

Minutes — AWL / FLS field meeting, Torinturk

Monday 10 August 2026

Present: Callum Strong, Emma Bryce, Ana Martin and Ben (Forestry and Land Scotland); Alain Karmitz, Paul Hawes, Owen Paisley, Jackie Nichols, Simon Hicks, Ed Tyler and Carina Spink (Action West Loch).

1. Felling plan

- FLS has revised the Land Management Plan: no longer a single clear-fell coupe, but three coupes felled over a 5–10 year period.
- Detailed felling plans for the first coupe will be drawn up in about six months. AWL will be invited to input at that stage. This will include a walkover survey to identify broadleaves, recording of ditches and watercourses, and deciding the direction of forwarder operation to minimise runoff.
- FLS will update its LMP maps to show the felling coupes and timings.
- AWL asked to see the coupe-level method statements when available, particularly for the steep coupes close to Torinturk Burn.

2. Restocking — natural regeneration

- FLS has decided not to plant broadleaves after felling and to rely on natural regeneration instead, prompted by Peter R.'s evidence of good regeneration in a coupe felled 20 years ago beside Torinturk.
- It follows that all broadleaves should be retained during felling — including scattered remnants along burns and rivers and individual trees within the conifer stands — apart from self-seeded beech.

3. Minimising runoff during felling

- Ditches created when the last rotation was planted can be blocked before felling starts, so there is no runoff into the burns.
- Silt traps in burns and other free-flowing watercourses will need CARS licences from SEPA.
- AWL offered to monitor water quality before and during felling. Peter's note on what that would involve, and on the relevant UKFS, Forest Research and SEPA guidance, is at Annex B.

4. Deer management

AWL stressed that a deer management plan needs to be agreed and in place before felling starts, and drawn up with AWL involved. FLS has decided to rely on natural regeneration rather than planting, so browsing pressure becomes the single factor that decides whether the restoration works: without deer numbers brought down first, a felled coupe will regenerate poorly or not at all, and the opportunity will not come round again for another rotation. Deer control also needs to be in place before, not after, the flush of palatable growth that follows felling. AWL asked that this be one of the sections of the Memorandum of Collaboration, covering agreed cull targets, timing relative to each coupe, and AWL involvement in the monitoring — including Herbivore Impact Assessments before and after felling. Two AWL members hold deerstalking certificates and one is trained in HIA.

5. Wood ants

AWL raised wood ants, which came up again in the discussion of retaining mature trees. Wood ants are ecosystem engineers and their nests can be many decades old. Nests are easily destroyed by harvesting machinery and by the change in light and temperature that follows felling, and they will not simply re-establish themselves afterwards.

AWL has already located and recorded 34 ant hills across the area, so this is not a hypothetical concern — the nests are there and their positions are known. AWL has been in contact with Professor Elva Robinson of the University of York, and Dr Jenni Stockan of the James Hutton Institute in Aberdeen, co-editor with her of Wood Ant Ecology and Conservation, will help with a full pre-felling survey. That survey would confirm species and map the nests against the coupe boundaries, so decisions can be made nest by nest: retaining

nests in situ with a protective buffer of standing trees where that is possible, and translocating them where it is not.

FLS has already done this elsewhere. Colonies in a block of commercial forestry managed by FLS west of Salen, due for clear-felling, were translocated to Ardtornish Estate under the supervision of an ecologist, with volunteers from Arkaig Community Forest taking part. There is also published good practice guidance to work from — the Cairngorms National Park Authority's Wood Ant Translocation Good Practice Guidance (2022). AWL asked that a wood ant provision be included in the Memorandum of Collaboration.

6. Specific stands

- Beech stands: to be retained.
- Douglas fir stand in the coastal corner near Baravalla Gardens: has suffered windblow despite being a young stand, making it costlier to fell. The only viable option is to fell it at the same time as the adjacent coupe.
- Mature individual Sitka and Douglas fir grown on from a previous rotation: left open. Pros — mature trees are useful habitat (wood ants, fungi etc.). Cons — a seed source.

7. Other business

- Proposal that a Memorandum of Collaboration be drawn up between AWL and FLS. AWL's description of itself, for inclusion in that document, is at Annex A.
- AWL set out why the marine end of the catchment matters to the felling decisions: West Loch Tarbert is a designated Shellfish Water Protected Area, lies within the Sound of Gigha SPA, flushes only slowly, and supports native oyster, seagrass and relict serpulid habitat that is sensitive to sediment. The background is at Annex C.
- Callum is drawing up a master plan for rainforest regeneration along the coastal areas of both Knapdale and Kintyre.
- AWL noted the wider restoration work already under way on private land west of Torinturk down to Ardpatrik, and by AWL members and neighbouring groups across the area. A summary is at Annex D.

Actions

Who	Action
Owen	Supply a paragraph for the LMP headline text explaining AWL's marine work (ask from Ana) — drawn from Annex C.
Peter	Draw up a monitoring programme for watercourses, pre- and during felling operations (ask from Ana) — see Annex B.
Ed and Alain	c. 200 words on what AWL has done / is doing along the coastal rainforest on the Knapdale side of West Loch (ask from Ana) — see Annex D.
Ed	Contact Living Water about their work with the Forestry Commission on preventing runoff.
Ed	Contact Callum re. collaboration with Chris Ellis's PhD student and Verity Brosnan (Forest Research).
FLS	Update LMP maps to show felling coupes and timings.
FLS	Share coupe-level method statements, particularly for steep coupes near Torinturk Burn.
Callum	Talk to Nathan Berry re. deer management.
AWL	Carry out Herbivore Impact Assessments before and after felling.

AWL	Survey the natural regeneration area beside Torinturk found by Peter.
AWL / FLS	Pre-agree an operational sampling protocol and trigger / action levels.
AWL / FLS	Draw up a deer management plan, agreed and in place before felling starts, for inclusion in the Memorandum of Collaboration.
AWL	Pre-felling wood ant nest survey with Dr Jenni Stockan (James Hutton Institute), building on the 34 nests already recorded, and an agreed retention / translocation plan.

Annex A — Action West Loch

Tarbert, Argyll | Based on the former Kilcalmonell Parish

A community organisation applying for Scottish Charitable Incorporated Organisation (SCIO) status

About Action West Loch

Action West Loch (AWL) is a community conservation organisation based in Tarbert, Argyll, covering the area of the former Kilcalmonell Parish, and currently applying for Scottish Charitable Incorporated Organisation (SCIO) status with OSCR.

AWL is dedicated to protecting and restoring the living landscapes and waters of West Loch Tarbert — from its Atlantic rainforest and native woodlands to the burns, shorelines, seagrass beds and marine habitats of the loch itself — for the long-term benefit of nature and the communities who depend on it.

The West Loch Tarbert catchment drains approximately 60 square kilometres of Atlantic rainforest fragments, Plantation on Ancient Woodland Sites (PAWS), upland ground and riparian corridors on the Kintyre peninsula into a sea loch containing sensitive freshwater burns, coastal habitats, certified shellfish waters, seagrass meadows and native oyster habitat.

The loch opens at its mouth onto the Sound of Gigha Special Protection Area, classified for four qualifying bird species: great northern diver, Slavonian grebe, common eider and red-breasted merganser. Great northern diver and Slavonian grebe overwinter in the SPA, while common eider and red-breasted merganser are present all year and use the loch as a feeding area. All four feed by diving in shallow inshore water, so they depend directly on the clarity of that water and on the health of the prey it supports. Anything that increases sediment or nutrient loading at the head of the loch has the potential to reach them, which is a further reason why AWL treats the catchment and the sea as one system rather than two.

AWL works from ridge to reef, treating woodland, freshwater and marine habitats as a single connected system rather than as separate domains. Sediment, drainage and the loss of woodland continuity do not stop at the forest edge: their effects travel downstream through burns into shellfish waters, fish nursery grounds and the wider biological life of the loch. This principle underpins AWL's interest in the management of Torinturk and its offer of downstream monitoring, building on monitoring already underway in the catchment.

AWL's charitable purposes include protecting and restoring habitats across the catchment; promoting sustainable land and forestry management that safeguards soils, water quality and biodiversity; supporting scientific monitoring and survey work; educating and involving the public, especially young people; and working collaboratively with farmers, fishers, foresters, landowners, scientists and public bodies.

Activities to date

Woodland and catchment

AWL's central terrestrial focus is the ecological restoration of Plantation on Ancient Woodland Sites — the recovery of ancient woodland ecosystem function, including native canopy, mycorrhizal networks, oceanic bryophytes and lichens, soil stability and riparian connectivity. AWL participated in the Forestry and Land Scotland public consultation on Torinturk in June 2026 and made a formal written submission in July 2026. It has produced a series of evidence briefings on woodland carbon, continuous cover forestry, and forest-ocean connectivity.

AWL, Heather Morrison (Our Rainforest Futures) and ACT worked together to set up the Torinturk PAWS Volunteers, who carry out invasive species removal in the Achaglachgach Block every month. Rhododendron removal has been carried out in the Ardpatrik area using the Lever and Mulch method, and a collaboration grant has been obtained to survey the extent of rhododendron on the Ardpatrik and Carse Estates. Several AWL members own fragments of rainforest along the coast of West Loch Tarbert; all are members of Northwoods, part of Scotland: The Big Picture. The wider restoration work under way across the area, including on neighbouring private land, is summarised at Annex D.

AWL received a grant to look into the feasibility of setting up a deer management group in the South Knapdale area. Progress was made with some landowners, discussions were held with FLS stalkers, and the possibility of a group for the whole of Knapdale was explored with ACT and Highlands Rewilding. Two AWL members have obtained their deerstalking licence and one has been trained in Herbivore Impact Assessment. AWL also helped develop the Rapid Rainforest Assessment tool. AWL is in discussion with ACT and ASR about setting up a Landscape Focus Project for the West Loch Tarbert catchment.

Marine restoration and survey

AWL leads a grant-funded serpulid reef restoration project involving local schools, and partners with the Marine Conservation Society and Heriot-Watt University on the Oyster Ark 2 native oyster restoration feasibility study (2026). AWL members carry out SeaSearch surveys of the loch and contributed to a Bonamia surveillance collaboration with the Roslin Institute / University of Edinburgh, published in Aquaculture (Regan et al., 2025).

Community, citizen science and public engagement

AWL volunteers monitor the burns of the catchment for freshwater invertebrates through Buglife's Guardians of our Rivers programme, including the burns flowing in to the south-west of Torinturk, using the Riverfly Monitoring Initiative method to assess the impact of forestry and agricultural activity on water quality. This work builds a catchment-specific ecological baseline that informs restoration decisions and land management discussions. AWL also carries out woodland observation and marine habitat monitoring, and engages the wider community through public events in Tarbert — including a Marine Conservation Society presentation in July 2026 — and documentary screenings in local town halls, with Riverwoods and No Trees No Seas currently scheduled.

AWL contributes records to the Knapdale focus iNaturalist project, and Oliver Moore has visited twice to train members in lichen and bryophyte identification. Members and supporters have held workshops on rainforest lichens, bryophytes, ferns and fungi.

Annex B — Monitoring sediment runoff during clearfell

Note by Peter R. following the AWL / FLS meeting, 10 August 2026

What the guidance says

- The UK Forestry Standard says forestry operations should prevent watercourses being affected by sediment or becoming discoloured; monitoring should take place during works, and contamination should be reported and put right immediately. Drainage and watercourses should be assessed before clearfelling to reduce erosion and sediment delivery.
- UKFS recognises that poor practice can cause unacceptable turbidity and damage aquatic habitats and downstream waters, but sets no universal NTU limit. Forest Research guidance says freshwater life can be adversely affected at roughly 10–50 NTU, and readings in or above that range warrant investigation into whether forestry is responsible. This is an investigation range, not a statutory limit.
- There is no ambient river turbidity EQS in the current 2024 Standards Directions. SEPA's General Binding Rule for runoff from waterbound forestry roads and tracks does say the discharge must not cause visible discolouration in the water environment.
- SEPA's construction-runoff guidance refers to suspended-solids limits of 30 or 80 mg/L depending on the sensitivity of the receiving water. These are limits on a licensed construction discharge — not a general environmental standard for a natural burn, and not automatically a clearfelling limit. They are worth raising with FLS as context, and worth asking SEPA whether either applies to associated road or civil works at Torinturk.

Why simple volunteer sampling is not enough on its own

A monthly or fortnightly volunteer grab-sample programme would give useful background information, but it would be very poor at detecting the main sediment effect of clearfelling, because sediment is usually carried in short pulses during heavy rain and high flows. Forest Research recommends more intensive sampling during harvesting and ground preparation, automated or sub-daily monitoring for high-flow events, continuous turbidity monitoring, and flow measurement so concentrations can be converted into loads.

West coast rainfall can make turbidity and pH change dramatically even in an untouched catchment, so Forest Research also recommends comparison with nearby streams unaffected by forestry operations when interpreting any changes.

Proposed approach

- Baseline monitoring established before Phase 1 felling.
- Continuous turbidity, pH and stream-stage monitoring.
- Event-based laboratory suspended-sediment sampling.
- A comparable control catchment.
- An agreed monitoring and pollution-response protocol with SEPA, including pre-agreed trigger and action levels.
- Publication of, or shared access to, the data.
- Continuation through harvesting and into the post-felling period.

UKFS expressly calls for monitoring during operations where sediment or discolouration is a risk, Forest Research sets out a methodology for doing it, and FLS itself publicly states that regular water-quality monitoring and reducing sediment entering watercourses are part of its freshwater management work. AWL also needs to see the coupe-level method statements, particularly for the steep coupes close to Torinturk Burn.

Annex C — West Loch Tarbert: the marine environment and AWL's marine work

Priority Marine Features

Priority Marine Features (PMFs) are habitats and species of marine conservation importance found in Scottish waters. Several of these occur in West Loch Tarbert.

- **Native oyster (*Ostrea edulis*).** The loch holds a nationally significant population, and an active restoration project is under way, run by Action West Loch in partnership with the Marine Conservation Society. As filter feeders, oysters are vulnerable to any increase in sedimentation.
- **Seagrass beds (*Zostera marina* and *Zostera noltii*).** The loch contains two species of seagrass. There are extensive beds of the subtidal *Z. marina* west of Kennacraig, including one bed over 1 km in length, and two smaller beds of the intertidal dwarf eelgrass *Z. noltii* have also been recorded. Surveys in the 1970s recorded both species at the head of the loch, but recent surveys have failed to find them there. As a flowering plant, seagrass is vulnerable to any increase in the turbidity of the water.
- **Serpulid reefs (*Serpula vermicularis*).** Reefs formed by this polychaete worm are known from only a handful of Scottish sea lochs and were reported present in West Loch Tarbert in the 1980s. Recent surveys have found numerous examples of relict reefs but no live reefs. An ongoing restoration project, carried out by AWL in partnership with a variety of other community groups, is working to aid their recovery. Serpulids are filter feeders, so any increase in sedimentation within the loch is likely to be detrimental to the project.
- **Maerl beds.** There are old records of maerl towards the loch entrance. Maerl grows at roughly 1 mm per year and is highly sensitive to smothering by sediment, with a low or negligible rate of recovery.
- **Other PMFs.** Other PMF species such as salmon, sea trout and blue mussel beds are also found within the loch and would be adversely impacted by any increase in turbidity or sedimentation. The West Loch is also part of the Sound of Gigha SPA, which cites four species of sea bird: Slavonian grebe, great northern diver, common eider and red-breasted merganser. The first two use the SPA for overwintering, while the eider and red-breasted merganser use the loch all year round as a feeding area.

Geography and tidal exchange

West Loch Tarbert is a long, narrow, sheltered sea loch on the north-west side of Kintyre, about 16 km long, with roughly 23% of its area intertidal. Much of the loch is less than 10 m deep; a shallow sill of about 8 m lies at the mouth, behind which a deeper basin reaches about 32 m. The deeper central basin is mainly soft or sandy mud; around the shallower margins the seabed becomes more varied, with gravel, stone, rock and shell — the clean, stable substrate that native oysters and other sessile marine life need for settlement.

The loch's shape, shallow margins and restricted entrance make water movement very gentle. Historic oyster investigations recorded currents in the upper loch of less than about 0.1 mile per hour even on spring tides, and a later hydrodynamic assessment estimated a spring-tide current of about 0.13 m/s at the sill and a whole-loch flushing time of roughly five days. This slow exchange is fundamental to the loch's ecology: it helps retain plankton and oyster larvae inside the loch long enough for settlement, but it also means that fine sediment, nutrients or pollutants entering from burns and shoreline catchments disperse and leave the system only slowly. The same slow, sheltered water movement that made West Loch Tarbert an exceptional oyster loch also makes it sensitive to what enters the water from the surrounding catchment.

Statutory protection and designations

The loch is not only ecologically sensitive; it is legally protected water. Inner West Loch Tarbert (UKS79923104) was designated a Shellfish Water Protected Area in 2002, covering 1.90 km², with a second designated area at Loup further down the loch (UKS79923105). These are protected areas under the Water Framework Directive, carrying statutory environmental objectives. SEPA's own compliance record shows how little margin there is: apart from 2007 and 2010, Inner West Loch Tarbert failed the Guideline standard

for faecal coliforms every year from 2003 onwards, while the WFD objectives require it to pass both the Imperative and Guideline shellfish growing water standards.

The loch also lies within the Sound of Gigha Special Protection Area, classified on 3 December 2020 and covering 363.27 km² from Machrihanish Bay north to the entrance of Loch Caolisport. The Scottish Government's regulatory assessment for the site states that the SPA includes the sheltered waters of West Loch Tarbert, and records beds of seagrass, sea pens and gastropods there. The qualifying birds — great northern diver, Slavonian grebe, common eider and red-breasted merganser — all feed by diving from the surface and pursuing prey underwater, so water clarity bears directly on the site's qualifying interest.

On the terrestrial side, SEPA's site report for the shellfish water lists Tarbert Woods Special Area of Conservation among the conservation designations relevant to these waters. Tarbert Woods was designated on 17 March 2005 for Western acidic oak woodland and is a groundwater-dependent SAC. It covers about 1,576 ha of coastal broad-leaved woodland with good stands of old sessile oak, and is important for its oceanic bryophytes: 180 bryophyte species have been recorded, including 47 Atlantic species. The numerous streams crossing the site have cut deep ravines which, together with the sheltered aspect, provide the humid conditions those communities depend on. Woodland and freshwater management in this catchment therefore bears on a European-designated woodland site as well as on the loch.

A remarkable native-oyster history

West Loch Tarbert supported a major native-oyster fishery for well over a century. Oysters were being sold in Campbeltown and Glasgow by the late eighteenth century, and the loch became the principal native-oyster producing area of the Inveraray district. Around 1890 the population was estimated at at least one million oysters, with annual landings of roughly 150,000 during the peak years. No proper survey was carried out at the time, so that figure is a contemporary estimate and a floor rather than a measured population. The fishery was actively managed: oysters were moved between beds, predators were controlled, and stock was imported to replenish the beds. At Rhu, a tidal spatting pond was used to produce young oysters for restocking the loch, and the remains of that pond still survive today.

Overexploitation drove a severe decline, and commercial landings had ceased by the late 1930s. Restoration experiments in the 1940s and 1950s introduced more than 200,000 oysters, and R. H. Millar's 1961 Scottish Oyster Investigations identified West Loch Tarbert as one of Scotland's most promising sites for renewed oyster cultivation. Millar also estimated that the beds could carry a stock of around 5 million oysters — several times the estimated population at the 1890 peak — which gives some sense of the scale restoration could eventually rebuild. Native oysters have survived in the loch to the present day, so current work is restoration of a surviving population rather than reintroduction from scratch. The loch also contains recorded Priority Marine Features, including native oysters, seagrass beds, maerl and blue mussel beds, and historically supported globally rare biogenic reefs built by the tube worm *Serpula vermicularis*.

Habitats that cannot readily recover

Maerl grows at roughly 1 mm per year, so beds accumulate over thousands of years. It depends on light for photosynthesis, and NatureScot's management advice records that maerl beds are sensitive to increased sedimentation, which smothers the maerl and blocks the exchange of oxygen, nutrients and food, and that they have a low or negligible rate of recovery because of that exceptionally slow growth. Maerl beds are a Priority Marine Feature, a UK BAP habitat and an OSPAR threatened and declining habitat. In practical terms, damage to maerl is not reversible on any management timescale.

Serpulid reefs are rarer still. Living reefs are known from only two places in Scotland and two other places in the world. NatureScot's comparison of flushing times across the Scottish lochs where serpulid reefs are known to occur lists West Loch Tarbert (five days) alongside Loch Creran, Loch Ailort and Loch Teacuis — placing this loch among a very small number of sites worldwide that have ever supported the habitat.

AWL's marine programme today

Over the last decade Action West Loch has recorded the marine life of the West Loch and developed working relationships with a range of organisations including Heriot-Watt University, the Roslin Institute and the Marine Conservation Society.

Initial efforts focused on establishing what was actually in the loch, and numerous survey dives were carried out by volunteer Seasearch divers. Survey diving is an ongoing activity, with almost every dive revealing something new about the loch's marine life. The most significant findings so far are:

- An extensive native oyster population, one of the largest in Scotland, showing clear signs of successful reproduction — making the site a leading candidate for oyster reef restoration.
- Extensive *Zostera marina* seagrass beds, the largest over 1 km long.
- Evidence of the recent presence of extensive serpulid reefs throughout the eastern side of the loch.

Oyster surveys

As an initial step, five permanent transects were set up in 2023 to monitor fluctuations in population levels, with oyster numbers recorded along the transect from year to year. That work is ongoing, and a major population survey is planned for September 2026 in partnership with the Marine Conservation Society.

These initial surveys showed maximum densities of between 7.36 and 9.72 oysters per m², but as the transect sites were chosen for the presence of oysters, the overall density in the loch will be much lower. These densities are significant by current standards but far below historical levels: the historic population was estimated at at least a million, whereas current estimates of population size are in the low tens of thousands.

Since the oyster fishery collapsed in the early twentieth century, the population has not recovered to pre-exploitation levels. This is probably due to a number of factors. There have been sporadic episodes of illegal collection, most recently in 2025. The oysters in the loch also harbour the haplosporidian parasite *Bonamia ostreae*, which causes increased mortality when the oysters are stressed by events such as spawning and possibly sediment pulses from the land. Illegal collecting and *Bonamia* may explain the absence of large, old oysters in the loch: shells over 130 mm in diameter have been collected, whereas no living oyster has been found with a diameter greater than 90 mm.

Successful reproduction and settlement require a number of conditions to be met — water temperature, water quality, the presence of larval food at the right time, enough oysters in close proximity to allow fertilisation, and suitable substrate for larvae to settle on. Some of these are regularly met in the loch, including temperature and suitable settlement substrate. However, the current population, while abundant enough to allow some recruitment, is scattered, making fertilisation less successful than it could be.

To counter this, AWL is working with Heriot-Watt University and the Marine Conservation Society to set up low-cost spatting ponds using ex-trout-hatchery tanks, and to bring a nineteenth-century spatting pond back into use. If successful, the project will greatly increase the production of larvae in the loch and the subsequent settlement of young oysters.

The loch has a restriction order placed on it preventing the movement of oysters out of the loch, because of the presence of *Bonamia ostreae* — a major threat to oyster reef restoration projects across Europe. Working with the Roslin Institute, AWL has been instrumental in successfully testing a new non-lethal test for the parasite. This will allow the project to test potential broodstock oysters for *Bonamia* before placing them in the spatting ponds, which should reduce post-spawning mortality to acceptable levels.

Once larvae have been produced they need suitable substrate to settle on, preferably oyster shell. The West Loch is unusual in that a great deal of oyster shell still lies on the seabed, reducing the need to introduce additional substrate. But for settlement to succeed the shells must be lying on the seabed, not buried under sediment. At present the oysters are concentrated in a narrow depth band from the shore to a depth of around 2 m, below which soft mud predominates. Any increase in sediment settling in shallow water would

be of concern, as it would smother the oyster shell and prevent settlement. Increased sediment loading would also reduce larval survival by preventing larvae from feeding.

Seagrass beds

The Seasearch surveys also recorded significant areas of seagrass, the largest stretching for over 1 km along the northern shore. The largest area is sublittoral *Zostera marina*, but the littoral seagrass *Zostera noltii* is also present, and a new, previously unrecorded *Z. noltii* bed was found as recently as July 2026. Both species rely on clear water to thrive. Seagrass was recorded at the head of the loch in the 1970s but recent searches have failed to find any. Seagrass is sensitive to increased turbidity, so any increase in the sediment loading of watercourses flowing into the loch is likely to be detrimental.

Serpulid reefs

The polychaete worm *Serpula vermicularis* is a common resident in sea lochs all over the west coast of Scotland. It secretes a hard calcareous tube, often attached to rock or mollusc shells, usually as individuals. In a few locations, however — notably Loch Creran — the worms join together to form highly biodiverse biogenic reefs. Other locations where this is known to have occurred include the nearby Loch Sween and Loch Teacuis. The serpulid reefs in Loch Sween died out in the 1990s, and the reefs in Loch Creran and Loch Teacuis have been deteriorating over the last decade. There are records of live reefs in West Loch Tarbert in the 1980s, and Seasearch survey divers have located relict reefs in a number of locations in the loch. It is quite possible that when oyster populations were higher the loch also supported extensive serpulid reefs.

Seasearch divers in Loch Sween recorded resurgent serpulid reefs growing on old discarded clay field drains in 2024. Accordingly AWL has started a project, funded by Sea-Changers, working with local schools to produce clay structures which will be placed on the seabed in the hope that serpulids will settle on them and form biogenic reefs. This would be a world first if successful. Serpulids are filter feeders, and any increase in sediment loading is likely to be detrimental to their survival.

Ongoing work

The Seasearch surveys carried out to date have concentrated on the upper reaches of the loch. In the coming years there are plans to extend the surveys to the loch entrance, where there are old records of maerl beds — yet another Priority Marine Feature.

Forest to sea

AWL treats the surrounding hills, forests, burns, shoreline and sea loch as one connected catchment. Because of the loch's very slow flushing, sediment released upstream does not simply disappear when it reaches salt water: fine material can affect water clarity, settle on the hard substrate that oyster and serpulid larvae need, and influence shallow habitats such as seagrass. There is published evidence that the loch's water clarity is already marginal — the 2004–05 study recorded underwater visibility at the West Loch Tarbert sites as generally poor, under 2 m because of high turbidity, and dropping below 1 m after storms. Additional sediment arriving from felling operations would be added to a system already close to the limit for the light-dependent habitats it supports. This is why AWL advocates baseline turbidity and water-quality monitoring at burn outfalls, strong riparian protection, careful forestry operations and downstream marine-impact assessment in sensitive catchments — the reasoning behind the monitoring proposals at Annex B.

SEPA has already identified the surrounding land use in exactly this context: its site report for Inner West Loch Tarbert describes the land around the designated area as semi-natural woodland and coniferous plantation, with smaller areas of improved pasture, in the section dealing with potential diffuse pollution sources. The same report classifies the Abhainn na Cuile, the main freshwater input to the head of the loch, as fair quality, against good quality for the River Bardaravine. The catchment's principal freshwater input is therefore already below good status before any additional pressure is added.

Key sources

Cefas/FSA West Loch Tarbert sanitary survey (2010); R. H. Millar, Scottish Oyster Investigations (1961); OysterArk2 Feasibility Study (2026); Seasearch Scotland survey records and oyster belt-transect data; Roslin Institute native-oyster research; UMBSM (2007), Conservation of the Native Oyster *Ostrea edulis* in Scotland, SNH Commissioned Report No. 251; SEPA shellfish water site reports 104 (Inner West Loch Tarbert) and 105 (Loup); JNCC Special Areas of Conservation, Tarbert Woods (UK0030286); Scottish Government, Sound of Gigha SPA business and regulatory impact assessment (2020); NatureScot maerl bed and serpulid reef guidance and conservation advice; NatureScot Research Report 1349.

Annex D — Additional work and projects in the area by landowners and group members

The wider context outwith the FLS forest blocks: rainforest establishment and invasive species control west of the Torinturk block down to Ardpatrik

Beyond the FLS blocks, restoration is already under way on the private land running west from Torinturk down to Ardpatrik.

Rhododendron has been removed by the landowners at Dunmore, Ardpatrik and Carse Estates, using the Lever and Mulch method, with outlier removal in the Barr na Criche area; a collaboration grant has been obtained to survey the remaining extent of rhododendron on Ardpatrik and Carse Estates, with a view to its removal.

Deer fences have been erected around rainforest fragments at both Dunmore and Ardpatrik Estates, and seed islands have been created on open ground at Ardpatrik Estate to extend rainforest habitat.

Scottish Woodlands planners and managers have been engaged on enhancing rainforest habitat in the Carse Estate area between the Couliatro and Achaglachgach blocks, in particular the important riparian rainforest of the Cuildrynoch Burn.

At Ferry Wood, an SSSI on the Ardpatrik Estate, Sally Gouldstone is researching why rhododendron-cleared areas take so long to restore to rainforest, working with the James Hutton Institute, Heriot-Watt University and the Royal Botanic Garden Edinburgh. Plantlife's Rapid Rainforest Assessment tool has also been used there.

AWL received a grant to look into the feasibility of setting up a deer management group in the South Knapdale area. The possibility was explored with local landowners, ACT and Highlands Rewilding of having a Deer Management Group for the whole of the Knapdale area. Two AWL members have obtained their deerstalking licence and one has been trained in Herbivore Impact Assessment.

AWL contributes records to the Knapdale iNaturalist project. Oliver Moore has come over twice to train AWL members in lichen and bryophyte identification, and AWL members and supporters have held a number of workshops for the local community on rainforest lichens, bryophytes, ferns and fungi.

AWL, Heather Morrison (Our Rainforest Futures) and ACT worked together to set up the Torinturk PAWS Volunteers. Every month AWL members take part in invasive species removal in the Achaglachgach Block.

AWL members monitor the burns flowing into the West Loch, including the burns to the south-west of Torinturk, using invertebrate sampling methods. The data is sent to Buglife under their Guardians of our Rivers programme.

Taken together, this means the Torinturk blocks sit within a stretch of coast where rhododendron control, deer management and rainforest expansion are already being actively pursued by neighbouring landowners, community groups and AWL members.