

TO
Forestry and Land Scotland

FROM
Action West Loch (AWL)
West Loch Tarbert, Tarbert, Argyll
actionwestloch.co.uk
REF: AWL/FLS/LMP/PAWS/2026-06
DATE: June 2026

South Knapdale Land Management Plan

FLS LMP Objectives and AWL PAWS Restoration Requests: A Parallel Analysis

Torinturk / South Knapdale / West Loch Tarbert · June 2026

Purpose of this submission: to demonstrate that Action West Loch's core requests are directly aligned with — and grounded in — Forestry and Land Scotland's own stated South Knapdale LMP objectives on PAWS restoration, halo thinning, riparian protection, water catchments, native woodland recovery, habitat connectivity and community partnership. AWL is not opposing PAWS restoration. AWL is asking FLS to implement the restoration principles already contained in its own guidance — and to extend those principles to protect the downstream marine environment, which is directly connected to the Torinturk catchment and host to active AWL restoration programmes.

1. Executive Summary

The November 2024 South Knapdale LMP Brief contains several principles that directly support AWL's position: PAWS should be reviewed, protected and restored; halo thinning is named as a restoration tool; native broadleaf establishment and deer management are identified as necessary; riparian habitats and water catchments must be protected; and habitat connectivity with temperate rainforest should be maximised. These are not aspirational — they are FLS's own stated objectives.

The scientific evidence base is unequivocal: gradual transition, selective felling and halo thinning are the ecologically appropriate restoration methods for PAWS sites where ancient woodland features survive. Clear-felling on PAWS is recognised across the peer-reviewed literature as incompatible with the retention of ancient woodland indicator communities, remnant native trees, rainforest bryophytes and lichens, mycorrhizal networks, and ancient woodland soils (Thompson et al., 2003; Woodland Trust, 2020; Forestry Commission, 2014). These losses are not temporary — they may be irrecoverable on human timescales (Noon et al., 2022).

Torinturk is not a generic PAWS case. It occupies steep slopes draining directly to West Loch Tarbert, adjacent to Tarbert Woods SAC, within reach of Atlantic rainforest fragments, with private water supplies, scheduled monuments, public catchments and — uniquely — active AWL marine restoration programmes at the base of the catchment. The Woodland Trust's Ocean Forest Links Scoping Review (Phillips, 2025), synthesising 276 peer-reviewed studies, documents the scientific mechanisms by which terrestrial forest management directly affects downstream marine habitat quality. AWL's serpulid reef (*Serpula vermicularis*) and native oyster (*Ostrea edulis*) restoration work in West Loch Tarbert, conducted in partnership with the Marine Conservation Society, is directly threatened by sediment pulses that clear-felling on these slopes would generate.

The central concern is the gap between FLS policy language and operational prescription. If clear-felling is used within PAWS and described as 'restoration', it contradicts the very objectives FLS has already set. AWL asks FLS's ecology team to ensure that the final LMP translates stated PAWS objectives into binding site-level prescriptions — and includes the Torinturk marine catchment dimension that the current draft does not address.

AWL position in one sentence: Action West Loch asks FLS to apply its own stated PAWS restoration objectives — halo thinning, gradual native woodland recovery, riparian protection and temperate rainforest connectivity — instead of clear-felling as a default restoration practice with PAWS, and to recognise that this means restoring a functioning ecosystem — soil, fungal network, riparian corridor and marine habitat together — not simply replacing one tree species with another, and to extend those objectives and protect the downstream marine environment of West Loch Tarbert, which is directly linked to the Torinturk catchment and is the site of active AWL and MCS restoration programmes.

2. Why Torinturk Is Ecologically Exceptional

A note on restoration philosophy

AWL wants to be explicit about this because it changes what “successful restoration” should mean in the new LMP. A felled PAWS site replanted with native broadleaves can look, on paper, like restoration achieved — the species mix changes, the canopy eventually closes, and the site is recorded as moved toward favourable condition. But if the operation has compacted and oxidised the soil, severed the mycorrhizal networks that connect veteran trees to regenerating seedlings, and released sediment and dissolved organic carbon into the burns, then the site has lost the underground and downstream infrastructure that actually constitutes a functioning ancient woodland ecosystem — infrastructure that took centuries to establish and which broadleaf planting alone does not restore. AWL is asking FLS to define restoration success at Torinturk in those ecosystem terms, not solely by canopy species composition.

Torinturk is not representative of a standard commercial PAWS site. The combination of characteristics present at this location makes it one of the most ecologically sensitive sites in South Knapdale — and one where the consequences of clear-felling would be unusually far-reaching:

- Significant areas of Ancient Woodland Sites (AWS) in the lower third of Torinturk, linking directly to Tarbert Woods SAC — one of the most important Atlantic rainforest SACs in Argyll (LMP Brief, November 2024; FLS 2026 consultation).
- Atlantic rainforest indicator species — including oceanic lichens (*Lobaria pulmonaria*, *Sticta* spp., Graphidaceae) and specialist bryophytes — that are among Europe's most sensitive organisms to disturbance and microclimate change (Ellis, 2016; Kirby & May, 1989). Once lost, these communities require decades to centuries to re-establish.
- Steep slopes draining directly into West Loch Tarbert via burn systems assessed as 'Good' quality by SEPA (LMP Brief) — water quality that is directly vulnerable to post-clear-fell sediment pulses lasting three to seven years (Nisbet, 2001).
- Private water supplies and public water catchments (Kilberry, Tarbert) within the LMP area, all dependent on the sediment-control function of continuous forest cover (LMP Brief).
- Two Scheduled Monuments (Cnoc Dubh na Leiteach; Dun a Choin Duibh) within Torinturk, requiring careful buffer management.
- Deep peat, peaty gleys and flushed blanket bog soils across the LMP area — soils on which clear-felling can convert ancient woodland from a net carbon sink to a net carbon source (Hargreaves et al., 2003), with documented soil organic carbon losses on comparable Scottish and upland soils of the order of 30–60% (Das Gupta & DeLuca, 2012; Zerva et al., 2005; Vanguelova et al., 2019; Mayer et al., 2024; see AWL Carbon Evidence Briefing, June 2026). The UK Government's 2025 National

Security Assessment on Global Biodiversity Loss formally identifies such soil carbon losses as a nationally significant risk.

- Active AWL marine restoration programmes in West Loch Tarbert — serpulid reef (*Serpula vermicularis*) restoration and native oyster (*Ostrea edulis*) restocking, in partnership with the Marine Conservation Society — directly downstream of the Torinturk catchment. No other PAWS site in South Knapdale has this downstream dimension. The Ocean Forest Links Scoping Review (Phillips, 2025) documents across 276 peer-reviewed studies the mechanisms by which upland forest management affects marine habitat quality through DOC flux, sediment dynamics, invertebrate food webs and coastal nutrient budgets.
- West Loch Tarbert falls within the Sound of Gigha Special Protection Area (SPA), designated in 2020. The SPA's protected features are four bird species: the Great northern diver (*Gavia immer*), the Slavonian grebe (*Podiceps auritus*), the Common eider (*Somateria mollissima mollissima*) and the Red-breasted merganser (*Mergus serrator*). As of 2024, the assessment condition for all four protected features was recorded as 'Favourable maintained'.
- AWL raises this because the catchment's legal protections are not limited to its terrestrial Ancient Woodland Sites and the adjacent Tarbert Woods SAC — the loch itself carries statutory protection for overwintering birds that depend on stable water quality and undisturbed shoreline habitat. Any LMP prescription, and any associated marine licensing process, should account for the SPA designation alongside the terrestrial designations already covered in the November 2024 Brief.

3. Parallel Analysis: FLS Objectives and AWL Requests

The table below places FLS's own stated LMP objectives alongside AWL's parallel requests and the specific prescription changes required in the final LMP. Each AWL request is grounded in the scientific literature and in FLS's own published guidance. **AWL is not asking FLS to depart from its own policy — it is asking FLS to honour it.**

FLS South Knapdale LMP Objective (November 2024 Brief & 2026 Consultation)	AWL Parallel Request / Ecological Rationale	Required Change to Final LMP Prescription
Review, protect and restore high and medium ecological-potential PAWS through removal of invasive species, halo thinning, deer management and native broadleaf establishment to aid temperate rainforest habitat restoration.	AWL supports PAWS restoration, but asks for it to be done by gradual ecological transition: halo thinning around remnant native trees, strip thinning, selective/group felling in small patches, deer control, natural regeneration and locally appropriate native broadleaf planting, anchored around retained sentinel/veteran trees as regeneration centres for the surrounding mycorrhizal network. AWL also asks that invasive species control — particularly <i>Rhododendron ponticum</i> , which suppresses native regeneration and carries <i>Phytophthora ramorum</i> biosecurity risk to surrounding rainforest trees — be carried out as its own low-impact operation, not folded into or used to justify wider canopy clearance.	State explicitly that PAWS restoration will prioritise halo thinning, strip thinning, and gradual transition, defining success in ecosystem terms (soil, mycorrhizae, water quality) rather than canopy species alone. Clear-felling should not be presented as the default PAWS restoration method. Specify <i>Rhododendron ponticum</i> control as a distinct, phased invasive-species operation, sequenced separately from any felling.

ACTION WEST LOCH Forest-to-Sea Restoration PAWS Advocacy		Formal Submission to FLS June 2026
FLS South Knapdale LMP Objective (November 2024 Brief & 2026 Consultation)	AWL Parallel Request / Ecological Rationale	Required Change to Final LMP Prescription
Protect, expand and enhance Ancient Woodland Sites and priority species/habitats.	AWL asks for restoration to protect surviving ancient woodland features: remnant native trees, rainforest bryophytes and lichens, woodland soils, deadwood, microclimate and mycorrhizal continuity. AWL's core concern is that clear-felling compacts and oxidises these soils, releasing stored soil carbon and severing the mycorrhizal networks that connect veteran and regenerating trees — damage that planting alone cannot reverse.	Commission pre-operational cryptogam and ecological surveys, then use the results to define exclusion zones, retention trees, halo-thinning areas and low-impact extraction routes.
Riparian habitat objective: remove invasive non-native species, manage deer, enable natural regeneration and native broadleaf development along watercourses.	AWL asks for permanent native riparian woodland corridors, with no machinery, no drainage work and no avoidable ground disturbance in buffer zones. Buffers should be widened on steep or sensitive slopes. AWL is concerned with both sedimentation and acidification of these watercourses, since disturbed peaty soils can release both fine sediment and acidic runoff simultaneously.	Map all burns feeding West Loch Tarbert and specify minimum riparian buffers, wider where slope/runoff risk is high. Restoration should start from the burn system outward.
Identify water sources and catchments; protect during harvesting and restock with appropriate plant species; carefully consider coupe design.	AWL asks FLS to treat the forest, burns and West Loch Tarbert as one connected catchment. Private water supplies, public catchments, fish habitat, oysters, seagrass and Serpulid restoration all depend on sediment and runoff control. West Loch Tarbert also falls within the Sound of Gigha SPA, designated for four overwintering bird species, adding a further statutory water-quality interest beyond the terrestrial designations.	Include baseline turbidity/water-quality monitoring before operations, clear sediment-control measures, and coupe design that avoids large synchronized soil disturbance.
Maximise opportunities to integrate FLS forest blocks with the adjacent landscape, promote habitat connectivity, forest-edge design, riparian corridors and temperate rainforest habitat; consider partnership with landowners and the wider community.	AWL's proposal is landscape-scale: link Torinturk PAWS with Tarbert Woods SAC, neighbouring rainforest fragments, riparian corridors, coastal woodland, marine restoration and adjacent landowners. This reflects the 'flowscape' concept — forests, rivers, estuary and sea as a single connected biogeochemical system — which underpins AWL's Ridge to Reef framework and is independently supported by the Woodland Trust's Ocean Forest Links evidence review (276 peer-reviewed studies).	Create a mapped rainforest/restoration corridor and include AWL, neighbouring landowners and marine restoration partners in operational planning, not only general consultation.
Restructure coupes to consider appropriate scale of land, landform and efficiency of site operations.	AWL asks that ecological scale and catchment sensitivity are considered alongside operational efficiency. Small-group selection, phased thinning and low-impact access are more appropriate than large PAWS clear-fells.	Use small phased interventions in PAWS and sensitive catchments, with multi-year gaps between operations to protect soils, microclimate and water quality.

ACTION WEST LOCH Forest-to-Sea Restoration PAWS Advocacy		Formal Submission to FLS June 2026
FLS South Knapdale LMP Objective (November 2024 Brief & 2026 Consultation)	AWL Parallel Request / Ecological Rationale	Required Change to Final LMP Prescription
Sustainable road construction: construct and upgrade roads only where necessary for the plan period.	AWL asks for low-impact access and extraction methods that avoid unnecessary new road building, soil compaction, rutting, drainage disruption and sediment release.	Define no-go areas for heavy machinery, avoid new access through sensitive PAWS/riparian zones, and assess track/road impacts as part of restoration design.
Maintain and enhance environmental services, biodiversity and peatland restoration; consider deep peat and carbon sequestration.	AWL asks FLS to treat ancient woodland soils, peaty gleys, blanket bog, soil carbon and long-term carbon storage as central to restoration. Clear-felling can convert a site from carbon store to carbon source through soil compaction and oxidation — a process that begins during the operation itself, not only afterward.	Add a soil and carbon-risk assessment for PAWS operations, and prefer gradual, low-impact ecological restoration where clear-felling would expose peat/soils or increase runoff.
(No specific marine downstream provision in current LMP objectives.)	AWL is conducting active, funded marine restoration directly downstream of Torinturk: a grant-funded serpulid reef restoration project with local schools, and OysterArk2, a native oyster restoration partnership with the Marine Conservation Society and Heriot-Watt University. Both depend on sediment and water-quality conditions that upstream clear-felling would directly threaten.	Include a dedicated marine downstream impact assessment in the LMP, with pre-operational turbidity baselines and operational timing constraints aligned to marine restoration windows.
Engage communities in decision-making and consider partnership with landowners and the wider community.	AWL is already named as a stakeholder in the South Knapdale LMP and has offered a detailed restoration proposal. AWL asks for meaningful involvement before operational decisions are fixed. AWL also notes that Torinturk would be a strong candidate site for FLS to treat as a 'lighthouse' pilot under the UK Government's 2026 Government Estate Nature Plan, generating evidence for gradual PAWS restoration that could inform FLS's wider estate.	Set up a formal working discussion with AWL and relevant partners before submitting the final plan, especially on PAWS prescriptions, water monitoring, marine timing constraints and restoration sequencing.

4. The Key Gap: Between Policy Language and Operational Prescription

The LMP Brief and 2026 consultation objectives both contain language aligned with AWL's proposal. They recognise PAWS, halo thinning, native broadleaf restoration, riparian corridors, water catchments, forest-edge design, habitat connectivity, temperate rainforest and partnership working. These commitments are not in dispute.

The concern is that the operational proposal presented to the community appears to continue using clear-felling within PAWS as the default restoration practice. That creates a direct contradiction with FLS's own stated objectives. Clear-felling may remove conifers — but it simultaneously removes:

- Canopy continuity and the high-humidity microclimate on which rainforest indicator species depend;

- Remnant native trees that are the ecological backbone of PAWS recovery;
- Ancient woodland soils and mycorrhizal networks that cannot be re-created within a commercial rotation;
- Organic matter horizons and soil carbon stocks that are irrecoverable on human timescales (Noon et al., 2022);
- Riparian and catchment stability, generating sediment pulses that travel downstream to West Loch Tarbert;
- The ecological setting on which AWL's active marine restoration programmes depend.

AWL sets out this causal sequence explicitly because it is the basis of AWL's objection: clear-felling on these slopes compacts and oxidises previously undisturbed ancient woodland soil, releasing stored soil carbon. It severs the mycorrhizal fungal networks that connect veteran and regenerating trees — networks that cannot be replanted, only regrown over decades. And the resulting bare, compacted ground sheds sediment and acidic runoff into the burns feeding West Loch Tarbert. Each step in that chain is a foreseeable, well-evidenced consequence of clear-felling on these soil types — not a worst-case scenario.

For a site with the characteristics of Torinturk — steep, peaty, adjacent to an SAC, draining to an active marine restoration area — the gap between stated PAWS restoration policy and clear-fell operational prescription is not a technicality. It is a substantive ecological failure that risks permanently undermining the objectives FLS has itself committed to.

5. Requested LMP Prescriptions for Torinturk

AWL asks that the final South Knapdale LMP includes the following site-specific prescriptions for Torinturk, each with the ecological justification and evidence basis shown:

#	Prescription	Required Operational Text	Evidence Basis
1	PAWS Restoration Method	PAWS restoration at Torinturk will prioritise gradual ecological transition: halo thinning, selective and group felling, deer control, natural regeneration and native broadleaf enrichment. Clear-felling will not be used as the default restoration method within PAWS areas, especially where remnant native trees, rainforest indicators, steep slopes, watercourses or sensitive soils are present.	Woodland Trust (2020); Forestry Commission (2014); Thompson et al. (2003); LMP Brief, Nov 2024
2	Strip Thinning	Strip thinning will be included as an additional intermediate restoration method between halo thinning and full clear-fell at Torinturk, removing conifer in narrow strips to limit the scale of any single disturbance event. This maintains continuous canopy and root cover across the majority of the site at any one time.	Forestry Commission (2014), CCF practice guidance
3	Sentinel and Veteran Tree Retention	Sentinel and veteran trees will be retained as the structural and biological anchor of restoration at Torinturk, since these trees carry the site's surviving mycorrhizal networks. Restoration prescriptions will explicitly use veteran trees as germination and regeneration centres for broadleaf recruitment, allowing seedlings to establish in direct mycorrhizal connection with mature trees rather than through isolated replanting.	Kirby & May (1989); Ellis (2016)

ACTION WEST LOCH Forest-to-Sea Restoration PAWS Advocacy		Formal Submission to FLS June 2026	
#	Prescription	Required Operational Text	Evidence Basis
4	Invasive Species Control (Rhododendron)	Invasive species control, particularly <i>Rhododendron ponticum</i> , will be carried out as a distinct, phased, low-impact operation at Torinturk, sequenced separately from any felling so that invasive clearance is not used to justify wider canopy removal. Control work will account for <i>Phytophthora ramorum</i> biosecurity risk to surrounding rainforest trees.	LMP Brief, Nov 2024 (invasive species objective)
5	Pre-operational Ecological Survey	All PAWS felling operations at Torinturk will be preceded by survey work covering: bryophyte and lichen assessment (with specific rainforest indicator recording), vascular plant ancient woodland indicators, veteran and legacy tree identification, and mycorrhizal network sensitivity assessment. Survey results must inform retention trees, exclusion zones, halo-thinning areas and extraction routes before operational approval.	Ellis (2016); Kirby & May (1989); AWL FLS Consultation Proposal, June 2026
6	Riparian Protection and Buffers	All burns draining toward West Loch Tarbert will have mapped riparian buffer zones with native woodland corridor restoration, permanent canopy cover targets and sediment-control safeguards as binding operational constraints. Buffers to be widened on steep or peaty slopes. No heavy machinery or drainage works within buffer zones.	SEPA WFD Guidance; Orr et al. (2008); LMP Brief (riparian habitat objective), Nov 2024
7	Baseline Water-Quality Monitoring	Baseline turbidity and water-quality monitoring will be established at West Loch Tarbert burn outfalls before any felling or ground-disturbing works in sensitive catchments. Monitoring data will be used to set operational thresholds and inform adaptive management during operations.	Nisbet (2001); Forest Research Technical Note; SEPA; AWL active marine restoration programmes
8	Marine Downstream Impact Assessment	A dedicated marine downstream impact assessment will be included in the LMP, acknowledging AWL's active serpulid reef and native oyster restoration programmes in West Loch Tarbert. Operational timing constraints will be imposed, aligned with marine restoration planting windows. AWL and MCS will be included as formal consultation partners on all PAWS prescriptions upstream of active marine sites.	Phillips (2025) — Ocean Forest Links Scoping Review, 276 peer-reviewed studies; MCS partnership agreement; AWL Forest-to-Sea Restoration Strategy (June 2026)
9	Soil and Carbon Risk Assessment	A soil and carbon-risk assessment will be completed for all PAWS operations at Torinturk before operational approval. Gradual, low-impact ecological restoration — rather than clear-felling — will be prescribed wherever felling would expose peat, peaty gleys or high soil organic carbon soils. Soil carbon outcomes to be recorded as a monitored LMP metric.	Noon et al. (2022); Hargreaves et al. (2003); UK National Security Assessment on Biodiversity Loss (2025); AWL Carbon Evidence Briefing (June 2026)
10	Formal AWL Partnership and Working Group	A formal working group will be established with AWL and relevant ecological, marine and community partners before submitting the final LMP to Scottish Forestry for approval. The working group will specifically review PAWS prescriptions, water monitoring design, marine timing constraints and restoration sequencing. AWL's role as a co-delivery partner will be formalised within the LMP.	LMP Brief (community partnership objective), Nov 2024; FLS Corporate Outcome 3

6. Precedent for Gradual Restoration, and an Opportunity for FLS

A working precedent: Loch Awe

AWL notes that gradual PAWS restoration has already been demonstrated to work in Argyll. At Dalavich Oakwood on Loch Awe, oak woodland heavily underplanted with Sitka spruce and silver fir in the 1950s has been progressively restored since the mid-1980s through staged removal of conifer rather than clear-fell, allowing surviving oaks and natural regeneration of rowan, birch, holly and hazel to recover the site to the point where the former plantation is, in many areas, no longer visually distinguishable from continuous ancient woodland. Keith Kirby, a leading authority on PAWS restoration whose foundational research (Kirby & May, 1989) underpins much of the current UK guidance on this subject, has been in direct contact with AWL and has expressed willingness to discuss AWL's proposals for Torinturk. AWL would welcome the opportunity to bring this expertise into a working dialogue with FLS on the Torinturk prescription.

FLS as a lighthouse project site

The UK Government's Government Estate Nature Plan, published 26 June 2026 during London Climate Action Week, sets out a coordinated approach to nature recovery and climate resilience across the government estate, including £4.1 million of seed funding earmarked specifically for 'lighthouse' projects on public land through to 2030 — funded pilot projects designed to demonstrate how nature recovery can be delivered on operational public land, with evidence from those pilots used to inform future, larger-scale work. Forestry England, as the country's largest land manager, is named in the plan as a contributor with an existing track record of nature recovery projects.

The Government Estate Nature Plan applies to the England government estate (with Forestry England named as a contributor) and does not extend directly to devolved Scotland; AWL cites it as a precedent and a direction of travel for UK public-land management that FLS could match in Scotland. As a PAWS site with adjoining SAC, SPA and active marine restoration interests, Torinturk would make a strong candidate for FLS to treat as an equivalent experimental, monitored pilot — explicitly testing gradual restoration methods (halo and strip thinning, veteran-tree-anchored regeneration, integrated soil and marine monitoring) and generating evidence that could inform PAWS prescriptions across FLS's wider estate. This would let FLS demonstrate national leadership consistent with the direction the UK Government itself has now set for public land management, rather than treating Torinturk as a routine commercial coupe.

7. AWL's Active Marine Restoration Programmes

AWL is already named as a stakeholder in the South Knapdale LMP and has offered a detailed restoration proposal. The group asked that AWL's active, evidence-generating marine work be set out here so FLS understands what sits directly downstream of the Torinturk slopes.

One documented case from the Ocean Forest Links evidence base is worth citing directly because it traces a complete, measured mechanism rather than a general association: across Northern Europe, increased catchment forest cover has darkened rivers and coastal waters through higher dissolved organic carbon export, which reduced light penetration, delayed the spring phytoplankton bloom, and produced a measurable shift in Atlantic cod (*Gadus morhua*) spawning timing (Opdal et al., 2024). This is the same forest-to-sea pathway AWL is raising for Torinturk — catchment forest management altering water chemistry, light climate and the timing of marine biological processes — demonstrated as a real, published outcome rather than a hypothesised risk.

Serpulid reef restoration

West Loch Tarbert has historically supported serpulid polychaete reef communities (*Serpula vermicularis*) — a globally rare and protected habitat. SeaSearch records document the historic presence of this reef system, and dead structural remnants have been recorded in recent surveys, confirming that the substrate and conditions capable of supporting reef formation exist; no living reef is currently confirmed. AWL has been awarded a grant specifically to run a serpulid reef restoration project in West Loch Tarbert, with local schools actively involved in the programme. Increased sediment loading from clear-felled hillside catchments poses a direct threat to this restoration: fine sediment settles on and smothers the hard substrate that serpulid larvae require for settlement, and such damage is difficult to reverse.

Native oyster restoration: OysterArk2

AWL is a delivery partner, alongside the Marine Conservation Society and Heriot-Watt University, in OysterArk2 — a project developing community-operated native oyster (*Ostrea edulis*) spatting ponds at West Loch Tarbert to support restoration and restocking of the loch's native oyster population. West Loch Tarbert was historically the primary native oyster production area in the district, with a fishery dating to the 18th century and a historic spatting pond at Rhu still standing today; SeaSearch surveys in 2023 and 2025 confirm the continued presence of native oysters at multiple sites around the loch, with localised high densities at Rhu — one of the two sites selected for the new community spatting ponds.

Project feasibility work has already identified water clarity as a live concern: residents involved in the project report a perceived decrease in water clarity over recent decades coinciding with increased forestry activity, including clear-felling, around the loch, with turbidity increases observed following heavy rainfall consistent with sediment flushing from the catchment. This is anecdotal observation rather than measured baseline data, which is precisely why AWL is requesting pre-operational turbidity monitoring as part of any Torinturk prescription — to establish the baseline this kind of observation cannot provide on its own.

West Loch Tarbert is also a Confirmed Designation Notice area for the oyster parasite *Bonamia ostreae*. AWL is an active research collaborator on non-invasive *Bonamia* surveillance: AWL personnel are named co-authors — Owen Paisley, who leads AWL's SeaSearch survey work, and Alain Karmitz of AWL — on the peer-reviewed faecal-analysis detection method developed with the Roslin Institute, University of Edinburgh, and Heriot-Watt University (Regan et al., 2025). This adds a further biosecurity dimension to catchment management: a population already under disease pressure has correspondingly less resilience to absorb additional sediment or water-quality stress from upstream forestry operations.

8. Conclusion

AWL's position is not an objection to restoration. It is a request for FLS to implement the restoration principles already contained in its own LMP guidance — and to extend those principles to protect the downstream marine environment that the current LMP does not address. The final LMP should translate the stated objectives — PAWS protection, halo thinning, riparian recovery, water protection, rainforest connectivity and community partnership — into binding operational prescriptions for Torinturk. In PAWS areas, restoration should mean ecological continuity and native woodland recovery, not clear-fell convenience reframed as ecological management.

Action West Loch formally requests a working meeting with FLS's ecology team and the South Knapdale LMP planning team before the final plan is submitted for Scottish Forestry approval. AWL is prepared to contribute ecological survey planning, marine monitoring design, and restoration sequencing proposals to that process.

AWL would welcome the opportunity to discuss Torinturk's potential as a lighthouse pilot site directly with FLS, and to bring Keith Kirby's Loch Awe experience, AWL's marine restoration partners, and the Roslin Institute's disease-surveillance work into that conversation before the final LMP prescription is fixed.

Contact: Action West Loch · West Loch Tarbert · Tarbert · Argyll · www.actionwestloch.co.uk

Administrator: Paul Hawes · paul@actionwestloch.org

References

All references cited in this submission are listed below. AWL's own research documents are included as primary sources, having been produced through synthesis of peer-reviewed literature by the AWL research team.

Reference	Full Citation
Austrian Forest Strategy 2020+	Federal Ministry of Agriculture, Forestry, Regions and Water Management, Austria (2021). Austrian Forest Strategy 2020+. Vienna: BMLRT. Establishes close-to-nature silviculture and CCF as the national forestry standard.
Ellis (2016)	Ellis, C.J. (2016). Oceanic and temperate rainforest climates and their epiphyte indicators in Britain. <i>Ecological Indicators</i> , 70, 125–133. Evidence base for lichen sensitivity to disturbance in Atlantic rainforest.
EU Forest Strategy 2030	European Commission (2021). New EU Forest Strategy for 2030. COM/2021/572. Brussels: EC. Establishes close-to-nature forestry as the EU policy direction for publicly owned forest.
Forestry Commission (2014)	Forestry Commission (2014). Keepers of Time: A Statement of Policy for England's Ancient and Native Woodland. FC Policy Paper. Sets out the scientific case against clear-fell as a restoration method in ancient woodland.
FLS LMP Brief (2024)	Forestry and Land Scotland (2024). South Knapdale Land Management Plan Brief. November 2024. Anata Martin. Tarbert: FLS. Sets draft LMP objectives for PAWS, riparian habitats, water catchments, community partnership and temperate rainforest.
FLS 2026 Consultation	Forestry and Land Scotland (2026). South Knapdale LMP Second Consultation. Poster suite. June 2026. Tarbert Village Hall. Identifies South Torinturk as high-priority PAWS; restates LMP objectives.
Government Estate Nature Plan (2026)	UK Government, Department for Environment, Food & Rural Affairs (2026). Government Estate Nature Plan. Press release, 26 June 2026: 'Smarter use of government land to support nature and climate'. Establishes the 'lighthouse project' framework and £4.1 million seed funding for public-estate nature recovery pilots through 2030.
Hargreaves et al. (2003)	Hargreaves, K.J., Milne, R. & Cannell, M.G.R. (2003). Carbon balance of afforested peatland in Scotland following rotational clear-felling. <i>Forestry</i> , 76(3), 299–317. Establishes clear-fell as a net carbon source event on peatland sites.
Kirby & May (1989)	Kirby, K.J. & May, J. (1989). Foundational research on the restoration of native woodland on ancient woodland sites, underpinning current UK PAWS guidance. [Full citation to be confirmed with the author; grey-literature consultation with NatureScot Library ongoing.] Keith Kirby is in direct contact with AWL regarding the Loch Awe precedent and the Torinturk proposals.
Millar (1961)	Millar, R.H. (1961). Scottish Oyster Investigations 1946–1958. Marine Research, Department of Agriculture and Fisheries for Scotland. Historic fishery and spatting pond records for West Loch Tarbert.
NatureScot (2022)	NatureScot (2022). Conservation and Management Advice, Sound of Gigha SPA. Confirms the SPA's four qualifying bird species and the 2024 'Favourable maintained' condition assessment.
Noon et al. (2022)	Noon, M.L., Goldstein, A., Spawn-Lee, S.A. et al. (2022). Mapping the irrecoverable carbon in Earth's ecosystems. <i>Nature Sustainability</i> , 5, 37–46. Establishes ancient woodland soils and associated carbon stocks as irrecoverable on human timescales.
Nisbet (2001)	Nisbet, T.R. (2001). The role of forest management in controlling diffuse pollution in UK forestry. <i>Forest Ecology and Management</i> , 143, 215–226. Reviews sediment and DOC dynamics following clear-fell on upland catchments.
Orr et al. (2008)	Orr, H.G., Large, A.R.G., Newson, M.D. & Walsh, C.L. (2008). A predictive typology for characterising hydromorphology of headwater streams. <i>River Research and Applications</i> , 24, 1154–1166. Underpins riparian buffer design rationale.
Opdal et al. (2024)	Opdal, A.F., Lindemann, C., Andersen, T., Hessen, D.O., Fiksen, Ø. & Aksnes, D.L. (2024). Land use change and coastal water darkening drive synchronous dynamics in phytoplankton and fish phenology on centennial timescales. <i>Global Change Biology</i> , 30(5), e17308. Demonstrates a measured forest cover → coastal darkening → spring bloom delay → Atlantic cod spawning shift pathway in Norwegian coastal waters.
OysterArk2 Feasibility Study (2026)	UK Government, Marine Conservation Society, Action West Loch & Heriot-Watt University (2026). OysterArk2 Feasibility Study. Site information, historic fishery records, SeaSearch survey data (2023, 2025) and project partnership details for native oyster restoration at West Loch Tarbert.

ACTION WEST LOCH Forest-to-Sea Restoration PAWS Advocacy		Formal Submission to FLS June 2026
Reference	Full Citation	
Phillips (2025)	Phillips, B. (2025). Ocean Forest Links: Scoping Review. Woodland Trust. Synthesises 276 peer-reviewed studies on terrestrial forest–marine ecosystem connectivity, including DOC flux, sediment dynamics, and invertebrate habitat linkages.	
Regan et al. (2025)	Regan, T., Vythalingam, L., Nascimento-Schulze, J., Paisley, O., Karmitz, A., Hanley, N.M., Sanderson, W.G. & Bean, T.P. (2025). Non-invasive detection method for Bonamia ostreae infected Ostrea edulis. Aquaculture, 599, 742153. Roslin Institute, University of Edinburgh; underpins AWL's non-invasive Bonamia surveillance work at West Loch Tarbert.	
Royal Society of Edinburgh (2024)	Royal Society of Edinburgh (2024). Report on Scotland's Biodiversity. RSE: Edinburgh. Identifies Atlantic rainforest as a priority Scottish ecosystem and supports landscape-scale restoration approaches.	
Thompson et al. (2003)	Thompson, R., Humphrey, J.W., Harmer, R. & Ferris, R. (2003). Restoration of Native Woodland on Ancient Woodland Sites. Forestry Commission Practice Guide. Edinburgh: Forestry Commission. Core guidance establishing selective and group felling as the evidence-based approach for PAWS restoration.	
UK National Security Assessment (2025)	UK Government (2025). National Security Assessment on Global Biodiversity Loss and Ecosystem Collapse. Cabinet Office / FCDO. London: HMSO. Formally classifies biodiversity loss and ecosystem collapse as national security risks. Relevant to clear-fell policy on PAWS sites.	
Williamson et al. (2023)	Williamson, J.L., Tye, A., Lapworth, D.J. et al. (2023). Landscape controls on riverine export of dissolved organic carbon from Great Britain. Biogeochemistry, 164, 163–184. UK-specific evidence that forest cover is among the strongest predictors of DOC export to coastal waters.	
Woodland Trust (2020)	Woodland Trust (2020). Ancient Woodland Restoration: Guidance for Practitioners. Grantham: Woodland Trust. Sets out the scientific case for gradual restoration approaches over clear-felling on ancient woodland sites.	
AWL (June 2026a)	Action West Loch (2026). Forest-to-Sea Restoration Strategy. 17-chapter strategy document. Tarbert: AWL. Integrates SeaSearch citizen science, riparian ecology, marine restoration and CCF advocacy into a Ridge-to-Reef framework.	
AWL (June 2026b)	Action West Loch (2026). AWL Carbon Evidence Briefing: Clear-fell, Soil Carbon and the Case for CCF. AWL_ClearfellCarbon_EvidenceBriefing_June2026.docx. Tarbert: AWL. Peer-reviewed evidence that clear-fell converts ancient woodland from carbon sink to carbon source.	
AWL (June 2026c)	Action West Loch (2026). FLS Forest-to-Sea Advocacy Briefing: Ocean Forest Links Scoping Review Integration. Tarbert: AWL. Synthesises Phillips (2025) for application to West Loch Tarbert catchment.	
AWL (June 2026d)	Action West Loch (2026). Forest-to-Sea Evidence Briefing: The No Trees No Seas Evidence Base. Tarbert: AWL. Sets out the 'flowscape' concept (forests, rivers, estuaries and ocean as one connected biogeochemical system) and its parallel to AWL's Ridge to Reef framework, drawing on the Woodland Trust Ocean Forest Links Report (Phillips, 2025), a synthesis of 276 peer-reviewed studies identified through a systematic scoping review screening over 37,000 records.	

Action West Loch · Formal Submission to FLS South Knapdale LMP · June 2026
Ref: AWL/FLS/LMP/PAWS/2026-06 · Addressed to Forestry and Land Scotland