

PWS Assessment

Introduction

This appendix is to support the Hydrology, Hydrogeology, Geology and Soils Chapter of the Environmental Appraisals for

- i) Cambushinnie Substation;
- ii) Overhead line (OHL) tie-ins; and
- iii) Haul Track.

Herein, iii), is to be defined as the “Proposed Development”. In each case, the Environmental Appraisal should be read in conjunction with the respective chapter.

Private Water Supply (PWS) data was received from Perth & Kinross Council (PKC) on the 17 of January 2024 and from Stirling Council on the 31 January 2024 (see Table 3).

Letters were sent out to property owners targeting potential PWS which were at risk, to confirm their location, usage and source of supply. One response was received on the 20 of February 2024 from the owner at Calzieveg. They confirmed the location and the usage of the PWS as well as provided information of the surrounding properties. House of Feddal PWS responded on the 6 June 2024, confirming that their PWS is no longer in use. They provided further details on the 30 of August by phone to the SSEN Transmission communities manager. A response from Blairmore PWS was received on the 2 of September 2024. They noted that they recently failed their annual testing water quality due to heavy rain which reduced the efficiency of the treatment.

Methodology

A three-step process was conducted for assessing the likely risk to a PWS. For this assessment a 1 km study area was used.

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, PWS no longer in use or well out of study area).

Step 2: Assess a general risk rating based on distance from the Proposed Development (see Table 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 Proposed 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 1 Risk factors

Distance (m)	Risk Factor	Justification
50	High	Travel time between source and receptor would be quick and there is likely to be less barriers to block contamination.
50-250	Moderate	There will be a bit more time for the 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 more barriers to block contamination.

Step 3: Establish any pathways present between sources and PWS and assess whether the PWS should be considered for any mitigation/monitoring (see Table 2).

Information Sourced Public Surveys & Consultations

The property owner of House of Feddal PWS contacted SSE on the 6 June 2024 to confirm that their property is now connected to the mains. They also confirmed that the old PWS was located at NN 817 098 and was a groundwater spring source.

Letters were sent out the property owners at Calzieveg, Carsemeg, Ochilview and Ochilview Cottage in February 2024. From the response the following can be assumed:

- According to the owner of the PWS at Calziebeg, the PWS is situated to the left hand-side of the house. It is a collection tank situated under the ground. Using satellite imagery, the PWS possibly located at NN 80868 09128, which 184 m north of the location provided by the council. However, that is still over 250 m away from any works. It can also be assumed that the source of this PWS is likely to be a spring, as it is described to be underground.
- Bentick, Casemeg and Calziebeg all have their own PWS. Therefore, suggesting that the data supplied by the Perth and Kinross council (PKC) is correct.
- No one occupies Bentick, but the PWS is likely to supply agriculture.

A communication with Braco Castle Farm around its PWS was received by SSEN Transmission on 2 September 2024. Reports indicate that this supply may be liable to failure/non-compliant under high rainfall events. No specific data is available but further investigation may be required.

Limitations and Assumptions

The data collected from PKC and Stirling 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 Councils correspond to the location of the PWS i.e. no ground truthing has been undertaken at this stage.

Some clarification on the location of Calzieveg was received from the property owner which revealed that the PWS could be situated around NN 80868 09128. For the purposes of this assessment this location will be used for Calzieveg.

PWS data from PKC on the 17 January 2024 and from Stirling Council on the 31 January 2024, and so only represent the PWS that were recorded at that time.

Summary of Findings and Recommendations

Step 1 Results

There was a total of eleven PWS identified from PKC and Stirling council records. However, only four of which were within the study area. The remaining seven were scoped out of the assessment.

Step 2 Results

Of the four within the study area (Table 2), only one PWS was within 250 m of the Site, Blairmore Supply. The other three properties are all out with 250 m of the Site.

Step 3 Results

Accidental spillages of fuels, solvents, oil and other construction chemicals have the potential to enter the water environment and contaminate these PWS. Similarly high levels of fine sediments in runoff from the access also has the potential to impact the quality at these PWS.

Blairmore Supply is situated approximately 40 m downstream of the proposed existing access track upgrades. It is likely to be a spring source, however, this is not confirmed. During construction, the main risks of contamination will stem from the daily use of the track and any associated accidental spillages. However, these construction impacts are likely to be temporary and highly unlikely when implementing measures outlined in the CEMP and the use of drainage.

As for operation, the proposed existing access track upgrades will have similar use as it already exists at this location, therefore, operational impacts will likely be the same as the current impacts. Additionally, any contaminated runoff will likely be captured by the drainage.

Overall, it is recommended that the Blairmore Supply is incorporated into any monitoring plans. Information was provided by a 3rd party, the PWS owner, who did suggest that the quality of the PWS is already poor. However, without a physical inspection of the PWS source it cannot be ruled out of monitoring at this stage.

There is guidance¹ from SEPA which states that water quality should be monitored pre-construction (for at least 12 months) and during construction. Water samples should be collected from the raw source and the customer's tap on a monthly basis. If it were to be determined that any effects were due to construction, then the provision of an alternate supply would be needed to be provided. It is advised that trigger levels for quality are set after the pre-construction monitoring has been undertaken. A commitment to this effect is included in the EA.

Table 2: PWS Assessment

ID	Property	NGR	Step 1: Distance		Step 2: Source-Pathway-Receptor		Step 3:
			Distance to works (m)	Closest works	Source	Pathway	At Risk?
PWS-B-01	Bentick Farm Supply	NN 80708 08820	998	Proposed existing access track upgrades	Accidental spillages from construction chemical and sediment from track and bare earth	Potential track run-off, but likely too far to cause impacts.	No (Additionally, it is likely used for agricultural purposes and not used as a drinking supply)
PWS-B-02	Blairmore Supply	NN 80792 09925	41	Proposed existing access track upgrades	Accidental spillages from construction chemical and sediment from track and bare earth	Contaminated run-off from the track	Possibly Within close proximity to the track, contaminated runoff could leach into shallow aquifers and contaminate the source
PWS-B-03	Calziebeg Farm Supply	NN 80868 09128	770	Proposed existing access track upgrades	Accidental spillages from construction chemical and sediment from track and bare earth	Potential track run-off, but likely too far to cause impacts.	No
PWS-B-04	Carsemeg Farm Supply	NN 81300 09200	680	Proposed Existing access track upgrades	Accidental spillages from construction chemical and sediment from track and bare earth	Potential track run-off, but likely too far to cause impacts.	No

Table 3: Private Water Supply Information

Supply	Council	National Grid Reference	Classification	Source	Use	Volume (m ³)	Information Supplied from Property Owners	Scoped In/Out
Craigovall Supply	PKC	NN 83200 07000	W13 PWS Type B Supply			0.5		Scoped Out – outwith study area
Ochilview Cottage Supply	PKC	NN 83388 07401	W13 PWS Type B Supply			0.5		Scoped Out – outwith study area
Rottearns Spring Supply	PKC	NN 83561 07663	W13 PWS Type B Supply			1.2		Scoped Out – outwith

¹ SEPA, 2024. *Guidance of Assessing the Impacts of Development on Groundwater Abstractions*. [online]. [Accessed 19 June 2025]. Available from: <https://www.sepa.org.uk/media/mfzpnjwb/guidance-on-assessing-the-impacts-of-developments-on-groundwater-abstractions.docx>

Supply	Council	National Grid Reference	Classification	Source	Use	Volume (m ³)	Information Supplied from Property Owners	Scoped In/Out
								study area
House of Feddal Supply	PKC	NN 817 098	W13 PWS Type B Supply			0.5	No longer in use	Scoped Out – no longer in use
Bentick Farm Supply	PKC	NN 80708 08820	W13 PWS Type B Supply			0.5	Farm buildings, PWS likely used for agriculture	Scoped In – proximity to site
Calziebeg Farm Supply	PKC	NN 80868 09128.	W13 PWS Type B Supply			0.5	Serves only the one property.	Scoped In – proximity to site
Carsemeg Farm Supply	PKC	NN 81300 09200	W13 PWS Type B Supply			0.5		Scoped In – proximity to site
Blairmore Supply	PKC	NN 80792 09925	W18 New Regulated Supply		Rented Property	1.5		Scoped In – proximity to site
Cambushinnie SSE Substation Supply	PKC	NN 78390 10505	W18 New Regulated Supply	Surface – Rainwater	Workers Canteen and Hygiene Facility	0.4		Scoped Out – rainwater supply
Cambshinnie Cottage	Stirling Council	NN 79140 06587	N/A	Spring	Domestic Property			Scoped Out – outwith study area
Cromlix Home Farm	Stirling Council	NN 77805 06396	N/A	Spring	Commercial			Scoped Out – outwith study area