



Appendix 7 – Water and Catchment Management

Freshwater Management

All operations on Scotland's National Forests and Lands (NFL) will adhere to the UK Forestry Standard 5.0 (UKFS) (2024), section 4.6 – Watershed management and erosion control, and the Water Environment (Controlled Activities Scotland) Regulations (CAR) and the General Binding Rules published by Scottish Environment Protection Agency (SEPA). Operations will also be carried out in accordance with '*Managing Forestry Operations to Protect private water supplies*' (FC, 2025) and the Forest and Water Scotland Initiative booklet "*Know the Rules*".

In Scotland, SEPA implements the Water Framework Directive (WFD) - a legal framework for the protection, improvement and sustainable use of all waterbodies in the environment across Europe. All water bodies in Scotland are routinely assessed for ecological and chemical status and catchment plans have been drawn up to ensure waterbodies are brought up to an acceptable level. North Region lies entirely within the Scotland river basin district, and is covered by the third River Basin Management Plan (2021 – 2027).

The aims of the WFD are to improve waterbodies to acceptable ecological status/potential (by 2015, but later if this has not been feasible) and to prevent any deterioration in ecological status/potential. FLS North Region consider it vital that operational planning and delivery does not lead to a deterioration of waterbody condition or water-dependant habitat within LMP areas including tributaries and waterbodies directly up- or downstream of the NFL. Water bodies noted on SEPA's River Basin Management Plan (RBMP) website, and minor watercourses identified by North Region as significant for this LMP, are shown on **Map 3 - Key Water Features**. The ecological condition assessment of the RBMP-listed waterbodies is given in the table below.

Table 1.1 Ecological Condition Assessment

Water Body ID	Water body Name	Current classification (Overall Status)	2027 Objective
100156	Loch Ness	Good	Good
20266	River Farigaig	Moderate	Moderate
20267	Liath Burn Farigaig Forest	Good	Good
23387	River Foyers- Loch Ness to Whitebridge	Good ecological potential	Good ecological Potential
100177	Loch Knockie	Good	Good
20290	Allt Luaidhe	Good	Good

Many forests within the South Loch Ness plan area lie on the banks on Loch Ness and as such the majority of the LMP area lies within the Loch Ness Catchment for a Public Drinking Water source. As a consequence, compliance with all relevant Scottish Water guidance for working within a **Drinking Water Protected Area** will be adhered to when carrying out operations within this catchment.

Whilst no examples are present in the South Loch Ness LMP area, it is acknowledged that water bodies have suffered from inappropriate forestry practices in the past due to plantation edges being too close to watercourses, to their intensive cultivation and for poorly implemented drainage schemes. It is also recognised that **invasive non-native species** (INNS) can have impacts on the condition of areas protected under the Habitats Directive for species or habitats important at a European scale, and those nationally important, for biodiversity. INNS are recognised as a significant risk to the water environment in the 3rd River Basin Management Plan for the Scotland River Basin District (2021 – 2027).

Given the potential for contamination from management activities on upstream populations of riparian INNS, any control efforts will be undertaken with this in mind, and FLS will continue engage with established authorities (Rivers and Fisheries Trusts and SEPA) to work within existing project frameworks such as biosecurity plans when implementing control measures. Invasive plants have been recorded at small, localised scale in the plan area. Historically, removal works have been delivered to reduce rhododendron populations (*R. ponticum*) and will continue during the coming Plan period. Routine survey work will continue throughout the Plan period and any occurrence dealt with in compliance with best practice guidance.

Water crossings for proposed roads infrastructure will be planned and delivered in accordance with the Engineering in the Water Environment Best Practice Guide (River Crossings) (2010) and within the structure of the Controlled Activities Regulations (CAR). It is acknowledged that the on-site storage of oil will be carried out in accordance with the Water Environment (Oil Storage) (Scotland) Regulations 2006.

As a minimum, the Water Environment (Diffuse Pollution) (Scotland) Regulations 2008 General Binding Rules will be followed. These rules cover the **storage and application of fertiliser, cultivation of land, discharge of site water, construction of roads and use of pesticides**. These are considered operational planning issues and as such specific mitigation and working methods are not detailed in the LMP but through the established work planning and pre-commencement planning protocols. The associated documentation being available for viewing as required by stakeholders.

North Region Civil Engineering staff will contact SEPA prior to commencing **engineering works** in, or in the vicinity of, inland surface waters to determine the level of authorisation required. Site-specific mitigation for engineering works is not a matter for this Plan; however Forestry Civil Engineering will adhere to all planning controls and mitigation measures stipulated before, during and after construction work.

Surface water drains will not discharge directly into the water environment. North Region staff will remediate legacy drains of this type to avoid siltation problems by using tree roots and other natural methods to act as anti-siltation devices during harvesting operations. When natural means are not available, plastic dams or semi-permeable netting may be used temporarily. When operations are finished these will be removed and the materials re-used.

Where opportunities exist to deliver environmental improvement by alteration or removal of **inappropriately designed or redundant structures** - for instance upgrading of a culvert to allow fish passage or removal of a redundant weir - this will be undertaken in consultation with relevant stakeholders and FLS will register the operation with SEPA. Opportunities for morphological and ecological improvements may also be considered.

Forestry has a significant role to play in **mitigating the effects of climate change**. Building resilience against extreme weather events underpins all our proposals but is particularly relevant in relation to protecting overhead power line networks, public road infrastructure and watercourses. Many instances of historical, artificial cultivation and drainage across Scotland's NFL are inappropriate in light of (current) future climate predictions and will be addressed by adoption of less intensive techniques into the future and complemented by the establishment of a network of protective native riparian woodland where appropriate. Details of the proposed riparian woodland that will provide a buffer on all identified watercourses (average 30 metres from each bank) is shown spatially in **Map 6 – Future Habitats and Species**. As part of pre-operational work planning, watercourses are initially identified from Ordnance Survey GIS data but this information may ultimately be supplemented by additional watercourse identified during environmental walkover surveys to

inform the work plan. Where an existing drain has become a sizable and stable watercourse, it will be treated as though it were a natural watercourse in terms of respecting buffer areas along its length in line with FR Practice Guide 25 – ‘*Managing forest operations to protect the water environment*’.

Tree guards may be used to protect more palatable species in riparian areas from browsing damage. When tree guards are being used this will be recorded using our work planning process and mapping software. Tree guards will be inspected annually and removed when no longer necessary. If possible tree guards will be reused on other sites.

Where specific operations produce **waste materials** not detailed above, North Region staff will liaise directly with SEPA to establish the level of permission/licensing required on a site by site basis.

Flood risk

The Flood Risk Management (Scotland) Act 2009 created a new framework for assessment and management of flood risk and new responsibilities for local and statutory authorities, including Forestry Commission Scotland, to consider and reduce flood risk as an integral and ongoing aspect of land management.

Of pertinence to this assessment requirement, the Highland Council (*in partnership with Argyll and Bute Council, Scottish Water, Forestry and Land Scotland, Scottish Environment Protection Agency, the Cairngorms National Park Authority and the Loch Lomond and the Trossachs National Park Authority*) has published The Highland and Argyll Local Flood Risk Management Plan 2022 – 2028. This Plan identifies forty areas where risk of flooding is deemed of greatest likelihood and significance. These areas are referred to as Potentially Vulnerable Areas (PVA). There are no PVA’s within the South Loch Ness Plan area.

FLS will manage the forest in line with UKFS and the 2009 Flood Risk Management Act including: avoiding excessive felling that could increase the possibility of flooding downstream (see below); designing and maintaining forest drains separated from natural watercourses; planting and conserving riparian woodland to ‘buffer’ natural watercourses; and increasing the extent of continuous cover forest management in the catchment to increase evapo-transpiration rates in order to reduce peak flows.

Finally, at national level, FLS has actively worked with SEPA, the local authorities and other partners throughout the evolution of the current (second) Flood Risk Management Plan cycle and is committed to continue this engagement to ensure - should new information come to light - that FLS is listening, understanding and considering potential new ideas in forest and land management which may mitigate flood risk even more effectively.

Private Water Supplies

It is a legal offence to contaminate a drinking water supply. FLS adhere to guidance published through the Forestry & Water Scotland initiative (www.forestrywaterscotland.com) and, with particular relevance to private water supplies, Confor's 'Managing forestry operations to protect private water supplies (2025)' (also referenced in **Appendix 12 – Key Policies and publications**).

There are currently 5 private surface water catchment drinking water supply points within the South Loch Ness Land Management Plan area. These are recorded in a layer in FLS' GIS mapping system and also displayed on **Maps 3– Key Water Features**. All user infrastructure and intake points for these supplies have been identified, visited and - based on intake point and associated supply catchment area - all proposed tree felling and restocking proposals have been assessed*. A minimum 50 m buffer zone of the upstream catchment associated with each intake is then applied where no future ground preparation or pesticide spraying will take place. In addition, FLS commit to establishing (or restructure at next felling intervention) this buffer as minimum intervention native broadleaved woodland in order to guard intakes from any future disturbance.

**N.B. If the geology and/or geomorphology surrounding any intake had been found to be significantly sensitive (due to heightened porosity or high percolation on account of catchment topography) the extent of low density, minimum intervention native woodland would be increased beyond fifty metres - upon SEPA's recommendation - to counter the increased potential for negative impacts on water quality from forest management operations.*

With respect to tree felling within supply catchments - to remove productive forest stands and initiate restructuring, site-specific operational mitigation is decided by the Delivery teams at the Work Plan stage. Affected neighbours are routinely consulted prior to any works commencing. Supply infrastructure and fifty metre buffer zones are clearly marked on all contract maps, as well as on the ground, and their presence and sensitivity discussed in pre-commencement briefings with forest works managers. Similarly, if invasive non-native plant removal is planned, the Delivery team will also determine site-specific operational mitigation and consult relevant neighbours. Again, buffer zones around the intake points are marked on the ground and on maps to prevent the potential for pollution incidents and the whole process recorded through the FLS Work Plan process.

There are a further 5 borehole water supplies at close proximity to the LMP area boundary, where mechanised felling operations may only take place up to 50 m from the borehole and where native broadleaves will be subsequently planted. Also, within this buffer, there is a presumption against the use of ground-disturbing preparation techniques or associated pesticide use.

