

Management of the Gwent Levels SSSI's through hedgerow Removal and Ditch Management.

1. Introduction and Context

The Gwent Levels comprise a nationally important lowland landscape characterised by an extensive and interconnected network of reens and field ditches. This network underpins a suite of Sites of Special Scientific Interest (SSSIs) and represents a defining component of the historic and ecological character of the Levels. Approximately 1,200 km of field ditches occur across the SSSIs and require ongoing, active management.

These watercourses are of intrinsic historic value and support a range of aquatic plant and invertebrate communities that form part of the SSSI features of interest. The Gwent Levels landscape has relied on the effective management of this drainage system over many centuries. Where management lapses, the ecological condition and functional integrity of the ditch network decline.

This document sets out the ecological, landscape and policy considerations relevant to hedgerow removal and ditch restoration works on the Gwent Levels under NRW Land Management Agreements.

2. Policy and Legislative Framework

Wildlife and Countryside Act 1981 (as amended)

SSSIs are afforded statutory protection under the Wildlife and Countryside Act 1981 to safeguard nationally important habitats, species and geological features. Section 28 of the Act provides the principal mechanism for the protection and appropriate management of these sites and is a cornerstone of the wider habitat network and landscape scale approach to conservation.

Section 28G places a duty on Competent Authorities to take reasonable steps, consistent with the proper exercise of their functions, to further the conservation and enhancement of the features for which a SSSI is designated. (UK Government, 2025)

Planning Policy Wales (PPW 12)

In Wales, the statutory protection of SSSIs is reflected in national planning policy through Planning Policy Wales. Paragraph 6.4.25 of PPW12 states that development within a SSSI that is not necessary for the management of the site must be avoided.

Although Planning Policy Wales requires a stepwise approach to hedgerow removal where this forms part of a development proposal, the proposed works do not constitute development. Instead, they represent necessary conservation management for the protection and enhancement of SSSI features, consistent with paragraph 6.4.25. (Welsh Government, 2024)

Future Wales – The National Plan (Policy 9)

Policy 9 identifies the Gwent Levels as a National Natural Resource Area (NNRA) and emphasises the importance of safeguarding and enhancing ecological networks. The policy seeks to secure large-scale, resilient and functional ecological networks through the identification and management of land that is important for connectivity and expansion.

Appropriate hedgerow and ditch management is considered essential to maintaining the role of the Gwent Levels SSSI as a core component of these ecological networks. (Welsh Government, 2021)

Technical Advice Note 5 (TAN 5)

TAN 5 highlights the statutory duty of public bodies to further the conservation and enhancement of SSSIs, including through the implementation of appropriate management practices (paragraph 5.4.2). (Welsh Government, 2009)

Environment (Wales) Act 2016

Section 6 of the Environment (Wales) Act 2016 places a duty on public authorities to seek to maintain and enhance biodiversity and, in doing so, promote the resilience of ecosystems. (National Assembly for Wales, 2016)

Hedgerow regulations 1997

The **Hedgerows Regulations 1997** provide legal protection for certain countryside hedgerows in **England and Wales** by controlling their removal. (UK Government, 1997)

3. Purpose of the Works

The primary purpose of hedgerow and ditch management works is to improve the condition of SSSI habitats by restoring the function of the field ditch network and improving habitat quality for aquatic flora and fauna.

Hedgerow removal is typically proposed on one bank only, and where practicable on the southern bank. This increases sunlight penetration to the ditch channel. Ditch and hedgerow/scrub management is considered necessary to reduce overshadowing, restore appropriate light conditions, and enable ongoing ditch maintenance. These measures are required to support the recovery and long term favourable condition of SSSI features.

Experience across the Gwent Levels indicates that following clearance, aquatic vegetation typically recolonises restored ditches within one to two growing seasons, provided suitable hydrological and light conditions are reinstated.

4. Ecological and Environmental Considerations

4.1 SSSI Habitat Management

Declining ditch condition represents a significant management issue across the Gwent Levels. NRW monitoring data (CCW/NRW 2010–2013) indicate that at least 63% of field ditches are heavily shaded. Reduced light penetration within aquatic environments adversely affects biodiversity, ecosystem functioning and flood storage capacity.

Persistent low light conditions limit photosynthesis in rooted aquatic plants (macrophytes), reducing oxygen production and favouring algal dominance. Aquatic invertebrates may also be affected, as many species rely on visual cues for foraging. In addition, reduced sunlight slows the breakdown of terrestrial organic material, adversely affecting nutrient cycling processes.

Management interventions required to address these issues include: selective removal of hedgerow or scrub on the most southerly facing bank, where appropriate; bankside vegetation management to control shading from bramble, saplings, nettles, reeds and tall grasses; removal of weed from ditches; and desilting and casting where infilling with silt or organic material has occurred.

These measures will restore a well-connected, open ditch network capable of supporting the aquatic flora and fauna features of the SSSI, whilst also contributing to flood risk management. The approach is consistent with the Green Infrastructure Strategy produced by the Living Levels Partnership (The Living Levels Landscape Partnership, 2017).

Ditching and hedgerow works are not anticipated to result in significant habitat loss or disturbance. Annual removal of hedgerow is not expected to constitute a significant impact on the 1200km of ditches across the Gwent Levels, the average length of hedgerow management represents around 0.04% of the overall field ditch network across the Gwent Levels. Retention and management of the northern hedgerow will ensure the continued presence of linear habitat features for species movement, nesting and foraging, including for dormice.

The works are also expected to deliver wider benefits, including improvements to water quality, soil condition, biodiversity value and overall SSSI condition, and to enhance ecosystem resilience to climate change.

Mitigation planting for hedgerow loss is not considered necessary, as the retention and enhancement of the opposing hedgerow is proportionate to the limited scale of impact on green infrastructure and aligns with improvements to blue infrastructure function.

4.2 Dormouse Presence and Habitat Value

Dormouse presence on the Gwent Levels is confirmed by records held by SEWBrEC, although populations are understood to occur at low densities. Hedgerows within the Levels are generally atypical of optimal dormouse habitat. They are predominantly young (<15 years) and species-poor, providing low-quality linear habitat.

Key food sources such as fruiting hazel are typically absent, with hedgerows often dominated by blackthorn, hawthorn and willow. While these characteristics do not preclude dormouse presence, they limit overall habitat suitability. Consequently, many hedgerows on the Gwent Levels are considered to be of low or negligible value for dormice.

4.2.1 Risks, Mitigation and Safeguards

Potential impacts include short term habitat loss, disturbance, and reduced connectivity. These impacts are limited through the removal of hedgerow on one side of the ditch only, with the opposing hedgerow retained and enhanced.

Above-ground vegetation clearance will be undertaken during the winter period, with directional clearance used to encourage animals to move into adjacent retained habitat. Retained hedgerows will be brought into active management.

Appropriate hedgerow management can provide benefits for dormice by increasing the abundance of flowers and fruits and improving structural diversity. Retained hedges will therefore be managed on a rotational cutting regime, allowing them to become wider and more structurally diverse. Where appropriate, gapping up with native species characteristic of the Gwent Levels may be undertaken.

Hedgerows also support a range of invertebrates, including spiders, moths and butterflies, many of which favour south facing aspects. Rotational management will ensure continuity of suitable habitat within the local area.

Pre work inspections will be undertaken, and all works will cease should protected species be identified. Key safeguards include:

- retention of the hedgerow on the opposite bank, usually the northern hedgerow to maintain habitat connectivity;
- rotational and non-consecutive hedgerow management;
- enhanced management of retained hedgerows to improve structure and resource availability.

With these measures in place, the proposed works are not considered likely to have a detrimental effect on dormouse populations or their range.

4.3 Landscape and Historic Environment Considerations

The Gwent Levels SSSI complex forms part of the Gwent Levels Landscape of Outstanding Historic Interest and lies within areas designated as open countryside and Special Landscape Areas by local authorities. Works within this landscape must conserve and enhance historic character and demonstrate appropriate understanding of landscape setting.

The reens and field ditches are a manmade, hand dug system created to reclaim land from the sea and have remained largely unchanged since their construction. Maintenance of this system is therefore fundamental to conserving the historic landscape character.

Field ditches have historically been managed as “wet fencing,” using waterfilled features to contain livestock while providing stock water. This function remains integral to the grazing marsh landscape.

Selective hedgerow removal is a necessary component of maintaining this open landscape character. The relative absence of woodland and dense hedgerows is a defining feature of the Gwent Levels. Removal of hedgerow on one side of the ditch, typically the southern bank, is not considered to result in a significant adverse effect on landscape character or visual amenity, as the opposing hedgerow is retained.

4.3.1 Important Hedgerows under The Hedgerow Regulations

The Hedgerows Regulations 1997 provides statutory protection for certain countryside hedgerows in England and Wales. Hedgerows meeting the definition of an *important hedgerow*, as set out in Schedule 1 of the Regulations, require prior consent from the local planning authority before removal.

The Regulations apply to hedgerows greater than 20 metres in length, or those connected to other hedgerows, located on or adjacent to agricultural land. Hedgerows may be classed as important due to their historic or archaeological significance, ecological value, or contribution to landscape character. This includes hedgerows associated with pre-1830 boundaries, those supporting high biodiversity or protected species, and those contributing to distinctive or historic landscapes.

Hedgerows will be assessed in accordance with this legislation at the point of issuing a land management agreement. However the hedgerows, unlike the ditches, on the Gwent levels do not constitute a part of the historic landscape so any hedgerow to be removed will not qualify for historical or landscape importance. They will still be assessed for ecological value.

5. Methodologies

5.1 Hedgerow Removal and Vegetation Clearance

Hedgerow removal will only be undertaken between 15 September and 28 February. This avoids the bird nesting season and allows late-season foraging to take place. No clearance will occur between 1 March and 15 September. Winter works coincide with the period when hazel dormice are hibernating at ground level; during this period, works will be limited to the removal of above-ground vegetation only.

Where the removal of stumps or roots is required, this will be undertaken in spring, once dormice have emerged from hibernation and outside key hibernation periods for other protected species, including reptiles and amphibians. Ground disturbance will be minimised and restricted to what is necessary to achieve the required ditch profile.

Each ditch and its associated hedgerow will be assessed through the Land Management process prior to works commencing. Assessments will consider species composition, structure, habitat connectivity and condition, dormice and other protected species.

If hazel dormice or evidence of their presence are identified, all works will cease immediately. Specialist ecological advice will be sought, and works will not recommence until appropriate mitigation and, where required, licensing arrangements are in place. A precautionary approach will also apply where other protected species are identified.

Hedgerow removal will be undertaken progressively. All works will be carried out in accordance with the approved method statement and overseen through the Land Management process.

5.2 Avoidance of Cumulative Impacts

To maintain habitat connectivity and structural diversity, the concurrent casting of adjacent or hydrologically connected ditches will be avoided where reasonably practicable.

5.3 Predicted Impacts and Scale of Loss

The removal of hedgerow along one side of a ditch represents a small proportion of the overall ditch network across the Gwent Levels. Given the limited scale of works and the retention and enhancement of the opposing hedgerow, mitigation planting is not considered necessary. Habitat fragmentation is not anticipated for dormice or other species.

6. Conclusion

Subject to adherence to agreed methodologies, seasonal restrictions and the retention and enhancement of remaining hedgerows, the hedgerow removal and ditch restoration works are considered to be:

- necessary to support the recovery and favourable condition of SSSI features;
- consistent with the historic character of the Gwent Levels landscape;
- unlikely to result in a detrimental effect on dormouse populations or other protected species;
- supportive of long-term biodiversity, ecosystem resilience, water quality, and flood management objectives; and
- in line with all governmental guidance and legislation.

References

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