Glen Earrach Pumped Storage Hydro

Environmental Impact Assessment Report

Volume 5: Appendices Appendix 10.4: Outline Water Management Plan

Glen Earrach Energy Ltd



Quality information

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1. Introduction and Background

1.1 Introduction

- 1.1.1 This outline Water Management Plan (oWMP) sets out the water management principles and procedures to be applied throughout the construction period of the proposed Glen Earrach Pumped Storage Hydro (PSH) Scheme (referred to herein as the 'Proposed Development') to prevent pollution and physical damage to water features, groundwater aquifers and Private Water Supplies (PWS).
- 1.1.2 As an 'outline' management plan it describes the broad principles and mitigation measures that are to be implemented during the construction works to ensure that adverse impacts on water features can be avoided, minimised, or reduced, and supports the outcome of the impact assessment reported in **Chapter 10 Water Environment (Volume 2: Main Report)**. Some aspects of this plan remain high level, with the full detail to be provided in the final Water Management Plan (WMP) to be prepared post planning permission by the Contractor in line with any conditions and requirements of the given consent. The indicative construction programme can be seen within **Chapter 2 Project and Site Description**.

1.2 **Project Description**

1.2.1 The Proposed Development comprises of the Pre-construction and Enabling, Construction and Operation of a 2.0 GW PSH scheme. The Proposed Development Site lies within the Highland region of Scotland, southwest of Drumnadrochit and along the northwestern margin of Loch Ness. The main works are centred around National Grid Reference (NGR) NH 45073 22476. The extent of the Development Site is shown on **Figure 10.1 Surface Water Receptors** and **Figure 10.2 Groundwater Receptors (Volume 3: Figures).**

1.3 Potential Impacts During Pre-Construction and Enabling Works, and Construction Phases

- 1.3.1 During the Pre-construction and Enabling and Construction phases there is the potential for adverse impacts on the water environment from fine sediments in runoff or mobilised by works in water features (including the potential wash out of fine sediment from temporary spoil storage, dams, and access tracks, and works in Loch Ness), which may smother habitats and physically impact aquatic organisms, along with chemical spillages, disruption to groundwater levels and flows, and physical changes to water features as a consequence of:
 - Watercourse crossings identified in Appendix 10.3 Geomorphic Baseline and Watercourse Crossings (Volume 5: Appendices) and in Figure 10.3 Watercourse Crossings (Volume 3: Figures).
 - Dewatering and abstraction operations around Allt Loch an t-Sionnaich and associated tributaries for the construction of the Dams and Headpond.
 - The loss of Loch nam Breac Dearga, Allt Loch an t-Sionnaich and associated tributaries due to the construction of the Headpond.
 - Works associated to the Headpond Area.
 - Dewatering and abstraction operations associated with the cofferdam in Loch Ness at the Lower Control Works (LCW).
 - Excavation and crushing of excavated materials.
 - The batching of concrete at site (and cleaning out of plant and equipment).
 - Vegetation / site clearance.
 - Construction of Temporary and Permanent Access Tracks and their use by plant/vehicles.
 - Excavation of Tunnel Portals and tunnelling for the tunnels and Power Cavern.
 - Earthworks, construction of the Embankments and the creation of temporary material storage.
 - Runoff from temporary construction compounds and management of foul waste.

• Other general construction activities.

Mobilisation of Fine Sediment Affecting Water Quality Through Runoff or Scour

1.3.2 Construction activities such as earthworks, excavations, site preparation, levelling and grading operations result in the disturbance of soils. Exposed soil is more vulnerable to erosion during rainfall events due to loosening and removal of vegetation to bind it, compaction, and increased runoff rates. Surface runoff from such areas can contain excessive quantities of fine sediment, which may eventually be transported to watercourses where it can result in adverse impacts on water quality, flora and fauna. Construction works within, along the banks and across watercourses or bankside along Loch Ness can also be a direct source of fine sediment mobilisation. In addition, dewatering from excavations may also contain suspended solids. When excessive levels of fine sediment enter a watercourse, it may smother macrophytes, invertebrates and substrate important for fish and invertebrates (particularly fish spawning gravels). Water may also be used to dampen surfaces and avoid dust being generated.

Release of Oils and / or Other Chemicals Affecting Water Quality

1.3.3 Contamination of surface waters, groundwaters and soil could result from leakage and spills of fuels, oils, chemicals, and concrete during construction affecting watercourses indirectly via site runoff or directly where works are close to and within a water feature. The use of cementitious products, such as the mixing or batching of concrete, pouring of wet concrete, and washing out of plant and equipment can present a risk of polluting water features. Contamination may reduce water quality and impact aquatic fauna and flora.

Hydromorphological Impacts to Water Features

1.3.4 Works in the channels of smaller watercourses will be undertaken in a dry working environment, where possible, with flow temporarily over-pumped or flumed through the working area. The impacts associated with measures to maintain a dry working area in small watercourses come from changes in flow dynamics and patterns of erosion. Temporary removal of the bed substrate (that will be stored separately for replacement after completion of the works), and installation of the temporary culverts can encourage material to be deposited upstream of culvert and scour of the bed and / or banks downstream where there is a material deficit (due to changes in flow).

Lower Control Works

1.3.5 The LCW will require the temporary construction of a sheet piled coffer dam to create a dry working environment for the construction of the outlet. There will also be the need to extend the shoreline under the access road to the LCW in order to keep the supporting piers out of the water. A temporary quayside will also be required but this will be a floating structure and will be removed following completion of the works.

2. The Outline Water Management Plan

2.1 Purpose

- 2.1.1 This oWMP sets out the water management principles and procedures that will apply throughout the Preconstruction and Enabling Works, and Construction phases of the development. It describes the measures that will be implemented onsite to ensure that surface water features, groundwater bodies and PWS are protected from water pollution or physical damage. Water pollution may be the introduction of chemical or particulate matter either in suspension or on the bed, but also the consequences of chemical discharges such as reduced oxygen levels, increased turbidity, iridescence, effervescence, discolouration, foaming, surface scum and fungus etc.
- 2.1.2 This oWMP is designed to ensure that the requirements of relevant environmental legislation, the commitments set out in the Environmental Impact Assessment Report (EIAR) and the Construction Environmental Management Plan (CEMP), and any conditions of the planning permission and future environmental secondary permissions (when known) are complied with. It shall be the responsibility of the Applicant and their Contractor to ensure that the Proposed Development is executed in a manner that demonstrates its commitment to the care and protection of the water environment, taking into account aquatic habitats and any third-party user and/or uses of water.

- 2.1.3 The oWMP does not provide site specific details of how the Contractor will manage construction site runoff and chemical spillage risk, works to surface water features, or works below ground, as the level of risk will constantly be changing and there are many ways in which these risks can be managed effectively. Instead, the oWMP creates the 'framework' within which the Contractor and any sub-contractors shall operate onsite for the duration of the works.
- 2.1.4 This oWMP has been prepared by AECOM and the final WMP to be prepared post planning consent and will need to reflect any requirements of the approved s36 Consent.

2.2 Relationship with Other Plans

2.2.1 Due to the large number of workers that will be present on site during the construction of the Proposed Development there will need to be adequate provision of foul drainage facilities. These will be determined postconsent by a Detailed Drainage Strategy and foul drainage is not considered any further in this oWMP. Please refer to **Chapter 10 Water Environment (Volume 2: Main Report)** for further details.

3. Implementation

3.1 Responsibilities

- 3.1.1 The Contractor will implement the final WMP, which will need to be in keeping with this oWMP. In doing so the Contractor will need to ensure that:
 - The oWMP is implemented in accordance with the planning permission, EIAR, and Construction Environmental Management Plan (CEMP) (for the Outline CEMP see Appendix 3.1 oCEMP (Volume 5: Appendices)).
 - Construction Method Statements are prepared in line with the minimum requirements set out in the WMP and submit these to the SEPA for approval.
 - The WMP is reviewed regularly and under each of the specific circumstances set out later in this plan.
- 3.1.2 The following responsibilities apply:
 - All personnel and sub-contractors working on the project will perform their duties in accordance with the requirements of the oWMP.
 - The Environmental Manager (or other similar title) will report regularly to the Project Manager on the status and effectiveness of its implementation.
 - The Environmental Manager and Environmental Clerk of Works (or other similar titles) or other suitably qualified person will be responsible for implementing the 'during works' Water Quality Monitoring Plan described later.
 - Both the Environmental Manager and Environmental Clerk of Works will have powers to stop or request a change to the method statement of any works they consider are not compliant with this oWMP or are causing or are likely to cause pollution.

3.2 Training

- 3.2.1 The Environmental Manager or other suitably qualified person(s) will provide training to all personnel onsite including sub-contractors on water pollution prevention measures. This will include works that have a higher risk of leading to a pollution incident, such as silt/ fuel/ oil storage, refuelling, cement and concrete works and transportation, working in watercourses or lochs, managing silt in runoff, pumping and over-pumping, washing down plant and machinery, and spillage control onsite and emergency procedures. In addition:
 - Site notice boards will display incident and emergency procedures details and protocols. These will be updated as and when circumstances dictate.
 - Site inductions and toolbox talks will be carried out to highlight emergency and incident procedures to all staff working onsite.

- Flood/ evacuation drills to be carried out.
- Detailed spill drill training will be delivered to all necessary Site personnel with designated spill stations placed at high-risk areas.
- Training for the transportation of fuel.
- Bespoke training for the operation of a floating concrete batching plant.
- Weekly environmental inspections will be carried out onsite by a suitably qualified person onsite (e.g., Environmental Clerk of Works or Environmental Manager) to ensure all facilities are being maintained and activities are compliant with company procedures.
- The latest pollution prevention guidance (e.g., Guidance on Pollution Prevention (GPP), Pollution Prevention Guidance (PPG), and Construction Industry Research and Information Association (CIRIA) guidance) will inform the Contractor's Site procedures so that they reflect current good practice.
- 3.2.2 Relevant changes to the planning permission are those where the risk to the water environment from the works may change (i.e., Controlled Activities Regulations (CAR) and abstraction licences from SEPA).
- 3.2.3 The Highland Council (THC) will be informed in writing within seven days of the completion of a review of any changes that have been proposed or the reasons why changes are not being implemented.
- 3.2.4 Where, having considered the notice of review the THC considers that an amendment is required, the THC may notify the Contractor within seven working days of receipt of the notice of review.
- 3.2.5 Where the Contractor considers that a further amendment is required and/or the relevant THC serves a notice to the Contractor that they must submit an amended plan for their written approval, this must be received by the THC within four weeks of the date of the completion of the review (in consultation with the SEPA).

Legislation and Planning Policy 4.

Legislation 4.1

- 4.1.1 This section outlines the legislation, planning policy and guidance documents relevant to the assessment of impacts of the Proposed Development on the water environment and discussed in greater depth in Chapter 10 Water Environment (Volume 2: Main Report) of the EIAR. The following national legislation is relevant to the Proposed Development and will be considered as part of this assessment:
 - The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) ('the CAR Regulations')¹.
 - Water Environment and Water Services ('the WEWS Act') (Scotland) Act 2003².
 - Environmental Liability (Scotland) Regulations 2009³.
 - Pollution Prevention and Control (Scotland) Regulations 2012 (PPC)⁴.
 - The Private Water Supplies (Scotland) Regulations 2006⁵.
 - The Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017⁶.

¹ Scottish Parliament (2011). The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) ('the CAR Regulations'). Available online: https://www.legislation.gov.uk/ssi/2011/209/contents/made.

² Scottish Parliament (2003). Water Environment Water Services ('the WEWS Act') (Scotland) Act 2003. Available Online: https://www.legislation.gov.uk/asp/2003/3/contents. ³ Scottish parliament (2009). Environmental Liability (Scotland) Regulations 2009. Available Online:

https://www.legislation.gov.uk/ssi/2009/266/contents/made.

⁴ Scottish Parliament (2012a). Pollution Prevention and Control (Scotland) Regulations 2012. Available Online:

https://www.legislation.gov.uk/ssi/2012/360/contents/made ⁵ Scottish Parliament, 2006. The Private Water Supplies (Scotland) Regulations 2006. Available Online:

https://www.legislation.gov.uk/ssi/2006/209/contents ⁶ Scottish Statutory Instruments. 2017. The Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017 The Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017 (legislation.gov.uk).

4.2 **Planning Policy**

Policy Number

National Planning Policy – Energy Policy

Applications for energy developments in Scotland with an electrical generation capacity in excess of 50 MW are 4.2.1 made to and determined by the Scottish Ministers in accordance with the provisions of Section 36 of the Electricity Act (1989)⁷ and any direction deeming planning permission to be granted under Section 57(2) of the Town and County Planning (Scotland) Act 19978. There are legal, policy and advice documents which are material considerations to the decision-making process of this process, covering relevant legislation, national and local planning policy, and advise notes/supplementary guidance, and these are described in the following sections.

National Planning Framework 4 (NPF4)

- 4.2.2 The National Planning Framework 4 was published in February 2023⁹ and replaces the previous National Planning Framework 3 (NPF3)¹⁰. NPF4 sets out the Scottish Government's spatial development principles, regional priorities, national developments and national planning policy, covering six spatial principles which aim to deliver sustainable places, liveable places and productive places.
- 4.2.3 Pumped Storage Hydropower (PSH) is identified in NPF4 as necessary to support energy security, diversity of the electricity supply, and to reduce carbon emissions. This includes refurbishment of existing sites and the development of new developments. Policy 11 within the NPF4 outlines that such energy developments should demonstrate within their project designs and mitigation that impacts to hydrology, water environment and flood risk are addressed.

Local Planning Policy – The Highland Council

4.2.4 THC Local Development Plan (HwLDP) was published 2012¹¹. New arrangements were made within the Act for Development Plans May 2023; therefore, THC are currently reviewing their current HwLDP and are preparing a new HwLDP. At the time of writing this oWMP, only the HwLDP published in 2012 was available. Table 1 List of water environment related policies outlined in HwLDP outlines the water environment related polices found within HwLDP.

| Policy 63 – Water Environment | "The Council will support proposals for development that do not compromise the objectives of the Water Framework Directive (2000/60/EC), aimed at the protection and improvement of Scotland's water environment. In assessing proposals, the Council will take into account the River Basin Management Plan for the Scotland River Basin District and associated Area Management Plans and supporting information on opportunities for improvements and constraints." |
|--|--|
| Policy 65 – Wastewater Treatment | "Connection to public sewer as defined in the Sewerage (Scotland) Act 1968 is required for all new development proposals Unless application can demonstrate that the development is unable to connect to a public sewer for technical or economic reasons; and that the proposal is not likely to result in or add to significant environmental or health problems." "The Council's preference is that any private system should discharge to land rather than water. Within areas of cumulative drainage impact (as defined by SEPA), applicants will be required to submit evidence to SEPA and the Council that their proposal will not result in or add to significant environmental or health problems." " private system would only be supported if: the system is designed and built to a standard which will allow adoption by Scottish Water and the system is designed such that it can be easily connected to a public sewer in the future" |

Table 1 List of water environment related policies outlined in HwLDP

Description

https://www.highland.gov.uk/info/178/development_plans/199/highland-wide_local_development_plan

⁷UK Public General Acts, 1989. Electricity Act 1989. Available Online: <u>https://www.legislation.gov.uk/ukpga/1989/29/contents</u> ⁸ The Scottish Government. 1997. Town and Country Planning (Scotland) Act 1997. Available Online: https://www.legislation.gov.uk/ukpga/1997/8/section/57

⁹ The Scottish Government. 2023. National Planning Framework 4. Available Online:

https://www.gov.scot/publications/national-planning_framework-4/ ¹⁰ The Scottish Government. 2014. National Planning Framework 3. Available Online:

https://www.gov.scot/publications/national-planning-framework-3/ ¹¹ The Highland Council. 2012. Highland-wide Local Development Plan. Available Online:

5. Water Environment Baseline

5.1

Surface water features (and their attributes) within the 2 km study area and extending to Loch Ness are described in this section. Under the WFD, 'water bodies' are the basic management units, defined as all or part of a river system or aquifer. Water bodies form part of larger 'river basin districts' (RBD), for which RBMPs are used to summarise baseline conditions and set broad improvement objectives. This baseline is presented by each water body, noting that some features are present within the catchments of designated WFD water bodies rather than being designated as a WFD water body in their own right.

5.2 As not all the watercourses in the study area are named, and some have multiple tributaries, each watercourse has been given a unique reference number. These can be seen on **Figure 10.1 Surface Water Receptors** and **Figure 10.2 Groundwater Receptors (Volume 3: Figures)** and are referred to in the following baseline summary. **Table 2 Surface Water Body Receptors and their Importance** to **Table 4 Private Water Supplies** (all have a High Importance) displays a summary of the water environment receptors.

| Water feature | Water Quality Importance | Hydromorphology Importance |
|---|--|--|
| Private Water Supplies (Surface Water) | High - Private Supply and Human drinking source | n/a |
| Loch Ness | Very High - A large freshwater loch in the Scottish Highlands, to the south of Inverness. Hosts protected species such as Atlantic salmon, Arctic char and European eel. Within a Drinking Water Protected Zone. Has a WFD classification of 'Good' (2023). Loch Ness is also very important for tourism and recreation and a national/international profile. There is also commercial aquaculture on the loch, although not near the Proposed Development. | High - Loch Ness is an anthropogenically modified waterbody. The water levels in the loch are controlled by the weir located at Dochfour. There are also existing CAR controlled water consumptions on the loch for Foyers PHS and the Caledonian Canal, and hydro inflows from conventional schemes. Despite these, the loch retains many natural features. |
| Allt Saigh (SW3) | High - A larger watercourse that flows across the catchment and outflows into Loch Ness at NGR NH456188. Hosts protected species such as Atlantic salmon, and European eel. It has a 'Good ecological potential' WFD classification (2023). Has an estimated Q95 of <1.0 m ³ /s | Low - A relatively large watercourse which is heavily modified on account of hydrological impacts related to hydropower generation. Channel is less sensitive to change due large bedrock reaches. |
| Unnamed Stream (SW3- D) | Medium - A tributary of SW3 with a confluence at NGR NH 44295 19330. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Medium importance as a precaution as flows into SW3. | Low - Small, relatively unmodified watercourse with existing sections of bedrock channel. |
| Unnamed Stream (SW3- F) | Medium - A tributary of SW3 with a confluence at NGR NH 44031 19252. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Medium importance as a precaution as flows into SW3. Has an estimated Q95 of <0.001 m ³ /s. | Low - Moderately sized, relatively unmodified watercourse with sections of bedrock channel. |
| Unnamed Stream (SW3- H) | Medium - A tributary of SW3 with a confluence at NGR NH 43403 19197. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Medium importance as a precaution as flows into SW3. Has an estimated Q95 of $<0.001 \text{ m}^3/\text{s}.$ | Low - Small, relatively unmodified watercourse. |
| Allt Loch an t-Sionnaich (SW5) | Medium - A 4 km long watercourse that flows out of the southern end Loch nam Breac Dearga (SW8), a tributary to Allt Saigh (SW3) which confluences at NGR NH431191. Seven tributaries flow into the watercourse, including two that derive from nearby smaller lochs. It is dammed at NGR NH 43892 21618. Has an estimated Q95 of >0.001 m^3/s . | Low - Moderately sized watercourse with existing modifications related to hydropower generation. |
| Unnamed Stream (SW5- B) | Medium - A tributary of SW5, flowing south with a confluence at NGR NH 43909 21620. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Medium importance as a precaution as flows into SW3. Has an estimated Q95 of <0.001 m ³ /s. | Low - Small, unmodified watercourse. |

Table 2 Surface Water Body Receptors and their Importance

| Water feature | Water Quality Importance | Hydromorphology Importance | |
|--|--|--|--|
| Unnamed Stream (SW5- C) | Medium - A tributary of SW5-B, flowing south with a confluence at NGR NH 43900 21936. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Medium importance as a precaution as flows into SW3. Has an estimated Q95 of <0.001 m ³ /s. | Low - Small, unmodified watercourse. | |
| Unnamed Stream (SW5- D) | Medium - A tributary of SW5-C, flowing south with a confluence at NGR NH 44086 21792. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Medium importance as a precaution as flows into SW3. Has an estimated Q95 of <0.001 m ³ /s. | Low - Small, unmodified watercourse. | |
| Unnamed Stream (SW5- E) | Medium - A tributary of SW5, flowing south with a confluence at NH 43909 21620. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Medium importance as a precaution as flows into SW3. Has an estimated Q95 of <0.001 m ³ /s. | Low - Small, unmodified watercourse. | |
| Unnamed Stream (SW7) | Low - A 650 m long watercourse flowing south from Loch an t-Sionnaich (SW6) into the Allt Loch an t-Sionnaich (SW5) at NGR NH 43557 21063. The access track crosses at a bridge at NGR NH 43419 21322, where it is also dammed. Has an estimated Q95 of <0.001 m ³ /s. | Low - Small watercourse with existing modifications related to hydropower generation. | |
| Loch nam Breac Dearga (SW8) | Medium - The water body that will form the basis of the Headpond. 1 km in length along a northeast-southwest axis, with the Meall Fuar-mhonaidh forming a steep cliff along its south-eastern bank and sloping open upland on its other sides. Two tributaries confluence at NGRs NH 45244 22611 and NH 45614 22631. | High - Small loch which conforms closely to its natural unaltered state. | |
| River Coiltie (SW9) | High - A 12 km river that flows northeast through the Proposed Development Site with confluence with the River Enrick (SW19) at NGR NH523295 and then into Loch Ness at Drumnadrochit. Several tributaries flow into it along its course, some of which is through a steep-sided gorge. It is dammed by a hydropower scheme at NGR NH 46424 26744. Has an estimated Q95 of <1.0. It has a WFD classification 'Moderate' (2023). Flows through Urquhart Bay Wood SSSI and SAC. | Medium - A relatively large watercourse which is has poor modelled hydrology related to hydropower generation. | |
| Divach Burn (SW10) | Medium - A tributary of River Coiltie (SW9) that flows northeast through Proposed Development Site. Allt Coire an Ruighe (SW11) is one of seven tributaries. The Falls of Divach waterfall occurs at NGR NH 49328 27521. It is 3 km long and confluences with the River Coiltie (SW9) at NGR NH 49377 27867. Likely to contain Atlantic salmon (not confirmed). Has an estimated Q95 of >0.001 m ³ /s. | Low - Small, relatively unmodified watercourse | |
| Allt Coire an Ruighe (SW11) Medium - A 4 km long watercourse that flows northeast downgradient away from Loch nam Breac Dearga (SW8) before entering the Divach Burn (SW10) at NGR NH 48401 25571. Immature stages occur at Saddle Dam 2. Has an estimated Q95 of >0.001 m ³ /s. | | Low - Small, relatively unmodified watercourse | |
| Unnamed Stream (SW11- B) | Low - Tributary of SW11 that flows northeast from proposed Headpond. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. | Low - Small, relatively unmodified watercourse. | |
| Unnamed Stream (SW11- C) | Low - Tributary of SW11 that flows northeast from proposed Headpond. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. | Low - Small, relatively unmodified watercourse. | |
| Allt Glas Beag (SW12) | Medium - A 2 km watercourse originating at Lochan Dubh at NGR NH 46021 24932. It flows north with two tributaries and confluences with the River Coiltie (SW9) at NGR NH 46641 26621. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as flows into SW9. | Low - Small, unmodified watercourse | |
| Unnamed Stream (SW12- B) | Medium - A tributary of SW12-C, flowing north and with a confluence at NGR NH 46498 26505. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW9. | Low - Small, unmodified watercourse with sections of bedrock channel. | |

| Water feature | Water Quality Importance | Hydromorphology Importance |
|----------------------------------|---|--|
| Unnamed Stream (SW12- C) | Medium - A tributary of Allt Glas Beag (SW12), flowing east and with confluence at NGR NH 46596 26545. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW9. | Low - Small, unmodified watercourse. |
| Allt Glas Mor (SW13) | Medium - A 3.5 km long watercourse that flows northwest across Proposed Development Site and confluences with the River Coiltie (SW9) at NGR NH 43719 25467. It has ten tributaries, two of which are sourced in small lochs including Loch nan Oighreagan (SW14). May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW9. | Low - Small, unmodified watercourse |
| Unnamed Stream (SW13- B) | Medium - A tributary of SW13, flowing north with a confluence at NGR NH 44783 23728. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW9. | Low - Small, unmodified watercourse. |
| Unnamed Stream (SW13- C) | Medium - A tributary of SW13, flowing north with a confluence at NGR NH 44529 23795. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of $>0.001 \text{ m}^3$ /s. Medium importance as a precaution as ultimately flows into SW9. | Low - Small, unmodified watercourse. |
| Loch nan Oighreagan (SW14) | Low - A 200 m long loch on a north-south axis. One tributary from a smaller loch to the east. An outflow at the northern end confluences with Allt Glas Mor (SW13) at NGR NH 44785 23730. Not designated a WFD water body. | High - Small loch which conforms closely to its natural unaltered state. |
| Unnamed Stream (SW15) | Low - An outflow of Loch Ruighe an t-Seilich and a tributary to Allt Loch an t-Sionnaich (SW5), with confluence at NH 44087 21747. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. | Low - Moderately sized, relatively unmodified watercourse with bedrock channel in sections. |
| Unnamed Loch (SW16) | Low - A 150 m long loch on a north-south axis. It is 340 m directly to the east of Loch nan Oighreagan (SW14). No outlet flow is known for this loch. Not designated as a WFD water body. | High - Small loch which conforms closely to its natural unaltered state. |
| Caochan an Loch Dhuibh (SW17) | Medium - A tributary of the River Coiltie (SW9) that flows southeast and confluences at NGR NH 46869 26865, downstream and east of the existing dam and ford on the SW9 described above. The watercourse is 1.3 km long and its source is a small loch at NGR NH 46257 27726. It has one tributary. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW9. | Low - Moderately sized, relatively unmodified watercourse with bedrock channel in sections. |
| Unnamed Stream (SW18) | Medium - A tributary of the River Coiltie (SW9) that flows south and confluences at NGR NH 47555 27257. The watercourse is 870 m long and passes beneath two access tracks. May contain Atlantic salmon (not confirmed) but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW9. | Low - Small, relatively unmodified watercourse |
| River Enrick (SW19) | Very High - A 22 km long river to the north of the Proposed Development Site. It flows alongside the A831. Several tributaries enter the river from the southern slope of Glen Urquhart across an access road towards the Proposed Development Site; It has a WFD classification 'Good' (2023); Flows through Urquhart Bay Wood SSSI and SAC. Q95 flow estimate of 0.103 m ³ /s; Contains protected species such as Atlantic salmon and European eel. | High - SW19 conforms closely to a natural, unaltered state and exhibits well-developed and diverse geomorphic forms and processes characteristic of this river type. |

| Water feature | Water Quality Importance | Hydromorphology Importance | |
|---|--|--|--|
| Allt Creag an Fhithich (SW20) Medium - A 2 km tributary of the River Enrick (SW19) flowing north and with confluence at NGR NH 45197 29581. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | | Low - Moderately sized, relatively unmodified watercourse with bedrock channel in sections. | |
| Caochan na Ruighe Duibhe (SW21) | Medium - A 1 km tributary of the River Enrick (SW19) flowing north and with confluence at NGR NH 45244 29575. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Small, relatively unmodified watercourse. | |
| Allt na Criche (SW22) | Medium - A 1.8 km tributary of the River Enrick (SW19) flowing north and with confluence at NGR NH 45765 29545. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Moderately sized, relatively unmodified watercourse with bedrock channel in sections. | |
| Unnamed Stream (SW23) | Medium - A 380 m tributary of the River Enrick (SW19) flowing north and with confluence at NGR NH 46396 29581. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Small, relatively unmodified watercourse. | |
| Allt Luirg nam Broc (SW24) | Medium - A 4 km tributary of the River Enrick (SW19) flowing north and with confluence at NGR NH 46841 30129. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Moderately sized, relatively unmodified watercourse with bedrock channel in sections. | |
| Unnamed Stream (SW24- D) | Medium - A tributary of SW24 with a confluence at NGR NH 46982 29271. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Small, relatively unmodified watercourse. | |
| Unnamed Stream (SW24- E) | Medium - A tributary of SW24 with a confluence at NGR NH 46971 29457. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Small, relatively unmodified watercourse. | |
| Drumclune Burn (SW25) | Medium - A 3 km tributary of the River Enrick (SW19) flowing north and with confluence at NGR NH 48866 30208. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Small, relatively unmodified watercourse. | |
| Unnamed Stream (SW26) | Medium - A 1.5 km tributary of the River Enrick (SW19) flowing north and with confluence at NGR NH 49527 30134. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Small, relatively unmodified watercourse. | |

| Water feature Water Quality Importance | | Hydromorphology Importance | |
|--|---|--|--|
| Unnamed Stream (SW27) | Medium - A 470 m watercourse and former mill lade that exits the River Enrick (SW19) at NGR NH 45041 29856 and rejoins at NGR NH 45353 29689. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Small disused mill lade, heavily modified for previous industrial use. | |
| Unnamed Stream (SW28) | Medium - A tributary of the River Enrick (SW19) flowing north and with confluence at approx. NGR NH 45486 29658. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel but scale may be a limiting factor. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Small, manmade drainage ditch. | |
| Unnamed Stream (SW29) | Medium - A tributary of the Allt Luirg nam Broc (SW24) flowing north and with a confluence at NGR NH 46886 29808. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. Medium importance as a precaution as ultimately flows into SW19. | Low - Small, relatively unmodified watercourse. | |
| Unnamed Stream (SW30) | Medium - A tributary of the River Enrick (SW19) flowing north and with confluence at approx. NGR NH 47575 30391. Likely contains similar species as to the River Enrick such as Atlantic salmon and European eel. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. | Low - Small, relatively unmodified watercourse. | |
| Unnamed Stream (SW31) | Low - A small stream flowing into Loch Ness southeast of the Headpond. Not designated a WFD water body in its own right. Has an estimated Q95 of >0.001 m ³ /s. | Low - Small, relatively unmodified watercourse. | |

Table 3 Groundwater Aquifers Receptors and their Importance

| Groundwater Features | Location | Description | Importance |
|-----------------------------------|---|---|------------|
| Lower Old Red Sandstone (LORS) | Southwest side of the Development Site | Moderately productive aquifer within a drinking water protection zone. Within the Inverness WFD water body, which has a 'Good' WFD classification (2023, Cycle 3). Supports PWS and GWDTE. Hydrogeological connection to Loch Ness and other major surface water bodies. | High |
| Glenfinnan Group | Northwest side of the Development Site | Essentially unproductive strata with minor fracture flow. Within a drinking water protection zone and is within the Northern Highlands WFD body, which has 'Good' WFD classification (2023, Cycle 3). Unlikely to be much hydrogeological connection. | Low |
| Superficial Aquifers | Throughout Development Site | Small deposits of sands and gravels within till, alluvium and alluvial fan deposits which likely support GWDTE, some small watercourses and PWS. These aquifers will likely be perched between clay and over psammite (Glenfinnan Group). Waterlogged peatland will also be situated throughout the study area, and which have the potential to support small water features and GWDTE. Has no WFD classification. | Medium |

Table 4 Private Water Supplies (all have a High Importance)

| Area* | ID* | Presumed Grid Ref | Source |
|--------------|--------|-------------------|-------------------------------------|
| Allt Saigh | PWS-01 | NH 45589 19143 | Surface watercourse – Allt Saigh |
| Allt Saigh | PWS-02 | NH 45717 18999 | Borehole |
| Primrose Bay | PWS-03 | NH 47094 20523 | Spring |
| Grotaig Burn | PWS-04 | NH 48235 23434 | Surface Watercourse or spring |
| Grotaig Burn | PWS-05 | NH 48907 23535 | Spring |
| Grotaig Burn | PWS-06 | NH 49107 23683 | Well |

| Area* | ID* | Presumed Grid Ref | Source |
|--------------|--------|-------------------|---------------------|
| Grotaig Burn | PWS-07 | NH 49156 23813 | Borehole |
| Grotaig Burn | PWS-08 | NH 49153 23880 | Unknown |
| Grotaig Burn | PWS-09 | NH 49039 24155 | Spring |
| Grotaig Burn | PWS-10 | NH 49105 24206 | Spring |
| Grotaig Burn | PWS-11 | NH 49167 24389 | Borehole |
| Grotaig Burn | PWS-12 | NH 49359 24447 | Spring |
| Grotaig Burn | PWS-13 | NH 49425 24673 | Surface Watercourse |
| Grotaig Burn | PWS-14 | NH 49425 24673 | Borehole |
| Grotaig Burn | PWS-15 | NH 49921 24755 | Unknown |
| Grotaig Burn | PWS-16 | NH 49345 25066 | Borehole |
| Grotaig Burn | PWS-17 | NH 49331 25041 | Borehole |
| Grotaig Burn | PWS-18 | NH 49804 25453 | Borehole |
| Grotaig Burn | PWS-19 | NH 49859 25603 | Borehole |
| Grotaig Burn | PWS-20 | NH 49773 25592 | Well |
| Divach Burn | PWS-21 | NH 49640 27551 | Borehole |
| Divach Burn | PWS-22 | NH 49656 27611 | Borehole |
| Divach Burn | PWS-23 | NH 49641 27697 | Borehole |
| Divach Burn | PWS-24 | NH 49312 27340 | Borehole |
| Divach Burn | PWS-25 | NH 49262 27177 | Spring |
| Divach Burn | PWS-26 | NH 48611 26842 | Surface Watercourse |
| Divach Burn | PWS-27 | NH 48667 27223 | Surface Watercourse |

*See Figure 10.3 (Volume 3: Figures)

6. Management of Pollution Risks

6.1

To avoid, minimise and reduce potential adverse effects on the water environment, mitigation measures are required to be implemented onsite during construction, in accordance with the residual effects predicted in **Chapter 10 Water Environment (Volume 2: Main Report)** of the EIAR.

6.1 Relevant Guidance Documents

6.1.1

Guidance for Pollution Prevention provides good practice advice in Scotland for how to manage the risk from pollution risks during construction works. The following GPPs are relevant:

- GPP 1: Understanding Your Environmental Responsibilities Good Environmental Practices¹².
- GPP 2: Above ground oil storage¹³.
- GPP 3: Use and Design of Oil Separators in Surface Water Drainage Systems¹⁴.

¹⁴ Use and Design of Oil Separators in Surface Water Drainage Systems, GPP3. Natural Resources Wales, SEPA, Agriculture, Environment and Rural Affairs and Northern Ireland Environment Agency 2017. Available Online: <u>https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/gpp-3-use-and-design-of-oil-</u>

https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/gpp-3-use-and-design-of-oilseparators-in-surface-water-drainage-systems/

 ¹² Understanding Your Environmental Responsibilities – Good Environmental Practices, GPP1. Natural Resources Wales, SEPA, Agriculture, Environment and Rural Affairs and Northern Ireland Environment Agency 2013. Available Online: <u>https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/gpp-1-understanding-yourenvironmental-responsibilities-good-environmental-practices/</u>
 ¹³ Natural Resources Wales, SEPA, Agriculture, Environment and Rural Affairs and Northern Ireland Environment Agency.

 ¹³ Natural Resources Wales, SEPA, Agriculture, Environment and Rural Affairs and Northern Ireland Environment Agency.
 (2017). Above ground oil storage tanks, GPP2. Available Online: https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/gpp-2-above-ground-oil-storage/
 ¹⁴ Use and Design of Oil Separators in Surface Water Drainage Systems, GPP3. Natural Resources Wales, SEPA, Agriculture,

- GPP 5: Works and maintenance in or near water for construction or maintenance works near, in, or over water¹⁵.
- GPP 6: Working at Construction and Demolition Sites¹⁶.
- GPP 8: Safe storage and disposal of used oils¹⁷.
- GPP 13: Vehicle washing and cleaning¹⁸.
- GPP 19: Vehicles: Service and Repair¹⁹.
- GPP 21: Pollution Incident Response Plans²⁰.
- GPP 22: Dealing with Spills²¹.
- GPP 26: Safe Storage Drums and Intermediate Bulk Containers²².
- 6.1.2 Additional good practice guidance for mitigation to protect the water environment can be found in the following key CIRIA documents:
 - C811 (2023) Environmental good practice onsite guide²³.
 - C624 (2004) Development and flood risk Guidance for the construction industry²⁴.
 - C753 (2015) Publication C753 SuDS manual²⁵.
 - C648 (2006) Control of Water Pollution from Linear Construction²⁶.
 - C532 (2001) Control of water pollution from construction sites Guidance for consultants and contractors²⁷.
 - C744 (2015) Coastal and marine environmental site guide²⁸.
- 6.1.3 The Scottish Government has published the Sewers for Scotland Manual" (3rd Edition, Scottish Water 2015) and Planning Advice Notes (PANs) to provide national guidance on various topics and SEPA has also produced a number of guidance documents covering a range of environmental issues that are relevant to this impact assessment. Those documents relevant to the water environment are listed below:
 - PAN 51 Planning, Environmental Protection and Regulation (Revised 2006)²⁹.
 - PAN 61 Planning and Sustainable Urban Drainage Systems (2001)³⁰.

 <u>8-safe-storage-and-disposal-of-used-oils/.</u>
 ¹⁸ Vehicle washing and cleaning, GPP 13. Natural Resources Wales, SEPA and Northern Ireland Environment Agency 2017. Available Online: https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/gpp-13vehicle-washing-and-cleaning/. ¹⁹ Vehicles Service and Repair, GPP 19. Natural Resources Wales, SEPA and Northern Ireland Environment Agency 2017.

³⁰ Scottish Executive (2001). PAN 61 - Planning and Sustainable Urban Drainage Systems.

¹⁵ Works and maintenance in or near water for construction or maintenance works near, in, or over water, GPP 5. Natural Resources Wales, SEPA, Agriculture, Environment and Rural Affairs and Northern Ireland Environment Agency 2017. Available Online: https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/gpp-5-works-andmaintenance-in-or-near-water/.

¹⁶ Working at Construction and Demolition Sites, GPP 6. Natural Resources Wales, SEPA, Agriculture, Environment and Rural Affairs and Northern Ireland Environment Agency 2017. Available Online: https://www.netregs.org.uk/environmental-

topics/guidance-for-pollution-prevention-gpp-documents/gpp-6-working-on-construction-and-demolition-sites/ ¹⁷ Safe storage and disposal of used oils, GPP 8. Natural Resources Wales, SEPA and Northern Ireland Environment Agency 2017. Available Online: https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/gpp-

Available Online: https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/gpp-19vehicles-service-and-repair/. ²⁰ Pollution Incident Response Plans, GPP 21. Natural Resources Wales, SEPA and Northern Ireland Environment Agency

^{2017.} Available Online: https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/gpp-

²¹⁻pollution-incident-response-planning/. ²¹ Northern Ireland Environment Agency, Agriculture, Environment and Rural Affairs, SEPA and Natural Resources Wales (2018). Dealing with spills: GPP 22. Available Online: https://www.netregs.org.uk/environmental-topics/guidance-for-pollutionprevention-gpp-documents/gpp-22-dealing-with-spills/. ²² Safe Storage – Drums and Intermediate Bulk Containers, GPP 26. Natural Resources Wales, SEPA and Northern Ireland

Environment Agency 2017. Available Online: https://www.netregs.org.uk/environmental-topics/guidance-for-pollutionprevention-gpp-documents/gpp-26-safe-storage-drums-and-intermediate-bulk-containers/ ²³ CIRIA. (2023). C811 Environmental good practice onsite guide (fifth edition).

 ²⁴ CIRIA. (2004). CIRIA Report C624 (2004) Development and flood risk – Guidance for the construction industry.
 ²⁵ CIRIA. (2015). C522 (2015) Publication C753 SuDS manual.

²⁶ CIRIA. (2006). CIRIA Report 648 (2006) Control of Water Pollution from Linear Construction.

²⁷ CIRIA. (2001). CIRIA Report 532 (2001) Control of Water Pollution from Construction sites.

²⁸ CIRIA. (2015). CIRIA Report 744 (2015) Coastal and marine environmental site guide (second edition)

²⁹ Scottish Executive (2006). PAN 51 - Planning, Environmental Protection and Regulation (Revised 2006).

- PAN 79 Water and Drainage (2006)³¹.
- SEPA Policy No. 19 Groundwater Protection Policy for Scotland (2009)³².
- SEPA Interim Position Statement on Planning and Flooding (2009)³³.
- SEPA Engineering Activities in The Water Environment: Good Practice Guide River Crossings (Second edition, 2010)³⁴.
- SEPA Land Use Planning System SEPA Guidance Note 31, 'Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems' (2017)³⁵,
- SEPA Technical Flood Risk Guidance for Stakeholders (Version 13, 2022)³⁶,
- Sewers for Scotland Manual" (4th Edition, Scottish Water 2018)³⁷.
- 6.1.4 SEPA has also published the following documents to support the implementation of the Water Environment (Controlled Activities) (Scotland) Regulations 2011:
 - WAT-PS-06-02: Culverting of Watercourses (2015)³⁸.
 - WAT-PS-07-03: Engineering in Artificial Inland Surface Waters³⁹.
 - WAT-SG-75: Sector Specific Guidance: Construction sites⁴⁰.
 - WAT-SG-78: Sediment Management Authorisation (2012)⁴¹.
 - WAT-RM-02: Regulation of Licence-level Engineering Activities (2017)⁴².
 - WAT-SG-86: Registration Rules for Exposed Sediment Removal⁴³.
 - WAT-SG-93: Guidance for Transport Infrastructure Projects (2016)⁴⁴.
 - WAT-SG-23 Good Practice Guide Bank Protection (2008)⁴⁵.
 - WAT-SG-25: Good Practice Guide River Crossings (2010)⁴⁶.
 - WAT-SG-26: Good Practice Guide Sediment Management (2010)⁴⁷.
 - WAT-SG-28: Good Practice Guide Intakes and Outfalls; (2008)⁴⁸.
 - WAT-SG-29: Good Practice Guide Construction Methods (2009)⁴⁹.
 - WAT-SG-44: Good Practice Guide Riparian Vegetation Management (2009)⁵⁰.

6.2 Water Quality Monitoring

6.2.1

As part of the approach to mitigation, a programme of water quality monitoring will be undertaken throughout the entire construction phase of the Proposed Development. Water quality monitoring will be undertaken pre, during

- ⁴⁰ SEPA (2018). WAT-SG-75: Sector Specific Guidance: Construction sites.
- ⁴¹ SEPA (2012). WAT-SG-78: Sediment Management Authorisation.

⁴³ SEPA (2016). WAT-SG-86: Registration Rules for Exposed Sediment Removal.

⁴⁵ SEPA (2008). WAT-SG-23 Good Practice Guide – Bank Protection (2008).

³¹ Scottish Executive (2006). PAN 79 - Water and Drainage.

³² SEPA (2009). Policy No. 19 - Groundwater Protection Policy for Scotland.

³³ SEPA (2009). Policy No. 19 - Groundwater Protection Policy for Scotland.

³⁴ SEPA, Natural Scotland (2010). Engineering Activities in The Water Environment: Good practice guide – River Crossings (Second edition).

³⁵ SEPA (2017). Land Use Planning System SEPA Guidance Note 31, 'Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems'.

³⁶ SEPA (2022). Technical Flood Risk Guidance For Stakeholders (Version 13).

³⁷ Scottish Water (2018). Sewers for Scotland - A technical specification for the design and construction of sewerage infrastructure. Fourth edition.

³⁸ SEPA (2017). WAT-RM-02: Regulation of Licence-level Engineering Activities.

³⁹ SEPA (2013). WAT-PS-07-03: Engineering in Artificial Inland Surface Waters

⁴² SEPA (2015). WAT-PS-06-02: Culverting of Watercourses.

⁴⁴ SEPA (no date) WAT-SG-93: Guidance for Transport Infrastructure Projects.

 ⁴⁶ SEPA (2010). WAT-SG-25: Good Practice Guide - River Crossings (2010).
 ⁴⁷ SEPA (2010). WAT-SG-26: Good Practice Guide - Sediment Management (2010).

⁴⁸ SEPA (2008). WAT-SG-28: Good Practice Guide - Sediment Management (2010).

 ⁴⁹ SEPA (2009). WAT-SG-29: Good Practice Guide – Intakes and Outrails; (2008).
 ⁴⁹ SEPA (2009). WAT-SG-29: Good Practice Guide – Construction Methods (2009).

⁵⁰ SEPA (2009). WAT-SG-44: Good Practice Guide – Riparian Vegetation Management (2009).

and post-construction on all watercourses and PWS. Groundwater monitoring of the Old Red Sandstone aquifer should also be included.

6.2.2 Monitoring is proposed to ensure that mitigation measures operate as intended and construction works are being undertaken in accordance with any permit and licence conditions. Monitoring also allows environmental problems to be identified and responded to at as early a stage as possible. Finally, monitoring will also help the Contractor to identify and implement environmental improvements, which will contribute to the overall environmental performance of the project.

Water Feature Monitoring

- 6.2.3 The scope of the water quality monitoring programme will be developed at a post-consent stage and in consultation with SEPA and other relevant stakeholders. Water quality monitoring will be required of all potentially affected water features and may include daily visual and olfactory observations or after heavy or prolonged rainfall, in situ monitoring using a calibrated hand-held probe, and potentially taking grab samples on a regular or ad hoc basis for analysis at an accredited laboratory.
- 6.2.4 To ensure that monitoring during construction is effective it will be necessary to carry out pre-construction monitoring. There is no guidance on how long or frequent this should be, but it is recommended that as a minimum there are 12 monthly visits taking in a range of flow and weather conditions. The scope of pre-construction water quality monitoring, and monitoring during construction and for a short period post construction will be set out in the Water Quality and Flow Monitoring Plan, likely pursuant to a pre-commencement planning condition.
- 6.2.5 Daily visual and olfactory observations, and those during specific works (e.g. as work progresses in water features directly) or following periods of heavy or prolonged rainfall represent the first screen for water pollution (and in the case of any dewatering, of any potential changes in water quantity). These will consider signs of pollution such as:
 - Turbid water or fine sediment deposition (compared to baseline).
 - Non-natural oily sheens (iridescence).
 - Water decolourisation.
 - Chemical or other odours.
 - Effervescence.
 - Fungus growth.
 - Surface foam (unnatural), scum or litter.
 - Stained sediment or flora.
 - Adverse impacts on aquatic organisms including fish mortality etc. possibly due to low dissolved oxygen.
- 6.2.6 Finally, in situ monitoring using a handheld water quality meter can be effective at giving immediate readings on any changes in water quality where pollution is suspected but where visual and olfactory observations may not be obvious. In addition, certain water quality parameters like dissolved oxygen need to be recorded in-situ in the field using handheld water quality meters. At the same time, there are other parameters (i.e., pH, conductivity and turbidity) that can be analysed in the field, and it is beneficial to record these parameters in situ. A multi-parameter water quality meter can be purchased to do this.
- 6.2.7 In addition to the in-situ testing, water samples taken from natural water features will be tested at an accredited laboratory for the parameters listed in Table 5 Sampling Parameters to be used for Construction and Post-construction Water Quality Monitoring excluding in-situ measurements from probes as a minimum.

Table 5 Sampling Parameters to be used for Construction and Post-construction Water Quality Monitoring excluding in-situ measurements from probes

| Recommended parameter | Units | Recommended limit of detection | Accreditation |
|-------------------------------|----------|--------------------------------|---------------|
| Conductivity @ 20°C | µS/cm | 10 | UKAS |
| рН | pH Units | 0.05 | UKAS |
| Alkalinity to pH 4.5 as CaC03 | mg/l | 5 | UKAS |

| Recommended parameter | Units | Recommended limit of detection | Accreditation |
|--|---------------|--------------------------------|---------------|
| Dissolved Organic Carbon | mg/l | 0.2 | UKAS |
| Turbidity | FTU | 1 | UKAS |
| Total Suspended Solids @ 105°C | mg/l | 3 | UKAS |
| Total and dissolved metals | mg/l and µg/l | Various | UKAS |
| Chemical oxygen demand (COD) | mg/l | 10 | UKAS |
| Biochemical oxygen demand (BOD) 5 Day ATU | mg/l | 1 | UKAS |
| Speciated Polycyclic Aromatic Hydrocarbons (US EPA 16) | µg/l | 0.01 | UKAS |
| Extractable / volatile aliphatic & aromatic hydrocarbons (speciated) | mg/l | Various | UKAS |
| Total Petroleum Hydrocarbons (TPH) | µg/l | 100 | UKAS |
| Nitrate | mg/l | 0.02 | UKAS |
| Nitrite | mg/l | 0.2 | UKAS |
| Orthophosphate (as P) | mg/l | 0.03 | UKAS |
| Total phosphorus | ug/l | 0.7 | UKAS |
| Total Organic Carbon (TOC) | mg/l | 2 | UKAS |

Private Water Supply Monitoring

- 6.2.8 PWS are an important drinking water receptor and if impacted have the potential to risk human health and safety. Monitoring will help identify any deterioration that might be a consequence of the construction works so that appropriate action can be taken. As stated within **Appendix 10.2 PWS Assessment (Volume 5: Appendices)**, it is recommended that PWS-01 and PWS-02 are implemented into all water quality monitoring plans. All other PWS have been scoped out and so do not require inclusion here.
- 6.2.9 Appendix B of the Guidance on Assessing the impacts of development on groundwater abstractions⁵¹ recommends at least 12 months of monitoring before construction, fortnightly during construction and at least monthly for 12 months post construction. Additional sampling maybe required in the event of an investigation of an incident as described below.
- 6.2.10 The following suite of parameters is also recommended for monitoring groundwater PWS. It is likely that this suite will also be suitable for surface water PWS as well.
 - pH, electrical conductivity, dissolved oxygen, redox, temperature.
 - Chloride, alkalinity, sulphate.
 - Sodium, potassium, calcium, magnesium.
 - Ammoniacal nitrogen, nitrate, nitrite, orthophosphate.
 - Biochemical oxygen demand, chemical oxygen demand.
 - Iron, manganese (total and dissolved).
 - Total suspended solids.
 - Dissolved organic carbon.
 - Colour, turbidity, taste and odour.
 - Hydrocarbons.
 - Metals.

⁵¹ SEPA.2024. Guidance on Assessing the Impacts of Developments on Groundwater Abstractions. Available online: <u>https://www.sepa.org.uk/media/ijwd3q0y/guidance-on-assessing-the-impacts-of-developments-on-groundwater-abstractions.docx#:~:text=Qualitative%20assessment%20of%20the%20potential,reversibility%20of%20any%20potential%20im pacts.</u>

6.2.11 As well as quality monitoring, it is also recommended that there is groundwater level monitoring carried out at PWS-02 during operation (if practical). Groundwater surrounding Loch Ness may have some hydrogeological linkage with the loch. Therefore, fluctuations in loch levels during operation could impact PWS-02. PWS-02 will also require at least 12 months of water level monitoring prior to construction.

6.3 Management of Construction Site Runoff

- 6.3.1 The management of construction site runoff and spillages to water features will be carefully managed across the whole Proposed Development Site to avoid adverse environmental impacts by preventing pollution.
- 6.3.2 There may also be other environmental impacts to take into account in the approach at any one time (e.g., ecological interests in watercourses or the risk of excessive dust generation from exposed earth stockpiles). Potential adverse impacts may be acute (i.e., very high concentrations of a polluting substance persisting for a short time measured in hours) or chronic (lower concentrations of a polluting substance but still above background and persisting over longer periods of time such as days, weeks, months or longer).
- 6.3.3 The Contractor will prepare a temporary works drainage strategy prior to construction works. This will set out appropriate measures to manage runoff rates and be prepared in accordance with the pollution prevention measures set out in this oWMP. The temporary works drainage strategy will define the installation of preconstruction drainage measures to intercept run-off and ensure that discharge and runoff rates are controlled in quality and volume, in turn causing no degradation to water quality. This may include specific measures to be used in high-risk areas (for example construction along or across steep gradients and watercourse crossings). A phased approach may be taken to the development of the temporary works drainage strategy to reflect the phasing of the construction programme.
- 6.3.4 The location and condition of existing land drainage will be established, and a record compiled. A specialist drainage contractor in most instances will carry out the work. Subject to landowner/occupier agreement, existing drains should be restored, or new drains established to help prevent damage to soil structure, maintain work areas in a dry condition and to enable current drainage systems to continue to operate through the construction period.
- 6.3.5 The following measures could also be used to mitigate construction site runoff.
 - Topsoil stripping should be undertaken outside of the winter period (October to March inclusive) where possible during which wetter weather is more likely.
 - Avoidance of wet weather working where practical, especially site clearance, earthworks and works to
 water features. Short term periods of wet weather will be avoided when undertaking earth moving
 works, if possible, to minimise the risk of generating runoff contaminated with fine particulates. If there
 is forecast more than 15 mm of rain over 24 hour period then topsoil stripping should cease until the
 soil is dry or 24 hours has passed, whichever is the sooner or otherwise additional action taken by the
 Contractor to dry out the working area. This is to avoid working in waterlogged conditions.
 - No topsoil or subsoil will be stored within a fluvial or surface water flood zone (flood zone 2 and 3) unless supported by a risk assessment (i.e., consideration of weather forecast and duration of storage) and additional mitigation (i.e., drainage bypass channel for overland flow).
 - Appropriate separate storage of topsoil/subsoil and materials, and at least 50 m from water features on flat ground with additional mitigation such as silt fences installed if there is a risk of sediment entering the watercourse, other than where works are necessary adjacent to water features, in which case a site/works-specific risk assessment would be carried out and additional measures added if required.
 - Any earth bund/ stockpile to be present for longer than two weeks will be either seeded, covered using geotextiles, or other pressures provided to ensure it is not a source of excessive fine sediment in runoff to water features.
 - The implementation of a temporary drainage system and other measures to manage pollution risk during construction (e.g., fabric silt fences, lagoons, bunds, straw bales, sandbags, lamella clarifiers or other proprietary measures etc. as may be required).
 - Any dewatering of excavations will include measures where necessary to filter the water prior to discharge to a watercourse or ground (there shall be no discharge of any construction site runoff to existing ponds).

- Mud deposits will be controlled at entry and exits to the Site using wheel washing facilities and/ or road sweepers operating during earthworks or other times as considered necessary. The wash down of construction vehicles and equipment should take place in designated washdown areas within construction compounds. Waste wash water should be prevented from passing untreated into watercourses or groundwater. Appropriate measures will include use of sediment traps.
- Tools and heavy plant to be washed down and cleaned in designated areas onsite only. At all wash down locations, the wash down water will be collected for treatment before discharge to surface water drainage under appropriate consent and/ or agreement with SEPA and/ or Scottish Water or otherwise removed from Site for appropriate disposal at a licenced waste facility.
- Depending on ground conditions and weather conditions a geotextile membrane and stone surface and/or bog-mats may be used in selected areas. The geotextile will need to be regularly monitored and any excessive build-up of fine sediment removed.
- Annex A Silt Management Options gives options for examples of measures that can be used (including Installation of cut off trenches/ catchment drains, drain covers, sand-bags, earth bunds and lagoons, geotextile silt fences/matting, straw bales, or proprietary treatment (e.g., lamella clarifiers)).
- The effectiveness of fine sediment control measures must be continually monitored, managed and adapted to the Site-specific needs at any given time (e.g., build-up of silt in temporary construction SuDS or against fabric silt fences, or the decomposition of straw bales).
- Appropriately sized runoff storage areas for the settlement of excessive fine particulates in runoff will be provided. The Contractor will need to monitor the build-up of fine sediment in temporary construction SuDS and when they become ineffective either remove sediment or provide replacement measures.
- Water quality monitoring regime to be established and recorded. Daily inspections/ watching brief to be carried out, and especially during and after wet weather. Works will be stopped immediately and reviewed if silt plumes are identified within the watercourse/ water body as a result of operations involved with the works.
- Any material imported to site, such as for supporting foundations, will be natural quarried stone or, if recycled, the material will undergo chemical testing. The suite of contaminants and site use criteria will be agreed with regulatory authorities, in order to demonstrate that the material is suitable for use onsite and does not pose a risk to construction workers or the environment.
- Watercourse crossing locations will be micro-sited to make the crossing as close to perpendicular to
 the watercourse as reasonably practicable, ensuring the crossing is as short as possible and for open
 cut / temporary access crossings reducing the risk of localised scour at the structures. They will also
 be designed to maintain downstream flows and to allow continued and unobstructed passage for
 aquatic organisms and mammals (e.g., otter and water vole) using river corridors.
- Flumes for water crossings will be sized to maintain the current land drainage regime and the existing flow, following a study to understand the hydrology of the watercourse being crossed in order to assess the range of flows likely during the temporary works.
- For water features that are being flumed, a phased approach of flume removal should be undertaken.

6.4 Management of Spillage Risk

6.4.1 To prevent chemicals, fuels / oils and other such substances from entering the water environment, measures to control the storage, handling and disposal of these substances would be put in place prior to and during construction. The CEMP (Appendix 3.1 CEMP (Volume 5: Appendices)) provides detailed information relating to the control of spillages and leaks, and these are not repeated here. However, in summary they include:

- Storage of fuel and chemicals would be in accordance with GPP 2: Above ground oil storage¹³. SEPA guidance on oil storage regulations for business and preventing groundwater pollution from underground fuel storage tanks will be complied with. Within the construction compounds specific areas will be designated for the storage of chemicals, waste oils and fuel and refuelling activities and will be placed on secondary containment e.g., double walled tanks or bunded areas with a capacity of 110% of the maximum stored volume.
- Surface water drains on local roads or within compound areas will be identified and where there is a risk that fine particulates or spillages could enter them, they will be protected (e.g., covers or sand

bags). Alternative road drainage measures may be required. Sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.

- All wash down of vehicles (including wheel washing) and equipment will take place in designated areas, and wash water will be prevented from passing untreated into watercourses (directly or indirectly via drains) and groundwater. It will be adequately contained, prevented from entering any drain, and disposed of off-site at a suitably licenced waste facility using an accredited waste disposal company. It may also be disposed of to the foul sewer only with prior, written consent from the local sewerage undertaker.
- Any permanent oil storage tanks and temporary storage of 201 litres or more of oil in drums and mobile bowsers, and ancillary pipe work, valve, filters, sight gauges and equipment will have secondary containment (e.g. bunding or drip trays).
- No oil/chemical tanks will be stored within 50 m of a water feature and potentially further if ground is
 angled towards a water body except for fixed/large plant associated with works that must occur close
 to water features or hand tools that have to be located in that location (e.g. Lower Control Works
 discussed under 'Works in, under, over and adjacent to water receptors'). Such chemical storage will
 be on flat, impermeable hard standing, and with an isolated drainage system.
- Where possible re-fuelling will be undertaken in designated areas within main compounds or satellite compounds. It is possible that refuelling of mobile plant may be required by mobile fuel bowser. This will not be undertaken within 50 m of a water feature, and only on flat land (or otherwise a greater distance and other measures may be required subject to an on-site/works-specific risk assessment) and with a drip tray/plant nappy. Certain semi-mobile very large plant (e.g. cranes) may need to be located close to watercourses and potentially within 50 m. Due to the difficulties in moving plant such as this they may need to be refuelled in situ. Again, a site/works-specific risk assessment will need to be undertaken by the contractor.
- Oil/ diesel storage (including fixed tanks, IBCs, mobile bowsers and generators) will be placed at least 50 m from any watercourse (including drains), or any borehole/ well (nominal minimum 50 m provided around all licensed abstractions). Drip trays will be checked and emptied daily and will retain at least 10% of the volume being handled. Daily inspections will be undertaken of plant using hydraulic oils. Storage containers will be correctly labelled. Storage areas will be kept secure to prevent acts of vandalism which may result in leaks/ spills. Appropriate measures will be implemented to ensure that any spillage cannot drain to a nearby water body directly or indirectly.
- Biodegradable hydraulic oils would be used where possible in all plant used during pre-construction and construction works, and only in plant and equipment working in or over water features. This will be in accordance with the plant manufacturer's instruction.
- Spill kits will be available on the Proposed Development Site in watertight containers at key locations (such as at compounds, especially next to oil storage or refuelling locations) and locations where there is a risk to a water feature) and carried on all mobile plant. The Environmental Emergency Response Plan will identify these key locations. The Safety, Health and Environment Manager/ Advisor is responsible for ensuring that spill kits are checked at least weekly and kept fully stocked and in good repair. Appropriate training will be given to all construction workers in their use.
- An Emergency Response Plan or similar titled plan would be prepared and included in the Final CEMP.
- Any plant, machinery or vehicles would be regularly inspected and maintained to ensure they are in good working order and clean for use in a sensitive environment. This maintenance is to take place offsite if possible or only at designated areas in the site compounds.
- All plant will have thorough plant examination certificates. Trained and designated refuelling personnel will be appointed for the project. Refuelling will be observed by a banksman, and with a drip tray or plant nappy placed under the refuelling connections. Vehicles and plant will not be left unattended during refuelling. Refuelling will be undertaken in line with project specific procedures.
- All fixed plant used on the Proposed Development Site to be self-bunded.
- Mobile plant to be in good working order, kept clean and fitted with plant 'nappies' at all times.
- Adequately protect the Proposed Development Site from vandalism, theft and fly-tipping by fencing and locking access gates to discourage unauthorised access. Any occurrence of tipping on the

Proposed Development Site will be reported to the site management who will then inform the local environmental authority and the police if necessary.

- Construction waste/ debris are to be prevented from entering any surface water drainage or water feature.
- Any site welfare facilities would be appropriately managed, and all foul waste disposed of by an
 appropriate contractor to a suitably licensed facility. The main compound will have accommodation and
 welfare facilities. It is expected that a suitably sized storage tank will be provided that would be
 periodically pumped out by a specialist contractor so that the water could be disposed of at a suitably
 licensed waste facility.
- All chemicals are to be stored in lockable containers which are double bunded. A designated Control of Substances Hazardous to Health (COSHH) co-ordinator will be appointed for the project. A COSHH risk assessment register will be completed before any COSHH is used onsite.
- Establish and maintain contact with relevant regulators and other 3rd parties, keeping them regularly informed of the progress and pollution control measures used.

6.5 Management of Works in, Over, Under or Adjacent to Water Features

- 6.5.1 Construction works directly affecting water features will require careful management and the implementation of stringent working practices and mitigation. This applies foremost to the construction of the LCW in Loch Ness and the Headpond Area. Watercourses that may be crossed by new or upgraded Access Tracks, or to which new surface water drainage connections are made, are also more sensitive locations where there is a greater risk of water pollution or physical damage to the water feature.
- 6.5.2 A silt curtain and floating oil boom (potentially combined) and careful management of the operation of a concrete batching plant, if this is located on a floating barge, is proposed for the LCW. This will reduce the spillage risk and limit the area of the loch that may be impacted, so that any chemical spillage can be remediated immediately.
- 6.5.3 The construction of a temporary coffer dam is intended to create a dry working area and thus will reduce the risk of water pollution. In the same way, the diversion of watercourses through culverts during dam construction at the Headpond are also intended to create a barrier to construction site runoff, despite some unavoidable impacts during the diversion process. Elsewhere, any works in the channels of smaller watercourses will be undertaken in a dry working environment, where possible, with flow temporarily over-pumped or flumed or isolated from the working area using sand/ pea gravel bags or other similar and inert barrier. Works to existing or proposed bridges will require debris netting to prevent materials and equipment falling into the channel.
- 6.5.4 Full details of specific measures and processes will be set out in the Final Water Management Plan. However, as minimum the Principal Contractor will adhere to the following measures:
 - Works in, over, under or adjacent to water features will be avoided, but if this is not possible dry
 working areas will be created using the least intrusive techniques with downstream measures to
 prevent any silt and chemical spillages propagating.
 - It is assumed that where there are diversions or other works to watercourses, they would need to be either flumed, over-pumped, or otherwise diverted around dry working areas in water features (e.g. using sandbags for small areas of work or otherwise coffer dams or other similar ways to create a dry working environment).
 - Where the flow in watercourses is over-pumped, spare pumps must be maintained onsite. Temporary barriers to flow must be partially removed at the end of shifts once pumps/equipment and any debris/materials have been removed from the channel.
 - Temporary works to watercourses will be fully reinstated as found. Where riparian vegetation is cleared adequate protection of soils will be provided (e.g. using a biodegradable geotextile staked into the ground using wooden pegs) until vegetation re-establishes.
- 6.5.5 All activities outlined above must comply with the authorisation requirements of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR). The registration and authorisation of such works are administered by the SEPA.

6.6 Working Within a Drinking Water Protected Area

- 6.6.1 Part of the Proposed Development Site is within a surface Drinking Water Protected Area but all of it drains to Loch Ness that is. In addition, all aquifers in Scotland are considered to be within a groundwater Drinking Water Protected Area. Drinking Water Protected Areas are where there are specific measures to protect the quality of water as it may be abstracted for public potable supplies.
- 6.6.2 Scottish Water is the water supply company in Scotland and has provided guidance for working in or near these areas, 'Your Guide to living or working in a drinking water protected area'⁵². This includes the following measures:
 - Store all detergents, oils, fuels and chemicals securely. Do not leave any potential contaminants next to watercourses.
 - Ensure all vehicles and plant are maintained to avoid leaks and spillages.
 - Avoid driving through and working in watercourses where possible.
 - Make sure all septic tanks/wastewater treatment works, slurry and drains are operated and maintained correctly to avoid leaks.

6.7 Concrete Batching Plants and Use

- 6.7.1 Significant amounts of concrete will be required for various construction components such as at the Headpond, tunnel lining, and at the LCW. This will be a mixture of precast and cast in-situ. Usually, where possible, concrete would not be batched on-site and would instead be delivered on an 'as and when' basis in ready mixed lorries. However, given the remote location and the volume of concrete required this will not be practical and on-site batching of concrete will be required.
- 6.7.2 Any on-site concrete batching facilities will generally be located at least 50 m from any water feature, on flat ground, and suitable impermeable hardstanding, so that surface water run-off can be intercepted for either treatment or disposal off-site at an appropriate licensed waste facility. However, for the LCW this will practically not be possible due to the proximity of the works to Loch Ness and the lack of available space for construction works. At the LCW it may be necessary to position the concrete batching facility on a floating barge with materials brought to and from storage on the proposed temporary, floating quayside via tenders, and concrete delivered to the point of use using lines and booms. Locating these facilities on a floating barge presents greater risk than positioning them on land, but is not uncommon for offshore marine works, and similar risk management processes for those circumstances would be required to ensure adequate protection of the water environment. The floating concrete batching facility will likely be a bespoke build allowing appropriate pollution risk management measures to be included. This will include covered aggregate bins and the containment of surface water runoff and wash water (e.g. of lines used for a concrete pour) for appropriate disposal offsite, if it cannot be recycled in the process. A silt curtain / bubble screen is proposed around the works and a spillage containment floating oil boom will also be provided to ensure any oil spillage is contained allowing it to be remediated as quickly as possible. All remediation works would be undertaken under an Emergency Response Plan with daily monitoring of water quality.
- 6.7.3 Water for use during construction will be abstracted locally. Details of the source or estimates of the volumes required are not known at this stage. Any local abstraction will be subject to a CAR licence from SEPA and thus will not be granted if it is to have significant adverse effects on the water environment or any third-party users.
- 6.7.4 Particular care would be taken with the delivery and use of concrete and cement as it is corrosive and alkaline. No washing out of delivery vehicles to take place on the Proposed Development Site without suitable provision for the washing out water and provision of a suitable location (e.g. geotextile wrapped sealed skip, container or earth-bunded area) that is lined with a geotextile to prevent infiltration to ground. Such washing would not be allowed to flow into any drain or over the edge of a floating barge. The Final CEMP/ WMP would contain a methodology for dealing with any washing out water, or wheel wash. Wash/ wheel wash water would be adequately contained, prevented from entering any water feature, and either treated by an on-site Water Treatment Plant or removed from the Proposed Development Site for appropriate disposal at a suitably licensed waste facility.

⁵² Scottish Water. 2020. Your guide to living or working in a drinking water protected area. Available Online: <u>https://www.scottishwater.co.uk/-/media/ScottishWater/Document-Hub/Key-Publications/Energy-and-Sustainability/Sustainable-Land-Management/200320SWProtectedDrinkingWaterV4Lrweb.pdf</u>

6.7.5 Full details of specific measures and processes will be set out in the WMP.

6.8 Management of Dewatering and Groundwater Risks

- 6.8.1 The contractor(s) will aim to stem any uncontrolled water/ ingress into Waterways, the Power Cavern Complex, and Access Tunnels using a combination of reinforced shotcrete and/or other forms of lining as appropriate. A significant amount of the construction will be at great depth, where the amount of fracturing will reduce, and therefore it is expected that any groundwater inflow will also reduce. However, despite the expectation of encountering drier conditions at depth, the design and temporary works are planning for a worst-case scenario that groundwater is encountered. A Construction Groundwater Control Strategy will also be prepared to detail how groundwater will be managed.
- 6.8.2 Construction works at the LCW will be required to deal with high heads of groundwater due to the surrounding hillside into the excavations, as well as leaks through the coffer dam. There will also be high groundwater levels due to its proximity to Loch Ness that may need to be sealed using grout to minimise ingress into the excavation. The Construction Groundwater Control Strategy will set out appropriate methods for how groundwater ingress to the LCW excavation will be managed. This will include what non-toxic substances will be used and how water will be intercepted, stored and treated prior to discharge into Loch Ness. Although rare, without an appropriate method and due care by the Contractor, there is a risk that grout could 'break out' into the water column of Loch Ness through emergence from the bed. All works will be behind a silt curtain thus containing any spillage to a localised area. However, the risk will be further minimised by:
 - Performing appropriate geotechnical investigations before inserting the sheet piles for the cofferdam or excavating the LCW.
 - Performing drilling fluid hydro-fracture analyses for each grouting operation and maintaining downhole pressures within recommended limits using appropriate monitoring equipment.
 - Using appropriate grout mixes for the anticipated ground conditions.
 - Constantly monitoring the operation such as grouting fluid parameters and observations of water quality in Loch Ness for evidence of any leaks.

6.9 Secondary Consents

CAR Licences

- 6.9.1 The construction of the Proposed Development will be undertaken in accordance with good practice as detailed below. It is anticipated that all temporary works will be carried out under the necessary consents/ permits (e.g. CAR licences as required under the Water Environment (Controlled Activities) Regulations 2011)⁵³ and that the Contractor will comply with any conditions imposed by any relevant permission. It is anticipated that the Contractor will ensure all permits/ consents in place for works in, or near watercourses.
- 6.9.2 The following activities will require CAR authorisation:
 - Any discharges of polluting matter, this includes any water runoff from a construction site. This runoff includes any rainfall, meltwater from ice/snow.
 - Abstraction of water from the water environment (groundwater and surface water).
 - Construction/alteration/operation to any impounding works to inland waters and wetlands.
 - Engineering works on inland water or wetlands or within the vicinity of water/wetlands.
 - Artificial recharge to groundwater aquifers.
 - Direct/indirect discharge and any activity likely to cause a direct or indirect discharge, into groundwater of any hazardous substance or other pollutant.
 - Any other activity which directly or indirectly has or is likely to have a significant adverse impact on the water environment.

⁵³ Scottish Parliament (2011). The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) ('the CAR Regulations'). Available online: https://www.legislation.gov.uk/ssi/2011/209/contents/made.

- 6.9.3 The Contractor will also be required to obtain a water abstraction licence⁵⁴ through the CAR process which is required to abstract water from natural watercourses in Scotland.
- 6.9.4 Existing CAR Licenses within the Study Area are included within Appendix B CAR Licences.

Water Rights Order

6.9.5 The Electricity Act (1989) provided for the privatisation of the electricity industry within the UK. A Water Rights Order from the Secretary of State under the Electricity Act (1989) would be required for this Proposed Development, "for the purposes of constructing or extending a generation station wholly or mainly driven by water and of operating that generating station after such construction or extension"55.

Environmental Clerks of Works (EnvCoW) 6.10

- 6.10.1 The role of the EnvCoW is to monitor the compliance of a project and advise on the environmental management of a project to the client. The EnvCoW are also tasked with environmental monitoring, auditing and reporting. The EnvCoW have a separate role from the Ecological Clerk of Works (ECoW) who are responsible for on-site practical ecological support.
- 6.10.2 The Proposed Development will have an assigned EnvCoW, who will monitor the environmental management of the project.

Incidents and Emergencies 7.

Introduction 7.1

- 7.1.1 The Applicant is to ensure that protection measures to control the risk of pollution are included within the final WMP which will be prepared by the Contractor ahead of any onsite works taking place.
- 7.1.2 All environmental incidents shall be reported and investigated and follow the Contractor's procedure, will be included in the [environmental] Emergency Response Plan.

7.2 **Pollution Incident Response**

- 7.2.1 The approach to pollution incident response will be presented in the environmental Emergency Response Plan included in the Final WMP produced by the Contractor. It will be agreed in advance with SEPA and will set out the appropriate actions in the event of an incident and/or unusual or anomalous results being identified through monitoring. It will be prepared in accordance with advice from SEPA.
- 7.2.2 Reporting of any potential or actual significant pollution incidents during construction will include as a minimum:
 - A description of the pollution incident, including its location and Ordnance Survey (OS) grid reference, • the type and quantity of contaminant and the likely receptor(s).
 - Details of monitoring undertaken.
 - Details of contributory causes. .
 - Details of any adverse effects that have occurred as a result of the pollution incident. •
 - A description of the measures implemented to mitigate adverse effects.
 - Any recommendations to reduce the risk of similar events occurring in future on the Proposed Development Site.
- 7.2.3 The approach to pollution incident response in the Emergency Response Plan will set out actions in the event that monitoring identifies anomalous or unusual results when compared to the baseline data and/ or

⁵⁴ SEPA. Water Abstraction Licence (Scotland). Available Online: <u>https://www.gov.uk/find-licences/water-abstraction-licence-</u> scotland ⁵⁵ UK Public General Acts. 1989. Electricity Act 1989. Available Online: <u>https://www.legislation.gov.uk/ukpga/1989/29/contents</u>

Environmental Quality Standards⁵⁶. It will also describe the actions to be followed depending on the level of risk triggered.

7.3 Private Water Supply Response Plan

- 7.3.1 The PWS Response Plan will be implemented in the event that the quality and quantity of the supply to any of the PWS was impacted during construction. See **Appendix 10.2 Private Water Supply Assessment** for more details
- 7.3.2 The precise definition of what 'impact' would require a response will be determined in consultation with THC's EHO and SEPA but it is expected that the response plan will have a hierarchy of actions. The most significant response would be where the supply is contaminated and is no longer wholesome or the flow is significantly disrupted.
- 7.3.3 Overall, the PWS Response Plan will cover how local PWS users can raise a concern with their supply, how the incident will be investigated, and what temporary and/or permanent water supply solutions need to be implemented.

⁵⁶ Scottish Parliament (2006). The Water Environment (Oil Storage) (Scotland) Regulations 2006. Available online: <u>https://www.legislation.gov.uk/ssi/2006/133/pdfs/ssi_20060133_en.pdf</u>

Annex A Silt Management Options



Annex B CAR Licences

| ID | Authorisation No | Site | Category | Authorisation Holder | Authorisation Activity | Site NGR |
|-------|------------------|---|--------------|----------------------|---|----------------|
| CAR1 | CAR/S/1016366 | Balmacaan Farm, Drumnadrochit, Inverness | Licence | BALMACAAN FARM | Sheep Dip onto Land | NH 50176 28495 |
| CAR2 | CAR/L/1001666 | Milton of Glenurquhart WWTW | Licence | SCOTTISH WATER | Sewage (Public) Primary | NH 49660 30200 |
| CAR3 | CAR/L/1001668 | Balnain Village STW | Licence | SCOTTISH WATER | Sewage (Public) Combined Sewer Overflow (CSO); Sewage (Public) Emergency Overflow (EO); Sewage (Public) Secondary | NH 44700 30200 |
| CAR4 | CAR/S/1167619 | Orbis Parcs Loch Ness, A831 Nr Drumnadrochit | Licence | ORBIS PARCS LIMITED | Sewage (Private) Secondary | NH 47384 30762 |
| CAR5 | CAR/S/1009407 | Loch Ness Youth Hostel, Invermoriston | Licence | MACBACKPACKERS LTD | Sewage (Private) Primary | NH 45749 19046 |
| CAR6 | CAR/L/1113661 | Drumclune Farm Hydro Scheme | Licence | CHRISTOPHER CLARK | Abstraction Hydropower; Impoundment Hydropower; Abstraction Return | NH 48720 30121 |
| CAR7 | CAR/L/1125645 | Coiltie Hydro Scheme, Inverness | Licence | COILTIE HYDRO LTD | Abstraction Hydropower; Impoundment Hydropower; Abstraction Return | NH 49440 27990 |
| CAR8 | CAR/R/1037760 | Mill of Divach, Drumnadrochit, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Tertiary | NH 48851 27528 |
| CAR9 | CAR/R/1141517 | New House, East of Torcroft Chalets, Balnain | Registration | PRIVATE CONTACT | Sewage (Private) Tertiary | NH 45419 30295 |
| CAR10 | CAR/R/1029265 | 3 Balbeg, Drumnadrochit, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Secondary | NH 49099 24131 |
| CAR11 | CAR/R/1032103 | New House, Acorn Lodge, Grotaig | Registration | PRIVATE CONTACT | Sewage (Private) Secondary | NH 49159 23814 |
| CAR12 | CAR/R/1067915 | Plot 2 NE Ancarraig Chalets, Bunloit | Registration | PRIVATE CONTACT | Sewage (Private) Secondary | NH 49590 25050 |
| CAR13 | CAR/R/1067916 | Plot 1 NE Ancarraig Chalets, Bunloit | Registration | PRIVATE CONTACT | Sewage (Private) Secondary | NH 49510 24920 |

| ID | Authorisation No | Site | Category | Authorisation Holder | Authorisation Activity | Site NGR |
|-------|------------------|--|--------------|----------------------|-------------------------------|----------------|
| CAR14 | CAR/R/1093619 | New House, Site B, Bunloit, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Secondary | NH 49120 24190 |
| CAR15 | CAR/R/1117555 | The Coach House, Divach Lodge, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Secondary | NH 49362 27332 |
| CAR16 | CAR/R/1143729 | New Dwelling N E of Torcroft Chalets, Balnain | Registration | PRIVATE CONTACT | Sewage (Private) Secondary | NH 45353 30164 |
| CAR17 | CAR/R/1144786 | Creag Mhor & Ceanna Ffordyt Cott, Balnain | Registration | PRIVATE CONTACT | Sewage (Private) Secondary | NH 45749 30266 |
| CAR18 | CAR/R/1158295 | Sghorra Breac, Balnain, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Secondary | NH 45391 30415 |
| CAR19 | CAR/R/1009298 | Tigh Ruadh, Pitkerrald Road, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 50390 29720 |
| CAR20 | CAR/R/1012631 | Briarbank, Alltsigh, Glenmoriston | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45723 19135 |
| CAR21 | CAR/R/1014036 | New House, Allanmore Farm, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49680 30020 |
| CAR22 | CAR/R/1015957 | Torcroft Lodge, Balnain, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45264 30101 |
| CAR23 | CAR/R/1016371 | Glentore, Balnain, Glenurquhart, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45705 29643 |
| CAR24 | CAR/R/1018630 | 1 | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45246 30081 |
| CAR25 | CAR/R/1018758 | Site A, Balbeg, Bunloit, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49130 24300 |
| CAR26 | CAR/R/1020441 | Clunemore House, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49641 27692 |
| CAR27 | CAR/R/1021505 | Jura Cottage, Drumnadrochit, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49918 28347 |
| CAR28 | CAR/R/1021682 | 1 Grotaig, Drumnadrochit, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49160 23891 |
| CAR29 | CAR/R/1023967 | Whinhill, Balnain, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44990 30157 |
| CAR30 | CAR/R/1024478 | Creagmhor, Marchfield, Glen Urquhart | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45624 30425 |

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| CAR31 | CAR/R/1029085 | Tigh Nan Uiseagan | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49855 25594 |
| CAR32 | CAR/R/1029086 | The Cottage at Tigh Nan Uiseagan | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49860 25560 |
| CAR33 | CAR/R/1035374 | Sheaig, Balnain, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45039 30681 |
| CAR34 | CAR/R/1035828 | Plodda Lodge, Lochletter Lodges, Balnain | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44404 29928 |
| CAR35 | CAR/R/1035838 | Glomach Lodge, Lochletter Lodges, Balnain | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44440 29920 |
| CAR36 | CAR/R/1035844 | Guischan Lodge, Lochletter Lodges, Balnain | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44480 29920 |
| CAR37 | CAR/R/1035847 | Divach Lodge, Lochletter Lodges, Balnain | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44420 29890 |
| CAR38 | CAR/R/1036265 | Longletter Farm Cott., Balnain, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44260 29920 |
| CAR39 | CAR/R/1036268 | The Bothy, Lochletter, Balnain, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44264 29996 |
| CAR40 | CAR/R/1036281 | 1 Badcaul, Balnain, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45776 30255 |
| CAR41 | CAR/R/1036384 | Ben Aden, Rychraggan, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 46770 30660 |
| CAR42 | CAR/R/1037678 | Aran | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45310 30170 |
| CAR43 | CAR/R/1038379 | Strathnacro Farmhouse, Glen Urquhart, Drumnad | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 46304 29841 |
| CAR44 | CAR/R/1038382 | Strathnacro Cottage, Glen Urquhart | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 46257 29678 |
| CAR45 | CAR/R/1038399 | The Old Post Office, Balnain, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45077 29715 |
| CAR46 | CAR/R/1038415 | Torshee, Rychraggan, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 46626 30487 |
| CAR47 | CAR/R/1038701 | Tigh Na Bruaich, Glen Urquhart, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 46535 29836 |

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| CAR48 | CAR/R/1038709 | Communal ST, Ghortein (+2), Balnain | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45237 30214 |
| CAR49 | CAR/R/1038793 | Lochletter Farm, Glen Urquhart, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44159 29962 |
| CAR50 | CAR/R/1041275 | Carnach, Balmacaan, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49979 28412 |
| CAR51 | CAR/R/1046058 | Coille Nan Eun, Balnain, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44885 30399 |
| CAR52 | CAR/R/1046299 | Drum Moraine, Pitkerrald Road, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 50352 29850 |
| CAR53 | CAR/R/1048090 | WEST BALBEG, Bunloit, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49016 23873 |
| CAR54 | CAR/R/1050654 | Sonas Barn, Delshangie Farm, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 47007 30044 |
| CAR55 | CAR/R/1057772 | Kinloch, Balnain, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44302 30132 |
| CAR56 | CAR/R/1064266 | Enrickvale, Balnain, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45095 30088 |
| CAR57 | CAR/R/1065803 | Hazelwood, Strathnacro, Drumnadrochit, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45743 29754 |
| CAR58 | CAR/R/1076077 | Culle Na Cro, Glen Urquart, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 46560 29883 |
| CAR59 | CAR/R/1076790 | Taigh Na Cheo, Grotaig, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49260 23841 |
| CAR60 | CAR/R/1077274 | An Fhaire, Balnain, Glenurquhart, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44830 30217 |
| CAR61 | CAR/R/1078779 | Uibhist, Milton, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49115 30314 |
| CAR62 | CAR/R/1079126 | Fir Chlis, Milton, Drumnadrochit, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49229 30401 |
| CAR63 | CAR/R/1094258 | Oakbank West Long House, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 48820 30342 |
| CAR64 | CAR/R/1097075 | Torcroft House, Balnain, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45262 30100 |

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| CAR65 | CAR/R/1098118 | Riverview Cottage, Strathnacro, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 46550 29940 |
| CAR66 | CAR/R/1101829 | Chaoruinn, Glenurquhart, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45763 29678 |
| CAR67 | CAR/R/1103705 | Cherry Tree Cottage, Glen Urquhart | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 46987 30416 |
| CAR68 | CAR/R/1105338 | Ard Carden, Balnain, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45164 30461 |
| CAR69 | CAR/R/1108530 | Rowans, Bunloit, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49805 25451 |
| CAR70 | CAR/R/1110729 | Polmaily lodge, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 47130 30500 |
| CAR71 | CAR/R/1114764 | Shionnachan, Glen Urquhart, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 46319 29762 |
| CAR72 | CAR/R/1115469 | Ardley, Lower Gartally, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49033 30570 |
| CAR73 | CAR/R/1119910 | Dhivach Cottage, Drumnadrochit, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49374 27249 |
| CAR74 | CAR/R/1130191 | New Hse, Nr Oakbank Longhouse, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 48780 30330 |
| CAR75 | CAR/R/1132051 | Grian, Balnain, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44890 30240 |
| CAR76 | CAR/R/1138651 | 1 | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 47084 20546 |
| CAR77 | CAR/R/1142772 | Ancarraig Lodges, Bunloit, Drumnadrochit, IV6 | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49425 24853 |
| CAR78 | CAR/R/1143728 | Conv of existing Barn & Pettyvaich | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 46534 29917 |
| CAR79 | CAR/R/1145471 | Tigh Ban, Bunloit, Drumnadrochit, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49422 24669 |
| CAR80 | CAR/R/1147281 | Enrick Fields Stables & Agri Store, Balnain | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 44954 30123 |
| CAR81 | CAR/R/1155804 | 3 Primrose Bay, Glenmoriston, Inverness | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 47063 20498 |

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| CAR82 | CAR/R/1157040 | 1 & 2 Aultsigh, Invermoriston | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45581 18957 |
| CAR83 | CAR/R/1173854 | Plot 1 500m SW of Polmaily Farm Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 47230 30539 |
| CAR84 | CAR/R/1181825 | Dun Ban, Bunloit, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 49210 24838 |
| CAR85 | CAR/R/1182607 | Birchcroft, Balnain, Drumnadrochit | Registration | PRIVATE CONTACT | Sewage (Private) Primary | NH 45369 30031 |
| CAR86 | CAR/R/1067914 | Ardnish House, Bunloit, Inverness, IV63 6XG | Registration | Unknown | Point Source - New Sewage Treatment System to Water | NH 49240 25120 |
| CAR87 | CAR/R/5003797 | New House, Balnain, Glenurquhart, Inverness | Registration | Unknown | Point Source - New Sewage Treatment System to Water | NH 45236 30771 |
| CAR88 | CAR/R/SEPA2021-526 | New house, East of Drumalin, Balnain, Drumnadrochit, IV63 6TJ | Registration | Unknown | Point Source - New Sewage Treatment System to Water | NH 45360 30286 |
| CAR89 | CAR/R/5001871 | Static Caravan, The Hillock, Allanmore Farm, Drumnadrochit, IV63 6XE | Registration | Unknown | Point Source - New Sewage Treatment System to Land | NH 49252 29955 |

| CAR90 | CAR/R/5003214 | New House at Polmaily House Hotel, Glenurquhart, IV63 6XT | Registration | Unknown | Point Source - New Sewage NH 4773 3072 Treatment System to Land |
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| ID | Authorisation No | Site | Category | Authorisation Holder | Authorisation Activity | Site NGR |
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| CAR91 | CAR/R/3000265 | ENRICK COTTAGE DRUMNADROCHIT INVERNESS IV63 6TZ | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 49934 30138 |
| CAR92 | CAR/R/3003976 | DRUMALIN LODGE DRUMNADROCHIT INVERNESS IV63 6TJ | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 45292 30231 |
| CAR93 | CAR/R/3004599 | ANCARAIG HOUSE DRUMNADROCHIT INVERNESS IV63 6XG | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 49354 25195 |
| CAR94 | CAR/R/3005127 | OAKBANK WEST DRUMNADROCHIT INVERNESS IV63 6XS | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 48820 30341 |

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| CAR95 | CAR/R/3009786 | ALLTSAIGH COTTAGE GLENMORISTON INVERNESS IV63 7YD | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 45675 19095 |
| CAR96 | PSTS/20fc87 | 1 Badcaul, Balnain, | Registration | Unknown | Point Source - Existing | NH 44665 30410 |
| | | | | | (PSTS) | |
| CAR97 | PSTS/55c965 | Middle House & Farm House, Delshangie, Drumnadrochit, IV63 6XT | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 46874 30618 |
| CAR98 | PSTS/8a2cda | Inchtellach House, Bunloit, Drumnadrochit, Inverness, IV63 6XG | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 48234 23434 |
| CAR99 | PSTS/90cf98 | Guisachan & Plodda, Lochletter Lodges, Balnain, IV63 6TJ | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 44440 29920 |
| CAR100 | PSTS/ba47b4 | Glomach & Divach, Lochletter Lodges, Balnain, IV63 6TJ | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 44440 29820 |
| CAR101 | PSTS/d751fb | An Sabhal Fada, Inchtellach, Bunloit, Drumnadrochit, Inverness, IV63 6XG | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 48321 23362 |
| CAR102 | PSTS/ddd127 | Clunemore Cottage, Drumnadrochit, Inverness, IV63 6XW | Registration | Unknown | Point Source - Existing Sewage Treatment System (PSTS) | NH 49639 27562 |
| CAR103 | CAR/R/1174951 | Plot 1 500m SW of Polmaily Farm Drumnadrochit | Registration | CHRIS BILLINGHAM | Other Effluent | NH 47230 30539 |
| CAR104 | CAR/R/1187427 | Glenview, Rychraggan, Drumnadrochit | Registration | Unknown | Unknown | NH 46909 30458 |
| CAR105 | CAR/R/1188289 | 2 GROTAIG INVERNESS | Registration | Unknown | Unknown | NH 49140 23704 |
| CAR106 | CAR/R/1191753 | Craigmont Path Upgrade Eng Wks, Drumnadrochit | Registration | Unknown | Unknown | NH 49420 29780 |

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| CAR107 | CAR/R/1192213 | Rowan Cott, Strathnacro, Glenurquhart | Registration | Unknown | Unknown | NH 46141 29794 |
| CAR108 | CAR/R/1195707 | 2 BALBEG INVERNESS | Registration | Unknown | Unknown | NH 49075 24120 |
| CAR109 | CAR/R/1195821 | CLUNEMORE STEADINGS INVERNESS | Registration | Unknown | Unknown | NH 49654 27600 |

