p>NGR: NJ 78860 13206</p> <p>Status: New Permanent Crossing</p> <p>Watercourse Width: 1.5m</p> <p>Watercourse Depth: 0.2m</p> <p>Notes: Left hand bank (looking downstream) heavily vegetated with shrub. Surveyed downstream of an existing crossing used for farm access.</p>
Photograph Looking Upstream	 A photograph showing a grassy bank of a watercourse. The bank is covered in tall green grass and some pink flowers. In the background, there is a wooden fence and a blue sky with light clouds.
Photograph Looking Downstream	 A photograph showing a heavily vegetated bank of a watercourse. The bank is covered in dense green shrubs and grass. In the background, there is a wooden fence and a blue sky with light clouds.



Watercourse Crossing ID	WX06
Watercourse Crossing Details	<p>NGR: NJ 78816 13222 Status: New Permanent Crossing Watercourse Width: N/A Watercourse Depth: N/A Notes: Watercourse noted as dry during the survey.</p>
Photograph Looking Upstream	
Photograph Looking Downstream	



Watercourse Crossing ID	WX07
Watercourse Crossing Details	<p>NGR: NJ 75902 14034 Status: New Permanent Crossing Watercourse Width: 0.5m Watercourse Depth: 0.6m Notes: None.</p>
Photograph Looking Upstream	 A photograph showing a grassy bank with a large, mature tree in the background under a blue sky with light clouds. The foreground is filled with tall, dry grasses and some green vegetation.
Photograph Looking Downstream	 A photograph showing a grassy bank with a large, mature tree in the foreground. The background shows a grassy field and a blue sky with light clouds. The foreground is filled with tall, dry grasses and some green vegetation.





Appendix A Location of Watercourse Crossings

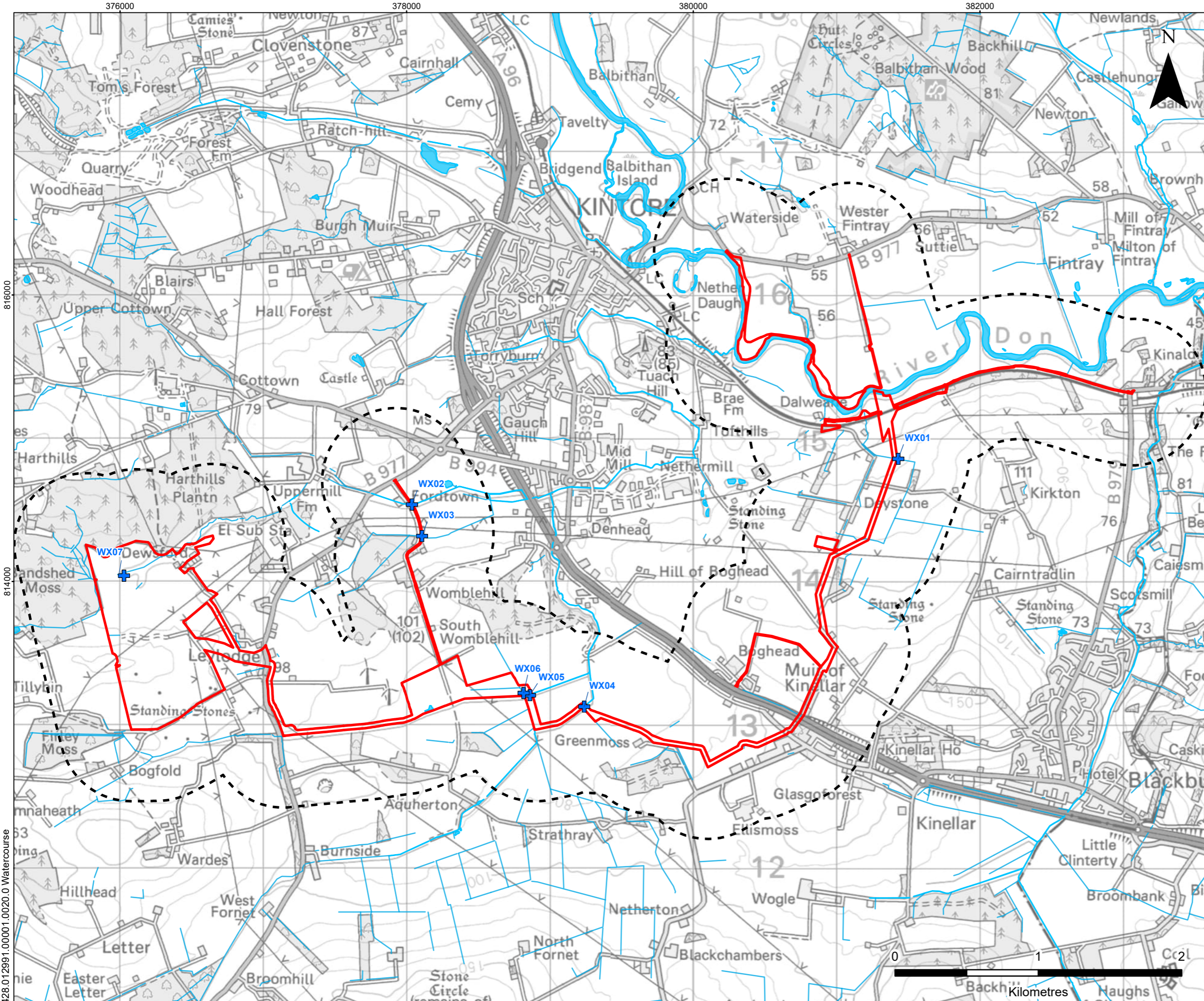
Appendix 13.4: Watercourse Crossings

Schedule of Watercourse Crossings

Kintore Hydrogen Ltd

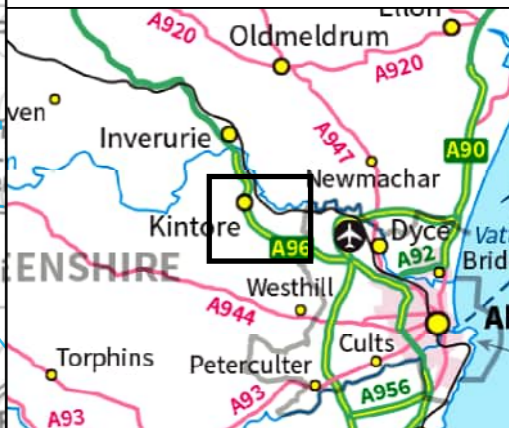
SLR Project No.: 428.013099.00001

11 September 2024



LEGEND

- Site Boundary
- Site Boundary 500 m Buffer
- + Watercourse Crossing
- Watercourse (OS OpenMap Local)
- Waterbody (OS OpenMap Local)



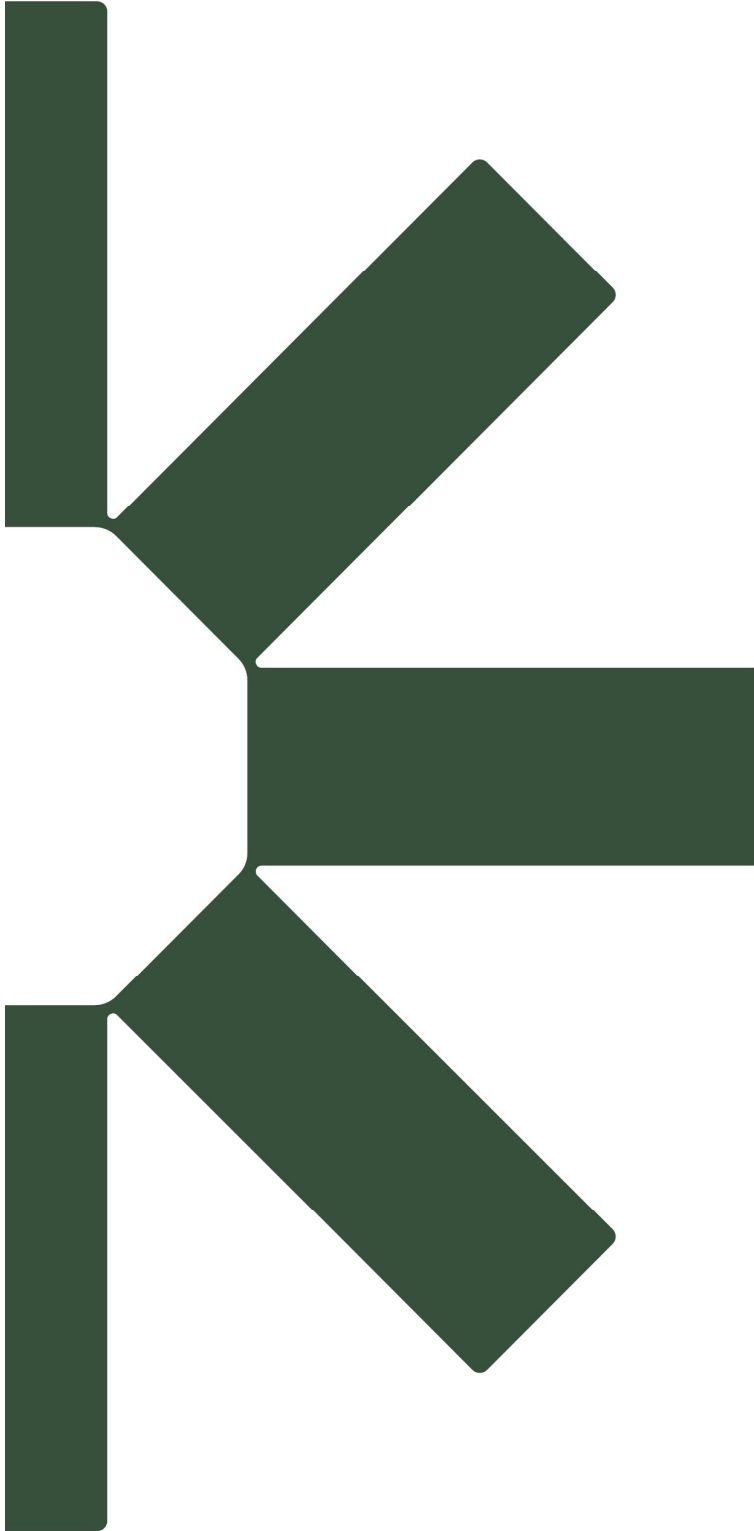

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KINTORE HYDROGEN PLANT
 TECHNICAL APPENDIX 13.4
 SCHEDULE OF WATERCOURSE CROSSINGS
 LOCATION OF WATERCOURSE CROSSINGS

Figure 13.4.1

Scale: 1:25,000 @ A3 Date: SEPTEMBER 2024



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