Glen Earrach PSH

Summary Note
Response to NatureScot Advice on Urquhart Bay Wood SAC

March 2026

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
N Dadds MCIEEM Associate Director	T Meadows Associate Director J Hunter MCIEEM Principal Ecologist	Dr J Riley CEnv MCIEEM Technical Director	M Campbell Principal Project Manager

Issue History

Issue	Issue date	Details	Authorized	Name	Position
1	March 2026	First issue			

© 2026 AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited ("AECOM") for sole use of our Client (**Glen Earrach Energy Limited)** in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Table of Contents

1. Introduction

1.1 Scope

1.1.1 This document responds to NatureScot's February 2026 advice on Urquhart Bay Wood SAC (Application Ref: ECU00005121), which identified two matters requiring further evidenced responses:

1.1.2 First, a requirement for the Applicant to provide information relating to the changes in the magnitude and character of water level variation. The information would need to demonstrate that the Proposed Development will not adversely affect the integrity of Urquhart Bay Wood SAC through changes in abiotic factors, including the potential development of an unvegetated drawdown zone associated with higher-frequency, predominantly shorter-duration level variations and an elevated median summer water level, or development of wide-scale open vegetation; and

1.1.3 Second, information relating to the preparation and long-term assured delivery of a Deer Management Plan, given the context of herbivore pressure as a compounding factor alongside potential hydrological change.

1.1.4 This document addresses both matters. The first section considers the mechanisms which could lead to the development of an unvegetated drawdown zone, or wide-scale open vegetation. Five sub-questions consider these potential mechanisms, with full technical and evidential detail, including literature references, provided in the accompanying Technical Annex. The second point (Deer Management) is addressed separately, as a distinct management commitment in Section 4.

1.1.5 This document builds upon and should be read alongside the AECOM ecological summary note and accompanying hydrological data, *Further information on water levels and Urquhart Bay Wood SAC* (February 2026), (hereafter “the February 2026 Additional Information submission”), which provides the quantitative foundation for the assessment presented here. It includes LiDAR-derived height bands, updated NVC mapping, inundation event-duration and drying-interval analyses, and inundation statistics across the relevant elevation bands.

1.1.6 The assessed scenario throughout is operation of the seasonal variable weir in combination with all consented and proposed pumped storage schemes (the Proposed Development, Loch na Cathrach and Loch Kemp, as well as the existing Foyers PSH which forms part of the hydrological baseline), as defined in the February 2026 Additional Information submission.

1.2 The Central Integrity Question

1.2.1 NatureScot's advice identifies the following specific risk pathway: that the combination of an elevated median summer water level and higher-frequency cyclic water level movement could generate a persistent unvegetated drawdown zone at the woodland–loch interface or otherwise cause sustained root-zone waterlogging sufficient to drive woodland loss.

1.2.2 The assessment focuses on the elevation bands identified in NatureScot’s advice as most relevant to potential change, namely the 15.7–16.5 m AOD bands, which together represent approximately 16.2% of the SAC. Within this zone, the assessment considers the physico-chemical and abiotic shoreline processes identified by NatureScot, including hydrodynamic energy distribution, substrate behaviour and soil drainage characteristics, alongside the ecological and hydrogeotechnical mechanisms.

1.2.3 For the purposes of this assessment, persistent de-vegetation refers to sustained loss of continuous vegetative cover sufficient to expose substrate to direct and repeated wave attack across a contiguous elevation band at the woodland–loch margin, such that biogenic reinforcement is removed and erosional processes become self-maintaining. If this occurred, this would represent an impact on the integrity of the SAC.

1.2.4 The assessment is organised around five mechanistic sub-questions (SQ) covering: shoreline energy distribution; ecological tolerance; stage change rates; root reinforcement; and substrate drainage behaviour. The interaction of these topics has the potential to create a drawdown zone, and so they need to be considered together. Each is addressed in full in the accompanying Technical Annex (which details the relevant references) with the conclusions summarised in Section 2 below. In summary, the findings are as follows:

1.2.5 On geomorphological grounds, the proposed cyclic regime does not replicate the conditions associated with concentrated attack-line formation. The sheltered, shallow-gradient wooded margins demonstrate progressive stabilisation rather than erosional retreat under fluctuating regimes (SQ1).

1.2.6 A pathway for persistent de-vegetation has not been identified, but rather floristic changes to existing vegetation, particularly around the 15.9 m band and below (SQ2).

1.2.7 The modelled cyclic stage movement does not introduce a distinct or materially intensified geotechnical instability mechanism relative to baseline conditions at the SAC margin. The dominant erosive driver remains wind-wave exposure as governed by the existing wind climate, fetch and basin geometry. Stage movement modifies the vertical position at which wave interaction occurs but does not, of itself, create additional hydraulic forcing comparable to wind-wave action (SQ3).

1.2.8 The stabilising influence of the existing woodland vegetation remains an important moderating factor in the erosion pathway considered in SQ1. The presence of an established multi-species root system materially increases the resistance of the margin substrate to shallow shear and surface detachment relative to a bare drawdown zone. Accordingly, the root cohesion mechanism does not indicate a pathway by which the proposed operational regime would generate progressive destabilisation of the woodland–loch margin (SQ4).

1.2.9 The hydrogeotechnical characteristics of the loch margin constrain the likelihood that the proposed operational regime would generate the chronic, season-long root-zone saturation that NatureScot's advice identifies as a potential precursor to vegetation change (SQ5).

1.2.10 On this basis, and taking into account the additional assessment of alder condition and *P. alni* risk set out in the annex, the causal pathway from the proposed operational regime to materially elevated waterlogging damage or *P. alni* susceptibility at the Urquhart Bay margin has not been identified.

1.2.11 Considering all hydrological, ecological, and geotechnical evidence together, this assessment finds no credible pathway by which the proposed operational hydrological regime would lead to sustained wide-scale woodland loss, persistent de-vegetated drawdown-zone formation, or other adverse effects on the integrity of Urquhart Bay Wood SAC. Predicted vegetation changes are localised, involve species already present, and fall within the range of acceptable variation for the qualifying alluvial alderwood.

1.2.12 The competent authority will ultimately determine site integrity, but the evidence indicates that no adverse effect on the integrity of the SAC would result from the assessed scenario set out in 1.1.6 above.

2. Mechanistic Assessment of Hydrological Change and Woodland Response

2.1 Drawdown Zone Risk: Shoreline Energy and Wave Exposure (SQ1)

2.1.1 Where the water surface remains at (or repeatedly returns to) a single contour for extended periods, wave energy is focused on that elevation, known as the ‘attack-line’. Over time, a ‘notch’ will develop at that contour; wave energy focussed on the same point will eventually erode and undermine material forming the shore, and a step or platform develops. The degree to which this occurs depends on the amount of wave energy, the narrowness of the band over which it is concentrated, and the relative softness of the material being eroded.

2.1.2 Under the proposed cyclic operational regime, the water surface moves continuously through an elevation band rather than remaining at a fixed level. No single contour experiences the prolonged seasonal residence that characterises attack-line formation. Wave exposure is redistributed vertically across the active band rather than concentrated at one elevation. The total wind-wave energy entering Loch Ness is unaltered by the cumulative operational scenario; what changes is the temporal distribution of that energy across elevations.

2.1.3 The modestly higher median summer level associated with operation of the seasonal variable weir shifts the vertical position of the active band. It does not, of itself, recreate the prolonged seasonal residence of the water

surface at a fixed elevation that constitutes the mechanistic precondition for concentrated drawdown-zone formation. Hourly water-level time-series modelling demonstrates continuous sub-daily variability is present across all operational scenarios, with frequent reversals between generation and pumping phases rather than extended plateaux at any single contour. The modelling covers the full annual cycle; however, the potential for elevated median water levels arises specifically during the period when the seasonal variable weir is in operation (May to September). The concern regarding elevated median levels therefore relates to that operating season.

2.1.4 On geomorphological grounds, the proposed cyclic regime does not replicate the conditions associated with concentrated attack-line formation. This conclusion is supported by reservoir and freshwater lake studies in which formation of erosional margins is repeatedly associated with sustained long-term residence of the water surface. The sheltered, shallow-gradient wooded margins demonstrate progressive stabilisation rather than erosional retreat under fluctuating regimes.

2.2 Ecological Compatibility of the Cyclic Inundation Regime (SQ2)

2.2.1 W7 alluvial alderwood occupies riverine and loch-margin settings that are subject to natural water level fluctuation. The lowest-elevation parts of the Urquhart Bay Wood SAC below 16.1 m already represent a wetter expression of this community, with abundant reed canary-grass *Phalaris arundinacea*, occasional presence of bottle sedge *Carex rostrata* and water horsetail *Equisetum fluviatile,* and frequent pooled water in winter, and with some mature alders *Alnus glutinosa* observed in active bud development while rooted within loch water at a low level of 15.5 m AOD in February 2026.

2.2.2 The hydrological event-duration and drying analyses provided in the February 2026 Additional Information submission characterise the inundation regime at each elevation band. At 15.7 m, overall exceedance is high at 86.6%, however it is also high at baseline (70.7%) and existing species in this vicinity include those capable of growing in water (such as reed canary-grass and bottle sedge) as well as alder, thus vegetation loss by soil saturation alone is not indicated. There is a general absence of sustained static submergence comparable to a quasi-static summer level – at 15.9 m, 36.1% of the growing season is not inundated spread across over 80 drying events, rising to 59.7% across 65 drying events at 16.1 m. The predominant inundation durations are 24 hours or less, interspersed with drying intervals throughout the growing season. Median event duration under the full in-combination scenario is also shorter than at baseline across all elevation bands, owing to the more frequent directional reversals introduced by the cumulative pumped storage operational scenario.

Figure 1 - Alder at Urquhart Bay Wood growing in an inundated substrate

2.2.3 A further contextual point is that the baseline exceedance at the lowest elevation band is already high under existing conditions. At 15.7 m AOD, baseline modelling indicates exceedance of approximately 70.7% of the growing season, including the effects of the existing Foyers PSH. The incremental change between baseline and the full in-combination operational scenario is therefore proportionally smaller at the lowest elevations than might be inferred from a comparison of event counts alone. The regime introduces more frequent but shorter individual inundation events rather than more sustained ones, a distinction that is material to the ecological tolerance assessment that follows.

2.2.4 The ecological literature distinguishes between this type of regime (periodic shorter-duration inundation by oxygenated loch water with repeated recovery intervals, here spread across 36.1% and 59.7% of the growing season respectively at 15.9 and 16.1 m) and the prolonged, uninterrupted growing-season submergence under stagnant, anoxic conditions associated with adverse vegetation response. Established W7 canopy species including alder, crack willow *Salix fragilis* and grey willow *S. cinerea* are classified in the highest European flood-tolerance classes, possessing multiple concurrent physiological and morphological adaptations, and in the case of willows the ability to germinate whilst submerged.

2.2.5 As such, a pathway for persistent de-vegetation has not been identified, but rather floristic changes to existing vegetation. Around the 15.9 m zone and below there may be replacement of a proportion of alder by willow, which is already present in this area, and a likely shift to wetter vegetation with expansion of existing swamp species such as reed canary-grass (already abundant in this zone) and bottle sedge. There may be an expansion of existing open swamp in this vicinity, however 97.1% of the SAC lies above 15.9 m, thus wide-scale change of this sort is not predicted, given factors such as micro-topographical variation within each height band and the ability of willow to germinate whilst submerged. The inundation regime will also likely shift the W7 / W9 transition upwards, however both constitute the qualifying habitat. Such changes are not considered inconsistent with the highly dynamic alluvial woodland ecosystem.

2.3 Stage Change Rates and Geotechnical Stability (SQ3)

2.3.1 Rapid drawdown instability is the geotechnical failure mechanism most associated with sustained lowering of external water levels adjacent to banks and slopes. The mechanism arises where external water level recession occurs more rapidly than pore pressures within low-permeability bank materials can dissipate, temporarily reducing effective stress and shear strength due to loss of external hydrostatic support.

2.3.2 The proposed operational regime involves stage movement in the order of centimetres per hour with frequent alternation between pumping and generation phases. This limits the duration of sustained drawdown and therefore limits the persistence of any single-direction hydraulic gradient acting across the bank profile. The geotechnical literature defines rapid drawdown relative to the hydraulic conductivity of bank materials rather than by absolute rate of stage change; the drainage behaviour of the alluvial substrates at this margin is addressed in Section 2.5. In addition, LiDAR-derived contour mapping confirms that the Urquhart Bay margin is characterised by a shallow deltaic gradient of approximately 1:100 with low bank heights. At gradients of this order, gravity-driven rapid drawdown instability is not expected to be a credible mechanism; any potential susceptibility would be confined to isolated locally steeper sections rather than operating across the SAC frontage.

2.3.3 On this basis, cyclic stage movement does not introduce a distinct or materially intensified geotechnical instability mechanism relative to baseline conditions at the SAC margin. The dominant erosive driver remains wind-wave exposure as governed by the existing wind climate, fetch and basin geometry. Stage movement modifies the vertical position at which wave interaction occurs but does not, of itself, create additional hydraulic forcing comparable to wind-wave action.

2.4 Vegetation Reinforcement and Margin Stability (SQ4)

2.4.1 The loch margin within Urquhart Bay Wood SAC supports a mature W7 alluvial woodland community dominated by alder with frequent willow species and a dense graminoid and tall-herb ground layer. Together these species form a composite root–soil matrix that provides measurable mechanical reinforcement of the upper substrate profile. Riparian and lacustrine stability studies demonstrate that woody root systems increase apparent soil cohesion and resistance to shallow shear through tensile root reinforcement and root–soil interaction. It is

important to note in this regard that SQ2 above indicates vegetation change but not removal, and thus persistence of root systems.

Figure 2 - Alder tree roots and other vegetation forming a matrix at the shore at Urquhart Bay Wood

2.4.2 In this woodland context, reinforcement arises from overlapping rooting structures operating at different depths. Alder and willow contribute structural roots capable of transmitting tensile forces across potential shear planes, while graminoid and tall-herb species provide dense fine-root networks within the upper soil horizon that bind surface sediments and increase resistance to initial scour. The combined effect is a reinforced surface layer that increases resistance to erosion relative to unvegetated or sparsely vegetated substrates.

2.4.3 The persistence of this reinforcing matrix is contingent on continued vegetation presence. Loss of root cohesion requires prior vegetation mortality followed by progressive root decay over a period of years. As set out in Section 2.2 and examined in the annex, the characterised inundation regime does not establish the sustained ecological stress conditions associated with widespread mortality of flood-tolerant alder woodland. The root–soil matrix that currently stabilises the loch margin would therefore remain operative under the proposed regime.

2.4.4 On this basis, the stabilising influence of the existing woodland vegetation remains an important moderating factor in the erosion pathway considered in SQ1. The presence of an established multi-species root system materially increases the resistance of the margin substrate to shallow shear and surface detachment relative to a bare drawdown zone. Accordingly, the root cohesion mechanism does not indicate a pathway by which the proposed operational regime would generate progressive destabilisation of the woodland–loch margin.

2.5 Substrate Drainage and Root-Zone Saturation (SQ5)

2.5.1 NatureScot's advice in response to the February 2026 Additional Information submission identifies a specific concern that soils may drain more slowly than loch stage recedes, such that repeated shorter-duration inundation events could result in cumulatively elevated root-zone wetness, potentially approaching permanently higher water levels in the lower elevation bands.

2.5.2 The superficial deposits at the Urquhart Bay Wood SAC loch margin are consistently described across British Geological Survey mapping, Woodland Trust management plan records and SNH (now NatureScot) site

management statements as coarse alluvial sand and gravel of deltaic origin, in hydraulic communication with the loch. No evidence of a laterally extensive confining low-permeability horizon is identified in the available mapping, management records or observed substrate character at the active delta-front margin. The flat, sandy, low-lying delta front is subject to active gravel deposition and periodic reworking, with independent fluvial inputs from the Rivers Coiltie and Enrick maintaining soil moisture connectivity from the catchment.

2.5.3 In hydraulically connected coarse alluvial substrates of this character, shallow groundwater levels would be expected to respond to loch stage recession rather than remain persistently elevated between events. The drainage lag mechanism that could produce season-long cumulative root-zone saturation requires confinement within laterally extensive low-permeability deposits. Such confinement is not indicated by the available mapping, management records or observed substrate character at the active loch-facing margin.

2.5.4 The hydrogeotechnical characteristics of the loch margin therefore constrain the likelihood that the proposed operational regime would generate the chronic, season-long root-zone saturation that NatureScot's advice identifies as a potential precursor to vegetation change.

2.6 Alder Condition and Phytophthora Risk

2.6.1 NatureScot's advice in response to the February 2026 Additional Information submission also draws attention to alder's known intolerance of submersion during the growing season and of stagnant or anoxic conditions, and to the possibility that increased waterlogging could elevate susceptibility to *Phytophthora alni*, a plant pathogen contributing to dieback and tree death.

2.6.2 The published literature on alder decline in Europe identifies a specific and well-characterised harmful envelope: sustained warm, stagnant, anoxic, growing-season waterlogging generating persistent oxygen depletion at the rooting zone over periods of weeks or more. This is the condition under which both direct waterlogging damage and elevated *P. alni* susceptibility are documented. The conditions under which alder is harmed are described with sufficient precision to distinguish them clearly from the conditions associated with tolerance. The controlling variables are the temperature, oxygen status, stagnation, and the continuity and seasonality of saturation at root depth, rather than water-level variation as a general property.

2.6.3 The proposed regime at Loch Ness does not replicate the harmful envelope described above. Inundation events are predominantly shorter and separated by drying intervals. The inundating water is drawn from a large, deep, thermally buffered, well-mixed freshwater body rather than warm, stagnating enclosed floodwater. The substrate also drains between events rather than maintaining chronic elevated pore pressures. Median inundation durations are reduced relative to baseline across all elevation bands due to cyclic reversals.

2.6.4 The *P. alni* risk pathway requires inoculum presence in the catchment, exposure of susceptible tissue to infectious water carrying active zoospores, conditions suitable for zoospore production (specifically warm growing-season temperatures sustained over extended periods) and host stress sufficient to reduce resistance. An increase in the frequency of shorter-duration water contact with thermally buffered, oxygenated loch water does not satisfy these preconditions. The published literature identifies winter temperature as a primary control on *P. alni* persistence and inoculum accumulation, with the pathogen's documented growth optimum of approximately 23–25°C and its low oospore viability indicating reduced resilience under sustained cold conditions. This is noted as a contextual factor relevant to the Great Glen catchment but is not relied upon as a primary line of evidence. No records of *P. alni* in the Loch Ness or Great Glen catchment have been identified in the available literature, though absence of records does not confirm absence of the pathogen.

2.6.5 On mechanistic grounds, the causal pathway from the proposed operational regime to materially elevated waterlogging damage or *P. alni* susceptibility at the Urquhart Bay margin has not been identified.

3. Conservation Objectives and Integrity Threshold

3.1.1 NatureScot's advice sets out the applicable conservation objectives and how they relate to these issues. Changes between woodland community types, including development of wetter communities, fall within the range of acceptable within-feature change. The NatureScot advice also notes that some changes from woodland to swamp communities could also be acceptable, since swamp is part of the wider ecosystem (this would be consistent with

the highly dynamic character of the alluvial woodland at the SAC). Wider-scale loss of woodland to swamp would be considered an adverse effect on site integrity. NatureScot additionally confirm in their advice that a shift in the W7 to W9 transition (as was noted in AECOM (2026), whereby increased inundation would likely induce a shift to W7 within the lower W9 and W7-W9 areas), including in the 16.7 m and 16.9 m AOD bands and with potential S28 (i.e. swamp) elements, would represent acceptable change (this is because both wet W7 and dry W9 are included within the alluvial alderwood qualifying feature at this SAC).

3.1.2 The mechanistic assessment presented in this document and the accompanying annex does not identify a pathway by which the proposed operational regime would give rise to wide-scale woodland loss. Floristic changes towards wetter vegetation are likely at the lower elevations, particularly around the 15.9 m band and below and particularly in the north-eastern sector (which is the most extensive low-lying part of the SAC), such that the existing wetter woodland (containing some existing open S28 and local existing swamp species such as bottle sedge and water horsetail) would likely develop increased open swamp of the same baseline types, and willow may replace a proportion of alder in this area. However, the majority of the SAC (97.1%) lies above the 15.9 m band, thus such floristic changes, involving species already present in the alluvial woodland ecosystem, are not wide-scale, and not inconsistent with the highly dynamic nature of alluvial woodland at the SAC. The conditions required to drive sustained woodland dieback and wide-scale conversion to persistent open wetland are not indicated by the modelled hydrological regime.

3.1.3 Accordingly, the predicted response across all affected elevation bands falls within the range of acceptable within-feature variation rather than representing adverse loss of the qualifying Annex I habitat.

4. Herbivore Pressure - Grazing and Browsing Management

4.1.1 NatureScot's advice identifies herbivore browsing pressure as a compounding factor in the context of potential hydrological change, noting that if conditions become less suitable for alder, a less palatable species for deer, and willow regeneration is simultaneously suppressed by grazing, this could cause loss of woodland area. NatureScot have requested preparation and long-term assured delivery of a Deer Management Plan, with herbivore impact monitored annually using Woodland Herbivore Impact Assessment (WHIA) criteria and aimed at reducing impact to Low.

4.1.2 This commitment is accepted. It is noted under SQ2 that there may be replacement of a proportion of alder by willow around the 15.9 m level and below. Herbivore pressure is recognised as an existing management concern within the Urquhart Bay Wood SAC and a controllable factor. Development of a proportionate plan to manage browsing pressure would therefore be appropriate.

4.1.3 In light of the Urquhart Bay Wood SAC site characteristics, including high levels of public access in large parts of the site (which may constrain certain management choices) and ownership by at least two land owners other than the Woodland Trust, a Grazing and Browsing Management Plan broader in scope than a conventional purely culling-based deer management plan is suggested. The plan would focus on practical and proportionate measures to support woodland regeneration and reduce browsing pressure as necessary. These may include repair or improvement of existing stock fencing, targeted livestock exclusion where appropriate, monitoring of regeneration using exclosure plots to establish baseline browsing pressure, and the use of protective enclosures in priority regeneration areas. The choice and location of management measures would be evidence-led through annual monitoring using WHIA. Measures would be designed to be proportionate and compatible with the landscape and recreational use of large parts of the site and would be developed and implemented in liaison with NatureScot, land managers, and the local Deer Management Group.

4.1.4 A detailed Grazing and Browsing Management Plan can be implemented via a planning condition to allow for relevant stakeholders to be involved in the preparation of the documents. The wording of any planning condition should allow the detailed content of the plan to be developed following consent, informed by site monitoring and agreed management objectives.

5. Conclusion

5.1.1 The mechanistic, ecological and hydrogeotechnical assessment presented in this summary and the accompanying Technical Annex leads to the following conclusions, considered collectively:

5.1.2 The proposed cyclic operational regime does not introduce a new or materially intensified mechanism capable of generating a persistent unvegetated drawdown zone at the Urquhart Bay Wood SAC margin. The mechanism required for concentrated attack-line formation – sustained seasonal residence of the water surface at a fixed contour – is not replicated under a cyclic regime characterised by continuous sub-daily movement and frequent directional reversals.

5.1.3 The modelled inundation and recovery pattern is characterised by predominantly shorter-duration events with repeated drying intervals and is mechanistically distinct from the prolonged, uninterrupted anoxic growing-season saturation that the literature identifies as the precondition for both waterlogging damage and elevated *P. alni* susceptibility in alder.

5.1.4 The site-specific conditions at the loch margin (permeable alluvial substrates, a shallow deltaic gradient of approximately 1:100 confirmed by LiDAR survey, frequent operational reversals limiting sustained drawdown duration, and established root reinforcement) do not support the geotechnical preconditions for rapid-drawdown instability under the proposed stage change regime. The dominant erosive driver remains wind-wave exposure, which is unaltered by the proposed scheme.

5.1.5 The existing loch-margin woodland provides measurable stabilisation of the margin substrate through a multi-species root–soil matrix formed by alder, willow and the graminoid ground layer. Loss of this reinforcement would require prior widespread vegetation mortality followed by progressive root decay over a period of years. As the ecological assessment does not identify a mechanism capable of generating sustained mortality of the flood-tolerant W7 woodland community under the characterised inundation regime, the stabilising root cohesion currently present at the woodland–loch margin would be expected to persist. The root reinforcement mechanism therefore does not provide a pathway to progressive erosion or destabilisation of the loch margin.

5.1.6 The mapped deltaic sand and gravel substrate at the active loch margin supports hydraulic drainage connectivity with the loch, constraining the likelihood of persistent season-long root-zone saturation through drainage lag.

5.1.7 Floristic changes towards wetter vegetation are likely at the lower elevations, particularly around the 15.9 m band and below, such that existing wetter woodland would likely develop increased open swamp of the same baseline types. However, the majority of the SAC (97.1%) lies above the 15.9 m band, thus such floristic change, involving species already present in the alluvial woodland ecosystem, would not be wide-scale, involves habitat that is part of the existing ecosystem, and is not inconsistent with the highly dynamic nature of alluvial woodland at the SAC. The conditions required to drive sustained woodland dieback and wide-scale conversion to persistent open wetland are not indicated by the modelled hydrological regime.

5.1.8 The herbivore pressure identified by NatureScot is acknowledged as an important factor in the current condition of the qualifying alluvial woodland, given existing presence of deer-palatable willow in the alluvial woodland and potential replacement of a proportion of alder by willow in the lowest-lying parts of the woodland. A Grazing and Browsing Management Plan will be developed in liaison with NatureScot, the Woodland Trust and other land managers, and the local Deer Management Group. The plan will be proportionate to the site context and deliverable within the constraints of public access and multi-ownership, and management measures will be evidence-led through annual herbivore impact assessment.

5.1.9 This assessment evidences that the proposed operational hydrological regime would not result in an adverse effect on the integrity of Urquhart Bay Wood SAC. The determination of Urquhart Bay Wood SAC site integrity remains a matter for the competent authority, informed by the complete evidence presented in this summary and the accompanying Technical Annex.