Scottish & Southern Electricity Networks

TRANSMISSION

Environmental Impact Assessment (EIA) Report

LT383 Alyth to Tealing Overhead Line (OHL) 400kV Upgrade

November 2024

VOLUME 4: APPENDIX 12.1 – PRIVATE WATER SUPPLY ASSESSMENT

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1. INTRODUCTION

1.1 Introduction

1.1.1 This Appendix supports and should be read in conjunction with Chapter 12: Hydrology, Hydrogeology and Soils (Volume 2).

1.2 Data Sources

1.2.1 Private Water Supply (PWS) data was received from Perth and Kinross Council (PKC) on the 17th of January 2024 and from Angus Council on the 23rd of February 2024 (Table 12.1-3).

2. METHODOLOGY

2.1 Private Water Supply Risk Identification

2.1.1 A three-step process was conducted for assessing the likely risk to a PWS:

- **Step 1:** Screen out any data points which are not required to be assessed as there is no known risk (i.e. no impact pathway or well out of study area).
- **Step 2:** Assess a general risk rating based on distance from the proposed Development (see Table 12.1-1). Before assessing the source-pathway-receptor impact in Step 3, an initial risk assessment has been applied. Where a PWS is located within 50 m of a component of the Development or where construction works may occur it was considered to be in a high-risk zone. Between 50 to 250 m is considered to be a moderate risk, and excess of 250 m is considered to be low risk.

Table 12.1-1 Risk Factors

Distance (m)	Risk Factor	Justification
50	High	Travel time between source and receptor would be quick and likely to be less barriers to block contamination.
50-250	Moderate	There will be a bit more time for source to travel to receptor. There would also be a higher likelihood for there to be more barriers to block contamination.
More than 250	Low	The larger distance between the source and receptor will allow for longer travel time and a large dispersion effect. There will also be less direct flow paths and less barriers to block contamination.

- **Step 3:** Establish any pathways present between sources and PWS and assess whether the PWS should be considered for further assessment (see Table 12.1-2).

2.2 Limitations and Assumptions

2.2.1 The data collected from PKC and Angus Council do not clarify whether the coordinates correlate to the property served by the PWS or the actual PWS location. For the purposes of this assessment, it has been assumed that the coordinates received from the councils correspond to the location of the PWS i.e. no ground truthing has been undertaken at this stage. Property owners for Little Scotston and Scotston have been reached out to gain details of PWS coordinates, usage and source. At the time of writing not details have been available. West Navey have confirmed that there PWS is still in use but have not confirmed the precise location.

2.2.2 PWS data was received from PKC on the 17th of January 2024 and Angus Council on the 23rd of February 2024, and so only represent the PWS that were recorded at that time.

3. SUMMARY OF FINDINGS

3.1 Step 1 Results

3.1.1 There was a total of 10 PWS identified from the councils that were overall within the 1000 m study area. However, only six of the ten PWS were found situated within 250 m of the alignment or a Proposed Access Route.

3.2 Step 2 Results

3.2.1 Of the five within the study area (Table 12.1-2), only two PWS was within 50m of the access track, Scotston and West Navey. The other four properties are all outwith 250m of the works.

3.3 Step 3 Results

3.3.1 The main risks to PWS during construction include:

- Spillages of fuel, hydraulic fluids, solvents, grouts, paints and detergents and other potentially polluting substances will be stored and/or used on site;
- Sediment laden runoff from construction activity; and
- Foundation improvements could cause disturbance to shallow groundwater.

3.3.2 Table 12.1-2 shows the risk categories and potential pathways that are present for each PWS. Overall, the majority of PWS are situated upgradient from any proposed works or are situated over 250m away from the Proposed Development and are therefore unlikely to be at risk.

3.3.3 There are however a couple of PWS which are situated within the 100m of Proposed Access route to the site. This includes PWS-AT-8, however, this is not currently used and so therefore not at risk. PWS-AT-1, PWS-AT-4 and PWS-AT-7 there could also be at risk of contamination as they are all situated within close proximity to the access routes and/or downgradient from an access route.

3.3.4 As outlined in the Limitation and Assumptions, the data collected from the councils does not clarify whether the coordinates correlate to the property served by the PWS or the actual PWS source location. Therefore, a PWS survey of each location would be required at Detailed Design Phase to determine the exact location of the PWS and the precise use of the PWS. Property owners for PWS-AT-1 and PWS-AT-4 have been reached out to gain details of PWS coordinates, usage and source. At the time of writing no details have been available. PWS-AT-7 have confirmed that there PWS is still in use but have not confirmed the precise location.

3.3.5 Overall, PWS-AT-1, PWS-AT-4 and PWS-AT-7 near a proposed access route. Any impacts will likely be temporary during construction. No operation impacts are predicted.

Table 12.1-2 PWS Assessment

ID	Property	NGR	Step 1: Distance		Step 2: Source-Pathway-Receptor		Step 3: Risk	
			Distance to works (m)	Closest works	Source	Pathway	At Risk?	Requires Further Assessment?
PWS -AT-1	Little Scotston	NO 33799 39187	99.55	Proposed Access Route	Sediment, chemical spillages and runoff	Runoff from access route. Downgradient	Possibly	Confirmation of PWS location and use

ID	Property	NGR	Step 1: Distance		Step 2: Source-Pathway-Receptor		Step 3: Risk	
			Distance to works (m)	Closest works	Source	Pathway	At Risk?	Requires Further Assessment?
						of access route.		
PWS -AT-4	Scotston	NO 33435 39871	19.13	Proposed Access Route	Sediment, chemical spillages and runoff	Runoff from access route. Downgradient of access route.	Possibly	Confirmation of PWS location and use
PWS -AT-6	Kinpurney	NO 30962 42375	117.00	Proposed Access Route	Sediment, chemical spillages and runoff	No, only close to the entrance of the access route, well over 500m from vegetation clearance	No	No
PWS -AT-7	West Nevay	NO 32773 43776	17.90	Proposed Access Route	Sediment, chemical spillages and runoff	Runoff from access route.	Possibly	Confirmation of PWS location and use
PWS -AT-8	Davidston	NO 31553 39759	51.49	Proposed Access Route	Sediment, chemical spillages and runoff	Runoff from access route.	No - not currently used	No
PWS -AT-10	Balludero n	NO 37601 38637	190.77	Proposed Access Route	Sediment, chemical spillages and runoff	No upgradient of access route and veg clearance	No	No

Table 12.1-3 Private Water Supplies Data

ID	Property	Number of Properties Served	Type of Source	Distance to works (m)	Closest works
PWS-AT-1	Little Scotston	4	Spring	99.55	Proposed Access Route
PWS-AT-2	Balkemback	4	Spring	390.92	Tower Foundation Vegetation Clearance
PWS-AT-3	Old Balkello	1	Spring	631.51	Tower Foundation Vegetation Clearance
PWS-AT-4	Scotston	6	Spring	19.13	Proposed Access Route
PWS-AT-5	Quarry House	1	Well	585.23	Bellmouth and Water Crossing Vegetation Clearance
PWS-AT-6	Kinpurney	6	Spring1 - main	117.00	Proposed Access Route
PWS-AT-7	West Nevay	5	Spring	17.90	Proposed Access Route

ID	Property	Number of Properties Served	Type of Source	Distance to works (m)	Closest works
PWS-AT-8	Davidston	1	Well	51.49	Proposed Access Route
PWS-AT-9	Pitpointie	2	Spring	896.64	Proposed Access Route
PWS-AT-10	Balluderon	5	Spring	190.77	Proposed Access Route