

Welsh Government

Celtic Lakes NGED Substation

Section 73 Ecological Assessment

Reference: 293651-ARP-XX-XX-RP-YE-0006

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Job number 293561

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1. Introduction

Ove Arup and Partners Ltd ('Arup') has been commissioned by Welsh Government (WG) to provide an ecological assessment in support of a Section 73 application to vary conditions, design and timescales relating to a planning permission for Celtic Lakes substation (planning reference: 23/0878) to Newport City Council (NCC) (the Local Planning Authority (LPA)). Planning permission was received for this development on 7 February 2024. In addition, Planning Policy Wales (PPW) Edition 12, published in February 2024 (and therefore since the submission of the previous planning application (23/0878), requires a Green Infrastructure Statement (GIS) to be submitted with all planning applications and is therefore also provided as part of this ecological assessment.

1.1 Purpose and objectives of this document

The report aims to summarise and assess the latest design of the substation, including the changes to the offsite Grassland Compensation Area (GCA) located within the Gwent Levels - St Brides Site of Special Scientific Interest (SSSI), compared to those outlined within the 2024 planning permission (planning reference: 23/0878).

1.2 Background

Relevant ecological documents included with the 2024 planning permission are as follows:

- Ecological Impact Assessment (EcIA), 293651-ARUP-XX-XX-RP-YE-0001 (December 2023)
- Dormouse Conservation Strategy, 293651-ARUP-XX-XX-RP-YE-0004 (December 2023)
- Landscape Ecology Management Plan (LEMP) and SSSI Grassland Management Strategy, 293651-ARUP-XX-XX-RP-YE-0002 (December 2023)
- Two-staged Vegetation Clearance, 293651-ARUP-XX-XX-RP-YE-0005 (December 2023)
- Information to Inform a Habitats Regulations Assessment 293651-ARUP-XX-XX-RP-YE-0003 (December 2023)

Relevant documents submitted to discharge the conditions are as follows:

- 30-Year Habitat Management and Monitoring Plan, CLS-ARUP-EAC-XX-RP-OE-000003 (July 2024)

Relevant European Protected Species licences at the site are as follows:

- Dormouse Licence number S093767-2 for the Substation site, 293651-XX-XX-RP-0006 (latest amendment / issued licence January 2025)
- Dormouse Licence number S095506/1 for the GCA, 293651-XX-XX-RP-YE-0096 (issued licence June 2025)

Relevant drawings are as follows:

- Figure 3 Grassland Compensation Area Vegetation Clearance (293651-LD-XX-DR-0403)
- Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001)
- Figure 5. Existing Conditions and Vegetation Lost and Retained (293651-LD-XX-DR-0002)

NCC advised that a Section 73 application be made to summarise any changes made or proposed to the above listed planning documentation. Any changes are summarised below in Section 2. Sections 3 to 7 then provide further details of any changes within specific documents, highlighting any differences to the associated impact assessment or mitigation required.

2. Summary of changes

Table 1 below summarises the changes considered in this Section 73 application. Each change has been assigned a reference number and change type. The table states the amendment that was required along with the reason and any documents or drawings which have changed as a result. The impact assessment column provides further explanation on whether there is any change to the ecological impact assessment as set out in the EcIA¹ and agreed through planning consent², and refers to more detailed explanations in the proceeding sections where necessary.

¹ Celtic Lakes NGED Substation Ecological Impact Assessment (EcIA) 293651-ARP-XX-XX-RP-YE-0001 (Arup, 12 December 2023)

² Planning reference: 23/0878

Table 1: Summary of changes

Ref.	Change type	Amendment required	Reason	Document or Drawing reference	Impact Assessment
1	Compound level	Compound and cable corridor level reduced by 400mm.	Available Earthworks quantities were less than anticipated during the design stage and planning.	Drawings: Proposed Finished Levels CG1011	The reduction in site levels does not change the embedded biodiversity design, impacts to species and/or mitigation measures. There is no impact to ecology or changes required to ecology or landscape drawings or documents and therefore this change is not assessed further within this document. Conclusion: <i>No additional impact or change to ecology from existing assessment¹.</i>
2	Compound level	Inclusion of bund to the west of the plateau	Reuse of topsoil and subsoil unsuitable for earthworks on site.	Drawings: Proposed Finished Levels CG1011	The inclusion of a bund at this location does not change any of the embedded biodiversity design or negatively affect any species and/or mitigation measures. The sloped surfaces created on all aspects would likely be of minor additional benefit to biodiversity through providing additional microclimates. No changes are required to ecology or landscape drawings or documents. Any positive impact is considered minor and therefore this change is not assessed further within this document. Conclusion: <i>No additional impact or change to ecology from existing assessment¹.</i>
3	Earthworks footprint	Minor amendments to the eastern edge of the compound earthworks	To avoid additional vegetation removal	Drawings: Proposed Finished Levels CG1011	The change in earthworks footprint to avoid additional vegetation removal did not change any of the embedded biodiversity design or negatively affect any species or mitigation measures. No changes were required to ecology or landscape drawings or documents and therefore this change is not assessed further within this document. Conclusion: <i>No additional impact or change to ecology from existing assessment¹.</i>
4	Landscape - hedge amendment	Sections of hedges amended for site constraints and short section across cable duct corridor to be planted at a	To avoid newly planted hedgerow being removed when cables are installed at a later date.	Documents: Ecological Impact Assessment (EcIA), 293651-ARUP-XX-XX-RP-YE-0001	Programming of works was originally assessed within the EcIA¹ (key stages of the project/programme) and this represents a minor change to the programme of planting. Refer to Section 3.2 for details of impact assessment.

Ref.	Change type	Amendment required	Reason	Document or Drawing reference	Impact Assessment
		later date once cables installed.		Drawings: Updated Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6) to final as built hedgerow arrangement.	Conclusion: Minor reduction in hedge length and area, no additional impact or change to ecology from existing assessment ¹ .
5	Landscape - seeding	Amended seeding and aquatic planting layout around reconfigured pond	Pond shape amended - planting to match original design intent	Documents: - Ecological Impact Assessment (EcIA), 293651-ARUP-XX-XX-RP-YE-0001 Drawings: - Updated Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6) to final as built arrangement.	Areas of planting were originally assessed within the EcIA ¹ (embedded biodiversity design). Refer to Section 3.3 for details of impact assessment. Conclusion: Minor negative impact compared to original assessment ¹ due to less extent of pond and marginal habitat and seeding being provided overall; however, still achieves required habitat replacement ratios.
6	Fencing update	Timber post and rail fence added around the extended basin	For safety, to prevent unauthorised access to the pond.	NA	Originally no fence was proposed, however a fence has been installed around the perimeter of the pond. It provides additional habitat protection and does not restrict the movement of any species. There is no impact or change to ecology compared with the assessment made within the EcIA and therefore this change is not assessed further within this document. Conclusion: No additional impact or change to ecology from existing assessment ¹ .
7	Pond	Adjustment in pond shape	Footprint reduced to minimise extent of vegetation removal following survey of the pond and inlet/outlet drainage invert levels.	Documents: - Ecological Impact Assessment (EcIA), 293651-ARUP-XX-XX-RP-YE-0001 Drawings: - Updated Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6) - Proposed Drainage Layout CG1040	Areas of planting were originally assessed within the EcIA ¹ (embedded biodiversity design). Refer to Section 3.3 for details of impact assessment. Conclusion: Minor reduction in pond and marginal vegetation extent habitat replacement ratio from existing assessment ¹ .

Ref.	Change type	Amendment required	Reason	Document or Drawing reference	Impact Assessment
8	Pond	Minor changes to details around pond inlet/outlet including minor change to vegetation retained/removed to allow for permanent maintenance, and minor changes to the location of adjacent planting.	To improve safety and facilitate maintenance access to the penstocks. Minor vegetation removal was required as well as moving of some year 1 planting to an adjacent area so that it wasn't obstructing access.	Documents: - Dormouse Licence number S093767-2 for the Substation site, 293651-XX-XX-RP-0006 (latest amendment / issued licence January 2025) - Ecological Impact Assessment (EcIA), 293651-ARUP-XX-XX-RP-YE-0001 Drawings: - Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6) - Figure 5. Existing Conditions and Vegetation Lost and Retained (293651-LD-XX-DR-0002 v3) - Proposed Drainage Layout CG1040	Areas of planting were originally assessed within the EcIA¹ (embedded biodiversity design), and then any changes in vegetation retained/removed was agreed through an amendment to Dormouse Licence number S093767-2, issued licence January 2025. Refer to Section 3.3 for details of impact assessment. Conclusion: No additional impact or change to ecology from existing assessment¹.
9	Drainage	Omission of 700mm drainage	Following reduction in pond footprint, existing 700mm diameter drainage could be retained. Diversion therefore omitted as unnecessary.	Documents: - Ecological Impact Assessment (EcIA), 293651-ARUP-XX-XX-RP-YE-0001 Drawings: - Proposed Drainage Layout CG1040	Areas of planting were originally assessed within the EcIA¹ (embedded biodiversity design). Refer to Section 3.3 for details of impact assessment. Conclusion: No additional impact or change to ecology from existing assessment¹.
10	Drainage	Amendments to drainage routes	Minor drainage route amendments to minimise removal of existing vegetation and suit construction methodology.	Documents: - Ecological Impact Assessment (EcIA), 293651-ARUP-XX-XX-RP-YE-0001 Drawings: - Proposed Drainage Layout CG1040	Areas of planting were originally assessed within the EcIA¹ (embedded biodiversity design). Refer to Section 3.3 for details of impact assessment. Conclusion: No additional impact or change to ecology from existing assessment¹.

Ref.	Change type	Amendment required	Reason	Document or Drawing reference	Impact Assessment
11	Drainage	Adjustment in 450mm drainage routing	Minor drainage route amendments to minimise removal of existing vegetation and suit construction methodology.	Documents: - Ecological Impact Assessment (EcIA), 293651-ARUP-XX-XX-RP-YE-0001 Drawings: - Proposed Drainage Layout CG1040	Areas of planting were originally assessed within the EcIA¹ (embedded biodiversity design). Refer to Section 3.3 for details of impact assessment. Conclusion: No additional impact or change to ecology from existing assessment¹.
12	Ecology	Changes to the programme of offsite SSSI GCA vegetation removal, seeding of grassland areas, and location of areas to be cleared and restored.	Delay to proposed scrub clearance, mowing and seeding works in Grassland SSSI area, and changes to the location of areas to be restored due to: - Lack of maintenance within SSSI grassland area resulting in significant scrub development compared with baseline survey. This required additional baseline data collection and revision of the location and areas of vegetation to be removed. - The decision to have two dormouse licences covering different areas of the site through consultation with NRW. One for the main site and one for the SSSI grassland area. This was to facilitate the starting of works within the main site (Licence S093767-2 agreed) and allow for further time for discussions between NRW, Welsh Government and NCC to agree on habitat loss/gain ratios within the SSSI grassland area; this is a balance between restoration of SSSI grassland habitat as compensation for loss of grassland by the development, whilst minimising the removal of dormouse habitat in the GCA (licence S095506/1 agreed). As a result, the proposed SSSI GCA works (scrub clearance, mowing and grassland seeding) have not yet been started, as they require a dormouse licence in order to clear scrub for access to the site (licence granted on 23 June 2025). It was stated within the planning	- Documents: Ecological Impact Assessment (EcIA), 293651-ARUP-XX-XX-RP-YE-0001 - Dormouse Conservation Strategy, 293651-ARUP-XX-XX-RP-YE-0004 - Landscape Ecology Management Plan (LEMP) and SSSI Grassland Management Strategy, 293651-ARUP-XX-XX-RP-YE-0002 - Two-staged Vegetation Clearance, 293651-ARUP-XX-XX-RP-YE-0005 30-Year Habitat Management and Monitoring Plan, CLS-ARUP-EAC-XX-RP-OE-000003 - Dormouse Licence number S093767-2 for the Substation site, 293651-XX-XX-RP-0006 (latest amendment / issued licence January 2025) - Dormouse Licence number S095506/1 for Grassland compensation area, 293651-XX-XX-RP-YE-0096 (issued June 2025) Drawings: - Figure 3 Grassland Compensation Area	Originally assessed within EcIA¹, Dormouse Conservation strategy, LEMP and Two-staged vegetation clearance. The dormouse licence for the SSSI grassland area has been submitted on 9 May 2025. Refer to Sections 3 to 6 for details of impact assessment. Conclusion: Reduction in the enhancement area extent within the GCA compared with the original assessment¹ resulting in a decrease in the habitat improvement ratio in diversity and condition of grassland from 3:1 to 2:1, however net benefit for biodiversity and the ratio required for SINC habitat replacement by NCC SPG of 1.5:1 is still achieved¹.

Ref.	Change type	Amendment required	Reason	Document or Drawing reference	Impact Assessment
			documents that these works would start in year 1 (2024) and continue for 7 years. It is now proposed that these started in year 2 (2025) and continue for 4 years.	Vegetation Clearance (293651-LD-XX-DR-0403 v5) - Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6) - Figure 5. Existing Conditions and Vegetation Lost and Retained (293651-LD-XX-DR-0002 v3)	

3. Ecological Impact Assessment (EcIA)

The following sections within the EcIA¹ (293651-ARUP-XX-XX-RP-YE-0001) have changed as a result of the amendments detailed in Table 1 or due to updates to planning policy in the time between the granting of planning permission and this Section 73 application:

- Planning Policy Wales
- Key stages of the project/programme
- Embedded Biodiversity Design
- Dormouse habitat creation and enhancement
- Grassland compensation area
- Ecosystem resilience assessment

Changes to these sections are detailed below in Section 3.1 to 3.6 along with any associated ecological impact assessment. A call out box is provided where relevant linking to the change reference number and type to **Table 1** - Summary of changes.

3.1 Planning Policy Wales

PPW12 requires all planning applications to include a GIS. Additionally, all schemes applying for planning permission must achieve a Net Benefit for Biodiversity (NBB). A GIS was not included within the original application due to it not being formal planning policy at the time of submission. A GIS is therefore included in **Appendix A**.

Planning Policy Wales Impact Assessment

A GIS has been provided (**Appendix A**) to comply with the changes to PPW. Additionally, NBB and following of the stepwise approach was already demonstrated within the original planning application through the embedded biodiversity design described in Section 7.2 of the EcIA¹. There are no significant changes to the diversity, extent, condition, connectivity or ecosystem resilience of habitats created, but there was a reduction in the extent of enhancements made within the offsite GCA. As achievement of NBB was not reliant on all of this area being enhanced, NBB is still achieved as shown in the detailed habitat calculations within **Table 3**, **Table 4** and **Table 5** contained in Section 3.3 and Section 3.6 of this report.

Therefore, it is considered that NBB is still achieved in line with PPW and therefore there is **no change to the ecological impact assessment**.

3.2 Key Stages of the Project/Programme

Table 1 'Summary of Changes' Ref 4 ; Landscape hedge amendment, Ref 12 ; Ecology
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An indicative programme was provided in Section 1.2.6 'Key Stages of the Project/Programme' of the EcIA¹. However, there are delays to the programme of proposed scrub clearance, mowing, and seeding works in the SSSI GCA, and also changes to the vegetation types, quantities and locations to be cleared for the following reasons:

- Lack of maintenance within the grassland area since initial baseline vegetation surveys took place, resulting in significant scrub development compared with baseline survey. This required additional baseline data collection and revision of the location and areas of vegetation to be removed. Refer to email dated 18 September 2024 in Appendix C which shows the extent of scrub intrusion through the comparison between the baseline and updated survey data. It also includes agreement in principle from the NCC Ecologist on proposed changes to the types of vegetation to be cleared and restored. The original proposal was to remove scrub only and restore this to grassland; however, the revised

proposal is to target removal of ruderal, reed and a smaller area of scrub, resulting in less scrub removal overall in order to reduce the impact to hazel dormouse *Muscardinus avellanarius*. Refer to **Table 4** in Section 3.3 for details of the revised habitat calculations.

- The decision to have two dormouse licences covering different areas of the site (one for the main site and one for the SSSI GCA) was agreed through consultation with NRW. This was to facilitate the construction programme within the main site (Licence S093767-2; first issued 21 March 2024) and allow for further time for discussions between NRW, Welsh Government and NCC to agree on the guiding principles of compensation measures within the SSSI GCA. The new baseline survey data collected, as stated above, was used to revise proposals, ensuring that a balance was achieved between restoration of grassland within the SSSI GCA as compensation for loss of grassland by the development, whilst still minimising the removal of dormouse habitat (dormouse licence S095506/1 ; issued on 23 June 2025).

As a result, the proposed SSSI GCA works (vegetation clearance, mowing and grassland seeding) have not yet been started, as they require a dormouse licence in order to clear scrub for access to the site (the dormouse licence was issued on 23 June 2025). It was stated within the planning documents that these works would start in year 1 (2024) and continue for 7 years. It is now proposed that these start in year 2 (2025) and continue for 4 years. The revised indicative programme is shown below in **Table 2**. Items already completed are indicated in red text and brackets.

Table 2: Revised proposed key stages of the project/programme

Task name	Original Start and Finish	Revised Start and Finish
Ecological site two-staged clearance within site and one-staged Year 1 (0.1ha per field) in GCA (over-seeding with species-rich grassland) ³	February 2024 - May 2024	(Ecological site clearance within main site was undertaken in April and May 2024, and September and October 2024.) Single stage scrub clearance in the GCA (Year 1 - max of 0.06ha per year) over-seeding with species-rich grassland, did not take place and is now proposed for September 2025.
Early planting of scrub within retained and protected areas of the site and diversification planting for dormice comprising 26No. hazel trees <i>Corylus avellana</i> (within the grassland zone of the Dormouse Compensation Area)	February 2024 - May 2024	(No change)
Bund relocation	May 2024 - June 2024	(October 2024 - January 2025)
Access road	May 2024 - June 2024	(January 2025 - March 2025)
Drainage	June 2024 - July 2024	(October 2024 - January 2025)
Grassland, hedgerow and scrub planting and enhancement within the main site	June 2024 - October 2024	(June 2024 - April 2025)
Handover of site to NGED	July 2024	(March 2025)
Civils and building works	October 2024 - February 2026	April 2025 to August 2026

³ This timing is indicative and dependent on the granting of planning and issue of the dormouse licence in time to undertake the winter clearance. As an alternative, in the case of programme delays, a single-stage clearance methodology has further been proposed in the Dormouse Conservation Strategy (293651-ARP-XX-XX-RP-YE-0004) as discussed with NRW. If this is the case, clearance will be undertaken between April to May or September to October where deemed suitable by the licensed ecologist with consideration to prevailing conditions at the time of works. Subsequent actions within the construction programme would then be continued accordingly following this clearance.

Task name	Original Start and Finish	Revised Start and Finish
Year 1 Management and Monitoring of created, restored and enhanced habitats (see LEMP for details and subsequent Years of Management and Monitoring)	March 2024 - December 2024	(No change)
Year 2 Ecological site one-staged clearance (max 0.1ha per field) within GCA (over-seeding with species-rich grassland)	September 2024 - May 2025	Max of 0.06ha per year - September 2025
Year 3 Ecological site one-staged clearance (max 0.1ha per field) within GCA (over-seeding with species-rich grassland)	September 2025 - May 2026	Max of 0.06ha per year - September 2026
Switchgear installations	February 2026 - May 2026	March 2026 – October 2026
Cable terminations	April 2026 - May 2026	November 2025 to September 2026
Commission and energise transformers	April 2026 - March 2027	October 2026 to February 2027
Year 4 Ecological site one-staged clearance (max 0.1ha per field) within GCA (over-seeding with species-rich grassland)	September 2026 - May 2027	Max of 0.06ha per year - September 2027
Year 5 Ecological site one-staged clearance (max 0.1ha per field) within GCA (over-seeding with species-rich grassland)	September 2027 - May 2028	Max of 0.06ha per year - September 2028
Year 6 Ecological site one-staged clearance (max 0.1ha per field) within GCA (over-seeding with species-rich grassland)	September 2028 - May 2029	Not required
Year 7 Ecological site one-staged clearance (max 0.1ha per field) within GCA (over-seeding with species-rich grassland)	September 2029 - May 2030	Not required

Key stages of project/programme Impact Assessment

The main changes from the programme are the year in which the clearance of scrub and seeding within the SSSI GCA is planned to start (changing from May 2024 to the proposed September 2025), and the time period over which this takes place (reducing from 7 years to 4).

The clearance of scrub and seeding works within the SSSI GCA are part of the embedded biodiversity design required in order to provide compensatory grassland habitat to replace the SINC grassland lost within the construction footprint. In the EcIA¹ it was proposed that scrub was removed and then replaced with grassland, however the re-survey of the SSSI GCA site in 2024 showed that that much of the grassland had been further taken over by scrub, reed or ruderal vegetation due to lack of management (see correspondence in Appendix C). Therefore, it became possible to increase the proportion of reed and ruderal vegetation removed and reduce the amount of suitable dormouse habitat removed, as determined through discussions with the NCC ecologist. It was then possible to reduce the time period over which clearance took place from 7 to 4 years due to the proposed reduction in clearance in the area of suitable dormouse habitat from 0.1ha per year to 0.06ha per year.

As stated in the EcIA¹, the enhancement of grassland within the GCA through long-term management to reduce scrub encroachment and achieve a species rich sward which is of County significance and suitable to support brown-banded carder bee *Bombus humilis* and shrill carder bee *Bombus sylvarum* (Section 7 species of county importance) is part of the embedded design. The grassland within the SINC was found to have the lowest number of species of biodiversity significance and the lowest total number of species compared to other, less mown grassland within the wider study area, with no shrill carder bee recorded and comparatively low numbers of brown-banded carder bee found. It is likely therefore that the low numbers of carder bee

present would be able to find suitable foraging areas in the retained/reseeded grassland within the SINC or the grassland within the wider study area for the 16-month duration of the delay to grassland restoration and would not be dependent on creation of alternative habitat within this timeframe. Therefore, the delay of approximately 16 months on commencing the clearance and seeding works within the GCA is not considered to have a significant impact on carder bee due to the availability of other adjacent habitats. In terms of the provision of species rich sward to benefit other invertebrates and provide biodiversity, works to the GCA are now programmed to be completed 20 months in advance of the original proposed dates (even when factoring in the 16month delay to starting).

The programme provided within the EcIA¹ was indicative, and the delay to the seeding of the GCA and therefore to establishment of grassland habitat is not considered to have a significant impact (including to dormouse or shrill or brown banded carder bee), with achievement of net benefits to biodiversity not being linked to such a small overall change to programme. Therefore, it is considered that there is **no change to the ecological impact assessment** from changes to the programme.

3.3 Embedded Biodiversity Design

Table 1 ‘Summary of Changes’: Ref 5; Landscape Seeding, Ref 7; Pond, Ref 8; Pond, Ref 9; Drainage, Ref 10; Drainage, Ref 11; Drainage and Ref 12; Ecology

Further consultation with NRW was required regarding the levels of dormouse habitat removal within the GCA area as explained in Table 1 Ref 14 and Section 3.2. Also, minor changes to design resulted in changes to the habitat calculations. These are quantified and explained in Table 3 and Table 4 below.

Drawings Figure 3 Grassland Compensation Area Vegetation Clearance (293651-LD-XX-DR-0403 v5), Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6) and Figure 5. Existing Conditions and Vegetation Lost and Retained (293651-LD-XX-DR-0002 v3), showing embedded biodiversity design and vegetation removed and retained have also been updated and are included in Appendix B.

Table 3: Embedded biodiversity design habitat creation summary changes

Landscape masterplan reference	Area/No. of created or enhanced habitat (ha/m)	Description of proposed habitat	Total area created or enhanced	Impact assessment
Existing grassland to be reinstated and/or enhanced/restored within the site	Original 1.38 ha Proposed 1.38ha	The seed mix and/or plug planting will be designed to provide at least 2No. grassland Primary species and at least 5No. grassland Contributory species for Wildlife Site selection ⁴ (to be confirmed with the supplier). The mix will also include species which support shrill carder bee, such as red clover, birds foot trefoil, meadow vetchling, red bartsia (<i>Odontites vernus</i>), common knapweed and field scabious (<i>Knautia arvensis</i>). Grassland enhancement within the compensation area will focus on management techniques to improve the diversity and sward structure, such as hay meadow cutting with arising removed. Plug planting of species favoured by shrill carder bee could be considered later in the	Original 3.66 ha species-rich grassland Proposed 2.41ha species rich grassland	Decrease of 1.25 ha in the total area of species-rich grassland created or enhanced compared to the original plan. During the planning process, NCC stated that due to insufficient evidence regarding the condition of the grassland within the GCA, only grassland created through scrub removal could be considered as compensation. As a result, a re-survey was conducted in 2024 (see Appendix D), which found the grassland to be in poor condition, with reed and ruderal species also present. Consequently, the removal of reed, ruderal, and scrub is now proposed and will be counted

⁴ Wales Biodiversity Partnership (2008). Guidelines for the Selection of Wildlife Sites in Wales.

Landscape masterplan reference	Area/No. of created or enhanced habitat (ha/m)	Description of proposed habitat	Total area created or enhanced	Impact assessment
Grassland to be enhanced within the compensation Area 1 (GCA)	Original 2.28 ha* (<i>*note that this incorrectly included an area of bramble to be retained, so should have stated 2.22ha</i>) Proposed 1.03ha	management to assist establishment of a species rich grassland.		towards compensation. The survey also identified a significant increase in scrub cover (see Section 3.3). This made it unfeasible to enhance the entire GCA through mowing alone, as it would require a significantly greater extent of scrub removal than originally planned—an approach that was deemed unviable due to its potential negative impact on hazel dormouse habitat. While grassland areas within the SSSI GCA will still be enhanced through mowing, the 1.25 ha reduction in total enhanced area is directly linked to the reduced area where mowing is now feasible. Nevertheless, since the total area of grassland to be created remains approximately unchanged, it is still possible to achieve the required habitat improvement ratios, as set out in Table 4 below. <i>Reduction in the grassland enhancement area extent compared with the ecological impact assessment; however, overall habitat replacement ratios in terms of diversity and condition of grassland still sufficient – Refer to Table 4 for ratios.</i>
Species-rich hedgerow	Original 411m Proposed 406m	The species-rich hedgerow will be a staggered double hedgerow comprising a range for species suitable for the local area and designed for foraging and nesting requirements for dormice. Planting will favour hawthorn (<i>Crataegus monogyna</i>), blackthorn (<i>Prunus spinosa</i>) and hazel (<i>Corylus avellana</i>), with other species listed below making up no more than about 15-20% of the mixture in total: Field maple (<i>Acer campestre</i>), holly (<i>Ilex aquifolium</i>), wild cherry (<i>Prunus avium</i>), pedunculate oak, Common dog rose (<i>Rosa canina</i>) and guelder rose (<i>Viburnum opulus</i>). Native climbers such as honeysuckle (<i>Lonicera periclymenum</i>) will also form part of new hedgerows.	Original 411 m species-rich hedgerow Proposed 406mm species rich hedgerow	Decrease of 5m length of species rich hedgerow compared with original due to minor changes to drainage routes and minor changes to site layout. Small reduction in length over large area. Does not cause fragmentation. <i>No change to ecological impact assessment due to minor area change.</i>

Landscape masterplan reference	Area/No. of created or enhanced habitat (ha/m)	Description of proposed habitat	Total area created or enhanced	Impact assessment
Diversification planting in the grassland zone of the Dormouse Compensation Area	Original 0.28 ha Proposed 0.28ha	26 hazel trees in the Dormouse Compensation Area to diversify and enhance the foraging and nesting opportunities of the dormouse population within the establishing woodland habitat which is naturally developing within historic grassland area. This developing woodland is already relatively species diverse with species such as oak, willow species, hawthorn, blackthorn, common dog rose, dogwood and bramble, but lacks hazel with only two saplings recorded.	0.28 ha diversification planting in native broadleaved woodland	No change to area of planting. <i>No change to ecological impact assessment due to no change.</i>
New woodland - tree and scrub planting within the site	Original 0.78 ha Proposed 0.79ha	New scrub and woodland-scrub areas will be created within the site using native flowering and fruiting shrub and broadleaved tree species which will provide habitat scrub and scrub-woodland for dormouse, with hazel at 25% of the mix.	Original 0.78 ha scrub Proposed 0.79ha scrub	Increase of 0.01ha of new scrub compared with original. Minor design changes resulted in a small overall increase in scrub over total site area. <i>No change to ecological impact assessment due to minor area increase in new planting.</i>
Attenuation pond and marginal habitat and seeding	Original • 0.23 ha new pond • 0.18ha marginal planting • 0.07 ha aquatic plug planting Proposed • 0.17ha new pond • 0.09ha marginal planting • 0.08ha aquatic plug planting	The pond edges will be gently sloping to allow species such as amphibians to access the water, as well as provide habitat for marginal aquatic planting. Species to be included within the marginal and aquatic planting include; marsh marigold (<i>Caltha palustris</i>), yellow flag iris (<i>Iris pseudacorus</i>), water mint (<i>Mentha aquatica</i>), purple loosestrife (<i>Lythrum salicaria</i>) and ragged robin (<i>Silene flos-cuculi</i>). Plug planting of species associated with the SSSI would also be incorporated, such as arrowhead. Scattered broadleaved trees will be planted around the pond's periphery, and a suitable grassland mix will be sown on the slopes.	Original 0.41 ha pond and marginal planting Proposed 0.34ha pond and marginal planting	Decrease in approximately 0.07ha of pond and marginal planting, due to re-sizing of the pond to avoid additional vegetation clearance. The new pond area will vary with water level. The habitat replacement ratio has changed but is still sufficient to achieve NBB as shown in Table 4 below. <i>Minor negative impact compared to original assessment due to less extent of pond and marginal habitat and seeding being provided overall however still achieves net benefit for biodiversity through increased extent. Refer to Table 4 for ratios.</i>

Table 4: Compares the loss of habitat as a result of the proposed development against the habitats to be created during and post construction and developed through operational phases through management and monitoring.

Habitats on Site	Existing area/length amount	Amount to be lost during construction	Amount to be retained and protected	Created and enhanced habitats on site	Created and enhanced habitat offsite	Net Benefit	Impact assessment
Semi-improved neutral grassland	Original 2.61 ha in planning boundary (0.28 ha in woodland creation area) Proposed 2.58ha* <i>(*change due to natural habitat succession)</i>	Original 1.84 ha (including lost for woodland creation) Proposed 1.83ha	Original 0.77 ha Proposed 0.76ha	Original 1.38 ha (species-rich grassland creation, reinstatement and enhancements of existing, this includes 0.77ha retained) ⁵ Proposed 1.38ha (species-rich grassland creation, reinstatement and enhancements of existing, this includes 0.77ha retained) ⁶	Original 2.28 ha* (GCA, including 1.02ha grassland creation from scrub removal of a 7-year period). <i>(*note that this incorrectly included an area of bramble, so should have stated 2.22ha)</i> Proposed 1.03ha (comprised of 0.8ha of grassland creation from removal of scrub, ruderal and reed within the GCA plus 0.23ha of enhanced grassland through improved management within the GCA).	Original Grasslands 3.66 ha (3.58 after correction in previous column) species-rich grassland to be created and/or enhanced Net loss of 1.23 ha in extent within the site boundary/SINC boundary, however compensation achieved through management of 2.28ha of grassland within the SSSI (including 1.02ha increase in extent from scrub removal over 7-year period*) and long-term management of the remaining 1.38ha SINC habitat through increased diversity from planting and condition management. <i>(*Note that during the planning application process, only 1.02ha of this was allowed to be considered part of the compensation due to lack of evidence of the remaining area of SSSI grassland proposed to be managed being in poor condition.)</i> Habitat replacement ratio in extent 0.8: 1 (measured from grassland restoration from scrub removal in SSSI) Habitat improvement ratio in diversity and condition 3:1 (measured from all grassland improvements within the site/SINC and SSSI) Therefore, net benefits achieved. ----- Proposed Grasslands 2.41ha species-rich grassland to be created and/or enhanced. Net loss of 1.2ha in extent within the site boundary/SINC boundary, however compensation achieved through management of 1.03ha of grassland within the SSSI (including 0.8ha increase in extent from scrub removal over 4-year period and 0.23ha of enhanced grassland through improved management) and long-term management of the remaining 1.38ha SINC habitat through increased diversity from planting and condition management. Habitat replacement ratio in extent is reduced slightly to 0.7: 1 (measured from grassland restoration from scrub removal in SSSI). Habitat improvement ratio in diversity and condition is reduced to 2:1 (measured from all grassland improvements within the site/SINC and SSSI). Therefore, net benefits achieved.	Compared with the original assessment: - Slight decrease in 0.01ha of the net loss of grassland within the site boundary/ SINC. - Slight decrease in the habitat replacement ratio in extent from 0.8:1 to 0.7:1 - Decrease of 1.25ha of total area of species rich grassland created or enhanced compared with original. This is due to the GCA becoming scrubbed over as explained in Section 3.2. Therefore, it was not possible to enhance the entirety of the GCA anymore through changed mowing regime as per original proposals, because in doing so it would have required a large an area of scrub removal which would have not been feasible due to its negative impact on dormouse. Additionally, it was determined through discussions with NCC that only the removal of non-grassland habitat and conversion of that into grassland could count towards compensation (areas that were grassland to start with and subject to mowing would be considered enhancement). Therefore, the habitat improvement ratio in diversity and condition has only slightly reduced from 3:1 to 2:1, because there is still a 0.8ha increase in extent from scrub removal and 0.23ha of enhanced grassland through improved management (overall 1.03ha). <i>Therefore, although overall there is a decrease in the extent of grassland enhanced compared with the original assessment representing a negative change in terms of grassland enhancement compared with the original assessment, net benefit for biodiversity and the ratio required for SINC habitat replacement by NCC SPG of 1.5:1 is still achieved.</i>

⁵ The grassland west of Duffryn Lane has been excluded from, and is not reliant for achieving, the grassland net benefit calculations, as the area of grassland will be reinstated to current condition post being used for welfare facilities during construction.

⁶ The grassland west of Duffryn Lane has been excluded from, and is not reliant for achieving, the grassland net benefit calculations, as the area of grassland will be reinstated to current condition post being used for welfare facilities during construction.

Habitats on Site	Existing area/length amount	Amount to be lost during construction	Amount to be retained and protected	Created and enhanced habitats on site	Created and enhanced habitat offsite	Net Benefit	Impact assessment
Deciduous woodland and woodland scrub	0 ha (planning boundary)	0 ha	Original 1.15 ha Proposed 1.18ha	0.28 ha (diversification hazel planting 26No. in the grassland zone of the Dormouse Compensation Area)		Original Woodland, scrub and hedgerow: 0.28 ha (diversification hazel planting in the grassland zone of the Dormouse Compensation Area) 0.78 ha new native species-rich tall dense scrub / scrub woodland 0.006 ha new species-rich hedgerow - Net increase (of all habitats) of 0.26 ha in extent [Note: the 26 hazel tree planting in the developing woodland are not included in this calculation] Net benefits also achieved through increased diversity of species and woodland habitats from planting and condition through management - Habitat replacement ratio 1.15 : 1 Proposed Woodland, scrub and hedgerow: 0.28 ha (diversification hazel planting in the grassland zone of the Dormouse Compensation Area) 0.79 ha new native species-rich tall dense scrub / scrub woodland 0.06 ha new species-rich hedgerow Net increase (of all habitats) of 0.27 ha in extent [Note: the 26 hazel tree planting in the developing woodland are not included in this calculation] Net benefits also achieved through increased diversity of species and woodland habitats from planting and condition through management Habitat replacement ratio 1.15 : 1 <u><i>Note: see Section 3.4 below for information on Dormouse habitat replacement ratio and carrying capacity</i></u>	Compared with the original assessment - No change to the area of diversification planting - Increase of 0.01ha in new native species-rich tall dense scrub/scrub woodland planting - No significant change to area of species-rich hedgerow despite decrease of 5m in length - Slight net increase in all of this habitat category of 0.01ha - No change to habitat replacement ratio of 1.15:1. <i>No change to ecological impact assessment due to minor area increase in new planting.</i>
Dense tall scrub	Original 0.86 ha Proposed 0.86ha	Original 0.32 ha Proposed 0.32ha	Original 0.54 ha Proposed 0.54ha	Original 0.78 ha new scrub Proposed 0.80ha new scrub	N/A		
Poor diversity but well-connected bramble scrub	Original 0.87 ha Proposed 0.9ha* <i>(*change due to natural habitat succession)</i>	Original 0.26 ha Proposed 0.26ha	Original 0.61 ha Proposed 0.67ha				
Species-rich hedgerow	0 ha (planning boundary)	0 ha	0 ha	Original 411 m (0.06ha) Proposed 406m (0.06ha)	N/A		

Habitats on Site	Existing area/length amount	Amount to be lost during construction	Amount to be retained and protected	Created and enhanced habitats on site	Created and enhanced habitat offsite	Net Benefit	Impact assessment
Open water and marginal habitat	Original 0.12 ha Proposed 0.12 ha	Original 0.06 ha Proposed 0.06ha	Original 0.06 ha Proposed 0.06ha	Original: 0.23 ha new open water pond 0.18 ha aquatic planting 0.07 ha aquatic plug planting Proposed: Approximately 0.17ha new open water pond 0.09ha aquatic planting 0.08ha aquatic plug planting	N/A	Original Open water and marginal habitat: 0.41 ha open water and planted diverse native marginal planting - Net increase in 0.35 ha in extent Net benefits also achieved through increased extent of marginal habitats, increased diversity from planting and condition through reduced shading and management - Habit replacement ratio 3.92 : 1 Proposed Open water and marginal habitat: 0.34 ha open water and planted diverse native marginal planting Net increase in 0.22 ha in extent Net benefits also achieved through increased extent of marginal habitats, increased diversity from planting and condition through reduced shading and management Habit replacement ratio 2.83 : 1	Compared with original assessment: - Decrease in 0.07ha of open water and planted diverse native marginal planting extent due to re-sizing the pond - This results in a change in the habitat replacement ratio of 3.92:1 to 2.83:1 <i>Minor negative impact compared to original assessment due to less extent of pond and marginal habitat and seeding being provided overall however still achieves net benefit for biodiversity.</i>

The embedded habitat creation and enhancements are shown on *Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6)* and *Figure 3 Grassland Compensation Area Vegetation Clearance (293651-LD-XX-DR-0403 v5)* included in **Appendix B**.

Embedded biodiversity design Impact Assessment

As noted in **Table 3** and **Table 4** it is considered that there is overall **a minor negative change to the original ecological impact assessment** resulting from a reduction in the area of grassland enhancement provided in the GCA, and from a slight reduction in the area of new pond and marginal planting provided. However, as required replacement ratios for the SINC grassland (based on improved condition and diversity) are still met, and there is still an increase in extent of the pond habitats, net benefits for biodiversity are still achieved.

3.4 Dormouse habitat creation and enhancement to maintain favourable conservation status

Table 1 'Summary of Changes': Ref 5 ; Landscape Seeding, Ref 7 ; Pond, Ref 8 ; Pond, Ref 9 ; Drainage, Ref 10 ; Drainage, Ref 11 ; Drainage, Ref 12 ; Ecology
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As detailed in **Table 4** above, an overall habitat replacement ratio 1.15:1 (gain vs loss) for habitat suitable for dormouse in terms of extent has been achieved (excluding the hazel diversification planting). Once the created and enhanced habitats have established, the carrying capacity of the suitable dormouse habitats within the site and the Dormouse Compensation Area will increase by 2:1 (gain vs loss) based on agreed carrying capacity numbers agreed with NRW. Both of these ratios remain unchanged from the EcIA¹.

Within the GCA, the carrying capacity of the suitable dormouse habitats will be 1.5:1 (gain vs loss). However, through ongoing management of scrub to enhance species diversity and structural heterogeneity, the carrying capacity of the GCA is still 2:1 in the long term, and therefore remains unchanged from the EcIA¹.

Dormouse habitat creation and enhancement to maintain favourable conservation status Impact Assessment

There is no change to the overall habitat replacement ratio for dormouse within the site and the Dormouse Compensation Area, or the carrying capacity of created and enhanced habitats and therefore it is considered that there is **no change to the ecological impact assessment**.

3.5 Grassland Compensation Area (GCA)

Table 1 'Summary of Changes': Ref 12 ; Ecology

As part of the wider biodiversity strategy for the site, to compensate for the loss of grassland within the planning boundary, an area of grassland in the SSSI GCA will be restored. This restoration will involve the management of scrub, ruderal and reed encroachment, which has occurred within the grassland.

As explained previously in Section 3.2 and **Table 1**, there has been further natural bramble scrub encroachment within the SSSI grassland area due to lack of management since the surveys to support the 2024 planning permission (planning application reference: 23/0878) were carried out. Therefore, an updated vegetation survey was carried out in summer 2024 in order to support discussions with the NCC Ecologist (see **Appendix C** for correspondence and survey results) and NRW regarding the most appropriate areas and types of vegetation to remove and seed with species rich grassland mix or green hay. The GCA covers a total area of 2.28ha. The planning submission showed delivery of a 1.02ha gain in grassland habitat within the GCA through removal of scrub habitat, with the remaining 1.26ha of grassland being subject to management (e.g. mowing) but was not considered part of the compensation due to lack of evidence of it being in poor condition.

The revised survey showed that the GCA was in poor condition, and that it was possible to deliver 0.8ha gain in new grassland habitat within the GCA through removal of reed and ruderal as well as limited scrub

habitat. Additionally, 0.23ha of grassland in poor condition could be enhanced through mowing, making a total of 1.03ha of enhancement and creation within the GCA. This would reduce the amount of suitable dormouse habitat removed and also result in an approximately similar gain overall in grassland habitat. Drawing *Figure 3 Grassland Compensation Area Vegetation Clearance (293651-LD-XX-DR-0403 v5)* included in **Appendix B** shows proposed changes. Due to natural scrub encroachment reducing the area of existing grassland to be mown and managed, the area available to be managed and enhanced within the GCA has reduced by 1.25ha compared to original proposals; removal of any more scrub would have negatively impacted dormouse.

Restoring this grassland will contribute to the restoration of the SSSI and its features and functions, providing ecosystem resilience and resource of SSSI species such as shrill and brown carder bee which are known to be in the local area.

As shown on Drawing *Figure 3 Grassland Compensation Area Vegetation Clearance (293651-LD-XX-DR-0403 v5)* in **Appendix B**, it is proposed to remove 0.56ha of reed and ruderal vegetation sequentially (not considered to be dormouse habitat) in year one under supervision of an ecologist with regard to other species. This would be alongside the clearance of low bramble scrub encroachment from this area over a 4-year period (originally 7-year period) using a single-stage clearance method, and planting with a species-rich grassland mix or seeding with green hay once removed. A maximum of 0.06ha (originally 0.1ha) of scrub within the eastern SSSI field will be cleared per year (originally it was within the eastern and western field), moving towards areas of retained habitat (see *Figure 3 Grassland Compensation Area Vegetation Clearance (293651-LD-XX-DR-0403 v5)* included in **Appendix B**). This will allow any dormice present to move north into larger areas of tall dense scrub north of the fields via remaining connected corridors over a 4-year period. As well as this scrub, reedbed and ruderal vegetation being removed, it is proposed to enhance the existing 0.23ha of grassland through annual mowing. All habitats changed to grassland will then be mown annually, the area increasing each year corresponding to the annual scrub removal.

Before the 4-year clearance starts, a total of 30 dormouse boxes will be placed in the tall dense scrub; five in the retained stands within the field and the remaining 25 in the tall dense scrub north of the field. No further mitigation planting is proposed on advice from NRW to remove planting within the SSSI field.

Based on each year's scrub clearance being restricted to 0.06ha of poorer diversity (but well-connected bramble scrub within the eastern SSSI field, the potential loss of habitat is predicted to impact up to 0.24 dormice per year in the eastern SSSI field (previously 0.8 dormice per year), and a total of 0.96 dormice over 4 years (previously up to 2.8 dormice over 7 years) based on agreed carrying capacities.

In the western SSSI field, 0 dormice are impacted (previously up to 1.5 dormice over 7 years) based on agreed carrying capacities as there is now no clearance of dormouse habitat within this field.

Dormouse boxes that are broken and/or rotten will be replaced during the first 10 years from installation.

Grassland Compensation Area Impact Assessment

There is a small increase of 0.01ha of grassland habitat creation/enhancement within the GCA (originally 1.02ha and now 1.03ha), due to the deterioration in condition of the grassland since the original surveys were completed resulting in different baseline vegetation being present, and proposals changing to remove reed and ruderal in addition to scrub. There is a reduction in the area within the GCA that is subject to long term management of 1.25ha due to it becoming scrubbed over. However, as this was not considered to count towards the compensation requirements due to lack of evidence of the condition of the grassland, this change in management areas only slightly reduces the overall habitat replacement ratios in diversity and condition within the original ecological impact assessment from 3:1 to 2:1 as shown in **Table 4**, with net benefit for biodiversity still being achieved.

Therefore, although overall there is a decrease in the extent of grassland enhanced compared with the original assessment **representing a negative change in terms of grassland enhancement compared with the original assessment, net benefit for biodiversity and the ratio required for SINC habitat replacement by NCC SPG of 1.5:1 is still achieved.**

There is a reduction in impact to dormouse habitat compared with the original EcIA¹ with less scrub being cleared. Additionally, this is being done over a shorter time period. This results in fewer dormice being

impacted. Therefore, it is considered that there is **minor benefit to dormouse compared with the original ecological impact assessment.**

3.6 Ecosystem Resilience Assessment

Table 1 ‘Summary of Changes’: Ref 12 ; Ecology

There is an update to the drawing referred to for the ecosystem resilience assessment, *Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6)*; this has been updated and is included in Appendix B. Any changes to the assessment due to revised habitat calculations are shown in **Table 5** below.

Table 5: Resilience Assessment of the Existing Ecosystems along with Indication of how the Scheme may change this Resilience (Increase +/- Decrease -).

Ecosystem	Diversity	Extent / size	Condition	Connectivity
Grassland	All grassland on site is semi-improved neutral and is designated as a SINC. The grassland is at the minimum threshold to be considered 'relatively species rich' according to Guidelines for the Selection of Wildlife Sites in Wales, however, the grassland is in a degraded condition in comparison to grassland within the wider area, and lacks any Primary species and only four Contributory species for Wildlife Site selection have been recorded. The grassland provides potential habitat for grass snake, mustelid mammals, and invertebrates including the brown-banded carder bee and cinnabar moth. Some of the grassland will be lost as part of the development but will be replaced, in part, by a higher quality semi-improved grassland, which will be of higher diversity, and planted with species favourable to brown-banded and shrill carder bee, as well as having at least 2No Primary species and at least 5No. Contributory species for Wildlife Site selection. Further to this, grassland currently of lower species diversity and condition, within the SSSI will also be enhanced through management (the GCA). This will diversify the grasslands within the site and within the SSSI area of the compensation area and provide greater resource for a diversity of invertebrates. All created and enhanced grasslands will be managed and monitored to provide species-rich diverse grasslands under long-term management plan for specific local species assemblages and rare species of invertebrates (brown-banded carder bee) as well as more common species of reptiles, birds and foraging bats. Expected increase (+) subject to long term management.	1.83 ha (previously 1.84ha) of semi-improved neutral grassland will be lost through construction and the creation of native broadleaved woodland. 1.38 ha (previously the same at 1.38ha) will be reinstated and restored post construction and enhanced within the remaining of the site through seeding of a species rich grassland mix. Further to this, 1.03ha (previously 2.28ha) grassland within the GCA will be enhanced which is currently a poor species grassland ruderal and scrub mosaic. The total extent of the grassland will be reduced compared with the baseline, but with grassland creation and improvements in the compensation area from encroaching and transition habitats, and long-term management of encroaching habitats across the site, this is expected to result in a long-term no change to grassland extent. No change anticipated (0) subject to long term management.	The condition of grassland habitats on site at present is poor and the NVC surveys suggest the grasslands of the SINC have potentially declined since it was first designated or that the species for which it was designated are no longer abundant; this has been attributed to historically management being more aligned with that for amenity grassland. Similarly, the grassland within the compensation area is of poor condition, likely through lack of management, with much of the grassland being encroached by bramble scrub and ruderal species. This grassland also lacks species diversity. Newly created, species-rich grassland, and those in the compensation area will be managed and monitored to ensure these grasslands achieve a good grassland condition. Expected increase (+) subject to long term management.	The grassland within the site will be well connected to other areas of grassland, with fields of similar grassland immediately to the south-east of the site. The created and enhanced species-rich grasslands proposed will have similar connectivity to the existing situation in terms of location. However, the enhanced diversity and condition of these grasslands will allow for enhanced connectivity for species that rely on species rich grassland, such as the shrill carder bee, which are present in the more diverse grasslands to the south-east and wider in the landscape. As such, the created and enhanced grasslands will provide an increase in connectivity, acting as a 'stepping stone' habitat for protected species and seed dispersal. Expected increase (+) subject to long term management.
Woodland, scrub and hedgerow	No woodland or hedgerows are present within the site, however an area of plantation woodland/scrub-woodland community is present within dormouse compensation area, immediately to the east of the site. An area of grassland and existing bramble scrub will be planting as a native	A total of 0.58ha (previously also 0.58ha) of scrub will be lost during construction. 0.79ha (previously 0.78 ha) of new diverse scrub, and 406m	The scrub on site at present is largely dominated by bramble, and of low botanical value. Enhanced and created habitats to be managed and monitored to	The scrub and woodland will be well connected to other areas of scrub within the wider area, including within the fields to the west.

Ecosystem	Diversity	Extent / size	Condition	Connectivity
	broadleaved woodland, specifically designed to support dormice and provide great diversity of tree and shrubs within the site. Dense scrub, largely comprised of bramble, is present throughout the site, and provides habitat for dormice. The loss of dense scrub within the site will be compensated for through the creation of both the diverse native broadleaved woodland (as above), diverse woody scrub and a species-rich hedgerow. All of these more diverse woody habitats will be managed and monitored to ensure a diversity prevails and a diverse woodland structure is achieved. Expected increase (+) subject to long term management.	(previously 411m) (0.06ha) of species-rich hedgerow will be created. 0.28ha (previously also 0.28ha) of hazel diversification planting in the grassland zone of the Dormouse Compensation Area. This will result in a net increase of woody habitats of 0.26ha (previously also 0.26ha) in extent [Note: the 26 hazel tree planting in the developing woodland are not included in this calculation] Expected increase (+) subject to long term management.	enhance condition through a long-term management plan. New woodland, hedgerow, tree and scrub planting to increase local diversity of woodland, scrub and hedgerow habitats. Expected increase (+) subject to long-term management.	The hedgerow to be created will enhance connectivity between the site and scrub habitats to the east, as well as scrub and woodland within the wider landscape. Expected increase (+) subject to long-term management.
Waterbodies /wetland habitats	At present, two attenuation ponds are present to the south of the site. The ponds are generally overshadowed by scrub, but notable aquatic flora have been recorded within these ponds. The western most attenuation pond within the site will be expanded and enhanced to provide SuDS. The pond will be subject to marginal and aquatic planting to increase the diversity, including species associated with the SSSI, which in turn will provide greater ecological value of the pond and provide ecosystem resilience to the wider SSSI flora species. The eastern attenuation pond will remain in situ. Expected increase (+) subject to long-term management.	0.34ha (previously 0.41ha) of open water habitat and marginal habitat will be created to provide SuDS on site; replacing the existing 0.06ha of pond with limited marginal habitat due to scrub encroachment and overshadowing. The new basin will be larger than the existing, and will be designed to support a range of wildlife. In addition to the existing retained attenuation basin. Expected increase (+) subject to long-term management.	At present, the attenuation ponds on site are largely overshadowed by scrub. The newly created attenuation basin will be managed and monitored to achieve good condition through a long-term management plan. Expected increase (+) subject to long-term management.	The expanded and enhanced attenuation basin will have similar connectivity to the existing ponds, reens and ditches. However, the enhanced diversity (including plant species associated with the SSSI) and condition and increase in extent of the pond will allow for enhanced connectivity for species that rely on open water feature, such as the aquatic invertebrates of the SSSI, which are present in the more open reed network to the south and west of the site. As such, the enlarged pond will provide an increase in connectivity, acting as a 'stepping stone' habitat for protected species as well as seed dispersal. Expected increase (+) subject to long-term management.

Ecosystem Resilience Assessment Impact Assessment

There have been some changes to the areas of habitat creation and enhancement, most notably a reduction in the area of grassland enhancement within the GCA. However, due to significant improvements in the overall diversity and condition of the grassland, the project is still considered to deliver an overall Net Biodiversity Benefit (NBB), and the ecosystem resilience assessment remains unchanged.

4. Dormouse Conservation Strategy

Table 1 'Summary of Changes'; Ref 12; Ecology

The details within the following sections or drawings within the Dormouse Conservation strategy (293651-ARUP-XX-XX-RP-YE-0004) have changed as a result of the design changes detailed in **Table 1**. All changes are already detailed within this document, but are referenced below in **Table 6** for ease.

Table 6: Changes to the Dormouse conservation strategy

Section or drawing with proposed changes	Detail of changes and reference
Section 2.2 Timing of the works	Any changes to the timings of works within Section 2.2 of the dormouse conservation strategy are stated and impacts assessed within Section 3.2 above.
Section 2.4 Embedded Biodiversity Design and Enhancements for Dormice	The proposed design as shown in the Landscape General Arrangement Plan has changed and the revised plan is shown in <i>Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6)</i> included in Appendix B. Minor changes to habitat figures within the dormouse conservation strategy have been made and the changes, along with the impact of those changes, are assessed within Section 3.3 and Section 3.4 above.
Section 2.6 Grassland Compensation Area	Proposed changes to the programme and areas of clearance within the GCA are detailed in Section 3.5 and shown in <i>Figure 3 Grassland Compensation Area Vegetation Clearance (293651-LD-XX-DR-0403 v5)</i> in Appendix B.
Figure 2 'Dormouse Habitat Lost During Construction'	Minor changes to the area of dormouse habitat lost during construction are shown in <i>Figure 5. Existing Conditions and Vegetation Lost and Retained (293651-LD-XX-DR-0002 v3)</i> in Appendix B, which details scrub removed during construction.
Figure 3 'Proposed Dormouse habitat'	Amendments to the proposed dormouse habitat to be created are captured on revised <i>Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6)</i> in Appendix B.
Figure 4. 'Proposed Landscape and Habitat General Arrangement'.	Amendments are captured on <i>Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6)</i> in Appendix B.

5. Landscape Ecology Management Plan (LEMP) and SSSI Grassland Management Strategy

Table 1 ‘Summary of Changes’; Ref 12; Ecology

The details in the following sections or drawings within the LEMP (293651-ARUP-XX-XX-RP-YE-0002) have changed as a result of the design changes detailed in **Table 1**. All changes are already detailed within this document, but are referenced below in **Table 7** for ease.

Table 7 Changes to the LEMP

Section or drawing with proposed changes	Detail of changes and reference
Section 1.2.3 Key Stages of the Project/Programme	Any changes to the programme are stated and impacts assessed within Section 3.2 of this report.
Section 4 Vegetation Clearance and Planting Quantities	All changes to the quantities (length or area) of habitats referred to are stated and already stated and impacts assessed in the habitat calculations shown within Table 3, Table 4 and Table 5 which are in Section 3.3 and Section 3.6 of this report.
Table 2 Vegetation Clearance and Planting Quantities	Table 8 in this report shows any area and programme changes compared with that originally proposed. Impacts are assessed in the habitat calculations shown within Table 3, Table 4 and Table 5 which are in Section 3.3 and Section 3.6 of this report.
Section 5 Landscape and Ecology Management Plan for Mitigation and Net Benefit for Biodiversity	Condition 6 of the 2024 planning permission (planning reference: 23/0878) required the submission of a Habitat Management Plan as follows: <i>“No development shall commence until a plan for the provision, management and maintenance of the dormouse habitat features has been submitted to and approved by the Local Planning Authority. The habitat management plan shall build upon the principles and commitments for protected species mitigation and compensation contained within the documents ‘Landscape and Ecological Management Plan (LEMP) and SSSI Grassland Management Strategy Reference: 293651-ARP-XX-XX-RP-YE-0002 Rev 3 dated 12 December 2023’ and ‘Dormouse Conservation Strategy Reference: 293651-ARP-XX-XX-RP-YE-0004 Rev 2 dated 12 December 2023’, and shall include:</i> <i>• Details of habitats and ecological features present or to be created on and off site, including planting schedules</i> <i>• Details of the desired conditions of habitats (present and to be created) on and off site</i> <i>• Details of short- and long-term management, monitoring and maintenance of new and existing habitats at the site, to deliver and maintain the desired condition</i> <i>• Details of scheduling and timing of activities.”</i> This condition was signed off on 10 October 2024 through submission of a Habitat Management Plan for the Site

Section or drawing with proposed changes	Detail of changes and reference
	which supersedes this section of the LEMP. There is no change to the impact assessment.
Section 6. Framework SSSI Grassland Management Plan	The area of scrub to be removed each year is now 0.06ha (was 0.1ha). There are no other changes to this section.
Figure 4. Proposed Landscape and Habitat General Arrangement drawing reference 293651-LD-XX-DR-0001 v5	Amendments are captured on revised <i>Figure 4. Proposed Landscape and Habitat General Arrangement (293651-LD-XX-DR-0001 v6)</i> in Appendix B.
Figure 5. Existing Conditions and Vegetation Lost and Retained drawing reference 293651-LD-XX-DR-0002 v2	Minor changes to the area of dormouse habitat lost during construction are shown in <i>Figure 5. Existing Conditions and Vegetation Lost and Retained (293651-LD-XX-DR-0002 v3)</i> in Appendix B which details scrub removed during construction.

Vegetation clearance and planting quantities originally included within the LEMP have been amended and any changes are shown in **Table 8** below.

Table 8: Vegetation Clearance and Planting Quantities

Site Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Change
Main Site								
Retained area								
Planting	Original +0.41ha* of scrubby broadleaved woodland (*note error in original figure, this should state 26 hazel trees) Proposed 26 hazel trees	n/a	n/a	n/a	n/a	n/a	n/a	
Construction Area								
Scrub clearance	Original 0.58ha Proposed 0.58ha	n/a	n/a	n/a	n/a	n/a	n/a	
Broadleaved woodland- scrub planting	Original n/a Proposed 0.44ha	Original 0.41ha Proposed 0.35ha	n/a	n/a	n/a	n/a	n/a	
Grassland seeding/plug planting	n/a	Original 1.38ha Proposed 1.38ha	n/a	n/a	n/a	n/a	n/a	
Dormouse Compensation Area								

Site Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Change
Grassland Zone								
Tree removal	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Tree planting	26 trees (hazel)	n/a	n/a	n/a	n/a	n/a	n/a	
Scrub Zone								
Scrub clearance	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Tree planting	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Grassland Compensation Area								
Scrub clearance	Original 0.2ha Proposed 0.06ha	Original 0.2ha Proposed 0.06ha	Original 0.2ha Proposed 0.06ha	Original 0.2ha Proposed 0.06ha	0.2ha	0.2ha	0.2ha	Over 4 years not 7 years
Grassland seeding/plug planting	Original 0.2ha Proposed 0.06ha	Original 0.2ha Proposed 0.06ha	Original 0.2ha Proposed 0.06ha	Original 0.2ha Proposed 0.06ha	0.2ha	0.2ha	0.2ha	Over 4 years not 7 years
Tree removal	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Over 4 years not 7 years

6. Two-staged Vegetation Clearance

Table 1 ‘Summary of Changes’; **Ref 12**; Ecology

The details within the following sections or drawings within the Two stage vegetation clearance (293651-ARUP-XX-XX-RP-YE-0005) have changed as a result of the design changes detailed in **Table 1**. All changes are already detailed within this document but are referenced below in **Table 9** for ease.

Table 9: changes to two-staged vegetation clearance

Section or drawing with proposed changes	Detail of changes and reference
Section 4.3.2 Grassland compensation area	Area to be cleared is now 0.06ha per year over 4 years as opposed to 0.1ha per year over 7 years. The impact of this is assessed in Section 3.5.

7. Information to Inform a Habitats Regulations Assessment

There are no changes to the Habitats Regulations Assessment (293651-ARUP-XX-XX-RP-YE-0003).

8. Conclusion

This Ecological Assessment has reviewed the proposed amendments to the Celtic Lakes substation development, as required for the Section 73 planning application. The report details and assesses the latest design of the substation, including the changes associated with the compensatory habitats and enhancements to be provided within the offsite Grassland Compensation Area (GCA) located within the Gwent Levels - St Brides Site of Special Scientific Interest (SSSI), revised construction timelines, and evolving planning policy requirements, compared to those outlined within the 2024 planning permission (planning reference: 23/0878).

A Green Infrastructure Statement has been provided within **Appendix A** in order to comply with revised planning policy. Changes to drawings have been highlighted and the relevant revised drawings are included in **Appendix C**. Changes to any habitat calculations have been highlighted and quantified throughout along with any associated changes to the calculated habitat replacement ratios.

While there have been minor reductions in the extent of grassland compensation and enhancement provisions and pond habitat creation compared to the original planning consent, these changes have been carefully balanced against the need to protect sensitive species, notably hazel dormice. The revised approach, informed by updated baseline surveys and ongoing consultation with stakeholders, ensures that the required habitat replacement and improvement ratios are still met or exceeded at a ratio of 1.5:1 considering the aspects of ecosystem resilience, and that the net benefit for biodiversity (NBB) mandated by Planning Policy Wales (Edition 12) is achieved.

The updated programme for vegetation clearance and habitat restoration reflects both ecological constraints and practical considerations, reducing the duration of works and the impact on dormouse populations. The embedded biodiversity design, ongoing management, and monitoring commitments will deliver long-term ecological enhancements, supporting ecosystem resilience, compensatory habitat for the affected Site of importance for Nature Conservation (SINC) and the conservation objectives of the SSSI.

In summary, despite some reductions in the scale of certain enhancements, the proposed amendments do not result in any significant adverse impacts on ecology compared to the original assessment. The project continues to deliver a net benefit for biodiversity, maintains compliance with relevant planning policies and statutory requirements, and supports the favourable conservation status of key species and habitats within the site and its surroundings.

Appendix A

Green Infrastructure Statement

Appendices provided separately

Appendix B

Revised General Ecology Drawings

Appendices provided separately

Appendix C

Correspondence on GCA

Appendices provided separately