Chapter 04:
Landscape & Visual

Table of Contents

Table of Figures

List of Tables

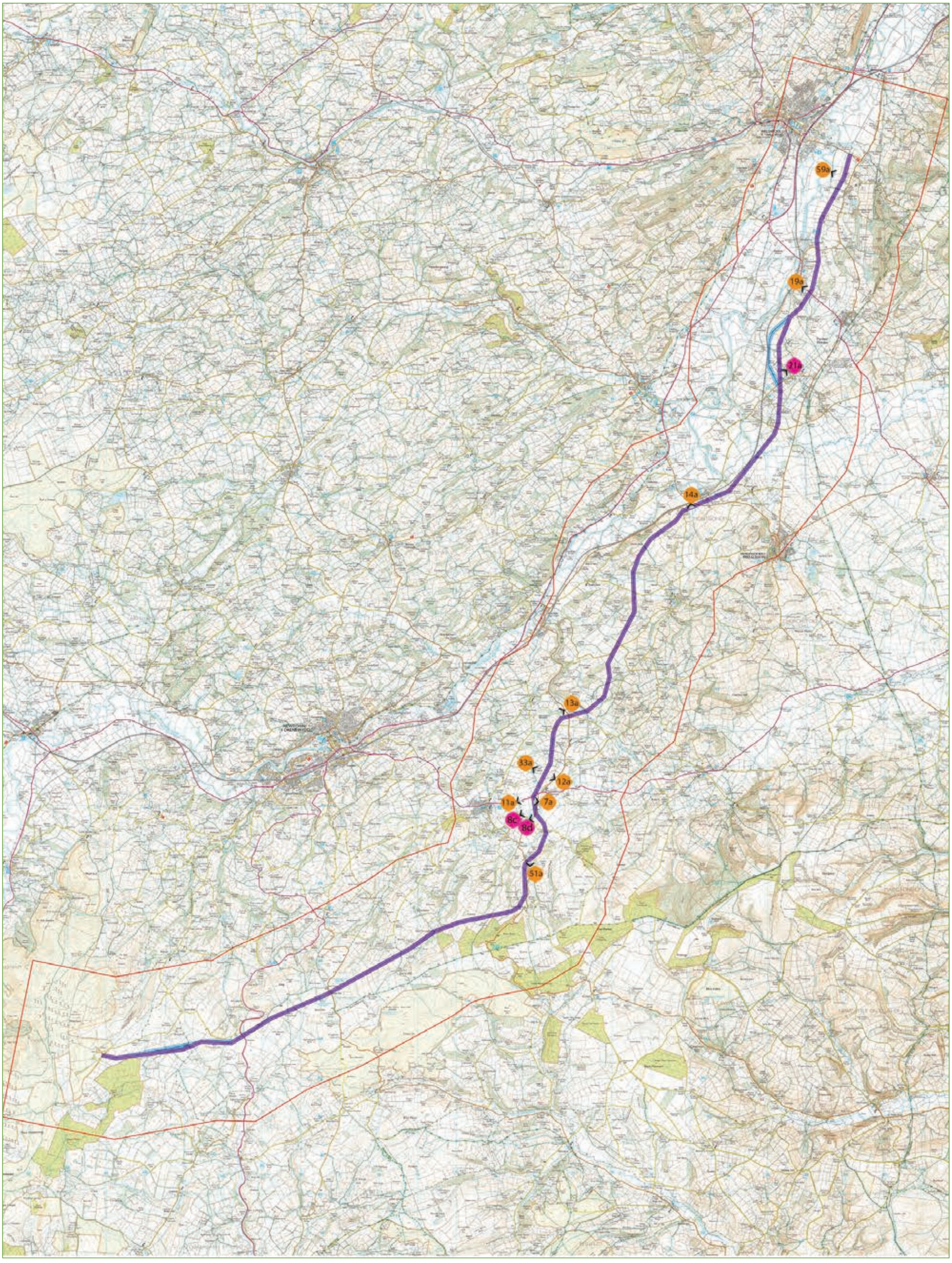

Figure 4.1

Viewpoint Locations

NTS

4.1 Background

4.1.1 This chapter of the Addendum presents the following landscape and visual information:

- Additional Information
  - Review of December 2009 ES landscape & visual assessments in respect of winter viewpoints
- Amended Development
  - Background
  - Baseline
  - Assessment of Effects
  - Cumulative Effects
  - Mitigation & Residual Effects
  - Summary

4.1.2 The assessment has been prepared by chartered landscape architects from Gillespies' Altrincham (Manchester) office. Gillespies holds 'Registered Environmental Effect Assessment Membership' of the Institute of Environmental Management and Assessment (EMA).

4.2 Additional Information

Winter Viewpoints

Methodology

4.2.1 The methodology for producing the winter viewpoint appraisals is detailed in Chapter 6.3 of the December 2009 ES. The assessment included in the Addendum was carried out through further site visits undertaken in autumn 2010 in clear conditions. Viewpoints were only revisited in locations where the presence of trees in full leaf may have affected the outcome of the original assessment. These are included below. Note that in some photographs, the pole locations differ slightly from those in the comparable December 2009 viewpoint. This is because the viewpoints in the Addendum are based on the slightly revised pole locations referred to in Chapter 1.0.

4.2.2 Near Kerry Saw Mills, two new viewpoints (Viewpoints 08C and 08D) were prepared in response to local residents' feedback to the December 2009 ES. These are included with the winter viewpoint appraisal.

4.2.3 The locations of both the winter viewpoints and the additional Saw Mills viewpoints are shown in Figure 4.1: Viewpoint Locations and a summary of the analysis provide in the viewpoint sheets at the end of this chapter.

Assessment of Effects

4.2.4 The visual appraisal described in the viewpoint sheets and summarised in Table 4.1 shows that the absence of foliage has no effect on the outcome of the visual appraisal included in the December 2009 ES and the assessment of significance remains the same.

4.2.5 The assessment of significance for the two new viewpoints near Kerry Saw Mills is minor and therefore not significant. Some additional planting to provide further mitigation is, however, proposed.

TABLE 4.1: SUMMARY OF WINTER VIEWPOINT SHEETS

Number	Viewpoint Location	December 2009 Assessment of Significance	Winter Viewpoint Assessment of Significance
7a	Glanmihelli, Glanmule	**Moderate** (significant)	**Moderate** (significant)
11a	A489 at Greenfields	Minor (not significant)	Minor (not significant)
12a	B4368 north of Glanmule	**Moderate** (significant)	**Moderate** (significant)
13a	Upper Maenllwyd	**Moderate** (significant)	**Moderate** (significant)
14a	Junction of B4385 & B4386 at Caerhowel	**Moderate** (significant)	**Moderate** (significant)
19a	A490 at Halmar, Fron	**Moderate** (significant)	**Moderate** (significant)
33a	Great Cloddiau Farm	Minor (not significant)	Minor (not significant)
51a	Bridleway above Cilthriew	**Moderate** (significant)	**Moderate** (significant)
59a	Footpath west of Leighton	Minor (not significant)	Minor (not significant)
Number	**New Viewpoint Location**		**Assessment of Significance**
08c	Northern edge of Kerry Saw Mills		Minor (not significant)
08d	North-eastern edge of Kerry Saw Mills		Minor (not significant)

4.3 Amended Development

Background

4.3.1 This section assesses the likely effects of the Amended Development on the landscape and on visual amenity or views. Where significant landscape or visual effects are identified, it puts forward mitigation measures to prevent, reduce or offset them and then re-assesses the residual effects remaining after mitigation.

4.3.2 As explained in the introduction to the Addendum, since submission of the December 2009 ES, the design has been subject to minor design amendments arising from further survey work and discussions with landowners, together with further technical review of the suitability of the design for the area where it is to be installed. These have resulted in changes to two sections of the route:

- Between Poles 45 – 63 over a distance of 1.7km, with the result that the outside edge of the 100m corridor moves a maximum 300m to the east.
- Between Poles 360 – 371 over a distance of 900m with the result that the outside edge of the 100m corridor moves a maximum 90m to the south.

4.3.3 SPEN refers to these changes as the Amended Development. Further detail on the changes is provided in Chapter 3.0: Feedback Response and Amended Development. An overview is presented in Figures 3.2 and 3.3.

Forden

4.3.4 The route deviates from that published in the December 2009 ES at Pole 43, departing the previous 100m corridor from Pole 45. From here it swings to a south to south-westerly line crossing over grazing fields, small tree groups and hedgerows. To the west of the farm complex of Pen-y-lan the line turns to run directly south, passing to the east of a new property, over an unnamed lane and to the west of St Michaels Crescent, over several arable fields before passing to the west of Church Farm. The line then oversails the minor road that runs through Forden to rejoin the previous route at Pole 63.

Bryn-picca

4.3.5 The route deviates from that published in the December 2009 ES at Pole 344, however it is not until pole 360 that the line falls outside the previous 100m corridor. From Pole 360 the route runs briefly in a west to south-westerly direction, before turning at pole 362 to run in an almost westerly direction, lying roughly parallel to the previous route, but situated closer to the River Camnant, crossing it directly south of Bryn-picca. From here the route continues in a westerly direction, moving away from the river and rejoining the previous corridor at Pole 371, and the previous route at Pole 383.

Scoping & Consultation

4.3.6 Chapter 2.0 of the December 2009 ES set out the full scoping and consultation process, which was undertaken as part of the original EIA, whilst Chapter 1.0 of the Addendum refers to the ongoing consultation process since submission of the application.

Assessment Methodology

4.3.7 The methodology for the landscape and visual assessment for the Amended Development is detailed in Chapter 6.3 of the December 2009 ES. As discussed in that document, the methodology draws on the latest available LANDMAP data and Ordnance Survey information. The baseline landscape character also utilises information from the Powys Landscape Character Study (2008), which uses all aspects of LANDMAP as its primary data source to define landscape character areas.

4.3.8 Essentially, the methodology combines an assessment of the expected magnitude of change arising from the overhead line, with the sensitivity of the landscape and visual receptors to the type of development proposed.

4.3.9 The effects are categorised as follows:

- **None** - no change to a landscape or view
- **Minor** - a detectable but non-material change to a landscape or view
- **Moderate** - a material but non-fundamental change to a landscape or view
- **Major** - a fundamental change to the landscape or view

Note that because of the nature of the proposed development, all effects are considered adverse.

Study Area

4.3.10 In the context of the proposed changes to the route, it was considered appropriate to retain the original study area for the scheme. This extends to a maximum 2km from the route of the proposed overhead line. Beyond this distance, the effects of the development will be insignificant in terms of the EIA Regulations. The approach to the assessment and delineation of the study area remained flexible and if, during the assessment, potential significant landscape or visual effects had been identified close to the edge of the study area, it would have been extended such that it contained all of the likely significant effects identified.

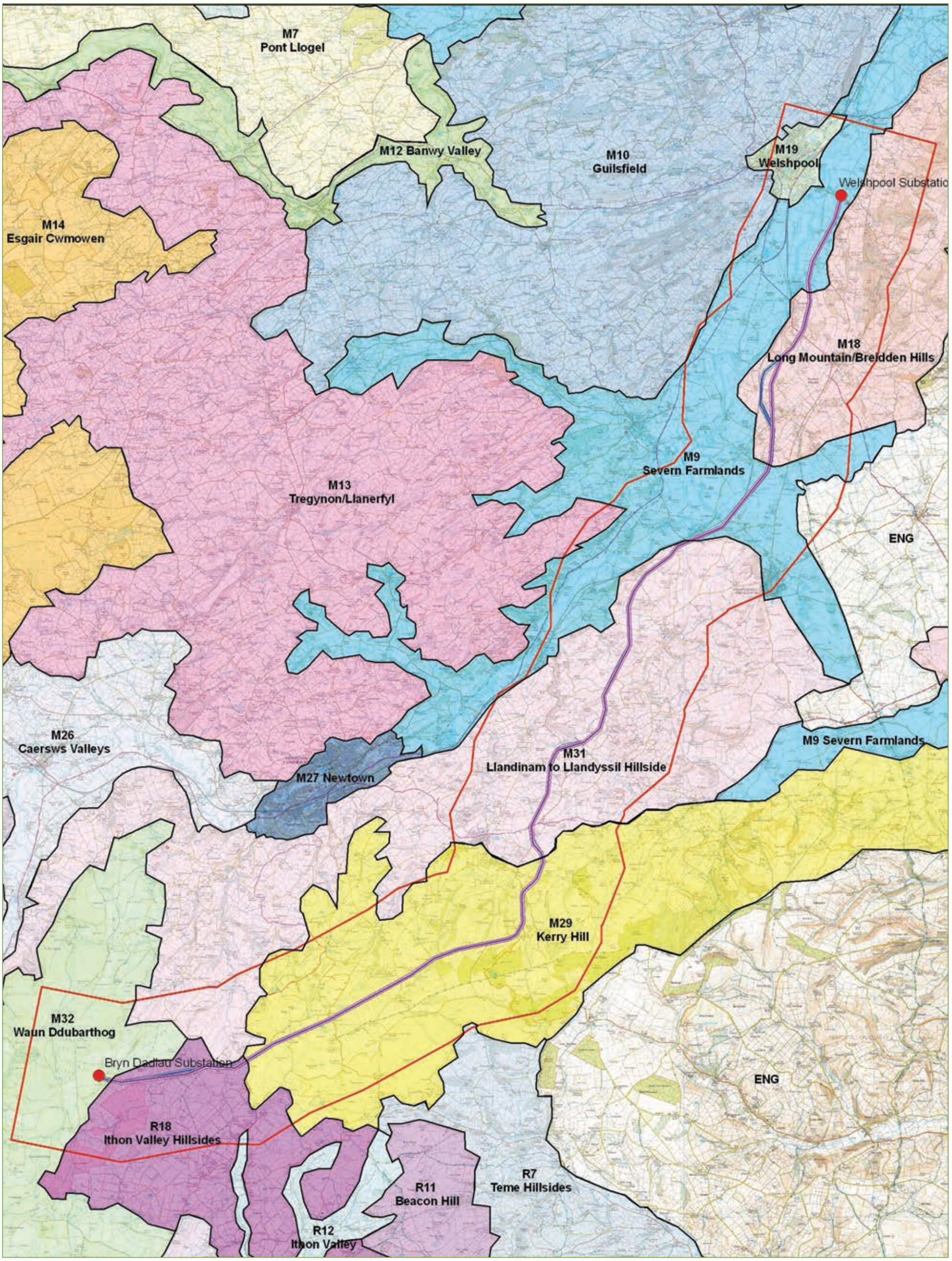

Figure 4.2

Powys Landscape Character Areas (LCAs)

NTS

Key:

- Substations
- Landscape and Visual Study Area
- Previous Route from Dec 2009 ES
- Proposed Route
- M29 Powys Landscape Character Areas

North

SP ENERGY NETWORKS

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Viewpoint Analysis

4.3.11 A viewpoint analysis was prepared for the section of Amended Development near Forden. The location (21A) was selected following on-site review and consultation with the local community and statutory stakeholders. To illustrate the appearance of the overhead line, a photomontage was produced for the viewpoint. A plan showing the locations of the new viewpoint is included in Figure 4.1. No viewpoint analysis was produced for the Bryn-picca section of the Amended Development as the amendment was very minor and unlikely to affect many people.

Visual Impact Analysis

4.3.12 In addition to the viewpoint analysis, an assessment was made of changes in visual amenity likely to be experienced by all potential receptors within the study area for the Amended Development. This included residents, commercial, transport and amenity (including footpath and bridleway) users.

Limitations

4.3.13 There were no limitations in carrying out the landscape and visual assessment for the Amended Development.

4.4 Baseline

Background

4.4.1 Chapter 6.4 of the December 2009 ES describes the baseline or existing landscape and visual conditions of the study area. This description remains applicable to the Amended Development.

4.4.2 For the purposes of the assessment, it is assumed that the re-powered and extended Llandinam wind farm is constructed and operational. It also assumes the presence of other proposed wind farms, which are currently the subject of connection offers or are in the planning system, namely:

- Hirddywel (Planning Ref: P2010/0650 dated 30 June 2010)
- Llaithddu (Planning Ref: BERR 2008/2 dated 21 May 2008)
- Llanbadarn (Planning Ref: BERR 2008/1 dated 12 March 2008)
- Bryngydfa (Planning Ref: P2009/0384 dated 3 April 2009)
- Garreg Llwyd (Planning Ref: P2008/0785 dated 2 June 2008)
- Neuadd Goch (in scoping)

Powys Landscape Character Assessment & LANDMAP

4.4.3 Chapter 6.4 (including Figures 6.10 and 6.11) of the December 2009 ES describes the landscape character of the study area with reference to LANDMAP and the Powys Landscape Character Assessment (Powys LCA).

4.4.4 This was reviewed with respect to the Amended Development.

Forden (Poles 43 – 63)

4.4.5 Powys LCA - this section of the route remains within LCA M18 – Long Mountain/ Breidden Hills.

4.4.6 LANDMAP - this section remains within MNTGMVS370 Crewgreen to Forden Hill & Scarp Visual and Sensory Aspect Area.

Bryn-picca (Poles 360 – 371)

4.4.7 Powys LCA - this section of the route remains within LCA R18 – Ithon Valley Hillsides.

4.4.8 LANDMAP - this section remains within the same LANDMAP Aspect Areas as the submitted route, although as shown by the information in Figures 1 – 22 in Appendix F of the December 2009 ES, it lies closer to landscapes of lower overall evaluation in terms of Visual and Sensory, Historic and Landscape Habitats Aspect Areas.

Recreation

4.4.9 Near Forden, the Amended Development crosses one additional footpath and crosses/runs parallel to two longer sections of footpath. At Bryn-picca, the Amended Development does not cross any additional public rights of way, although it lies slightly closer to a public forest.

4.5 Assessment of Landscape & Visual Effects during Construction & Decommissioning

4.5.1 The limited extent of the disturbance and short duration of the construction and decommissioning stage effects, combined with the progressive reinstatement of individual pole locations will ensure that the effects of these phases on the landscape and visual amenity of the locality are minimised. Individual activities will not be experienced concurrently and will take place over short time scales.

4.5.2 Construction effects are primarily concerned with the effects arising from the removal of/or works to trees and hedgerows and the effects of any new access tracks.

Forden (poles 43 – 63)

4.5.3 To facilitate construction of the Amended Development, six individual trees, including a mature field boundary oak located to the north-west of Church Farm will need to be felled. A further mature oak will need crown lifting. Two groups of tree will also need reducing to 1.4m in height. One section of hedgerow will have to be removed and a further three sections reduced in height to 1.4m. For comparison, these works are set out in Table 4.2, alongside the works for the same section of the original route.

TABLE 4.2: ASSESSMENT OF EFFECTS OF TREE WORKS NEAR FORDEN

Proposed Works	Original Scheme	Amended Development
Trees to be felled	22 (including 1 mature oak)	6 (including 1 mature oak)
Trees to be pruned	10 (including 2 mature oaks)	1 (mature oak) and 2 groups
Sections of hedgerow to be removed	None	1 Section (7 lin.m)
Hedgerows to be reduced in height	5 sections (all 20 lin. M)	3 Sections (including 2 sections of 30 lin.m)

Bryn-picca (poles 360 – 371)

4.5.4 To facilitate construction of the Amended Development, two sections of hedgerow will have to be reduced in height to 1.4m. For comparison, these works are set out in Table 4.3, alongside the works for the same section of the original route.

TABLE 4.3: ASSESSMENT OF EFFECTS OF TREE WORKS NEAR BRYN-PICCA

Proposed Works	Original Scheme	Amended Development
Trees to be felled	4	Nil
Trees to be pruned	Nil	Nil
Sections of hedgerow to be removed	Nil	Nil
Hedgerows to be reduced in height	1 section (20lin. m)	2 sections (20lin. m each)

4.5.5 The Amended Development both at Forden and Bryn-picca will result in fewer tree losses compared to the original scheme. With respect to hedgerow removal and pruning, the Amended Development will result in one additional section of hedgerow to be removed near Forden and one additional section of hedgerow to be reduced in height near Bryn-picca.

4.5.6 The Amended Development has less overall effect on trees and hedgerows than the same sections of the original scheme. Given that hedges and trees are a common feature of the lower lying parts of the study area, the required works will not have a significant effect on the area's landscape character.

4.5.7 Access tracks for construction will generally seek to follow existing tracks and gateways and this is not expected to result in significant adverse effects on landscape or visual receptors. No new access tracks are required for the construction of the two new sections of overhead line. Proposed access tracks for Bryn-picca remain as shown in Figure 4.3 of the December 2009 ES, and for Forden are shown in Figure 3.4 of the Addendum.

4.5.8 In terms of landscape, the relatively small-scale effects and disturbances arising from construction will not fundamentally modify its primary characteristics, even on a temporary basis. As such, there are no anticipated effects on landscape character.

4.5.9 The only visual receptors likely to be temporarily affected are the few properties that lie in close proximity to the individual pole locations and the tracks and lanes, which will be used for the limited traffic. Although receptors are of high sensitivity, the visual effects will be of low magnitude and will result in minor adverse effects, which are considered not significant.

4.5.10 No significant landscape or visual effects have been identified, therefore, no additional mitigation measures are proposed and construction and decommissioning effects will not be considered further in this chapter.

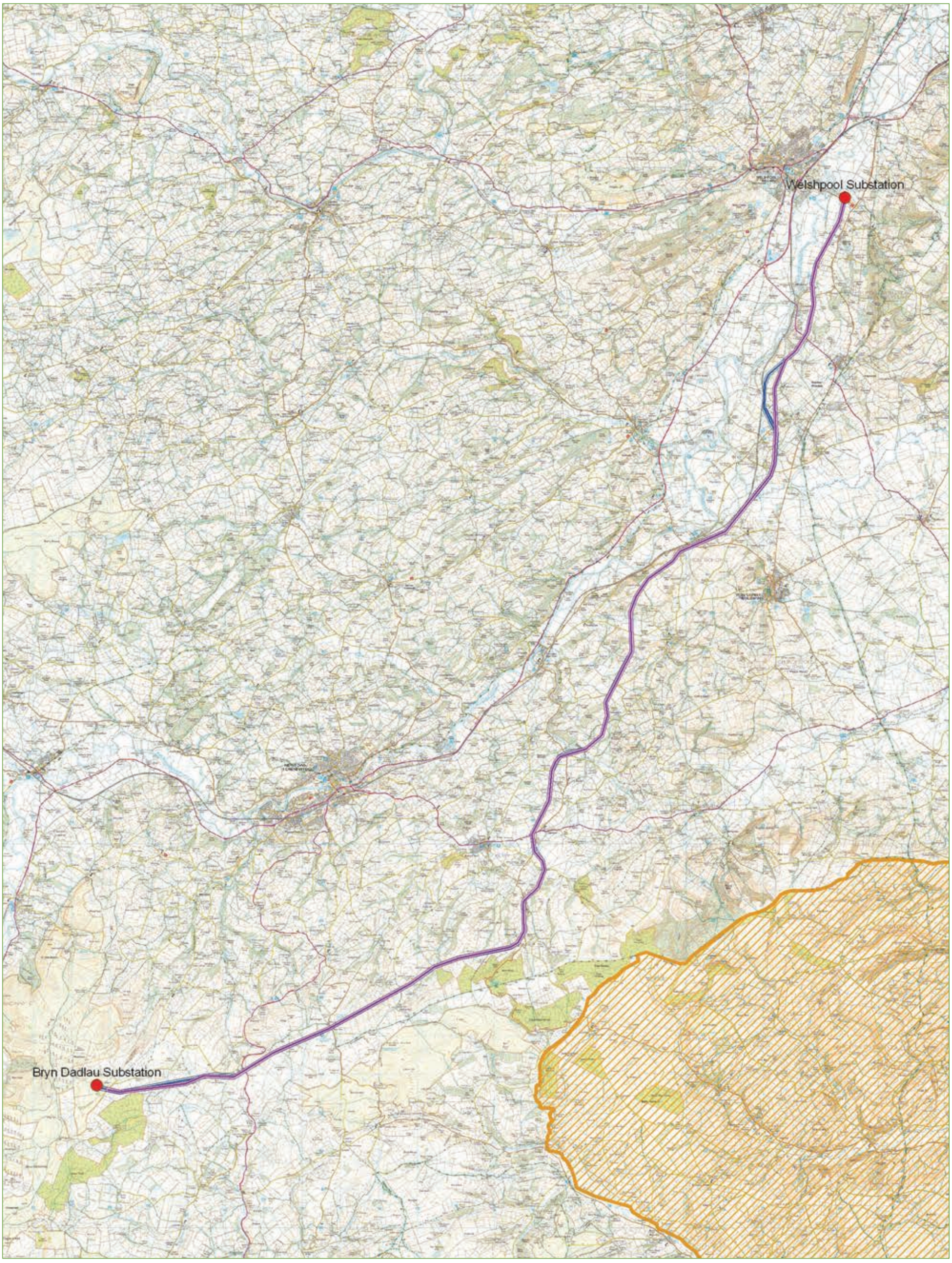


Figure 4.3

Shropshire Hills AONB

NTS

Key:

- Substations
- Shropshire Hills AONB
- Previous Route from Dec 2009 ES
- Proposed Route

North

SP ENERGY NETWORKS

GILLESPIES

4.6 Assessment of Landscape Effects during Operation

4.6.1 The main operational effects of the two sections of Amended Development, will be the introduction of new overhead line on wood pole supports into areas of countryside, which previously were unaffected by the proposal. Effects may also arise from the need to occasionally prune existing vegetation in order to maintain statutory safety clearances.

4.6.2 The effect of these changes on the landscape only becomes significant when the new structures become one of the defining characteristics of that landscape or will contrast with its existing character, and/or where existing key characteristics will be lost or changed. As discussed in Chapter 6.3 of the December 2009 ES, this depends on the character and quality of the landscape, the nature of views and whether any landscape designations apply. It also depends on the scale and nature of the change and the extent or duration of the effect.

4.6.3 Large-scale changes, which introduce new, discordant or intrusive elements into the landscape are more likely to be significant than small changes or changes involving features already present within the view.

4.6.4 The Amended Development lies within the same two Powys Landscape Character Areas (LCAs), as the original scheme as shown in Figure 4.2: Powys Landscape Character Areas.

Forden (Poles 43 – 63)

LCA M18 – Long Mountain/Breidden Hills

4.6.5 The Amended Development will still be located within this LCA. As shown in Table 6.6 of the December 2009 ES, LANDMAP gives this area a moderate to high overall evaluation for each Evaluated Aspect. This means that the area is considered of local to regional importance. In terms of LANDMAP, this section remains within Crewgreen to Forden Hill and Scarp VSA (*MNTGMVS370*), which is given an overall high evaluation.

4.6.6 Essentially, whilst much of this LCA displays high qualities, its western edge is affected by proximity to the railway and its association with urban land uses on the outskirts of Welshpool and along the Severn Valley. The proposed new section of overhead line will add to the range of manmade structures evident within this LCA (including overhead lines) but will not constitute an appreciable change in its defining characteristics. The LCA's sensitivity to further overhead line development is therefore considered medium. The proposed overhead line will influence only a small part of the wider Long Mountain/Breidden Hills LCA and the low magnitude of change will result in minor adverse effects on the overall character of this LCA. As with the original section of overhead line, this minor effect is not significant.

Bryn-picca (Poles 360 – 371)

LCA R18 – Ithon Valley Hillsides

4.6.7 The Amended Development will still be located within this LCA. As shown in Table 6.6 of the December 2009 ES, LANDMAP gives this area a moderate to high overall evaluation for each Evaluated Aspect. This means that the area is considered of local to regional importance. In terms of LANDMAP, this section remains within Kerry Ridgeway VSA (MNTGMVS254), which is given an overall high evaluation. However, it lies closer and almost on the boundary with the Improved Upland West of Upper Ithon VSA (RDNRVS123), which is given an overall moderate evaluation.

4.6.8 The new section of overhead line will broadly follow the boundary of the two LCAs, across an area of sloping ground at the head of the Ithon valley, which forms a transition between the upland moorland and the valley floor.

4.6.9 It is a landscape, which is locally dominated by commercial forestry plantations and has views of the existing Llandinam wind farm. This dominance of the landscape by mans' activities is one of its defining characteristics. Combine this with the undulating landform and scattered trees and woodlands, and its overall sensitivity to overhead line development is considered low. As noted in Chapter 6.6.83 of the December 2009 ES, the introduction of an additional manmade feature in the landscape will not constitute an appreciable change in its defining characteristics.

4.6.10 The proposed overhead line will influence only a small part of the wider Ithon Valley Hillsides LCA and the low magnitude of change will result in minor adverse effects on the overall character of this LCA. As with the original section of overhead line, this minor effect is not significant.

Effects on Designated Landscapes

4.6.11 The Amended Development will lie no closer to the boundary of the Shropshire Hills AONB, which is located to the east on the Welsh/English border. At its closest point, it lies 2.5km from the proposed overhead line as shown opposite in Figure 4.3: Shropshire Hills AONB. Whilst the landscape of the AONB is considered highly sensitive to overhead line development, the scale of the development and use of wood pole supports, combined with the intervening high ground and woodland, including large conifer plantations, means that the AONB should not experience any adverse effects.

Cumulative Effects on Landscape

4.6.12 For an assessment of the potential cumulative effects arising from the Amended Development together with the wider Mid Wales renewable energy project please refer to Chapter 7.0: Cumulative Review.

Summary of Landscape Effects

4.6.13 No significant landscape effects will arise from construction and decommissioning of the Amended Development.

4.6.14 As shown in Table 4.4, the operation of the Amended Development on the landscape of the two relevant Powys LCAs will be minor and therefore not significant. This is because the scale and appearance of the two new sections of overhead line means that they will not become defining characteristics of the landscape.

4.6.15 The proposed overhead line will only influence a small part of the overall geographical area of the LCAs and as such will not affect their integrity.

TABLE 4.4: SUMMARY OF LANDSCAPE EFFECTS DURING OPERATION

LCA No.	LCA Name	Landscape sensitivity to OHL	Magnitude of Change	Significance of Effect
M18	Long Mountain/ Breidden Hills	Medium	Low	Minor
R18	Ithon Valley Hillsides	Low	Low	Minor

4.7 Assessment of Visual Effects during Operation

4.7.1 The assessment of the visual effects of the Amended Development was undertaken through additional field surveys in 2010. For the section of overhead line near Forden, a new viewpoint (VP 21A) and photomontage was produced to illustrate the effects of the revised line on nearby properties.

Viewpoint Analysis

4.7.2 The viewpoint analysis illustrates that, because the amended section of overhead line lies closer to properties on the edge of Forden, the effect on visual amenity will be **moderate** and therefore **significant**. This represents a worsening of visual effect compared to the original proposal set out in the December 2009 ES.

4.7.3 In addition, there may be some cumulative effects arising from the proposed overhead line when seen in conjunction with an existing 33kV overhead line within the view (see Viewpoint 21A). These effects are also considered **significant**, which again represents a worsening of visual effect compared to the original proposal.

Visual Impact Assessment

4.7.4 Carried out alongside the viewpoint analysis was an appraisal of the Amended Development on nearby properties, amenity (users of footpaths, bridleways etc) and transport users as identified in Table 4.5.

TABLE 4.5: VISUAL RECEPTORS WITHIN THE STUDY AREA FOR THE AMENDED DEVELOPMENT

Properties As illustrated in Figure 6.1: Landscape Context of the December 2009 ES, in addition to the village of Forden, the study area for both sections of the Amended Development includes a mixture of small groups of houses and individual farms and properties. The Bryn-picca section is more sparsely settled and there are few properties likely to be affected.
Route Corridors Forden – users of a short section of the B4388 and the unnamed road near St Michael's Crescent may be affected as might users of a short section of the Shrewsbury to Aberystwyth railway. Other unclassified roads, lanes, footpaths and areas of open access are considered under the assessment of effects on the broader landscape and/or settlements.
Designated Landscapes/Culturally Important Landscape Features/ Recreational Visual effects on designated landscapes or setting of culturally important landscape features, including SAMs and listed buildings are covered in Chapter 6.0: Cultural Heritage. Visual effects on recreational landscapes are assessed here.

4.7.5 The results of the visual impact appraisal for the two sections of Amended Development are provided in Tables 4.6 and 4.7. These provide the name and type of receptor, the sensitivity of the receptor to the change in view and the predicted magnitude of change and overall effects. Where the overall effect for a receptor is likely to be significant, it is highlighted in bold.

4.7.6 Cumulative effects are noted in respect of existing overhead lines. For an assessment of any cumulative effects arising from existing or proposed infrastructure, which forms part of the wider Mid Wales renewable energy project, please refer to Chapter 7.0: Cumulative Review.

TABLE 4.6: FORDEN - SUMMARY OF VISUAL IMPACT ASSESSMENT BEFORE MITIGATION

Location	Visual Sensitivity to this Type of Development	Magnitude of Change	Effect on Visual Amenity	Significance	Duration	Cumulative (in respect of existing OHLs)
Villages, Groups of Properties and Farm Complexes						
Forden	High	Negligible	Minor	Not Significant	Long term, reversible	None
Properties near Forden	High	Medium	Moderate	**Significant**	Long term, reversible	**Significant**
Church Farm	High	Medium	Moderate	**Significant**	Long term, reversible	**Significant**
The Grove	High	Low	Minor	Not Significant	Long term, reversible	Potentially - but not significant
Pen-y-lan	High	Medium	Moderate	**Significant**	Long term, reversible	**Significant**
Edderton Hall and Farm	High	Negligible	Minor	Not Significant	Long term, reversible	None
Leisure and Recreational Routes						
Vale of Montgomery Historic Landscape	Medium	Variable but locally medium	Moderate	**Significant** (but very localised)	Long term, reversible	**Significant** (but very localised)
The Severn Way	High	Negligible	Minor	Not Significant	Long term, reversible	None
Offa's Dyke Path	High	Negligible	Minor	Not Significant	Long term, reversible	None
Local Rights of Way	Medium	Variable but locally medium	Moderate	**Significant** (but very localised)	Long term, reversible	**Significant** (but very localised)
Transport Routes						
B4388	Medium	Variable but locally medium	Moderate	**Significant** (but very localised)	Long term, reversible	**Significant** (but very localised)
Local Road Network	Medium	Variable but locally medium	Moderate	**Significant** (but very localised)	Long term, reversible	**Significant** (but very localised)
Shrewsbury to Aberystwyth Railway	Low	Negligible	Minor	Not Significant	Long term, reversible	Potentially but not significant

Summary of Visual Effects - Forden

4.7.7 The visual impact analysis for the section of Amended Development near Forden indicates that, a number of properties in the immediate vicinity of the overhead line will experience a **significant** effect on their visual amenity. Overall, more properties are likely to be adversely affected than for the original scheme presented in the December 2009 ES.

4.7.8 Users of local public rights of way, including Offa's Dyke Path and The Severn Way will be variably affected by the Amended Development near Forden. Overall, the amended section of overhead line crosses one additional footpath and crosses/ runs parallel to two longer sections of footpath than the original scheme.

4.7.9 In places close up, these effects on the visual amenity of footpath users will be **significant**, albeit very localised.

4.7.10 As noted in Chapter 6.0: Cultural Heritage of the Addendum, in respect to the Vale of Montgomery Registered Historic Landscape, an Assessment of the Significance of Impacts of Development on Historic Landscape (ASIDOHL) was conducted for the original ES. It is considered that the amendment to the route is unlikely to have any effect on the conclusions drawn from that study.

4.7.11 In terms of transport, users of a short section of the B4388 and local road network will have views of the overhead line. The effect on visual amenity will be moderate and therefore **significant**. However, the effects on the lane will be localised and transient.

TABLE 4.7: BRYN-PICCA - SUMMARY OF VISUAL IMPACT ASSESSMENT BEFORE MITIGATION

Location	Visual Sensitivity to this Type of Development	Magnitude of Change	Effect on Visual Amenity	Significance	Duration	Cumulative (in respect of existing OHLs)
Individual Properties						
Individual Properties	High	Negligible	Minor	Not Significant	Long term, reversible	None
Leisure and Recreational Facilities						
Public Forest (and other open access areas)	Medium	Variable but locally medium	Moderate	**Significant** (but very localised)	Long term, reversible	None
Local Rights of Way	Medium	Variable but locally medium	Moderate	**Significant** (but very localised)	Long term, reversible	None
Transport Routes						
Local Lanes and Access Tracks	Medium	Variable but locally medium	Moderate	**Significant** (but very localised)	Long term, reversible	None

Summary of Visual Effects - Bryn Picca

4.7.12 The analysis of visual effects for the section of Amended Development near Bryn-picca indicates that no properties will experience a significant adverse effect on their visual amenity. This represents no change to the situation for the original scheme presented in the December 2009 ES.

4.7.13 Users of local public rights of way, including a public forest and other open access areas will be variably affected by the Amended Development near Bryn-picca. In places, effects on the visual amenity of footpath users will be **significant**, albeit very localised. The Amended Development does not cross any additional public rights of way compared to the original scheme in this area, however it does lie nearer to a public forest.

4.7.14 In terms of transport, there may be some localised **significant** adverse effects on local lanes and access tracks, but these effects will be localised and transient.

4.8 Assessment of Cumulative Effects

Forden

4.8.1 The existing network of 33kV and 11kV lines in the area may give rise to some cumulative effects when they are seen in close proximity to the proposed overhead line. The effects on properties around Forden will, in places, be **significant**.

Bryn - picca

4.8.2 In terms of cumulative effects, the only existing overhead lines in the area are some small 33kV lines serving the isolated properties to the north. Because of the separation distance between these and the proposed overhead line, there are no predicted cumulative effects.

4.8.3 For an assessment of any cumulative effects arising from existing or proposed infrastructure, which forms part of the wider Mid Wales renewable energy project, please refer to Chapter 7.0: Cumulative Review.

4.9 Mitigation & Residual Effects

Background

4.9.1 As noted previously, no significant landscape or visual effects will arise from construction or decommissioning of the Amended Development, therefore no mitigation measures are proposed.

4.9.2 This section therefore provides a description of the measures proposed to mitigate against identified adverse landscape and visual effects arising from the operational stages of the Amended Development, together with an assessment of the residual effects on the landscape and visual amenity of the affected area.

4.9.3 Based on the effects identified in the preceding assessment, SPEN has considered mitigation measures, including landscape management proposals such as hedgerow re-instatement and tree planting. Details of these measures are summarised in the mitigation schedule included in Chapter 8 .0: Summary of Effects & Draft Environmental Management Plan.

4.9.4 Residual effects remaining include effects on the visual amenity of some residents near Forden, users of some short sections of footpaths and roads, and users of a public forest near Bryn-picca.

Mitigation & Residual Effects – Landscape

4.9.5 With respect to the wider landscape of the Powys LCAs, no significant landscape effects will arise from the Amended Development.

Mitigation & Residual Effects – Visual

4.9.6 With respect to significant adverse effects on views both at Forden and Bryn-picca, the following mitigation measures are proposed. These are summarised below and set out in the schedule included in Chapter 8.0: Summary of Effects & Draft Environmental Management Plan.

Properties near Forden

4.9.7 New tree and hedgerow planting along field boundaries to both screen views and provide backclothing is proposed to help offset any effects. Whilst, in time, this will compensate for some of the adverse visual effects, it will not be possible to screen all views of the overhead line and the residual effect will remain **moderate** and therefore **significant.**

Church Farm

4.9.8 New tree and hedgerow planting along field boundaries to screen the overhead line from Church Farm is proposed to help offset any effects. Whilst, in time, this will compensate for some of the adverse visual effects, it will not be possible to screen all views of the overhead line and the residual effect will remain **moderate** and therefore **significant.**

Pen-y-lan

4.9.9 New woodland planting and tree and hedgerow planting along field boundaries around Pen-y-lan is proposed to both help screen views and provide backclothing of the proposed overhead line, to help offset any effects. Whilst, in time, this will compensate for some of the adverse visual effects, it will not be possible to screen all views of the overhead line and the residual effect will remain **moderate** and therefore **significant.**

Vale of Montgomery Historic Landscape

4.9.10 New woodland planting and tree and hedgerow planting along field boundaries in the Vale of Montgomery Historic Landscape is proposed to both help screen views and provide backclothing of the proposed overhead line, to help offset any effects. Whilst, in time, this will compensate for some of the adverse visual effects, it will not be possible to screen all views of the overhead line and the residual effect will remain **moderate** and therefore **significant.**

Footpaths & Bridleways

4.9.11 In terms of visual amenity, where poles occur in close proximity to a designated route, new tree and hedgerow planting is proposed to help offset any effects. Whilst, in time, this will compensate for some of the adverse visual effects, it will not be possible to screen views of all poles and the residual effect on short sections of bridleways and footpaths will remain **moderate** and therefore **significant.** However, this effect will be transient and very localised.

Users of the B4388 and Local Road/Lane Network

4.9.12 Localised tree and hedgerow planting along field boundaries is proposed to help offset any effects. Whilst, in time, this will compensate for some of the adverse visual effects, it will not be possible to screen all views of the overhead line and the residual effect on short sections will remain **moderate** and therefore **significant.** It should be noted that these effects are localised, transient and will diminish rapidly with distance.

Public Forest

4.9.13 It is felt that localised planting near Bryn-picca would not be appropriate and would not help reduce the effects, therefore no mitigation is proposed. The residual effect will remain **moderate** and therefore **significant.**

Tree Removals

4.9.14 Six trees and two tree groups will have to be felled, including one mature oak along the two new sections of line. Others will have to be trimmed to retain statutory safety clearances. Although trees are well represented in the local landscape, their removal will have some localised effects on the landscape and on views. To offset this, it is proposed to plant significantly more trees than the number being removed. In identifying suitable locations for new tree planting, SPEN will approach landowners and Forden Community Council with offers to plant trees in areas identified by them. A review of suitable locations is identified in the Draft Environmental Management Plan included in Chapter 8.0: Summary of Effects & Draft Environmental Management Plan. This is based on an understanding of the landscape of the study area and the identification of areas, which could benefit from landscape reinforcement or enhancement.

4.9.15 The residual effect of the tree removal on the landscape and on views will be minor and therefore not significant.

Cumulative Effects in Respect of Existing Overhead Lines

4.9.16 Proposed planting around St Michael's Crescent will help offset any cumulative effects arising from the proposed overhead line when seen in conjunction with the existing 33kV line. However the effect will remain **moderate** and therefore **significant**.

4.10 Summary

Additional Information

Winter Viewpoint Survey

4.10.1 The winter viewpoint survey identified no additional significant effects compared to the original scheme. The following viewpoints will experience **moderate** and therefore **significant** adverse visual effects.

- Viewpoint 12a – B4368 north of Glanmule
- Viewpoint 13a – Upper Maenllwyd
- Viewpoint 14a – Junction of B4385 and B4386 at Caerhowel
- Viewpoint 19a – A490 at Halmar, Fron
- Viewpoint 51a – Bridleway above Cilthriew

Kerry Saw Mills Viewpoints

4.10.2 The two new viewpoints prepared for Kerry Saw Mills identified no significant effects.

Amended Development

Construction & Decommissioning

4.10.3 There are no identified significant landscape or visual effects for the Amended Development.

4.10.4 Any likely significant effects will arise during the operational phases.

Forden

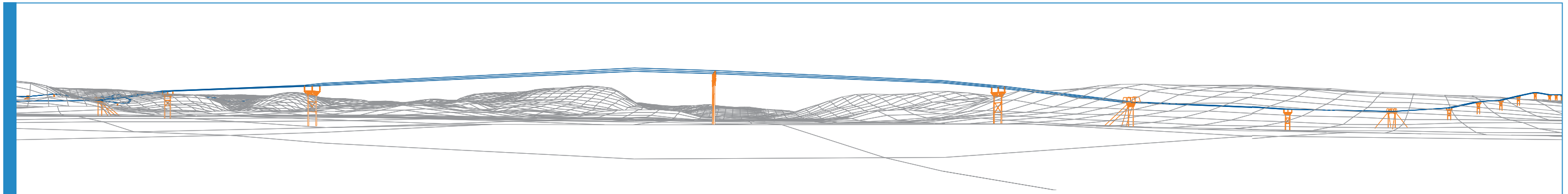
4.10.5 Significant visual effects have been identified for properties near Forden, Church Farm and Pen-y-lan, and localised visual effects for the B4388, local road network and footpaths. Tree and hedgerow planting is proposed in several locations to help screen views. However these measures will not screen all views and the effect will remain significant.

Bryn-picca

4.10.6 Significant localised visual effects have been identified for the public forest, footpaths and local access roads. However these effects are transient and very localised.

VIEWPOINT 07A

Photograph of existing view

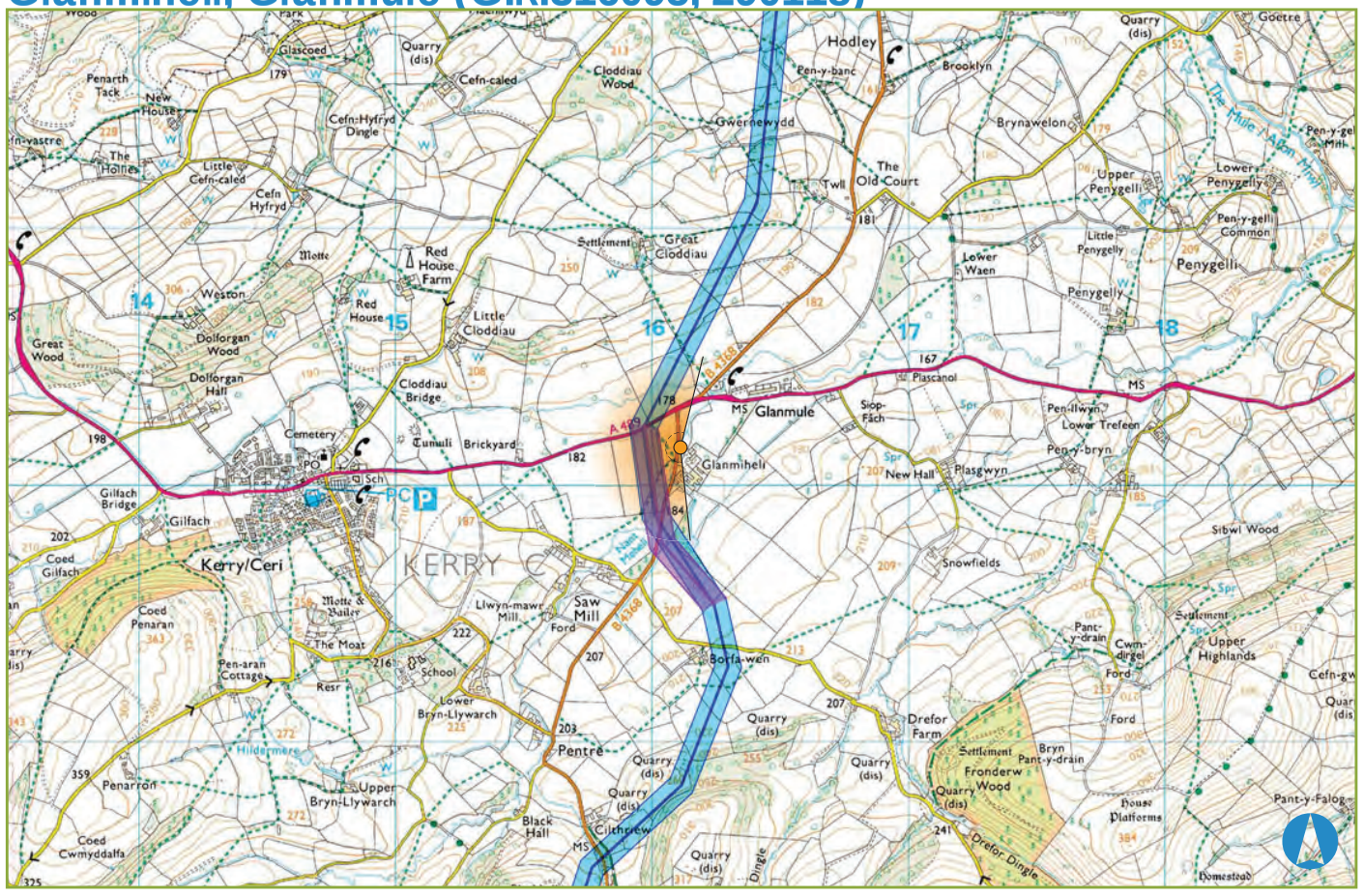


Wireframe of proposed grid connection

Photomontage of proposed grid connection

VIEWPOINT 07A

Glanmiheli, Glanmule (G.R.316095, 290118)



Grid Reference: 316095, 290118	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 188m	
Arc of View : 200°	
Nearest Visible Wood Pole: 170m	

Change from Viewpoint 07 in Dec 2009 ES:	▫ Winter view ▫ Hedge in middle ground clipped low ▫ Pole positions moved

Within: M31 Llandinam to Llandyssil Hillsides

Looking across: M31 Llandinam to Llandyssil Hillsides

Location

1. This 200° viewpoint is located on the B4368, in front of Glanmiheli Farm, just off the A489, looking to the west over the enclosed fields immediately in front of the farm. The view is taken from the verge by Miheli Bridge, through a break in the field boundary hedgerow. The B4368 is a reasonably busy minor road linking Abermule to Craven Arms.

2. The viewpoint will be experienced by a range of people, including the residents of Glanmiheli Farm and road users. The view is also representative of that experienced by users of two public right of ways, which start in front of Glanmiheli, and can be seen in the centre of the view. These run to the A489 and to Kerry Saw Mills. Due to the roadside vegetation, users of the road will experience transient intermittent views.

Existing View

3. The reasonably enclosed view looks across a small, flat arable field, strongly bounded by mature, relatively dense hedgerows. The B4368 is visible to the left and right of the view, its route emphasised by an existing single wood pole line. The road parallels the Nant Meheli stream. The presence of this stream is indicated by the small Glanmiheli bridge to the left of the view and the grassy riverbanks, which follow the western side of the road. The road is lined with a number of established deciduous trees, most notably a large mature oak tree, which is present in the left foreground of the view. The entrance to the Glanmiheli farm complex and one of the large outbuildings, are visible to the left of the view.

4. Beyond the field in the foreground of the view, are some of the hills that surround Kerry. These comprise pastures bounded by hedgerows and groups of both deciduous and coniferous woodland.

5. The viewpoint is located within the *M31 Llandinam to Llandyssil Hillsides LCA,* which is defined as '*extensive areas with an intricate patchwork of small field parcels bounded by mature hedgerows, together with more open, larger, grazed and cultivated fields, and dispersed settlements/farmsteads overlooking the flat open farmland of the Severn Vale*'.

Sensitivity

6. The visual sensitivity for the occupiers of the Glanmiheli farm complex to the proposed overhead line is considered **high**. The visual sensitivity for users of the B4368 and the public rights of way is considered **medium**.

Predicted View

7. From this location, the proposed overhead line will be visible, located 170m away to the west at its closest point. The line will run north-south across the extent of the view, but will be most noticeable in the centre of the view, where it follows the mature hedgerow running along the western field boundary and appears as a skyline feature. Due to the low nature of the hedgerow and surrounding landform, little screening or backclothing of the pole and line is provided, making it a prominent feature within the centre of the view. The remainder of the overhead line is partly screened by trees and hedgerows and backdropped by the rising hillsides, making it a visible, but less discernible feature.

Magnitude of Change

8. Whilst the proposed overhead line will be a prominent feature in the central part of this view, it will not be as visible throughout the remainder of the view. Although it will add a further manmade structure to those already present, it will not constitute an appreciable change in the defining characteristics of the landscape. The magnitude of overall change will be **medium**.

Potential Effect on Visual Amenity

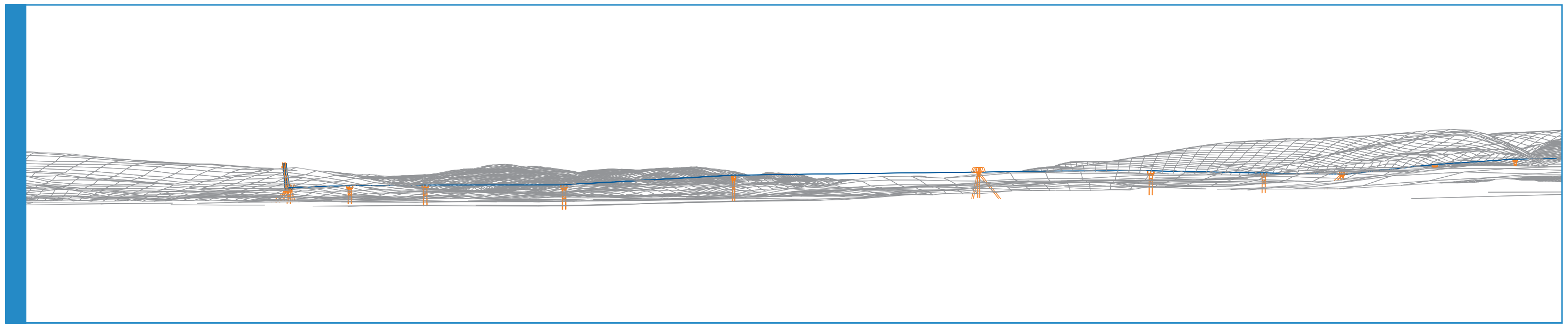
9. When the magnitude of change is correlated against the high visual sensitivity for occupiers of the farm complex, the effect on visual amenity arising from the proposed overhead line will be **moderate**, and therefore **significant**. When correlated with the medium visual sensitivity for users of the B1368 and the public rights of way, the effect on visual amenity will also be **moderate** and therefore **significant**.

Cumulative Effects in Respect of Existing Overhead Lines

10. There may be some cumulative effect arising from views of the proposed overhead line in combination with the existing wood poles running along the road. However, the degree of change will be limited and these cumulative effects are considered **not significant.**

VIEWPOINT 08C

Photograph of existing view



Wireframe of proposed grid connection

Photomontage of proposed grid connection

VIEWPOINT 08C

Kerry Saw Mills (G.R.315692, 289745)

Grid Reference: 315692, 289745	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 198m	
Arc of View : 120°	
Nearest Visible Wood Pole: 360m	

Change from Viewpoint 08 in Dec 2009 ES:	Additional viewpoint

Within: M31 Llandinam to Llandyssil Hillsides

Looking across: M29 Kerry Hill

Location

1. This 120° viewpoint is located on the northern edge of Kerry Saw Mills, in front of a row of terraced cottages, on the unclassified road that runs from the A489 through Saw Mills to the B4368. The view looks to the north-east, over the level grazing fields towards Glanmiheli Farm. It will be mainly experienced by residents of Kerry Saw Mills and is representative of views from properties on the northern edge of the village.

2. The view will be experienced by road users, mainly those travelling east along the unclassified road. Due to the roadside vegetation, users will experience transient intermittent views, afforded by gaps in the roadside hedgerows. Users of the footpath running across the field to the north-east will also experience the view.

Existing View

3. The reasonably enclosed view looks across a large, flat grazing field, bounded by mature, overgrown gappy hedgerows to the right of the photograph. A line of intermittent deciduous trees encloses the field to the north, indicating the line of the Nant Meheli stream. Beyond in the left and centre of the view, the rising hillsides of Llandyssil, scattered with trees and hedgerows, form the backdrop to the view.

4. The unnamed lane running through Saw Mills can be seen in the right of the view, bounded by mature hedgerows and deciduous trees. An existing overhead line runs north-south across the view, before turning to run parallel along the lane to the east. A single wood pole is situated in the middle of the field and forms a noticeable feature in the centre of the view. As indicated by the signpost visible in the left of the view, a footpath runs from the road across the field in north-easterly direction to the B4368 and the Glanmiheli Farm complex.

5. The viewpoint is located within the *M31 Llandinam to Llandyssil Hillsides LCA,* which is defined as '*extensive areas with an intricate patchwork of small field parcels bounded by mature hedgerows, together with more open larger grazed and cultivated fields, and dispersed settlements/farmsteads overlooking the flat open farmland of the Severn Vale*.'

Sensitivity

6. The visual sensitivity for the occupiers of the properties on the northern edge of Saw Mills to the proposed overhead line is considered **high**. For the users of both the unnamed lane and the footpath, the visual sensitivity is considered **medium**.

Predicted View

7. The proposed overhead line enters the view from the south, running in a northerly direction and lying 360m away from the view at its closest point. The line then turns to the north-east to climb the hillside on the left of the view. Due to the intervening vegetation afforded by the hedgerows and trees along the stream, the proposed overhead line will not be readily discernible as it crosses the view. Due to distance over which is the line is viewed and the backclothing offered by the landform and vegetation the line remains difficult to discern as it ascends the hillside.

Magnitude of Change

8. As the proposed overhead line will not be readily discernible from this location, the magnitude of change will be **low**.

Potential Effect on Visual Amenity

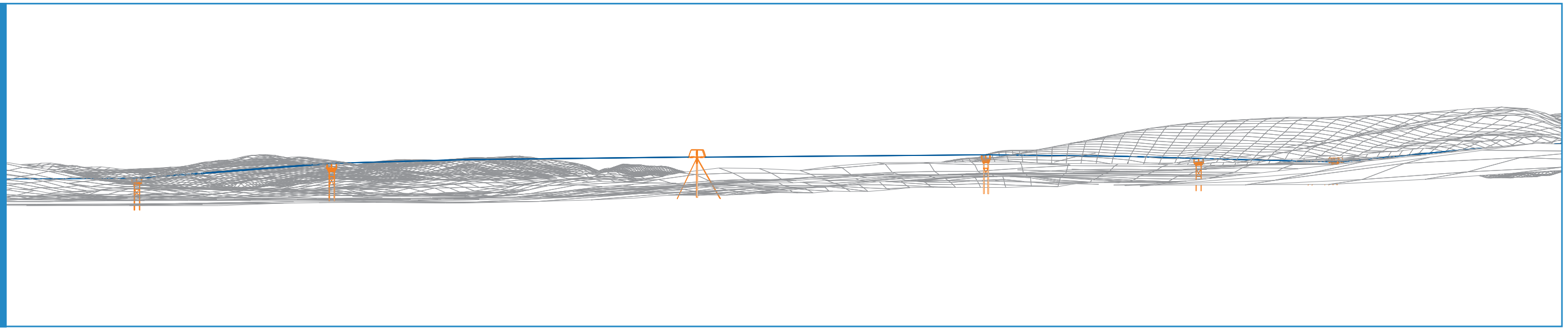
9. When the magnitude of change is correlated against the both the high visual sensitivity of the occupiers of Saw Mills, and the medium sensitivity of the users of the lane and footpath, the effect on visual amenity will be **minor** and therefore **not significant**.

Cumulative Effects in Respect of Existing Overhead Lines

10 As the proposed overhead line is not readily discernible there will be no cumulative effects arising from the proposed overhead line at this location.

VIEWPOINT 08D

Photograph of existing view

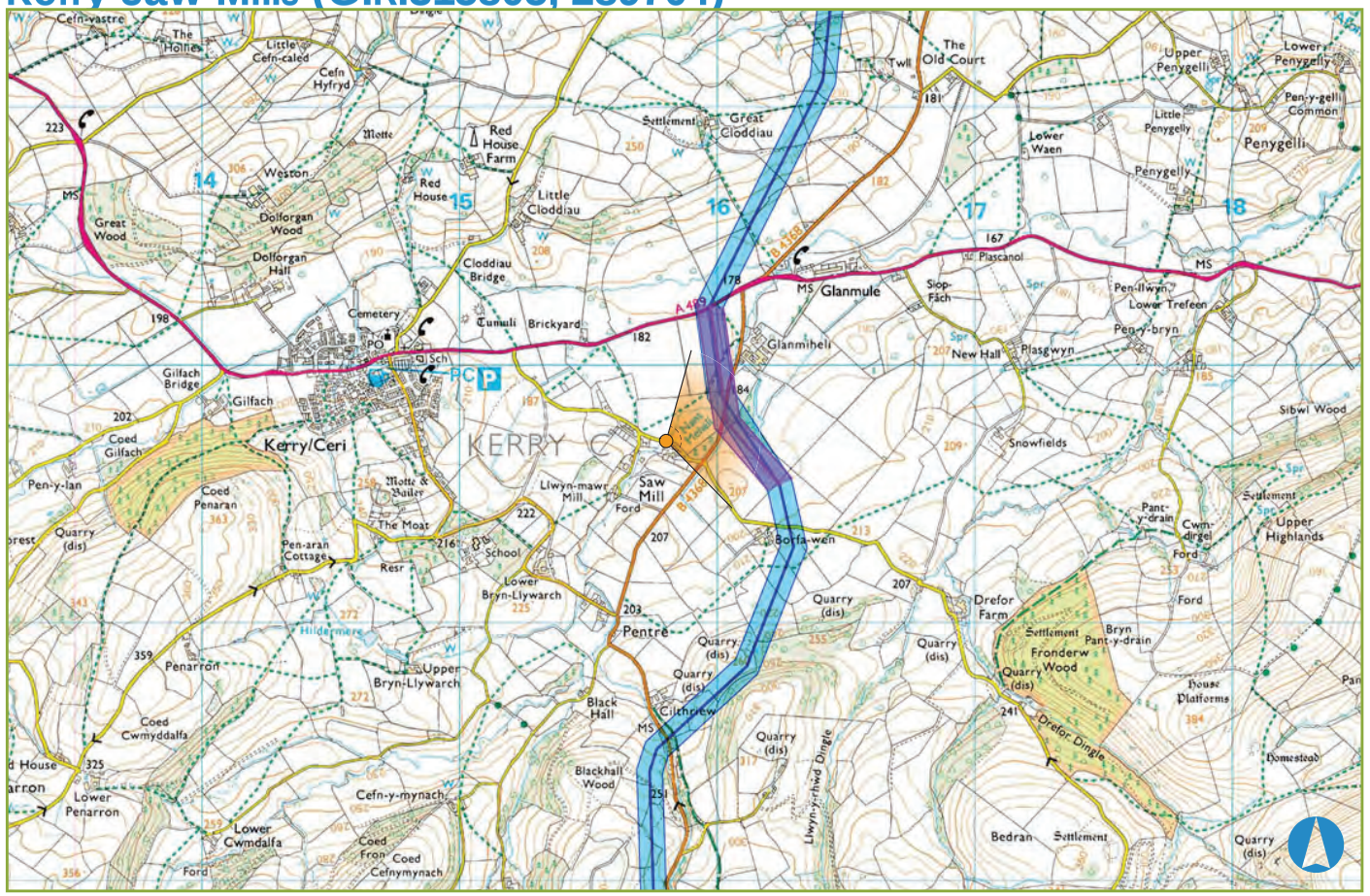


Wireframe of proposed grid connection

Photomontage of proposed grid connection

VIEWPOINT 08D

Kerry Saw Mills (G.R.315805, 289704)



Grid Reference: 315805, 289704	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 192m	
Arc of View : 120°	
Nearest Visible Wood Pole: 263m	

Change from Viewpoint 08 in Dec 2009 ES:	▫ Additional viewpoint

Within: M31 Llandinam to Llandyssil Hillsides

Looking across: M29 Kerry Hill

Location

1. This 120° viewpoint is located on the north-eastern edge of Kerry Saw Mills, in front of the property known as The Smithy, on the unclassified road that runs from the A489 through Saw Mills to the B4368. The view looks to the east, through the roadside hedgerows, over a flat grazing field towards the Glanmiheli Farm complex. It will be mainly experienced by residents of Kerry Saw Mills and is representative of views from properties on the north-eastern edge of the village.

2. The view will be experienced by road users, mainly those travelling east along the unclassified road. Due to the roadside vegetation, users will experience transient intermittent views, afforded by gaps in the roadside hedgerows.

Existing View

3. The view looks across and through a mature roadside hedgerow into the flat grazing field beyond, which is strongly enclosed by a mixture of mature deciduous and coniferous trees. A break in the tree line affords a view to a large barn associated with the Glanmiheli Farm complex, with the Llandyssil hills visible in the distance beyond.

4. In the right of the view, the lane runs away to the east, and is bounded by hedgerows to the north, and the properties known as The Smithy and Old Wagonors Cottage to the south. Two existing overhead lines are present in the view. One running north-south across the view in front of the line of trees, while the other parallels the lane, with a single wood pole located within the hedgerow being a noticeable feature in the right of the view.

5. The viewpoint is located within the *M31 Llandinam to Llandyssil Hillsides LCA,* which is defined as '*extensive areas with an intricate patchwork of small field parcels bounded by mature hedgerows, together with more open larger grazed and cultivated fields, and dispersed settlements/farmsteads overlooking the flat open farmland of the Severn Vale*.'

Sensitivity

6. The visual sensitivity for the occupiers of the properties on the north-eastern edge of Saw Mills to the proposed overhead line is considered **high**. For the users of the unnamed lane the visual sensitivity is considered **medium**.

Predicted View

7. The proposed overhead line, situated some 260m away at its closest point, crosses the view in a north-south direction. Due the location of the overhead line beyond the mature trees located along the eastern field boundary, the proposed overhead line will not be visible as it crosses the majority of the view. In the centre of the view, where there is a break in the trees, the overhead cables can be seen crossing in front of the Glanmiheli Farm complex. No poles are visible as they lie behind the existing vegetation.

Magnitude of Change

8. As the proposed overhead line will not be readily discernible from this location, the magnitude of change will be **low**.

Potential Effect on Visual Amenity

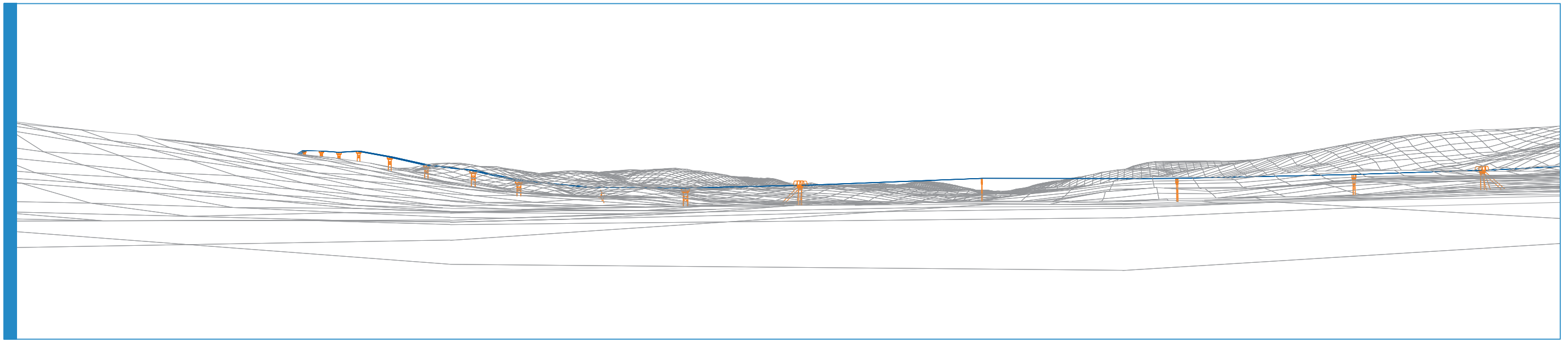
9. When the magnitude of change is correlated against the both the high visual sensitivity of the occupiers of Saw Mills, and the medium sensitivity of the users of the lane, the effect on visual amenity will be **minor** and therefore **not significant**.

Cumulative Effects in Respect of Existing Overhead Lines

10 As the proposed overhead line is not readily discernible there will be no cumulative effects arising from the proposed overhead line at this location.

VIEWPOINT 11A

Photograph of existing view

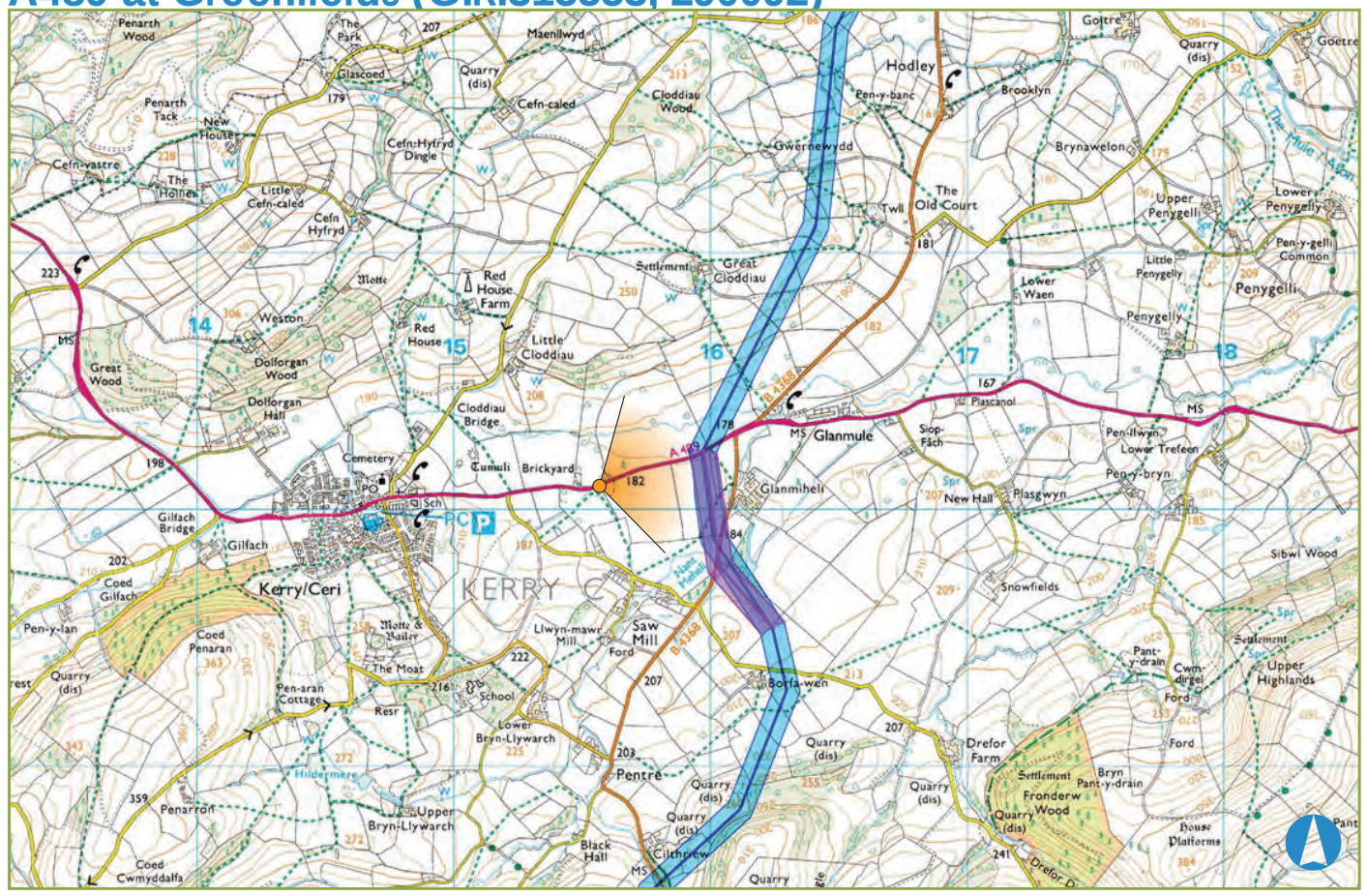


Wireframe of proposed grid connection

Photomontage of proposed grid connection

VIEWPOINT 11A

A489 at Greenfields (G.R.315553, 290092)



Grid Reference: 315553, 290092	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 184m	
Arc of View : 120°	
Nearest Visible Wood Pole: 445m	

Change from Viewpoint 11 in Dec 2009 ES:	Winter view

Within: M31 Llandinam to Llandyssil Hillsides

Looking across: M31 Llandinam to Llandyssil Hillsides

Location

1. This 120° view is taken from the southern verge of the A489, some 500m west of Kerry, close to the properties of Greenfields and Brickyard, looking eastwards along the A489. The A489 is a well-used road between Kerry and Church Stoke. The view is also representative of that experienced by users of the nearby public rights of way, running just to the south of the A489, and that of the residents of Greenfields and Brickyard although this is not their primary direction of view. Due to the roadside vegetation, users of the A489 will experience transient intermittent views.

Existing View

2. The A489 is strongly bounded on both sides by mature mixed hedgerows. To the left of the view, a gateway on the southern side of the road allows views of large flat pastures. There are a number of scattered trees and small blocks of woodland in the view, which are located mainly on field boundaries.

3. The steeply sloping sides of Kerry Hill are visible to the left of the view, while the hills between Sarn and Llandyssil are visible to the right. Other than the road, there are no prominent manmade features.

4. The viewpoint is located within the *M31 Llandinam to Llandyssil Hillsides LCA*, which is defined as '*extensive areas with an intricate patchwork of small field parcels bounded by mature hedgerows, together with more open larger grazed and cultivated fields, and dispersed settlements/farmsteads overlooking the flat open farmland of the Severn Vale*.'

Sensitivity

5. The visual sensitivity for users of the A489, the public rights of way residents of Greenfields and Brickyard to the proposed overhead line is considered **medium**.

Predicted View

6. From this location, the proposed overhead line will run north-south across the view, but will not be readily discernable due to screening and backclothing provided by the trees and hedgerows. The line, at its closest point, will be located 450m away to the east but will not be visible due to intervening hedgerow vegetation. As the line crosses the A490, it will be similarly difficult to distinguish due to backclothing provided by the trees and landform. To the left of the view, as the overhead line rises up over the hillside, it will be partially screened by a mature hedgerow tree in the foreground.

Magnitude of Change

7. As the proposed overhead line will not be readily discernible from this location, the magnitude of change will be **low**.

Potential Effect on Visual Amenity

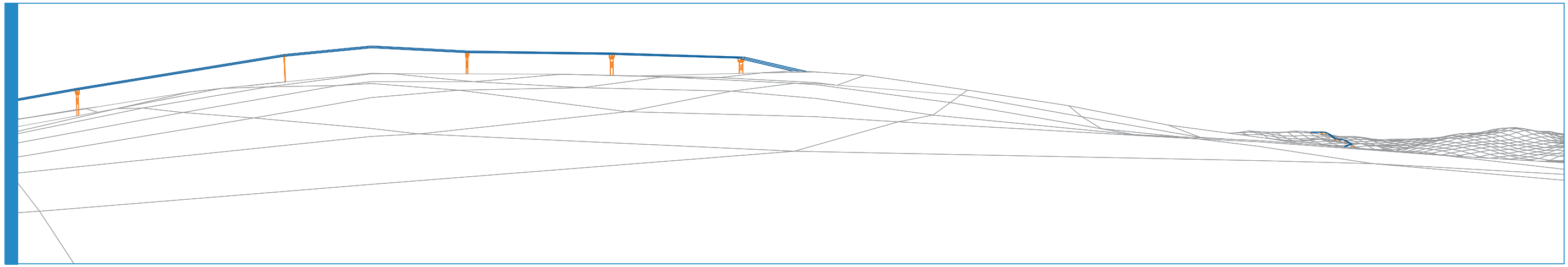
8. When the magnitude of change is correlated against the medium visual sensitivity of users of the A489, the adjacent public rights of way, and occupiers of nearby properties, the effect on visual amenity will be **minor** and therefore **not significant**.

Cumulative Effects in Respect of Existing Overhead Lines

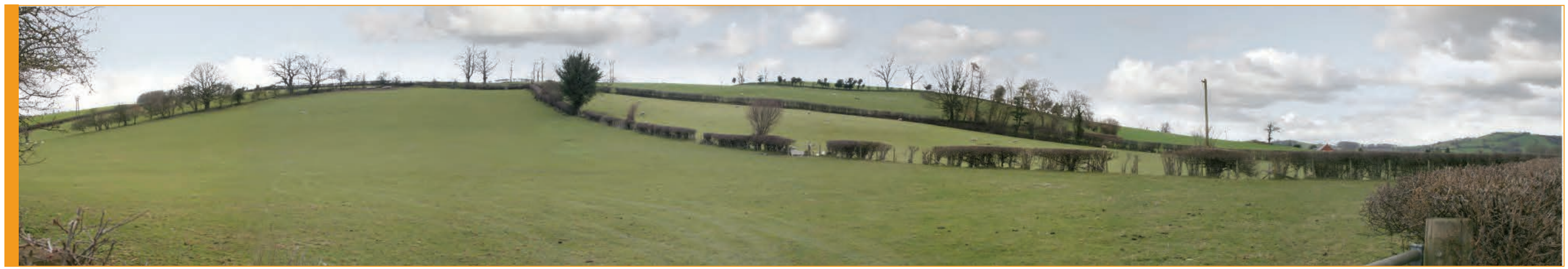
9. There will be no cumulative effects arising from the proposed overhead line at this location.

VIEWPOINT 12A

Photograph of existing view



Wireframe of proposed grid connection



Photomontage of proposed grid connection

VIEWPOINT 12A

B4368 north of Glanmule (G.R.316542, 290724)

Grid Reference: 316542, 290724	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 184m	
Arc of View : 160°	
Nearest Visible Wood Pole: 287m	

Change from Viewpoint 12 in Dec 2009 ES:	▫ Winter view

Within: M31 Llandinam to Llandyssil Hillsides

Looking across: M31 Llandinam to Llandyssil Hillsides

Location

1. This 160° viewpoint is located on the B4368 just north of Glanmule, looking in a north-easterly direction over rising pastures towards the farm complex of Great Cloddiau. The view is taken from the roadside verge at a break in the hedgerow. The viewpoint will be mainly experienced by road users. Due to the roadside vegetation, they will experience only transient intermittent views.

Existing View

2. Medium sized pastures gently rise up to the skyline in the middle distance and are bounded by a combination of post and wire fences with intermittent hedgerows and scattered deciduous trees and shrubs. To the right of the view, the edge of the Llandyssil Hills is visible. An existing overhead line on wood poles emphasises one of the field boundaries to the centre right of the view, and is the only manmade detractor present in the view.

3. The viewpoint is located within the *M31 Llandinam to Llandyssil Hillsides LCA,* which is defined as '*extensive areas with an intricate patchwork of small field parcels bounded by mature hedgerows, together with more open larger grazed and cultivated fields, and dispersed settlements/farmsteads overlooking the flat open farmland of the Severn Vale*.'

Sensitivity

4. The visual sensitivity for users of the B4368 to the proposed overhead line is considered **medium**.

Predicted View

5. From this location, the proposed overhead line will run up the hillside and along the skyline to the left of the view, before disappearing over the brow of the hill. Five wood poles, the closest being 290m from the viewpoint, will be visible on the skyline although these will be intermittently screened by mature hedgerow trees. The overhead cables will be visible on the skyline as they parallel the rising landform.

Magnitude of Change

6. The proposed overhead line will form a prominent skyline feature, introducing a new manmade element into the view and the magnitude of change will be **medium**.

Potential Effect on Visual Amenity

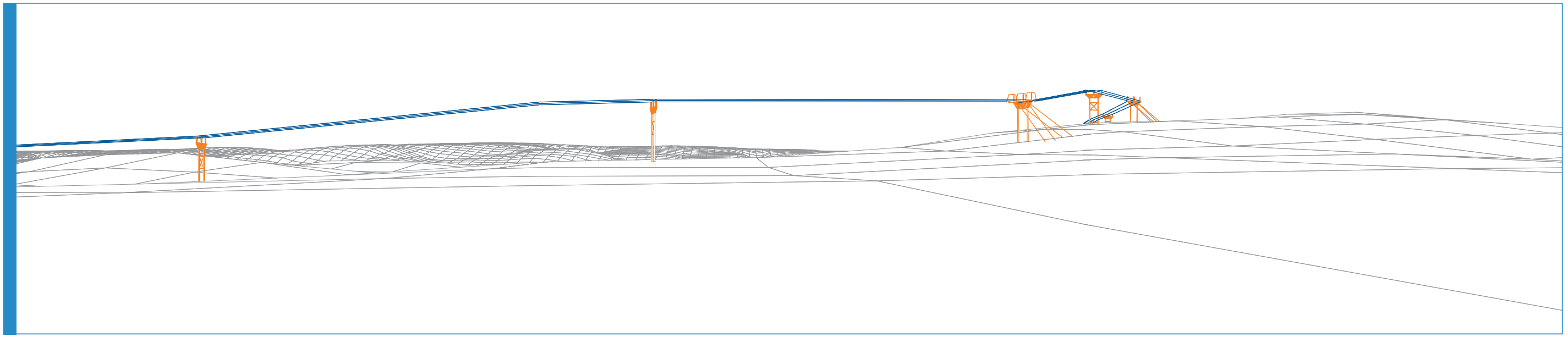
7 When the magnitude of change is correlated with the medium visual sensitivity for users of the B4368, the effect on visual amenity arising from the proposed overhead line will be **moderate** and therefore **significant**.

Cumulative Effects in Respect of Existing Overhead Lines

8. There may be some cumulative effect arising from proposed overhead line when seen in combination with the existing overhead line. However, the degree of change will be limited and these cumulative effects are considered **not significant.**

VIEWPOINT 13A

Photograph of existing view



Wireframe of proposed grid connection

Photomontage of proposed grid connection

VIEWPOINT 13A

Upper Maenllwyd (G.R.316784, 292468)

Grid Reference: 316784, 292468	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 147m	
Arc of View : 120°	
Nearest Visible Wood Pole: 119m	

Change from Viewpoint 13 in Dec 2009 ES:	▫ Winter view ▫ Pole positions moved ▫ Pole types changed

Within: M31 Llandinam to Llandyssil Hillsides

Looking across: M31 Llandinam to Llandyssil Hillsides

Location

1. This 120° view is taken from the access drive to Upper Maenllwyd on the B4368 looking in a south-easterly through to south-westerly direction, along the B4368, across pastures to the Maenllwyd plantation. The view over the fields to the plantation is facilitated by a break in the hedgerow allowing access to the field.

2. The viewpoint will be mainly experienced by road users travelling along the B4368 in a south-easterly direction. Due to the roadside vegetation, only transient intermittent views are likely to be experienced. The view is also representative of that from the public right of way, which runs along the access track to Upper Maenllwyd over the B4368 and on to the plantation. This footpath does not appear to be well used.

Existing View

3. The view looks in a southerly direction over the B4368 to gently rising grazing fields, bounded by a mixture of hedgerows and post and wire fences. The rising landform of Kerry Hill forms the backdrop to the view. To the left of the view, a mature oak tree located in the hedgerow on the southern side of the road is a notable feature and a number of other mature deciduous trees are visible in the distance. The driveway to Upper Maenllwyd, which is also a designated bridleway, is present in the foreground, to the left of the view.

4. To the right of the view, the view beyond the small sloping pasture is enclosed by the small, mixed Maenllwyd plantation. Existing overhead lines on wood poles are visible in front of the plantation and in the hedgerow to the left of the view, emphasising the line of the road.

5. The viewpoint is located within the *M31 Llandinam to Llandyssil Hillsides LCA,* which is defined as '*extensive areas with an intricate patchwork of small field parcels bounded by mature hedgerows, together with more open larger grazed and cultivated fields, and dispersed settlements/farmsteads overlooking the flat open farmland of the Severn Vale.*'

Sensitivity

6. The visual sensitivity for users of the B4368, the driveway to Upper Maenllwyd and the public rights of way to the proposed overhead line is considered **medium**.

Predicted View

7. From this location, the proposed overhead line will be visible across much of the view, located some 119m away to the south-east at its closest point. The line will be visible as it crests the brow of the hill to the right of the view, running across the fields in a north-easterly direction before oversailing the B4368 and disappearing out of view. As the line appears over the hill to the south, several poles will be visible, creating an intrusive feature on the skyline. The overhead line will then run across the pasture in the foreground, forming a noticeable skyline feature with one pole and the overhead cables being clearly visible.

Magnitude of Change

8. Due to its prominent skyline location, the proposed overhead line will introduce a new manmade feature into the landscape. Most of the poles within the view will be clearly visible on the skyline and, although moderated by other vertical elements of a similar scale, such as the trees and woodland, they will still dominate the view. The magnitude of change will be **high**.

Potential Effect on Visual Amenity

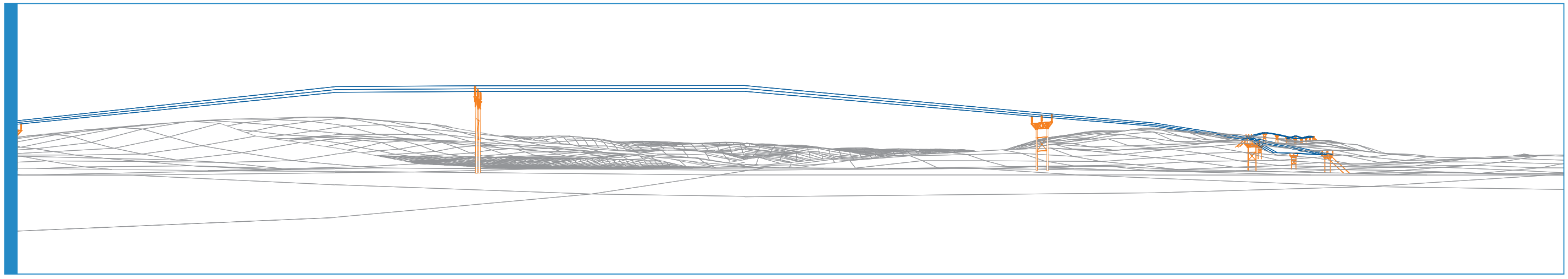
9. When the magnitude of change is correlated against the medium visual sensitivity for users of the B4368, the driveway to Upper Maenllwyd and the public rights of way, the effect on visual amenity will be **moderate** and therefore **significant**.

Cumulative Effects in Respect of Existing Overhead Lines

10. There may be some cumulative effect arising from proposed overhead line when seen in combination with the existing overhead lines within the view. However, the degree of change will be limited and these cumulative effects are considered **not significant.**

VIEWPOINT 14A

Photograph of existing view



Wireframe of proposed grid connection

Photomontage of proposed grid connection

VIEWPOINT 14A

Junction of B4385 and B4386 at Caerhowel (G.R.320065, 297803)

Grid Reference: 320065, 297803	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 089m	
Arc of View : 160°	
Nearest Visible Wood Pole: 084m	

Change from Viewpoint 14 in Dec 2009 ES:	Winter view

Within: M31 Llandinam to Llandyssil Hillsides

Looking across: M31 Llandinam to Llandyssil Hillsides

Location

1. This 160º view is taken from the junction of the B4385 and B4386, on the edge of the small village of Caerhowel. The view is taken from the roadside verge, directly to the south of the Machynlleth to Shrewsbury rail line and looks in a broadly southerly direction over the open pastures to the Llandyssil Hills in the distance.

2. The viewpoint will be mainly experienced by users of the B4385 and B4358, travelling in an easterly direction towards Montgomery. Both roads are relatively busy, particularly the B4385, which is the key road link from the A483 to Montgomery. Motorists will experience transient but open views. The view is also representative of views from the Machynlleth to Shrewsbury to rail line and these views will be similarly transient. The view is representative of that from a nearby public right of way, which runs from the centre of the viewpoint in a southerly direction towards Llandyssil, however the footpath is not signed and does not appear to be well used.

Existing View

3. Several large open pastures, which are relatively flat in the foreground of the view, gently rise up in the distance to south-east and south-west. A post and wire fence bounds the field in the foreground, whilst low but dense hedgerows define the fields beyond. A number of mature deciduous trees, both individual and small groups, are scattered throughout the view.

4. Views along the B4385 form eastern extent of the view while views to the railway embankment and along the B4386 form western extent of the view. The large farm complex of Court Calmore is visible beyond the flat field in the foreground, and forms a noticeable manmade feature. An existing overhead line on wood poles emphasises the route of the B4385 and B4386.

5. The view is typical of that of the *M31 Llandinam to Llandyssil Hillsides LCA* within which the viewpoint is located, defined as '*extensive areas with an intricate patchwork of small field parcels bounded by mature hedgerows, together with more open larger grazed and cultivated fields, and dispersed settlements/farmsteads overlooking the flat open farmland of the Severn Vale*.'

Sensitivity

6. The visual sensitivity for users of the B4385 and B4386 and the nearby public right of way and is considered **medium**. The visual sensitivity of rail users is considered **low**.

Predicted View

7. The proposed overhead line will be visible at a distance of 84m to the left of the view at its closest point. The line will crest the hill in the distance to the centre right of the view, and then descend the hillside above the Castle Court farm complex. It will then change direction as it meets the flat ground to the west of the farm and runs across the pastures in the foreground of view, before oversailing the B4385 to the left of the view. As the line descends the hillside, it will be backclothed by the landform and, whilst visible, will not be a noticeable feature due to its distance from the viewpoint and the backclothing effect of the hillside. However as the line runs across the middle of the view, it will become increasingly skylined and form a prominent foreground component of the view. The proposed overhead line will add to existing manmade features exacerbating their effect on the landscape at this location.

Magnitude of Change

8. Due to its proximity and prominent skyline location, the proposed overhead line will become a noticeable foreground feature. The overall magnitude of the change will be **medium**.

Potential Effect on Visual Amenity

9. When the magnitude of change is correlated against the medium visual sensitivity of users of the B4385 and B4386, and the nearby public right of way, the effect on visual amenity will be **moderate** and therefore **significant**.

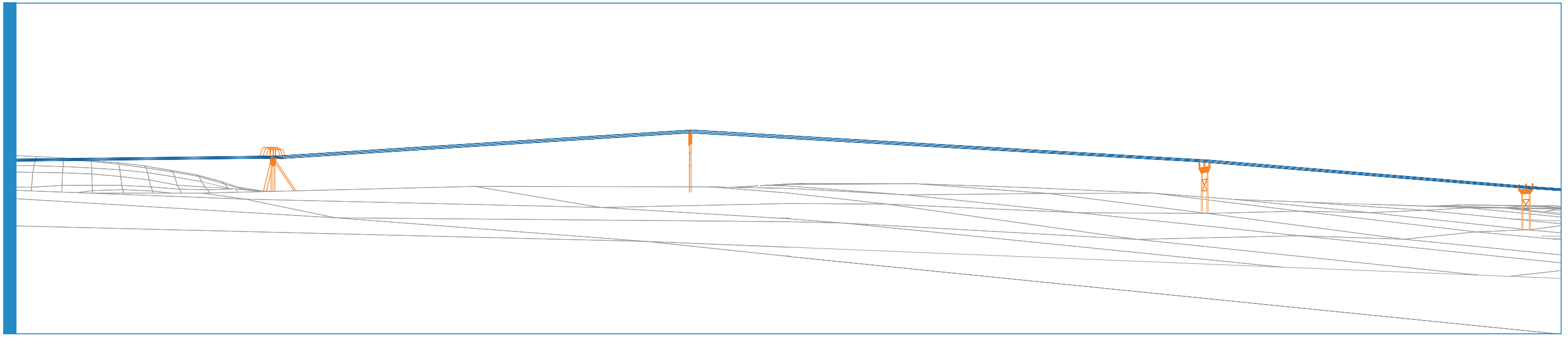
10. When the magnitude of change is correlated with the low visual sensitivity for rail users, the effect on visual amenity will be **minor**, and therefore **not significant**.

Cumulative Effects in Respect of Existing Overhead Lines

11. There may be some cumulative effect arising from proposed overhead line when seen in combination with the existing overhead lines within the view. However, the degree of change will be limited and these cumulative effects are considered **not significant.**

VIEWPOINT 19A

Photograph of existing view

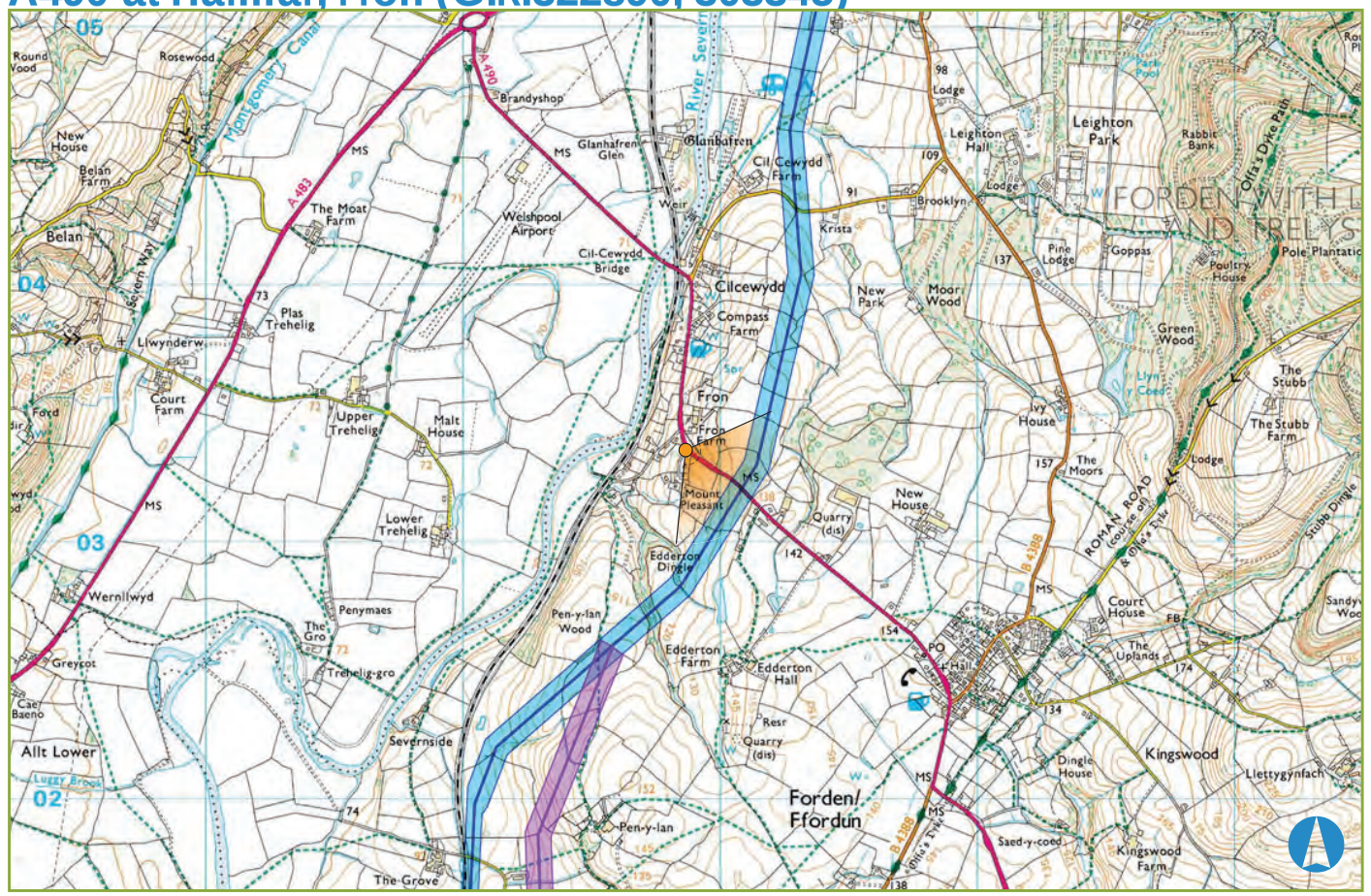


Wireframe of proposed grid connection

Photomontage of proposed grid connection

VIEWPOINT 19A

A490 at Halmar, Fron (G.R.322890, 303345)



Grid Reference: 322890, 303345	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 118m	
Arc of View : 120°	
Nearest Visible Wood Pole: 237m	

Change from Viewpoint 14 in Dec 2009 ES:	Winter view

Within: M18 Long Mountain/Breidden Hills

Looking across: M18 Long Mountain/Breidden Hills

Location

1. This 120° viewpoint is located on the A490, on the edge of the small village of Fron, close to the entrance to Halmar Drive, looking up the A490 to the south-east. The A490 is a busy road running between Welshpool and Church Stoke.

2. The viewpoint will be mainly experienced by road users travelling south towards Forden and those exiting the junction with Halmar Drive. Due to the roadside vegetation, road users will experience transient, intermittent views, although people exiting the junction may experience views that are more prolonged.

Existing View

3. The view from this location is well contained by the landform, and is principally focused on the A490, which rises up and disappears to the south-east in the centre of the view. The road is bounded on both sides by a wide grass verge and managed hedgerows. A mature deciduous tree forms a noticeable foreground feature and, together with the hedgerows, partly screens views to the fields beyond. A gate and gravel track leads to the adjacent fields in the foreground to the right of the view.

4. An existing overhead line on wood poles runs across the centre of the view, with a single wood pole located beyond the hedgerow. Although partially screened by a mature tree in the foreground, this forms a noticeable local landscape feature. Further overhead lines are also visible in the far distance. On the skyline, the properties of Edderton, Edderton Lodge and Freshwinds are visible, together with a number of scattered trees.

5. The viewpoint is located within *M18 Long Mountain/ Breidden Hills LCA*, which is defined as '*an area of managed upland grazing, lying to the east of the River Severn and reaching the Wales-England border, this area is distinguished from its surroundings by its low incidences of individual or hedgerow trees and its marked rectilinear field pattern*.'

Sensitivity

6. The visual sensitivity for road users is considered **medium**.

Predicted View

7. The proposed overhead line will be visible at a distance of 237m to the south-east, crossing the extent of the view. Where it oversails the A490, it will be clearly visible on the skyline with a pole located on the horizon as the A490 disappears from view. An existing single wood pole line is present in the foreground of the view.

8. South of the A490 to the right of the view, the line will be mainly screened by the roadside vegetation, although occasional glimpses will be afforded by gaps in the vegetation. The poles within the section of the view will be either fully or partly screened by vegetation.

Magnitude of Change

9. The proposed overhead line will become a prominent skyline feature. It will add a further manmade structure to those already present and will contribute to a developing 'wirescape' due to its proximity to the existing overhead line. Nevertheless, the proposed overhead line will be in keeping with the scale and pattern of the landscape and the overall magnitude of change will be **medium**.

Potential Effect on Visual Amenity

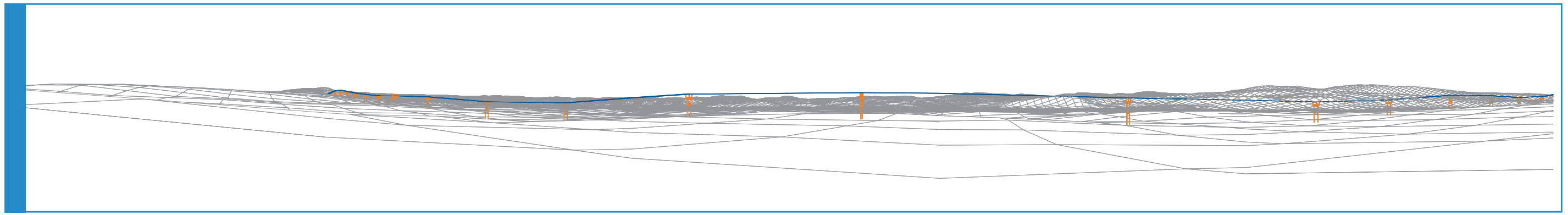
10. When the magnitude of change is correlated against the medium visual sensitivity for users of both Halmar Drive and the A490, the effect on visual amenity will be **moderate** and therefore **significant**.

Cumulative Effects in Respect of Existing Overhead Lines

11. There will be some cumulative effect arising from proposed overhead line when seen in combination with the existing overhead lines. This effect will be particularly noticeable in vies from the A490 where three separate lines will be visible oversailing the road. These cumulative effects are considered **significant**.

VIEWPOINT 21A

Photograph of existing view

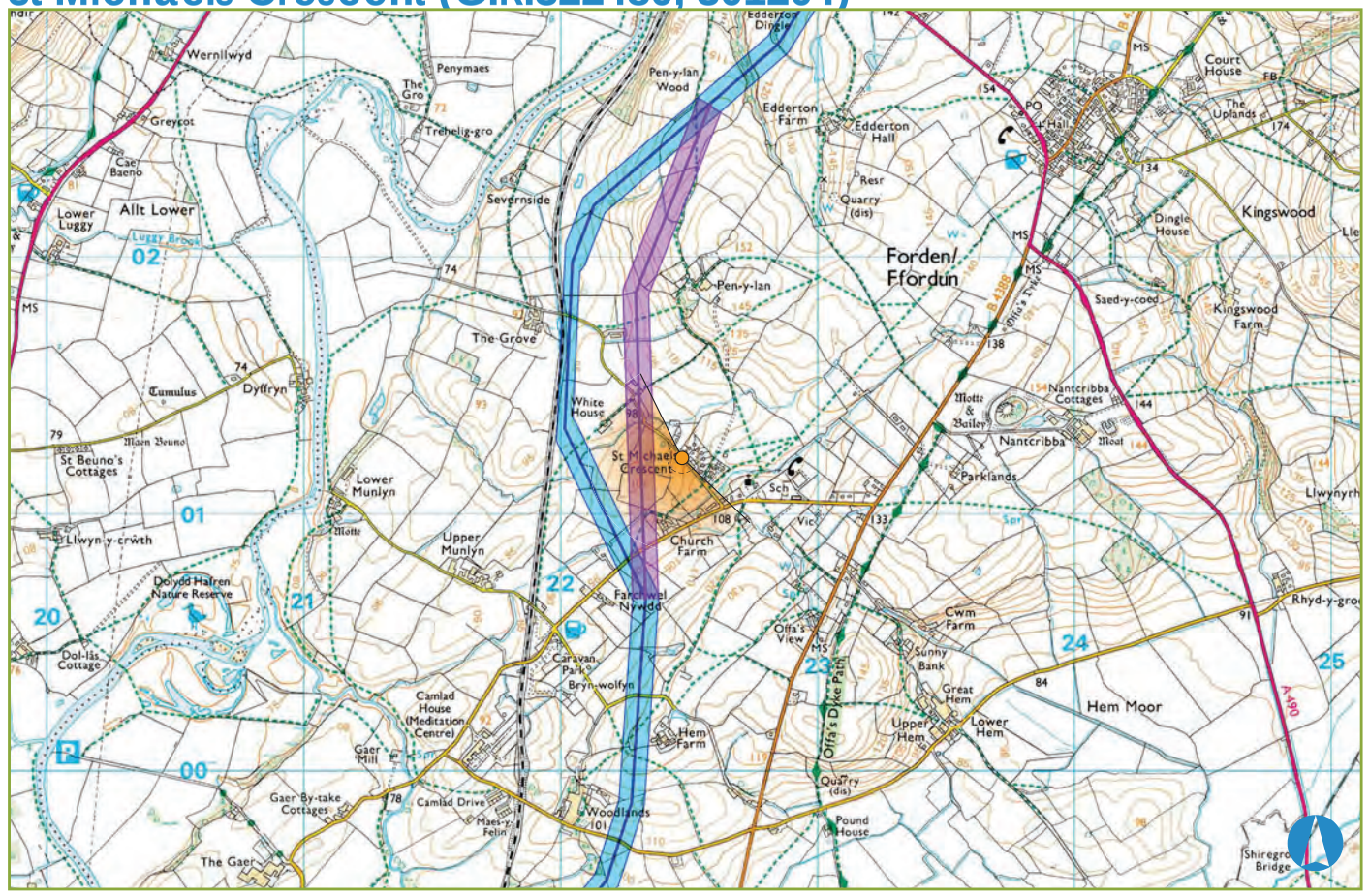


Wireframe of proposed grid connection

Photomontage of proposed grid connection

VIEWPOINT 21A

St Michaels Crescent (G.R.322480, 301204)



Grid Reference: 322480, 301204	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 108m	
Arc of View : 200°	
Nearest Visible Wood Pole: 165m	

Change from Viewpoint 21 in Dec 2009 ES:	Additional viewpoint

Within: M18 Long Mountain/Breidden Hills

Looking across: M18 Long Mountain/Breidden Hills, M9 Severn Farmlands, M13 Tregynon/Llanerfyl.

Location

1. This 200º viewpoint is taken from the unnamed road at the foot of St Michael's Crescent, a small housing development on the outskirts of Forden. The view looks in a south-westerly direction over gently undulating pastures to the River Severn valley floodplain. The view will be mainly experienced by residents of St Michael's Crescent, particularly those properties located at the bottom of the crescent. Users of the unnamed lane, a dead-end track leading past St Michael's Crescent to the The Grove farm complex, will also experience the view.

Existing View

2. The view looks over the unnamed lane which runs across the foreground of the view, and is strongly bounded by dense mature hedgerows along its south-western edge. Beyond the lane lie gently undulating arable and pastoral fields which are divided by intermittent hedgerows. A number of established deciduous trees are scattered throughout the fields. The southern valley side of the River Severn can be seen in the distance. Two existing single wood pole lines lie within the view. One paralleling the unnamed lane, with one pole forming a dominate foreground element. The other line crosses the fields running north-south in the middle distance of the view.

3. The properties located at the north-eastern corner of St Michael's Crescent can be seen in the right of the view. The view from this location is representative of that from the properties in St Michaels Crescent. Upper floor windows will provide panoramic views across the surrounding countryside.

4. The viewpoint is located within *M18 Long Mountain/ Breidden Hills LCA*, which is defined as '*an area of managed upland grazing, lying to the east of the River Severn and reaching the Wales-England border, this area is distinguished from its surroundings by its low incidences of individual or hedgerow trees and its marked rectilinear field pattern*.' The view looks over this LCA and beyond to the *M9 Severn Farmlands LCA and M13 Tregynon/Llanerfyl LCA*.

Sensitivity

5. The visual sensitivity for residents within the Crescent to the proposed overhead line is considered **high**. For users of the unnamed lane, the visual sensitivity is considered **medium**.

Predicted View

6. The proposed overhead line will be located to the south-west, at a distance of 165m at its closest point. The line will run north-south, across the view, through the fields in the middle distance. The majority of the line is backclothed by the undulating landform and vegetation, resulting in the line being a less noticeable addition to the landscape. However, a short section of line, in the centre of the view, appears on the skyline, with the tops of two poles and the overhead cables being visible.

Magnitude of Change

7. Due to the proximity of the proposed overhead line and the partial appearance on the skyline, the magnitude of change will be **medium**.

Potential Effect on Visual Amenity

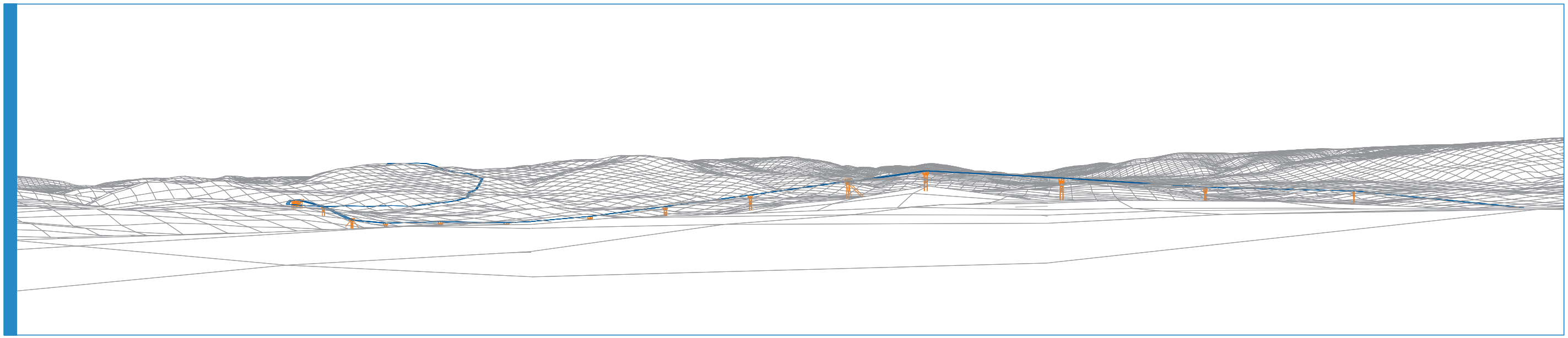
8. When the magnitude of change is correlated against both the high visual sensitivity for residents of the surrounding properties, and the medium visual sensitivity for users of the unnnamed lane, the effect on visual amenity arising from the proposed overhead line will be **moderate** and therefore **significant**.

Cumulative Effects in Respect of Existing Overhead Lines

9. There may be some cumulative effect arising from proposed overhead line when seen in combination with the existing overhead lines within the view. These cumulative effects are considered **significant.**

VIEWPOINT 33A

Photograph of existing view

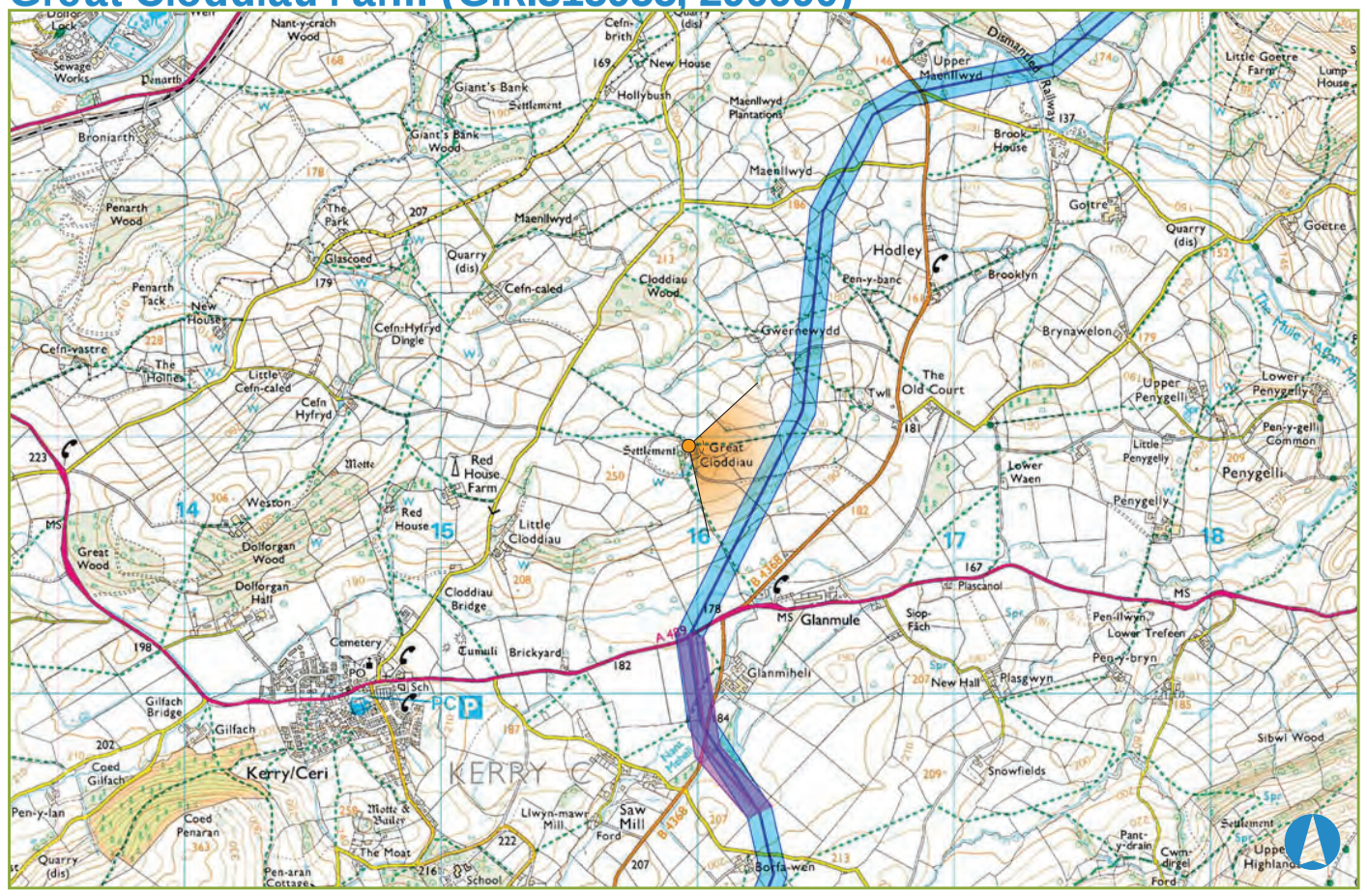


Wireframe of proposed grid connection

Photomontage of proposed grid connection

VIEWPOINT 33A

Great Cloddiau Farm (G.R.315955, 290990)



Grid Reference: 315955, 290990	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 249m	
Arc of View : 120°	
Nearest Visible Wood Pole: 357m	

Change from Viewpoint 33 in Dec 2009 ES:	Winter view

Within: M31 Llandinam to Llandyssil Hillsides

Looking across: M31 Llandinam to Llandyssil Hillsides and M29 Kerry Hill

Location

1. This 120° viewpoint is located at Great Cloddiau Farm, on the north side of the farm complex and looks in an easterly direction over the farmland to the Llandyssil Hills and Kerry Ridgeway. The view will mainly be experienced by residents of the farm. The view is also representative of that from the nearby public right of way, which runs east-west from the B4368 up to Great Cloddiau Farm. The public right of way is not well-defined and does not appear to be well used.

Existing View

2. Much of the view is occupied by pastures, beyond which are the Kerry Hills to the south and the hills around Llandyssil to the east. Other hills are visible in the far distance. A brick farm building, part of Great Cloddiau farm, is present at the extreme right of the view and other farms are visible in the distance. A number of mature trees are scattered throughout the fields, with larger blocks of woodland located on the sloping valley sides in the distance. An existing overhead line crosses the view in the middle distance.

3. The viewpoint is located within the *M31 Llandinam to Llandyssil Hillsides LCA*, which is defined as '*extensive areas with an intricate patchwork of small field parcels bounded by mature hedgerows, together with more open larger grazed and cultivated fields, and dispersed settlements/farmsteads overlooking the flat open farmland of the Severn Vale*.'

Sensitivity

4. The visual sensitivity for residents of the farm and users of the nearby public right of way to the proposed overhead line is considered **medium**.

Predicted View

5. The proposed overhead line will be visible at a distance of just over 350m to the east. The line will run across much of the view beyond the fields in the foreground, following the landform. In the distance, the line turns to the north-east to run up and over the higher ground before disappearing from view. For most of the view, the proposed line will be backclothed by landform and vegetation and will be difficult to distinguish.

Magnitude of Change

6. Although the proposed overhead line will be visible from this location, it will not be a noticeable feature. The wood poles will be in scale with the surrounding context and recede into the wider landscape. The magnitude of change will be **low**.

Potential Effect on Visual Amenity

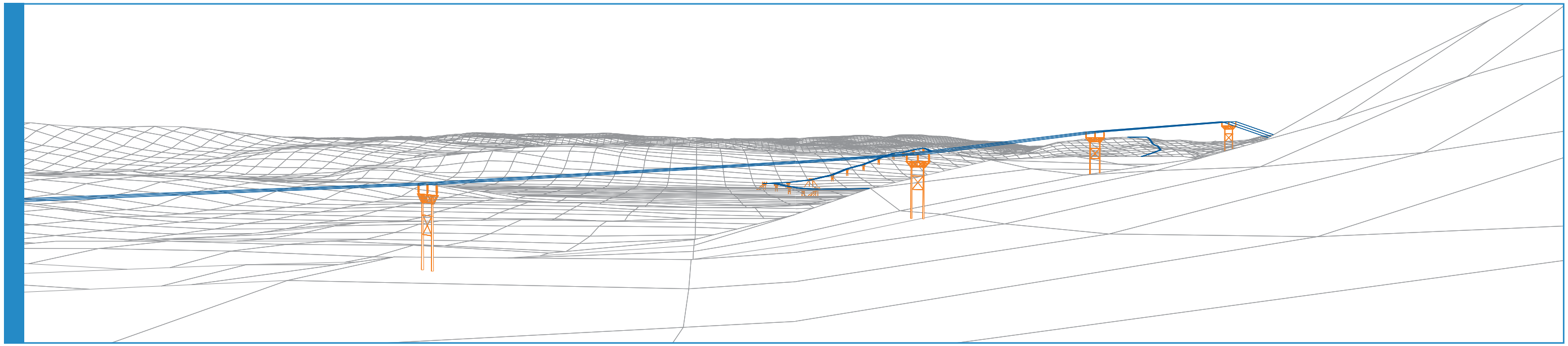
7. When the magnitude of change is correlated against the medium visual sensitivity for residents of the farm and users of the nearby footpaths, the effect on visual amenity arising from the proposed overhead line will be **minor** and therefore **not significant**.

Cumulative Effects in Respect of Existing Overhead Lines

8. There may be some cumulative effect arising from proposed overhead line when seen in combination with the existing overhead lines within the view. However, the degree of change will be limited and these cumulative effects are considered **not significant.**

VIEWPOINT 51A

Photograph of existing view

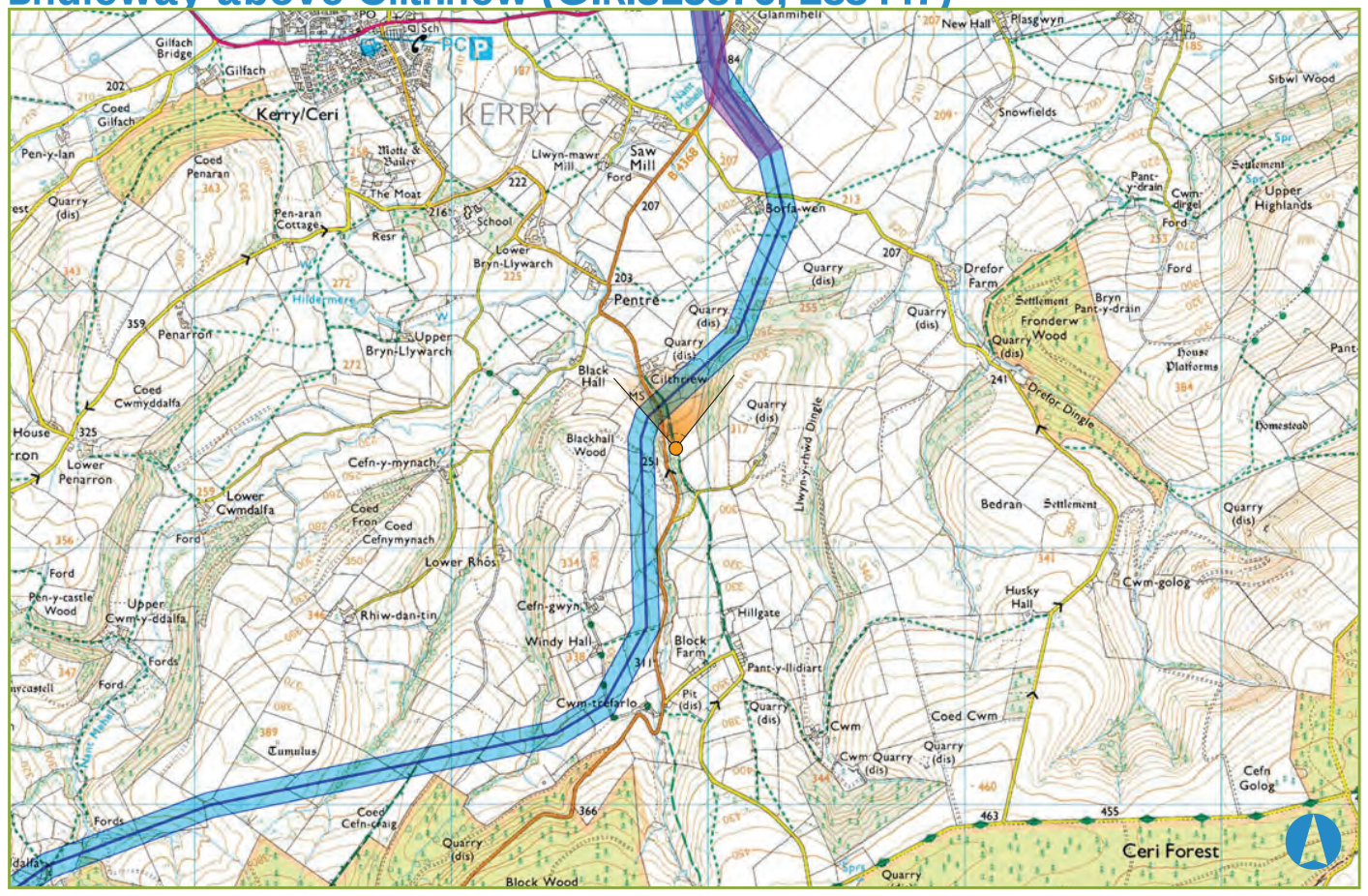


Wireframe of proposed grid connection

Photomontage of proposed grid connection

VIEWPOINT 51A

Bridleway above Cilthriew (G.R.315876, 288447)



Grid Reference: 315876, 288447	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 262m	
Arc of View : 080°	
Nearest Visible Wood Pole: 123m	

Change from Viewpoint 51 in Dec 2009 ES:	Winter view

Within: M29 Kerry Hill

Looking across: M29 Kerry Hill, M31 Llandinam to Llandyssil Hillsides

Location

1. This 80° viewpoint is located on the outskirts of Kerry, on the bridleway, which follows a track south from Cilthriew up to the farm complexes of Pant-y-llidiart and Block Farm. The bridleway joins a lane, which runs up Kerry Hill and connects with the Kerry Ridgeway regional trail. This elevated viewpoint, located approximately 250m to the south of Cilthriew, offers extensive north-easterly views over open farmland, to the Severn Valley and the wooded Tregynon Hills in the distance.

2. This viewpoint is located just above the B4368, near Kerry, and there are a number of nearby properties and farms.

Existing View

3. The view is contained by woodland, to the left by a mixed linear block of woodland, which runs along the field boundary, parallel to the B4368 and to the right by a block of dense deciduous trees. Most of the view comprises undulating farmland, predominately pastures with an occasional arable field. These fields are bounded by hedgerows, with occasional post and wire fences. Further small blocks of deciduous woodland are scattered throughout the view, together with occasional scattered trees, which are often located in hedgerows. The scenery is very rural and there are few manmade features present other than the occasional property visible in the distance.

4. The viewpoint is located within the *M29 Kerry Hill LCA*, but looks mainly over the *M31 Llandinam to Llandyssil Hillsides LCA*. This LCA is defined as '*extensive areas with an intricate patchwork of small field parcels bounded by mature hedgerows, together with more open larger grazed and cultivated fields, and dispersed settlements/ farmsteads overlooking the flat open farmland of the Severn Vale*.'

Sensitivity

5. The visual sensitivity for users of the bridleway to the proposed overhead line is considered **medium**.

Predicted View

6. The proposed overhead line will be visible at a distance of approximately 120m to the north, running left to right across the view before cresting the hill to the right of the woodland. Here, a wood pole and the overhead cables will be briefly visible before the line disappears over the skyline. For the most of the view, the line will be backclothed by landform and vegetation. This will make it less noticeable.

Magnitude of Change

7. The proposed overhead line will introduce a new manmade structure into the rural landscape. Although it will be of a similar scale to existing features and will be backclothed by landform and vegetation, there is no intervening vegetation to help screen it and the magnitude of change will be **high**.

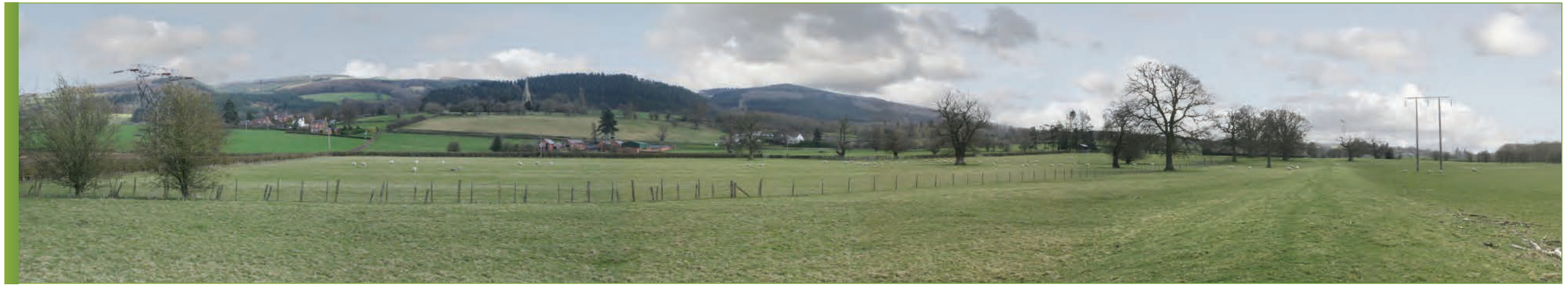
Potential Effect on Visual Amenity

8. When the magnitude of change is correlated against the medium visual sensitivity for users of the bridleway, the effect on visual amenity will be **moderate** and therefore **significant**.

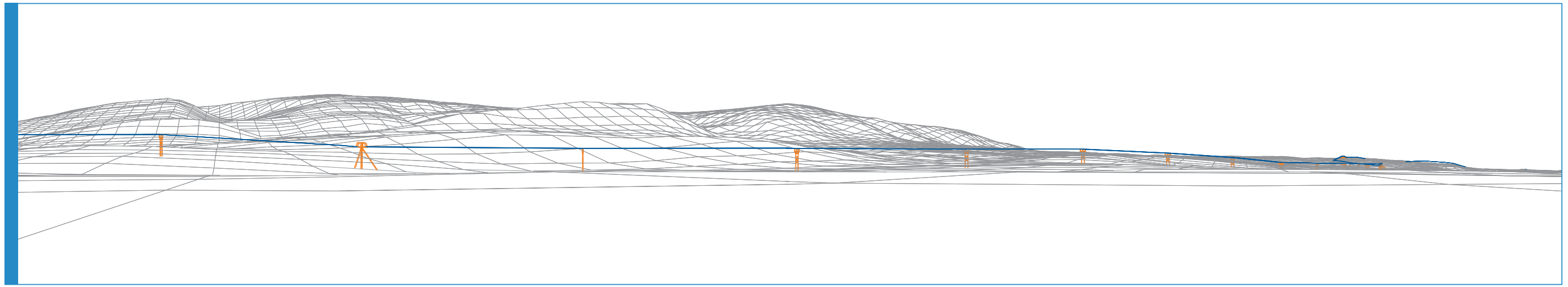
Cumulative Effects in Respect of Existing Overhead Lines

9. There will be no cumulative effects arising from the proposed overhead line at this location.

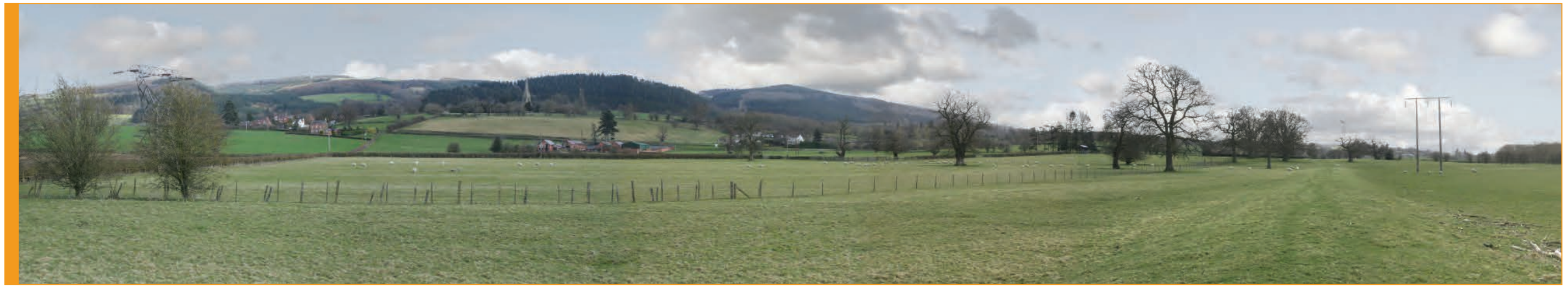
VIEWPOINT 59A



Photograph of existing view



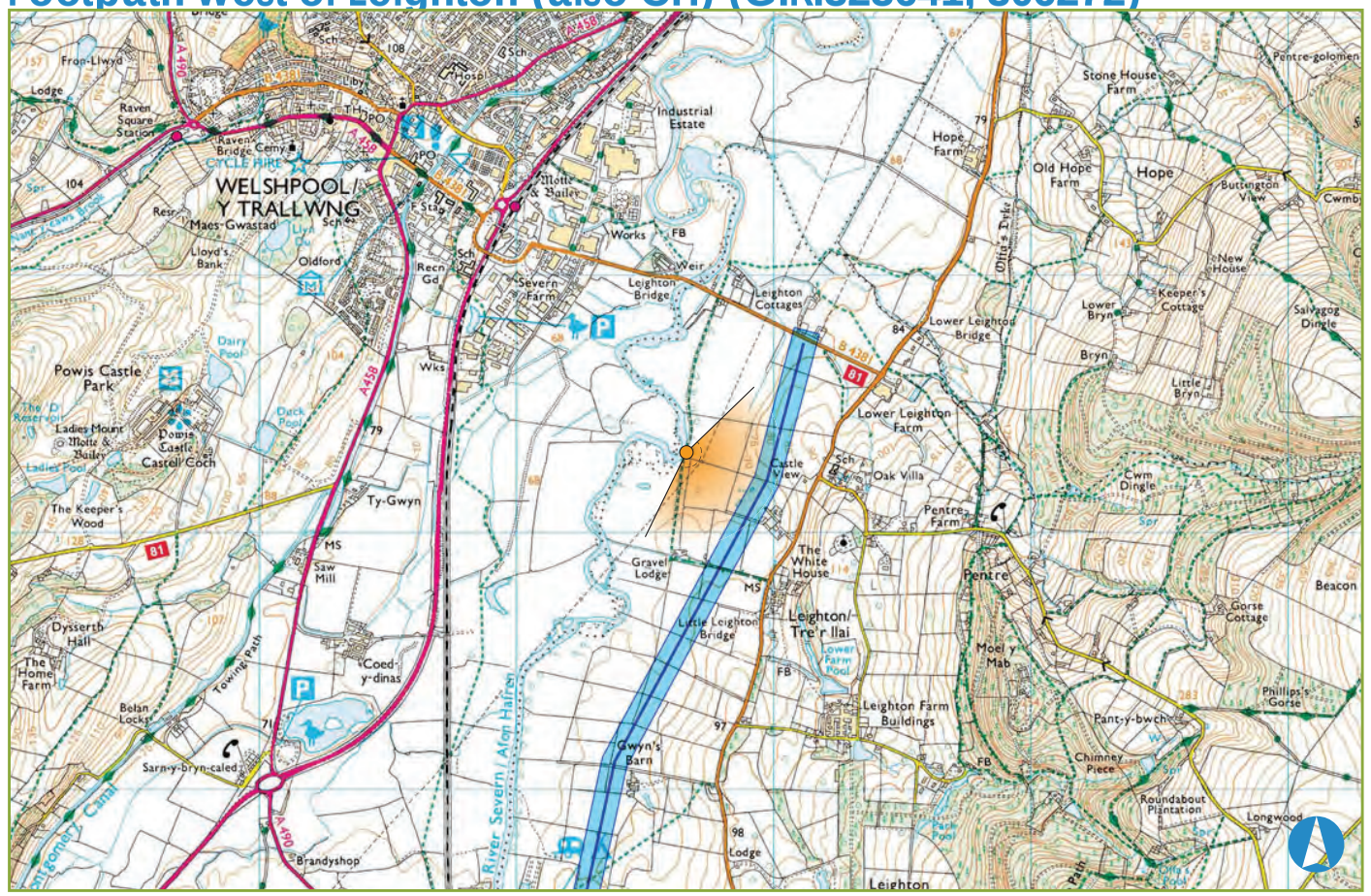
Wireframe of proposed grid connection



Photomontage of proposed grid connection

VIEWPOINT 59A

Footpath west of Leighton (also CH) (G.R.323641, 306272)



Grid Reference: 323641, 306272	Key to viewpoint page, right: Photograph of existing view Wireframe of proposed grid connection Photomontage of proposed grid connection
Elevation: 070m	
Arc of View : 160°	
Nearest Visible Wood Pole: 326m	

Change from Viewpoint 59 in Dec 2009 ES:	Winter view

Within: M9 Severn Farmlands

Looking across: M9 Severn Farmlands, M18 Long Mountain/Breidden Hills

Location

1. This 160° viewpoint is taken from the public right of way that runs from Leighton Cottages on the edge of Welshpool, to the village of Leighton. The view is taken from the eastern bank of the River Severn, approximately 300m to the north of Gravel Lodge, and looks in a south-easterly direction over the low-lying farmland of the River Severn floodplain to Leighton and the wooded slopes of Long Mountain. The viewpoint will be experienced by relatively few people, mainly users of the public right of way.

Existing View

2. Much of the view comprises the flat low-lying pastures of the River Severn floodplain. The River Severn is not visible, but lies immediately behind the view. To the east, the view is enclosed by the rising slopes of Long Mountain, which are cloaked in dense blocks of coniferous plantations. To the south, the view along the floodplain is relatively open. The fields in the foreground are bounded by post and wire fences, which give way to hedgerows as the fields rise up out of the floodplain to the east. A number of statuesque broadleaved trees are scattered throughout the view, often screening the views across the open fields.

3. An existing 132kV overhead line on a combination of double wood pole supports and steel towers runs up the floodplain and crosses the foreground of the view. A single overhead line on wood poles is discernable beyond. A number of properties are scattered throughout the view, the most notable being the spire of Leighton Church, which can be seen rising above the woodland on the lower slopes of Long Mountain. Below the church, on the edge of the floodplain, the red brick buildings of the Castle Court farm complex are visible. To the north, situated slighter higher up the valley side are a number of properties within the scattered settlement of Leighton and include the small village school.

4. The view is typical of the *M9 Severn Farmlands LCA*, within which the viewpoint is location, defined as '*open skies dominate with wooded valley sides fringing the valley bottom. Managed hedgerow and fence lines predominate, with intermittent patches of mixed broadleaved and deciduous woodland that produce a well-defined mosaic of small to large field patterns. The area is settled and domestic in character with sporadic clustered developments*.'

Sensitivity

5. The visual sensitivity for users of the public right of way is considered **medium**.

Predicted View

6. The proposed overhead line will be visible at a distance of just over 300m to the east at its closest point. The line will run from left to right across the view. Although it will be screened by vegetation on the left, the line will be visible in the middle distance as it crosses the centre of the view, running up the floodplain in a northerly direction, before it disappears again behind vegetation. For most of the view, the proposed line will be backclothed against the hillside, which will limit its visibility. Due to the presence of a number of manmade features, including overhead lines, the proposed line does not affect the existing visual character of the view.

Magnitude of Change

7. Although the proposed overhead line will be visible from this location, it will not be a noticeable feature. The wood poles will be in scale with the surrounding context and recede into the wider landscape. Although it will add a further manmade structure to those already present, it will not constitute an appreciable change in the defining characteristics of the landscape. The magnitude of change will be **low**.

Potential Effect on Visual Amenity

8. When the magnitude of change is correlated against the medium visual sensitivity for users of the public right of way, the effect on visual amenity will be **minor** and therefore **not significant**.

Cumulative Effects in Respect of Existing Overhead Lines

9. There may be some cumulative effect arising from proposed overhead line when seen in combination with the existing overhead lines within the view. However, the degree of change from this distance will be limited and these cumulative effects are considered **not significant.**

Chapter 05:
Ecology

Table of Contents

Table of Figures

List of Tables

5.1 Background

5.1.1 This chapter of the Addendum presents the following ecological information:

- Additional Information
  - Review of December 2009 ES in respect of Dormice
  - Review of WAG comments
- Review of December 2009 ES in respect of matters noted in a Countryside Council for Wales (CCW) meeting in September 2010 (a copy of points raised is included at Appendix B)
  - including bats, trees/hedgerows and mitigation
- Amended Development
  - Background
  - Baseline
  - Assessment of Effects
  - Cumulative Effects
  - Mitigation and Residual Effects
  - Summary

5.1.2 As in the December 2009 ES, the dormice assessment and reporting (see Appendix D) has been carried out by Jane Walsh Associates, as has the response to the matters raised by CCW.

5.1.3 The assessment and reporting for the Amended Development has also been carried out by Jane Walsh Associates who undertook an extended phase 1 habitat survey in May 2010 (Appendix E). A tree survey was carried out in July 2010 by ProArb Ltd.

5.1.4 This chapter firstly presents in section 5.2, the results and assessment of the dormouse survey for both the original route and the Amended Development. This is followed in section 5.3 by SPEN's response to the meeting with CCW. Section 5.4 provides the assessment of the Amended Development.

5.2 Additional Information - Review of December 2009 ES in respect of Dormice

Background

5.2.1 As stated in Chapter 7.4 of the December 2009 ES, this survey is included within the Addendum (see Appendix D) because it had not been completed in time for inclusion in that document.

5.2.2 Following consultation with the Powys CC ecologist in June 2009, who highlighted the possibility of dormice being present along the route, 100 dormice nest tubes (65 x 65 x 250mm) were erected. These were located in dense hedges, in patches of blackthorn (*Prunus spinosa*) where hazel (*Corylus avellana*) is dominant and in broadleaved woodlands where hazel is common. In order to obtain a full season's survey data, the nest tubes were erected in June 2009 to be left in-situ until September 2010. Nest tubes were checked in September 2009 and in May 2010, these being the optimum periods for checking for dormice.

5.2.3 In addition to erecting nest tubes, where hazelnuts were found on the woodland floor, these were checked for signs of characteristic eating patterns by dormice.

Scoping & Consultation

5.2.4 Chapter 2.0 of the December 2009 ES sets out the full scoping and consultation process, which was undertaken as part of the original EIA, whilst Chapter 1.0 of the Addendum refers to the ongoing consultation process since submission of the application.

5.2.5 As noted above, the dormouse survey resulted from consultations with Powys CC ecologist in June 2009.

Assessment Methodology

5.2.6 The assessment methodology is set out in Chapter 7.0 of the December 2009 ES, whilst the survey methodology is included in the Dormouse Survey Report at Appendix D of the Addendum.

5.2.7 The nest tubes were erected before the finalisation of the Amended Development. The survey therefore refers to the original scheme as presented in the December 2009 ES. Whilst as discussed previously, the scheme has been revised, the survey remains relevant, because the two amended sections of the route do not contain hedgerows, which are likely to support dormice populations.

Baseline

5.2.8 Dormice are secretive and nocturnal animals and are considered sensitive receptors. Dormice have traditionally been linked to hazel coppice and semi-natural ancient woodland. They are also known to live in hazel rich hedgerows. These habitats provide a succession of food sources throughout spring and summer, with a rich food supply in autumn. The disturbance or removal of hazel hedgerows may break the connectivity of a population between two neighbouring woodlands, which could be detrimental to the dormouse population. There are also increasing numbers of dormouse living in more unusual habitats, such as: blackthorn, bramble and gorse scrub. In addition, they are often found high up in the woodland canopy.

5.2.9 Taking into account that dormice are protected by European and British law, their population status and the presence of suitable foraging and nesting habitat, means that they are considered to be of **low** (Local High) nature conservation value.

5.2.10 Whilst some of the habitats recorded in the survey corridor could potentially support dormice populations, it should be noted that two nest tubes checks in September 2009 and May 2010 on all 100 nest tubes were found to be negative for dormice. The hazelnut surveys were similarly found to be negative.

5.2.11 Dormice surveys are notoriously lengthy and it can take up to three years to yield results from nest tube surveys. In the likelihood that there are dormice present, potential habitats should be considered to be of **low** (Local High) nature conservation value.

Assessment of Effects during Construction & Decommissioning

Habitat Loss &/or Disturbance

5.2.12 Tree and hedge removal for construction and to allow safety clearances to the overhead line cables may result in fragmentation of habitat and some loss and disturbance to foraging habitat, dispersal routes and nesting sites. Loss of intact, well-maintained hedgerows containing hazel or providing connectivity with broad-leaved woodland habitats is of most concern.

5.2.13 In the absence of any dormice being present, no effects on this species are currently anticipated. However, in the event that dormice are present, which have not yet been recorded by the survey, the following assessment applies.

5.2.14 Owing to the brief and temporary nature of the disturbance arising from the placement of poles and access route creation, providing that the work be undertaken in September and October when any young will have left the nest and prior to hibernation, the effects are anticipated to be not significant.

5.2.15 With respect to the loss of trees for safety clearance and/or hedges for the placement of wood poles or access routes, provided tree and hedgerow clearance is undertaken in September and October, the effects are anticipated to be low and not significant.

5.2.16 During decommissioning, the wood poles will be removed and vegetation along access routes may be temporarily disturbed. The effect on dormice is expected to be not significant.

TABLE 5.1: PREDICTED UNMITIGATED EFFECTS ON DORMICE DURING CONSTRUCTION & DECOMMISSIONING

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Dormice	Low (Local High)	Medium	Moderate - minor adverse	Medium -term	Not significant

Water Pollution

5.2.17 During construction and decommissioning, there will be vehicle movements throughout the survey corridor and vehicles may have to cross streams to gain access. Whilst no direct disturbance to dormice is anticipated, habitat could be subjected to adverse effects in the form of diesel or other contaminant spills.

5.2.18 This could have an effect on dormice although, provided Environment Agency guidelines are adhered to relating to working in proximity to watercourses, the effects are anticipated to be not significant.

TABLE 5.2: PREDICTED UNMITIGATED EFFECTS ON DORMICE DUE TO POLLUTION DURING CONSTRUCTION & DECOMMISSIONING

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Dormice	Low (Local High)	Low	Minor adverse	Short-term	Not significant

Assessment of Effects during Operation

5.2.19 No disturbance to potential dormice habitat is likely once the construction phase is completed and any affected hedge boundaries have been restored. Although during operation, there may some localised hedge cutting maintenance, the anticipated effects are not considered significant.

TABLE 5.3: PREDICTED UNMITIGATED EFFECTS ON DORMICE DURING OPERATIONAL & MAINTENANCE ACTIVITIES

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Dormice	Low (Local High)	Low	Minor adverse	Short-term	Not significant

Water Pollution

5.2.20 The potential for pollution of habitats to affect dormice will be much lower than during the construction and decommissioning phases. Activities, which may cause pollution, include vehicular access to site for maintenance and emergency work, which may involve crossing small streams or watercourses, or the leakage/ spillage of chemicals on site, including oil, grease and fuel.

TABLE 5.4: PREDICTED UNMITIGATED EFFECTS ON DORMICE DUE TO POLLUTION DURING OPERATIONAL & MAINTENANCE ACTIVITIES

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Dormice	Low (Local High)	Low	Minor adverse	Short-term	Not significant

Cumulative Effects

5.2.21 For an assessment of any cumulative effects arising from existing or proposed infrastructure, which forms part of the wider Mid Wales renewable energy project, please refer to Chapter 7.0: Cumulative Review.

Mitigation and Residual Effects

5.2.22 Although no significant adverse effects on dormice were identified during the assessment, it is proposed to implement mitigation as good practice and a precautionary measure.

5.2.23 Tree and hedge clearance will be undertaken in September and October prior to hibernation and after any young have left the nest.

5.2.24 Where hedge and woodland clearance is undertaken, whether for access routes, pole sites, or overhead line cable safety clearance, temporary fencing or brash corridors will be provided. This will be followed by new planting in order to provide connecting habitat for dormice to travel along.

5.2.25 Other measures may include the provision of dormouse boxes and/or replanting with shrubs such as hazel, as mitigation for loss of habitat and as a positive conservation measure.

5.2.26 Hedgerow connectivity and shrub diversity is directly linked to dormouse abundance and dispersal and dormice are indicators of ancient, biologically diverse hedgerows. Population density is strongly related to hedgerow height and shrub diversity. The Draft Environmental Management Plan (See Chapter 8.0) contains measures to improve habitat connectivity with planting of new hedgerows, new woodland and scrub areas and the reinstatement of existing and poorly managed hedgerows with broader shrub diversity.

Summary

5.2.27 The survey suggests that the effects on dormice arising from the proposed overhead line are likely to be limited and therefore not significant.

5.3 Additional Information - Review of WAG Comments

5.3.1 In respect of ecology matters, WAG's comments (dated 17 February 2010 - included at Appendix B) advise that more detail should be provided as to the precise number, composition and location of affected hedgerows as this could have informed the impact assessments.

5.3.2 In response, further consideration has been given as to how hedgerow related information is presented and this is provided in Table 5.6 on page 55 which details hedges affected by the construction, species and whether they are classed as important under the 1997 Hedgerow Regulations. The corresponding plans in Figures 5.2-5.21 (pages 62 - 71) indicate the broad location of important hedges.

5.3.3 A total of 115 hedgerows will be affected by construction (pole positions and construction access). Only two of these are identified as being 'important' for nature conservation value (due to connectivity with other habitats). The plans show the relative locations of all 115 hedgerows. Having revisited this information, no further effects are identified. SPEN considers this information does not change the assessment outcome of the December 2009 ES i.e. no significant effects. Table 5.6 does however highlight 'important hedgerows' as defined under the Hedgerow Regulations and this is a matter addressed in response to a CCW comment below.

5.3.4 WAG's comments also note that mitigation measures should include reference to information on pre-construction surveys, ground surveys, access routes and storage areas being set out in a construction method statement. This is addressed by providing a revised Draft Construction Method Statement a copy of which is included at Appendix C.

5.4 SPEN's Response to CCW Matters

Background

5.4.1 This section provides a response to matters raised by CCW in a September 2010 meeting. As noted in Chapter 2.0: Post Application Consultee Feedback, CCW have raised the following matters.

Clarification Request

Explanation of the determination of nature conservation receptors in line with Section 42 ' list of species and habitats of principal importance for the conservation of biodiversity in Wales'.

5.4.2 Nature conservation receptors were chosen following consideration of the BIS data search results, consultations (including wildlife trusts and the county ecologist), and the Phase 1 Habitats and Vegetation Surveys, and with respect to Section 42 habitats and species. This determined the following species being included in the assessment:

- All British Bats
- Common Otter
- Great Crested Newts
- Badgers
- Water Voles
- Brown Hares
- Reptiles
- Dormice
- Birds

5.4.3 In addition, as stated in the Phase 1 Habitat Survey report, consideration was also given to the following relevant legislation and nature conservation policy in determining which species and habitats to include:

- Wildlife & Countryside Act 1981 (as amended) and the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended).
- The Conservation (Natural Habitats & c.) Regulations 1994 (The Habitats Regulations).
- EC Council Directive 92/43/EEC on the Conservation of Natural Habitat and Wild Fauna and Flora (The Habitats Directive).
- Powys County Council local biodiversity action plan (Powys LBAP).
- The UK Biodiversity Action Plan (UK BAP).
- Protection of Badgers Act, 1992.
- Section 74 of the Countryside and Rights of Way Act 2000.
- The NERC Act 2006.
- The Hedgerows Regulations 1997.
- BS5837 (2005) Trees in Relation to Construction.
- BS3998 (1990) Recommendations for Tree Work.

Confirmation that no part of the line is within the River Teme catchment.

5.4.4 As shown in Figure 5.1 overleaf, the Teme catchment is outside the route corridor. The EA website was consulted in order to confirm the boundary of the catchment area.

Confirmation that the line does not cross local wildlife sites, including Wildlife Trust Reserves.

5.4.5 Consultations on habitats and species have been undertaken with the following organisations:

- Countryside Council for Wales
- Powys Biodiversity Information service
- Powys County Council's Biodiversity Officer
- Montgomeryshire Wildlife Trust
- The Welsh Kite Trust
- The County Bird recorder (Brayton Holt)
- Radnor Bird Group
- Montgomeryshire Barn Owl Group
- The Vincent Wildlife Trust
- RSPB
- Mid-Wales Red Squirrel Project

5.4.6 As shown in Figure 5.1 overleaf, the consultations and the BIS record search revealed no wildlife trust sites in the survey corridor. No part of the proposed overhead line crosses any part of a local wildlife site.

Confirmation that Regionally Important Geological Sites (RIGs) have been considered in the baseline.

5.4.7 RIGs sites have been considered and there are no sites in the corridor survey area.

Reference to survey corridor including a search for otters.

5.4.8 Otter and water vole surveys were undertaken during the Phase 1 Habitat Survey walkovers. The surveys looked for field signs for a distance of up to 200m up and downstream of the route corridor where the habitat was considered suitable. Otter field signs searched for included: spraints, holts, feeding remains, and footprints. All evidence of water vole presence was also recorded, notably: burrows, latrines, feeding remains and waterside runways in vegetation.

Explanation as to whether absence of data in great crested newt surveys was due to not being able to access some ponds thus affecting the assessment.

5.4.9 Great crested newts were found in only two of the 35 ponds surveyed.

5.4.10 Only two of the ponds recorded were not surveyed owing to the fact that they were inaccessible or too dangerous for health and safety reasons.

5.4.11 The distance of the ponds from the proposed work, the temporary nature of the work and the fact that there will be no effect on potential breeding ponds, means that the potential effect on any unrecorded great crested newt populations is considered very low. In addition, no great crested newt populations were found close to the proposed route in the record search.

Further details on appropriate measures for dealing with controlling introduction and spread of non-native invasive species.

5.4.12 Biosecurity during construction will reduce the risk of spread of non-native species.

5.4.13 The Construction Method Statement will contain details of these measures but will include measures such as:

- Vehicles will be checked and wheel washes used at entrances to site accesses and egresses. Monitoring of terrestrial and aquatic habitats will be undertaken during the construction period and on completion of the development by the site ecologist/ecological clerk of works over two years.

Further details on appropriate measures for preventing spread of Signal Crayfish in the tributaries of the River Severn

5.4.14 Biosecurity will be in place in order to mitigate for this, with measures including:

- Washing of vehicle wheels at site access and egress points. In addition, where appropriate footwear and equipment will also be washed, disinfected and allowed to dry before moving to another site.

Bats

Review of conservation value of lesser horseshoe bats (identified as 'low' in the December 2009 ES) and subsequent assessment to acknowledge potential effects in spring and autumn.

5.4.15 It is acknowledged that bats should have been included as a valued receptor in their own right and not just with respect to flight paths and potential roost trees. Although the roost sites lie outside the survey corridor, the lesser horseshoe bats are flying through the corridor. Therefore, the nature conservation value is revised to **very high** owing to them being a feature of the SAC.

5.4.16 It is also acknowledged that there may be an increase in activity during spring and autumn. However, a review of bat activity in July 2010 (Appendix F) reaffirms the previous survey results. SPEN considers this information supports the previous assessment outcome as being not significant. The habitat loss is temporary in nature and, bats are able to cope with gateways in hedges of around 3m width. The area of temporary hedge loss will be 5m, however the timber overhead line pole supports will serve in a similar way as individual hedgerow trees to assist with navigation.

TABLE 5.5: PREDICTED UNMITIGATED EFFECTS ON BATS DURING OPERATIONAL & MAINTENANCE ACTIVITIES

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Bats	Very High (International Importance)	Low	Moderate - minor	Short-term	Not significant

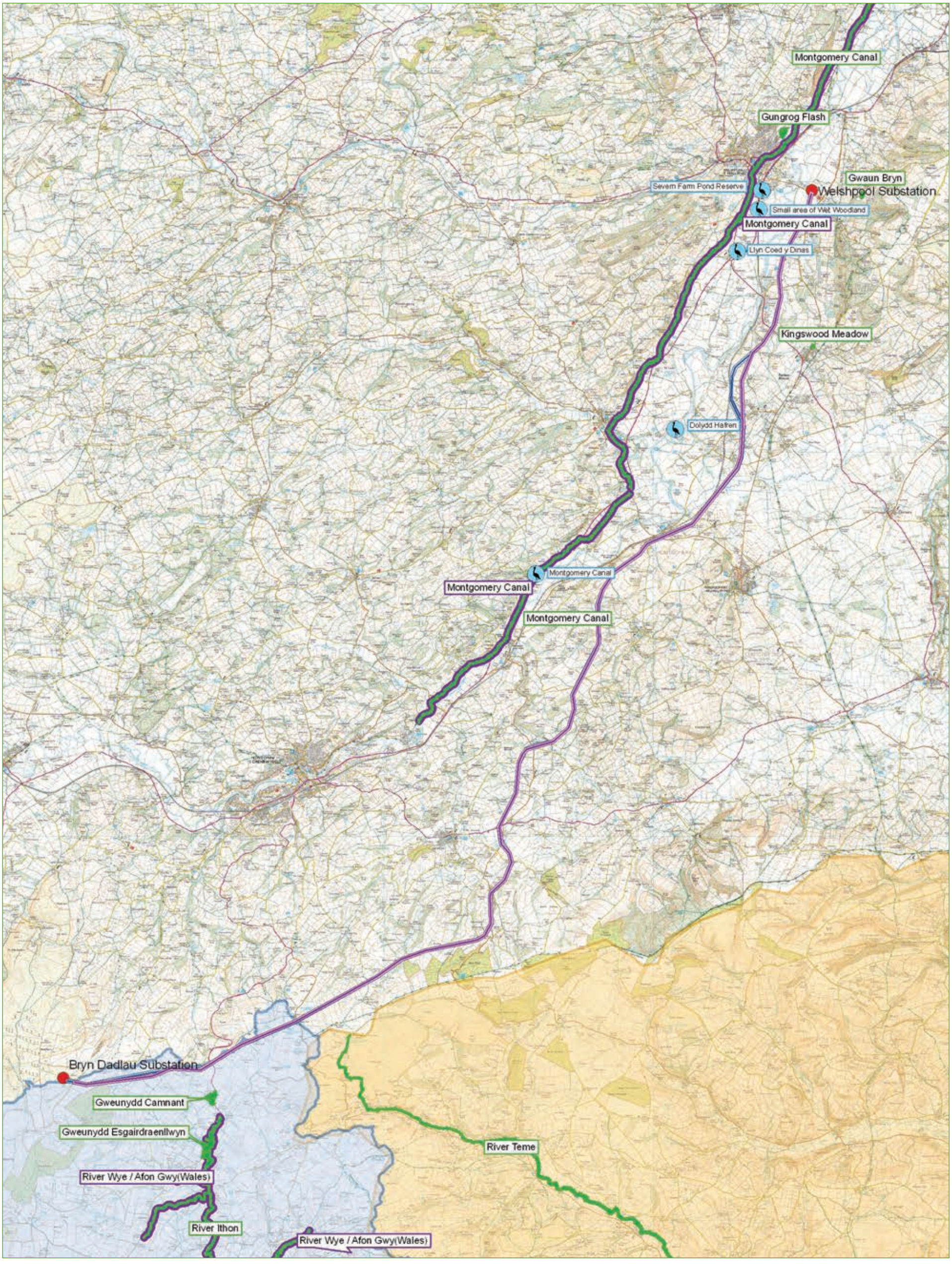


Figure 5.1

Ecological Designations and Wye and Teme Catchments

NTS

SP ENERGY NETWORKS

GILLESPIES

TABLE 5.6 HEDGEROWS AND CONSTRUCTION EFFECTS

Pole no/ Span	Species	Bat Hedge	Important (Hedge Regs Criteria)	Affected by construction
1	Cm, Ps	No	No	no
4	Cm, Sn	yes - medium	no	yes
6	Cm	no	no	yes
span 7-8	Cm	no	no	yes
9	Fe, Sx, Pop	yes - medium	no	no
12	Cm	no	no	yes
span 14-15	Ps, Cm, Ca	yes - low	no	yes
17	Cm	yes - high	no	yes
22	Cm,Ps	yes-high	no	yes
25	Cm	yes-medium	no	yes
27	Cm, Ps	yes-medium	no	yes
29	Cm, Ps	yes-high	no	yes
32	Cm	yes-high	yes-archeological	yes
33	Ps, Sn	no	no	yes
36	Cm	no	no	yes
37	Cm	no	no	yes
38	Cm	no	no	yes
43	Cm, Qp	no	no	yes
46	Cm	no	no	yes
48	Cm	no	no	yes
51	Cm, Qp	no	no	yes
53	Cm, Qp, Fe	no	no	yes
55	Cm	no	no	yes
56	Ug, Fe, Cm, Qp	no	no	yes
58	Cm	no	no	yes
60	Cm	no	no	yes
64	Cm, Fe, Qp	no	no	yes
65	Fe, Qp, Cm	no	**yes - nature conservation** *	yes
67	Ia, Cm, Ca, Qp	no	no	yes
69	Ac, Fe, Qp	no	no	yes
71	Cm, Ia, Sn	no	no	yes
73	Pop	no	no	yes
75	Cm ,Ca, Ps	no	no	yes
78	Ca, Cm, Qp, Ac	no	no	yes
86	CM	no	no	yes
87	Sn, Cm, Ca, Ps	no	no	yes
88/89	Cm	no	no	yes
90	Ps, Cm	no	no	yes
90/91	Ia, Ue, Ca	no	no	yes
94/95	Cm	yes-medium	no	yes
97	Cm	no	no	yes
98	Cm, Qp	no	no	yes
99/100	Sa, Cm, Fe	yes-medium	no	yes
101	Cm	no	no	yes
103	Cm	no	no	yes
106	Fe	no	no	yes
110	Cm	no	no	yes
114	Cm, Ca	no	yes - archeological	yes
119	Cm	no	no	yes
121	Cm, Ps	no	no	yes
125	Cm, Ps, Fe,	no	no	yes
127	Cm, Fe	no	no	yes
129/130	Cm	no	no	yes
131	Sx	no	no	yes
133	Qp, Cm	no	no	yes
139	Ca, Ps, Cm	no	**yes - nature conservation ***	yes
142	Cm	no	no	yes
145	Cm, Ca, Ia, Sn	no	no	yes
146	Qp, Fe	no	no	yes
149	Ps, Ia	no	no	yes
151	Cm	no	no	yes
153	Ca	no	no	yes
160	Cm, Fe	no	no	yes
162	Cm, Ca	no	no	yes
164	Cm, Ca	no	yes - archeological	yes
165	Cm, Ca, Ps	no	no	yes
167	Cm, Ca	no	no	yes
170	Cm, Qp	no	yes - archeological	yes
171	Cm, Qp, Fe	no	yes - archeological	yes
174	Cm	no	no	yes
177	Cm, Ps	no	no	yes
181	Ca, Cm	no	no	yes
182	Ca, Ap, Bp	no	no	yes
184	Cm	no	no	yes
186/187	Ag	no	no	No
188	Ca, Ps, Fe	no	no	yes
189	Sx, Ag, Qp	no	no	yes
190	Qp, Fe	no	no	yes
196	Cm	no	no	yes
197	Cm	no	no	No
198	Cm, Qp	no	no	yes
199	Cm	no	no	yes
200	Cm	no	no	yes
204	Qp, Fe, Cm	no	no	yes
205	Cm	no	no	yes
206	Cm	no	no	yes
207	Cm	no	no	yes
208	Cm, Fe, Ag	no	no	yes
212	Cm	no	no	yes
214	Cm	no	no	yes
215	Ca	no	no	yes
216	Ca, Ps	no	no	yes
217	Ca, Ps	no	no	yes
222	Ca, Sx, Fe	no	yes - archeological	yes
224/225	Cm	no	no	yes
227/228	Ca, Fe	no	no	yes
228/229	Ca	no	no	yes
230	Ca	no	no	yes
231/232	Ca	no	no	yes
233	Qp, Cm,	no	no	yes
234/235	Ca, Fe	no	no	yes
236	Ca	no	no	yes
238	Cm	no	no	yes
240	Cm	no	no	yes
243	Cm	no	yes - archeological	yes
245	Ca	no	no	yes
260	Cm, Fe, Ps, Ap	no	no	yes
269/270	Ca, Fe	no	no	yes
272	Cm	no	no	yes
274	Ca, Cm, Fe	no	no	yes
275	Cm	no	no	yes
277	Cm	no	no	yes
284/285	Cm	no	no	yes
361/362	Cm	no	no	yes

Species key:

Fe - Fraxinus excelsior
Qp - Quercus petraea
Cm - Crataegus monogyna
Ca - Corylus avellana
Ia - Ilex aquilinum
Ug - Ulmus glabra
Ps - Prunus spinosa
Ag - Alnus glutinosa
Sx - Salix sp.
Pop - Populus sp.
Ac - Acer campestris
Sa - Sorbus aucuparia
Bp - Betula pendula

* - nature conservation importance

Explanation as to why it is proposed to survey bat flight paths as part of the mitigation rather than at the time the ES bat flight survey was carried out.

5.4.17 No further surveys will be undertaken as the information collected in 2009 and 2010 provides sufficient records on which to base the assessment.

Trees and Hedgerows

Fuller explanation and inclusion within the Draft Construction Method Statement (following agreement with CCW) of mitigation measures with respect to netting and replanting hedgerows and their aftercare, including how this will be controlled and funded on third party land.

5.4.18 Where hedges are removed to facilitate installation of wood pole supports, the hedge will be cut by means of a chain saw. The pole hole will then be excavated and installed. This can be completed in one day. The ground will then be back-filled. Fencing and netting will be provided in order to bridge the gap in the hedge at the end of each day. Fencing and netting will remain in place until replanting has been undertaken. This is explained in the revised Draft Construction Method Statement and will be agreed with the landowner in advance.

Detailed plans showing hedgerows to be removed and clarification that these have not been identified as important with respect to the 1997 Hedgerow Regulations criteria.

5.4.19 Information relating to important hedgerows is provided in Table 5.6. From this information, it can be seen that only 2 of the 115 affected hedgerows are, in terms of nature conservation value, considered 'important' as per the Hedgerow Regulations criteria.

Review of the conservation value and impact assessment of the black poplar, which are identified for felling in the tree survey.

5.4.20 The black poplar is not a protected species but individual trees may be protected by Tree Preservation Orders (TPO's). Certain trees may have a degree of additional protection because they are within protected areas such as nature reserves, Wildlife Sites or SSSIs. Black poplars are also within the list of point scoring species used in assessing hedges under the Hedgerow Regulations 1997. The black poplar is also a proposed UK Priority Species and therefore may be considered as of medium (regional importance) nature conservation value. The proposed overhead line, will result in a single black poplar being removed. This is considered to give rise to a **moderate** and therefore **significant** effect.

Review of whether the overhead line could be diverted to avoid veteran oaks in the lower Severn Valley, where they are of particular conservation value and, if not, on assessment of the effects of their removal.

5.4.21 There are 16 veteran oaks recorded within the survey corridor. These have diameter at breast height (DBH) of between 100 and 150cm. Of the 16 recorded, 12 are required to be felled, 2 crown reduced and 2 pollarded in order to provide safety clearance for overhead line cables and poles. The trees may be considered to be of **low** (local high importance) nature conservation value. Although there are numerous other trees of the same species and similar stature in the area and therefore the effect is considered moderate and therefore significant.

TABLE 5.7. PREDICTED UNMITIGATED EFFECTS ON OAK TREES DUE TO CONSTRUCTION ACTIVITIES

Habitat / Flora Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Veteran Oaks	Low (local high)	Total	Moderate	Long term	**Significant**
Black poplar	Low (Local High)	Total	Major	Long term	**Significant**

Reference in mitigation measures to use of bird deflectors on sections of the line around the Camlad and Lower Severn Valley.

5.4.22 This is addressed in Chapter 8.0: Summary of Effects & Draft Environmental Management Plan, where reference is made to areas marked in a plan in Figure 8.1 which indicates where deflectors will be fitted.

Reference to where mitigation to prevent raptors/corvoids using poles to predate on other bird species will be provided eg. curlew breeding areas.

5.4.23 As above, reference should be made to the text and figures in Chapter 8.0.

Reference in a detailed map to which parts of the line are within the catchment area of the River Wye SAC, and then what mitigation is needed in this area and how this will be set out in a construction method statement which should be agreed with CCW.

5.4.24 The measures proposed will be as proposed for all watercourses along the southern section of the route as set out in the Draft Environmental Management Plan (EMP 29A).

5.5 Amended Development

Background

5.5.1 This section assesses the likely effects of the Amended Development on ecology. This encompasses protected species and habitats, including woodlands and hedgerows (and includes reference to commercial plantations where relevant). Desk based assessment and field surveys were carried out in Spring 2010 to identify those habitats and species, which may be affected.

5.5.2 As explained in the introduction to the Addendum, since submission of the December 2009 ES, the design has been subject to minor design amendments arising from further survey work and discussions with landowners, together with further technical review of the suitability of the design for the area where it is to be installed. These have resulted in changes to two sections of the route:

- Between Poles 45 – 63 over a distance of 1.7km, with the result that the outside edge of the 100m corridor moves a maximum 300m to the east.
- Between Poles 360 – 371 over a distance of 900m with the result that the outside edge of the 100m corridor moves a maximum 90m to the south.

5.5.3 SPEN refers to these changes as the Amended Development. Further detail on the changes is provided in Chapter 3.0: Feedback Response and Amended Development and Figures 3.2 and 3.3.

Forden

5.5.4 The route deviates from that published in the December 2009 ES at Pole 43, departing the previous 100m corridor from Pole 45. From here it swings to a south to south-westerly line crossing over grazing fields, small tree groups and hedgerows. To the west of the farm complex of Pen-y-lan the line turns to run directly south, passing to the east of a new property, over an unnamed lane and to the west of St Michael's Crescent, over several arable fields before passing to the west of Church Farm. The line then oversails the minor road that runs through Forden to rejoin the previous route at Pole 63.

Bryn-picca

5.5.5 The route deviates from that published in the December 2009 ES at Pole 344, however it is not until pole 360 that the line falls outside the previous 100m corridor. From Pole 360 the route runs briefly in a west to south-westerly direction, before turning at pole 362 to run in an almost westerly direction, lying roughly parallel to the previous route, but situated closer to the River Camnant, crossing it directly south of Bryn-picca. From here the route continues in a westerly direction, moving away from the river and rejoining the previous corridor at Pole 371, and the previous route at Pole 383.

Scoping & Consultation

5.5.6 Chapter 2.0 of the December 2009 ES set out the full scoping and consultation process, which was undertaken as part of the original EIA, whilst Chapter 1.0 of the Addendum refers to the ongoing consultation process since submission of the application.

Assessment Methodology

5.5.7 The assessment methodology is set out in Chapter 7.0 and Appendix Q of the December 2009 ES.

5.5.8 The study area for the Amended Development extended to within 2km of the two new sections of overhead line. The data gathered from the 2009 surveys was reviewed in relation to the Amended Development. In addition, the following additional surveys were undertaken:

- Extended Phase 1 Habitat Survey
- Tree Survey

5.5.9 In order to assess the potential effects on ecological receptors, their nature conservation importance and sensitivity is first evaluated. In assessing importance or value, a range of criteria is considered, including rarity, which is usually the most important criterion.

5.5.10 The assessment of an ecological receptor's sensitivity to change due to the Amended Development is a reflection of its function. It is ascertained through professional experience and the advice of scientific literature to understand the likely response of a receptor to effects associated with a development.

5.5.11 The effect levels (magnitude) are ranked into one of five groups taking into account the scale and duration as set out in Table 7.3 of the December 2009 ES.

5.5.12 The effects are categorised as follows:

TABLE 5.8. TABLE INDICATING THE DETERMINATION OF SIGNIFICANCE

Effect Magnitude	Nature Conservation Value of Receptor				
	Very High	High	Moderate	Low	Negligible
Total/Near Total	Major	Major	Major	Moderate	Minor
High	Major	Major	Major-Moderate	Moderate	Minor
Medium	Major	Major-moderate	Moderate	Moderate-Minor	Minor
Low	Moderate-Minor	Moderate-Minor	Moderate-Minor	Minor	Minor
Neutral	None				

5.5.13 There were no limitations to carrying out the assessment for the Amended Development.

5.6 Baseline

5.6.1 The baseline position has been updated in respect of desktop studies to identify designated sites, BIS records and ancient woodland and the following surveys:

- Extended Phase 1 Habitat Surveys for the two new sections of route (May 2010)
- Tree Survey (July 2010)

Designated Sites

5.6.2 There are 5 statutory designated sites within 2km of the two new sections of line:

Forden
- Kingswood Meadow SSSI lies within 1.5km

Bryn-picca
- River Wye SAC lies within 1.5km
- Gweunydd Camnant SSSI lies within 1km
- Gweunydd Esgairdraenllwyn SSSI lies within 1.5km
- River Ithon SSSI lies within 1.5km

Powys Biodiversity Information Service (BIS Records)

5.6.3 Whilst BIS provided records for the December 2009 ES; the most recent records were 2005. It is worth noting that a number of bat species and breeding birds have been noted within 1km of the survey corridor.

Ancient Woodland

5.6.4 The two new sections of overhead line do not cross any additional areas of ancient woodland. The section near Forden lies within 200m of two areas of ancient woodland. The section near Bryn-picca lies within 350km of an area of ancient woodland.

Breeding Birds

5.6.5 The Phase 1 Habitat Surveys for the Amended Development acknowledges the results of the breeding bird surveys carried out in April and May 2009 for the December 2009 ES, the results of which are included within Chapter 7.4 and Appendix N of the December 2009.

Habitats & Flora

5.6.6 The 2008/2009 Habitat Surveys noted that much of the proposed overhead line route passes through a wide variety of habitat. Semi-improved, sheep grazed acid grassland was most common at the southern end of the route, and improved grassland of limited botanical interest, and arable land most common towards the northern end. The surveys also noted the presence of woodland habitats through the survey corridor, including semi-natural broad-leaved woodland, mixed plantation, conifer plantation and scattered trees.

5.6.7 The May 2010 Phase 1 Habitat Survey for the Amended Development noted the presence of marshy grassland, poor semi-improved acid grassland, improved grassland, hedgerows, mature trees, and running water.

5.6.8 Some of the habitats present within the survey corridor are included in the Powys Local Biodiversity Action Plan (LBAP), notably: rhos pasture (marshy/damp grasslands), linear habitats (hedges and verges), rivers and streams, and farmland.

Semi-improved acid grassland

5.6.9 Acid grassland is listed in the UKBAP. However taking into account the modification of this habitat type (largely species poor), owing to intensive sheep grazing, its nature conservation value is considered **low** (Local Low).

Marshy Grassland/Rhos Pasture

5.6.10 Taking into account the local importance of this habitat and its species poor content, its nature conservation value is considered **low** (Local Low).

Improved grassland

5.6.11 This species poor habitat and the regular occurrence of such habitat means that its nature conservation value is considered **low/negligible** (Local low).

Riparian Habitats

5.6.12 The presence of otter was noted on the Afon Mule during the 2009 survey but not during the May 2010 survey. Otters are likely to utilise all of the watercourses within the study area, for foraging or commuting and potentially breeding. Other rivers present within or close to the survey corridor include: the Afon Camnant. Rivers and streams are priority habitats on UKBAP and LBAP, and potential otter habitat. These areas are therefore considered of **low** (Local High) nature conservation value.

Hedgerows

5.6.13 Most of the hedges along the proposed route were recorded as species poor. Species present included hawthorn (*Crataegus monogyna*), hazel (*Corylus avellana*) and blackthorn (*Prunus spinosa*). Hedges with mature trees were also present along the route and included oak (*Quercus petraea*), ash (*Fraxinus excelsior*) and sycamore (*Acer psuedoplantanus*). A number of defunct hedges and wire fence boundaries were also recorded. Generally hedges are very common in the area and their nature conservation value is therefore considered **low** (Local High).

Trees

5.6.14 The July 2010 tree survey for the Amended Development (see Appendix G) shows that 6 trees and two tree groups will need to be felled along the two new sections of overhead line route prior to construction work commencing. Trees can provide important habitat for birds and bats.

5.6.15 The tree schedule for the Amended Development, shows that most of the trees within the two new sections of corridor comprise willow, hawthorn, oak and ash. These species are common in the locality and are considered of **low** (Local Low) nature conservation value. One mature oak was identified to be felled. These are considered of **low** (Local Moderate) nature conservation value.

Legally Protected Species

Badger

5.6.16 One badger sett was recorded within the survey corridor for the Amended Development (Sett A). The location of the sett is recorded in the Confidential Ecology Report submitted with the December 2009 ES.

5.6.17 Badgers are protected under the Wildlife & Countryside Act and the Protection of Badgers Act. The population present within the study area is considered of **low** (Local Low) nature conservation value.

5.6.18 The sett will not be lost because of the proposed development.

Bats

5.6.19 Seven mature oak trees with high potential to support roosting bats were noted within the survey corridor for the Amended Development. Trees were noted as having potential for bats owing to their size and maturity, the presence of dead wood, rot holes, cracks and crevices in bark, and/or the presence of ivy, which may obscure cracks and crevices, or be of value itself as a bat roost. The location of the trees is shown in the Tree Survey Plan (Appendix G).

5.6.20 Individual trees are described in target notes 1, 2, 3, 4, and 6. Target notes are in the Extended Phase 1 Survey at Appendix E.

5.6.21 As noted previously, as part of the original EIA, road based transect surveys were undertaken in 2009 to assess bat activity within 1km of the proposed overhead line route. Some 368 bat passes were recorded during the transect surveys. The results of these surveys are contained in Appendix Q of the December 2009 ES.

5.6.22 The data gathered from the 2009 surveys was reviewed. No hedgerows recorded with high or medium activity levels for bats were noted in respect to the Amended Development.

5.6.23 Taking into account that bats and their roosts are protected by European and British law, their population status and the presence of suitable foraging and roosting habitat, all bat species present in the area are considered of **low** (Local High) nature conservation value.

Otters

5.6.24 The 2009 Otter Survey carried out for the December 2009 ES found evidence of otters in the form of fresh spraints (droppings) along the Afon Mule at Glan-Mule Bridge. No holts or potential holt sites were found within the survey corridor for the Amended Development.

5.6.25 All of the watercourses within the survey corridor represent potential otter habitat. Otters are protected by European and British Law, and are included in the Powys LBAP. The population present within the study area is therefore considered of **low** (Local High) nature conservation value.

Water Vole

5.6.26 The results of the 2009 Water Vole Survey are provided in Chapter 7.4 and Appendix K of the December 2009 ES. The May 2010 survey identified potential water vole habitat on the Afon Camnant, Target Note 15 (TN 15) at the far southern end of the survey corridor.

5.6.27 Water voles have suffered a drastic decline of over 70% in recent years across the UK as a whole and are a species targeted for action in both the UK national and Powys LBAP. Although no direct evidence of water voles was found at the time of the survey, the potential habitats identified are considered of **low** (Local High) nature conservation value.

Dormice

5.6.28 Dormice are considered earlier in this chapter.

Hares

5.6.29 No hares were sighted during the May 2010 surveys for the Amended Development, therefore they will not be considered any further in this assessment. Brown hares are a Section 74, UKBAP, Section 42 NERC Act, and Powys LBAP species. Their conservation value is considered **low** (Local High).

Amphibians/Reptiles

5.6.30 Thirty-five potential great crested newt ponds were identified within 500m of the proposed overhead line corridor and surveyed in 2009. Great crested newts were recorded at two of the ponds surveyed. No great crested newts were recorded within 500m of the Amended Development in May 2010. Therefore they will not be considered any further in this assessment. Their conservation value is considered **low** (Local High)

5.6.31 Reptile surveys using artificial refugia and undertaken during 2009 were negative. There are habitats present within the survey corridor such as grassland and scrub that represent potential habitat for species such as: slow-worm, adder, grass snake and common lizard. The reptile survey report can be found in Appendix P of the December 2009 ES.

5.6.32 Records of common lizard, adder, adder and slow-worm within 2km of the overhead line were provided by Powys BIS for the December 2009 ES. All four species are included in the UKBAP, whilst slow-worm is also included in the Powys LBAP. All these species are therefore considered of **low** (Local High) nature conservation value. Owing to their inclusion in the UKBAP but given the small size of the areas with habitat potential, reptiles are considered of **low** (Local High) nature conservation value.

Breeding Birds

5.6.33 Breeding bird surveys were carried out in April and May 2009 in accordance with the standard published methods for Breeding Bird Surveys (BBS) as stated in Gilbert, G, Gibbons, D W, and Evans, J. Bird Monitoring Methods (RSPB 1998). The full report is found in Appendix N of the December 2009 ES.

5.6.34 It is considered that, because the habitats recorded in the surveys for the Amended Development are the same and immediately adjacent to those previously recorded, it is acceptable for this assessment to utilise the survey data gathered in 2009.

5.6.35 The 2009 surveys recorded fifty-nine species of bird along the route with a number of these Red and Amber listed by the RSPB. Some are also Schedule 1 EU species, listed under Section 42 of the Natural Environment and Rural Communities Act 2006 (NERC Act), included in Section 74 of the CRoW Act 2000 or recognised as UKBAP species.

5.6.36 The most notable species recorded included red kite, fieldfare, bullfinch, yellowhammer, starling, house sparrow, song thrush, skylark, and curlew.

5.6.37 The birds recorded within the survey corridor are considered of **low** (Local High) nature conservation value.

Wintering Birds

5.6.38 The potential for collisions with overhead lines is probably the most significant effect of the likely to arise from construction of the overhead line. This represents a long-term, permanent hazard to certain groups of birds, primarily the larger wildfowl such as species of swan and geese and to a lesser extent the smaller wildfowl. These species frequently fly at low altitude in poor light conditions. Collisions with overhead lines also tend to be fatal.

5.6.39 A wintering vantage point bird survey was carried out between November 2008 and March 2009. Further details and the full report are provided in Chapter 7.4 and Appendix M of the December 2009 ES.

5.6.40 Collation of data search results and consultations led to two areas being the focus of the survey work - around the Mid Wales Airport and around Welshpool, where birds commute between Llyn Coed-Y-Dinas (SJ 222 052), Dolydd Hafren Nature Reserve (SJ 206 006) and Lymore Park (SO 231 962). The new section of overhead line around St Michael's Crescent near Forden lies near this area.

5.6.41 The species of most concern recorded during the vantage point surveys were a small number of mute swans and mallards and a larger number of Canada geese. Whilst Canada geese are not of conservation concern, there is a clear animal welfare issue and mitigation measures are put forward to reduce the likelihood of collisions.

5.6.42 The likelihood of fatal overhead line collisions is higher in the northern sections of the line where it crosses the Camlad and travels up the Severn Valley, however, this was not considered a significant concern.

Sensitive Ecological Receptors

5.6.43 The following species are identified as sensitive receptors for the purposes of assessing the Amended Development.

Habitats
▫ Riparian habitats, notably the Afon Camnant
▫ Afon Ithon – connected to SSSI and Wye SAC some 3km south
▫ Hedgerows
▫ Veteran oaks
▫ Black poplar
Species
▫ Bats (Potential roost trees) – **low** (Local High) overall site conservation value
▫ Bat flight paths – **low** (Local High) overall site conservation value
▫ Otter – **low** (Local High) overall site conservation value
▫ Water vole – **low** (Local High) overall site conservation value
▫ Reptiles – **low** (Local High) overall site conservation value
▫ Birds – **low** (Local High) overall site conservation value BBS and wintering birds survey

5.6.44 Whilst there are some habitats present within the survey corridor that are included in the Powys LBAP (notably: rivers and streams, hedgerows, and rhos pasture), these are considered as having low conservation value and/or because significant adverse effects are considered to be highly unlikely. In addition, some species (e.g. badger and great crested newts) are not included because they are considered of low or negligible nature conservation value, or because significant adverse effects are considered highly unlikely (e.g. small mammals having a relatively low nature conservation value and small extent of potential habitat loss/ damage).

5.7 Assessment of Effects during Construction & Decommissioning

Habitats & Flora

5.7.1 For both the placement of poles and creation of access routes and temporary storage areas, there will be some loss and disturbance to hedges, marshy grassland, semi-improved grassland, poor semi-improved acid grassland and improved grassland. There will also be loss or reduction of a number of trees to provide safety clearance for the overhead line cables.

5.7.2 Marshy grassland is of particular concern and habitat loss could have an adverse effect on lapwing, curlew, meadow pipit and skylark by depriving them of both nesting and foraging habitat. There may also be an effect on other birds, which use the marshland as foraging habitat.

5.7.3 Owing to the small amount of potential habitat likely to be lost and the short and temporary nature of the disturbance, effects on habitats are anticipated to be not significant.

5.7.4 During decommissioning, wood poles will be removed and vegetation along access routes may be temporarily disturbed. Again, effects are anticipated to be not significant.

5.7.5 Any loss of sections of hedgerow to install the wood pole supports could have an effect on bat species. As no hedgerows with high or medium activity levels for bats were noted near the Amended Development (as recorded in the 2009 surveys), effects on bat flight paths are anticipated to be not significant.

5.7.6 There may be instances where bats are using sections of hedgerow for foraging, which have to be removed to install the wood pole supports. In these cases, provided mitigation measures are in place to maintain the continuity of these hedgerows, the effects are anticipated to be not significant. Similarly, during decommissioning, the wood poles will be removed and hedgerows along access routes may be temporarily disturbed. Any effects on bat flight paths are expected to be not significant.

5.7.7 The July 2010 tree survey for the Amended Development indicates that the anticipated effects are not significant.

TABLE 5.9: PREDICTED UNMITIGATED EFFECTS ON HABITATS & FLORA DURING CONSTRUCTION & DECOMMISSIONING

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Afon Camnant	Low (Local High)	Low	Minor adverse	Short-term	Not significant
Afon Ithon	Very High	Low	Moderate-minor adverse	Short-term	Not significant
Hedgerows	Low (Local High)	Medium	Moderate-minor adverse	Medium term	Not significant
Trees	Low Local Low)	Minor	Minor Adverse	Long term	Not significant

Fauna

5.7.8 Potential effects on fauna include habitat loss and disturbance effects identified previously, which could lead to a potential loss of or disturbance to species as well as disturbance due to noise, vibrations and human/vehicle movement.

Bats

5.7.9 There is potential for the loss of mature trees that may support roosting bat species. Bat species are likely to forage in habitats near the overhead line and potentially use some of the trees as roosting sites. However, the loss of a small number of potential roost sites on the local bat populations is likely to be not significant.

Otters & Water Vole

5.7.10 Otters and water vole (if present) are largely nocturnal and crepuscular and so less affected by the construction and decommissioning phases of the development. Any effects are likely to be temporary and not significant.

Reptiles

5.7.11 Reptiles are generally diurnal. The early morning and late evening construction activities may affect nocturnal and crepuscular species, especially during autumn, winter and early spring when days are short. The resulting disturbance is anticipated to be not significant.

TABLE 5.10: PREDICTED UNMITIGATED EFFECTS ON FAUNA DURING CONSTRUCTION & DECOMMISSIONING

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Bats	Very High (International Importance)	low	Moderate-minor adverse	-Short - term	Not significant
Otter	Low (Local High)	Low	Minor adverse	Short-term	Not significant
Water Vole	Low (Local High)	Low	Minor Adverse	Short-term	Not significant
Reptiles	Low (Local High)	Low	Minor Adverse	Short-term	Not significant

Birds

5.7.12 Construction activities may have an effect on breeding and non-breeding birds. The loss of mature trees and hedgerows supporting nesting and foraging species may affect species such as red kite, raven, woodpecker, red start, willow warbler, thrushes and owls, due to a loss of nesting and feeding habitat.

5.7.13 The Red Kite Trust has expressed concerns regarding the construction phase of the development owing to the risk of disturbance during the nesting season.

5.7.14 A number of ground nesting birds have been recorded as nesting below and in close proximity to the proposed overhead line in areas of marshy grassland. These species include curlew, meadow pipit and skylark. They may be disturbed both by loss of habitat and by construction traffic along access routes. Loss of, or disturbance to other grassland areas could adversely affect carrion crow, jackdaw, rook, swift, swallow, meadow pipit and skylark by temporarily depriving them of foraging habitat. The resulting disturbance is likely to be not significant.

5.7.15 Fieldfare were noted during the 2009 surveys, however this is a primarily a winter visitor feeding along hedges and in pastures. No disturbance to this species is therefore anticipated and the effects are therefore, not significant.

5.7.16 Based on the consultation results, data search, Breeding Bird Survey and Wintering Bird Survey completed in 2009, the effects are anticipated to be short-term and not significant. However, in areas where trees and hedges are removed the effect will may be longer term, although still not significant.

TABLE 5.11: PREDICTED UNMITIGATED EFFECTS ON BIRDS DURING CONSTRUCTION & DECOMMISSIONING

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Breeding birds	Low (Local High)	Medium	Moderate-minor adverse	Medium-term	Not significant
Wintering birds	Low (Local High)	Low	Minor Adverse	Short-term	Not significant

Pollution of Habitats

5.7.17 During construction and decommissioning, there will be vehicle movement throughout the survey corridor and vehicles may be required to cross streams for access. However, habitats could be subjected to adverse effects in the form of diesel or other contaminant spills, leading to a change in pH because of contamination and siltation during periods of heavy rain.

5.7.18 No significant effects are anticipated in respect of watercourses and habitats and therefore no effects on birds as well as on other species such as fish and otters. Provided EA guidelines are adhered to relating to working in proximity to watercourses, effects are anticipated to be not significant.

TABLE 5.12: PREDICTED UNMITIGATED EFFECTS ON HABITATS & FLORA DUE TO POLLUTION DURING CONSTRUCTION & DECOMMISSIONING

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Afon Camnant	Low (Local High)	Low	Minor adverse	Short-term	Not significant
Afon Ithon	Very High	Low	Moderate-minor adverse	Short-term	Not significant

5.8 Assessment of Effects during Operation

Habitats & Flora

5.8.1 Habitat loss may occur during the construction phase of the Amended Development. This may continue through the operational phase, e.g. if turves are not properly stored and/or replaced at wood pole sites. Overall, however, there will be very limited habitat loss and the effects will be not significant.

5.8.2 There may be temporary damage/disturbance during maintenance or emergency work, resulting habitat loss or damage. In addition, maintenance operations may require use of machinery that could inadvertently result in pollution of surrounding habitats.

TABLE 5.13: PREDICTED UNMITIGATED EFFECTS ON HABITATS & FLORA DURING OPERATION

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Afon Camnant	Low (Local High)	Low	Minor adverse	Short-term	Not significant
Afon Ithon	Very High	Low	Moderate-minor adverse	Short-term	Not significant
Hedgerows	Low (Local High)	Low	Minor adverse	Short-term	Not significant

Trees

5.8.3 Trees along the two new sections of overhead line will be cut back every two years during operation to allow for a 5m safety clearance from the overhead line. The likely effects are considered not significant.

Fauna

5.8.4 The overhead line is not considered to represent a significant barrier to the movement of key fauna receptors.

Bats

5.8.5 Bat species are likely to forage in the locality; however, in terms of bat populations present, the amount of habitat loss or disturbance arising from the Amended Development is not significant.

5.8.6 Interruptions of flight paths caused by the loss of sections of hedgerows could have an effect on bat species. The effects are however anticipated to be not significant as hedge boundaries will be replanted as part of the mitigation strategy.

Otters

5.8.7 Otters may commute along the watercourses present within the survey corridor; however there will be limited disturbance, and no loss of habitat, therefore there will be no significant effects on the otter population.

Water Voles

5.8.8 Water voles have not been confirmed to be present within the survey corridor; however there is potential habitat present. Access to pole sites for operational and maintenance activities will be along existing access tracks therefore disturbance to potential water vole habitats is not anticipated and no significant effects are identified.

Reptiles

5.8.9 Disturbance to reptile habitat is anticipated to be not significant.

TABLE 5.14: PREDICTED UNMITIGATED EFFECTS ON FAUNA DURING OPERATION

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Bats	Very High	Low	Moderate -Minor adverse	Short-term	Not significant
Otter	Low (Local High)	Low	Minor adverse	Short-term	Not significant
Water Vole	Low (Local High)	Low	Minor Adverse	Short-term	Not significant
Reptile	Low (Local High)	Low	Minor Adverse	Short-term	Not significant

Birds

5.8.10 With respect to birds, consultations with the Red Kite Trust, RSPB and the County Bird Recorder, together with breeding bird survey results obtained in 2009, suggest that the overhead cables will not have a significant effect on bird populations. The effects are therefore anticipated to be not significant. The likely effect of the potential disturbance to over-wintering birds is considered not significant. All of the habitats affected by the Amended Development are very common in this vicinity and none of them is of exceptionally high quality. Any disturbance will be short-term and temporary and have considerably less effect than disturbance during the nesting season.

5.8.11 Overhead lines are often difficult for birds to see and can sometimes appear invisible due to background or low light conditions. During periods of poor visibility, this brings an increased risk of collision. Birds likely to be affected include wildfowl, such as ducks, swans and geese, as these are not as able to quickly manoeuvre around the cables. It is likely to have a greater effect during the autumn and winter when migratory wildfowl bird numbers are at a peak and visibility is poor.

5.8.12 There is a connection between the arrangement of overhead cables and the collision rate (Bevanger and Broseth 2001). Where cables arranged in more than one level there is a greater chance of collision than cables arranged on one level. The cable structure in the proposed scheme has three conductors on the same level. In light of this the impact of collisions is anticipated to be not significant. It is proposed that bird flight diverters and/or 'fireflies' be fitted in areas identified as potential risk during the 2009 surveys, to help improve the visibility of the overhead line and reduce likelihood of collision. The fireflies glows at night for up to ten hours, making it ideal for protecting night migrants. Given the mitigation proposed the anticipated effect on bird populations is not significant.

5.8.13 Electrocution is another potential adverse effect on birds. Raptors roost and perch on poles and may be electrocuted if they contact two energised components or an energised component and a grounded component. Those with the widest wingspan are most at risk of contacting two components simultaneously and are associated with collisions. However, electrocutions typically occur on voltages less than 69 kV where separation between the wires is minimal. The effect on the overhead line proposed here, due to the wide spacing (1.5m) between conductors at 132 kV is anticipated to be not significant.

5.8.14 The predation of ground nesting birds such as lapwing, meadow pipit, curlew and skylark, by corvids perching on poles is also a risk along overhead line routes. These species are already amber or red listed on the RSPB red list and are therefore vulnerable. The effect on ground nesting birds of increased predation is therefore anticipated to be **major**, and therefore **significant**.

TABLE 5.15: PREDICTED UNMITIGATED EFFECTS ON BIRDS DURING OPERATION

Habitat Receptor	Conservation Value	Magnitude	Effect	Duration	Significance
Breeding birds	Low (Local High)	Low	Minor adverse	Short-term	Not significant
Wintering birds	Low (Local High)	Low	Minor Adverse	Short-term	Not significant

Pollution of Habitats

5.8.15 The potential for pollution will be much lower than during the construction and decommissioning phases. Activities likely to cause pollution may include vehicular access to site for maintenance and emergency work, which may involve crossing small streams and watercourses, or the leakage/spillage of chemicals on site including: oil, grease and fuel.

5.9 Cumulative Effects

5.9.1 For an assessment of any cumulative effects arising from existing or proposed infrastructure, which forms part of the wider Mid Wales renewable energy project, please refer to Chapter 7.0: Cumulative Review.

5.10 Mitigation & Residual Effects

Habitats & Flora

- The mitigation measures proposed for the two new sections of overhead line are as previously stated in the December 2009 ES and are summarised below.
- Development of a Draft Construction Method Statement (CMS), detailing best practice procedures to be followed for construction and decommissioning works (including reinstatement). This will include procedures for vegetation and soil stripping and storage, effective vegetation reinstatement storage of construction materials and pollution control measures.
- Surveys prior to construction.
- Final locations of site infrastructure will be micro-sited to minimise effects on sensitive habitats, in consultation with a qualified and experienced ecological advisor, with particular reference to wet areas and watercourses.
- Demarcate sensitive habitats close to working areas and ensuring construction workers operate within these limits.

Badgers

5.10.1 One badger sett (Sett A) was recorded. If possible, a 30m protection zone will be maintained around this sett. If this is not possible, then a licence to disturb badgers will be required from CCW in order to undertake the proposed pole installation. The precise position of the pole will be determined on site with a qualified ecologist to minimise disturbance and risk of damage to the sett. The licence application must include a method statement detailing the methods, timing and duration of the work (NB. Licences are normally only granted between 1st July and 30th November).

Bats

5.10.2 Some potential bat roost trees within the survey corridor for the Amended Development have been recorded. Where possible these will be retained and disturbance avoided. Should any of these trees need to be felled or reduced to provide the required safety clearance, then survey protocol and guidance recommended by the Bat Conservation Trust will be followed.

5.10.3 Prior to any works being commenced, a detailed survey of any potential bat roost trees will be carried out.

5.10.4 Those trees that have been identified as having potential to support bat roosts will be surveyed prior to construction. Further detailed ground visual assessments will be undertaken where possible to see if there is any evidence of bats using the tree such as urine stains, scratches, droppings and smoothing of cavities around entrance. If this is not possible then dusk and dawn surveys will be undertaken to establish the presence of bats. Trees with confirmed roosts following further survey will require a licence and the Welsh Assembly Government (WAG) will be consulted to obtain a licence to undertake work on the roost. If no evidence of bats is recorded from the further surveys then the tree will be downgraded to a tree with low bat potential.

5.10.5 In the case of trees being felled that have been identified as having low potential to support bat roosts, they will be felled taking reasonable avoidance measures. Soft felling techniques will be used such as lowering and cushioning to reduce the impact of felling limbs, which may still have bats within cavities. A bat worker will inspect limbs with cracks and crevasses once lowered to the ground for signs of bats.

5.10.6 A licensed bat specialist will be employed who will undertake an inspection of the trees immediately prior to the start of any felling or reduction work and will guide the working method on site in order that the tree operations are conducted in a sensitive manner.

5.10.7 Where possible, sections of timber with possible roosts will be fixed to a suitable nearby tree to ensure the loss of roost sites is minimised. This will be conducted under the guidance of the bat worker.

5.10.8 As further compensation for the loss of potential roost sites, bat boxes will be provided fixed in appropriate locations under the guidance of the bat worker.

Otters

5.10.9 The assessment predicts no significant effects on any otters present within the area for the Amended Development. Appropriate mitigation as outlined in the Draft Construction Method Statement will be followed for working in proximity to the riparian habitat. In addition, a further survey of the area will be undertaken prior to construction work commencing. The results of the survey will then be used to design any further appropriate mitigation measures.

Water Voles

5.10.10 No evidence of water voles was confirmed during the survey although some potential water vole habitat was noted on the Afon Camnant. Further survey of this area will be undertaken prior to the start of the construction work. The results of the survey will then be used to design any further appropriate mitigation measures.

Reptiles

5.10.11 There are a few small areas of grassland and scrub habitats present within the survey corridor that represent potential foraging and resting sites for reptiles. Where these areas have been identified they will be subject to a terrestrial search immediately prior to the start of construction work, including access routes to pole sites.

Birds

5.10.12 A pair of red kite was noted flying near Poles 344 and 383 although no nesting sites were noted. To avoid disturbance to red kites, the Red Kite Trust will be further consulted regarding the timing and the location of any work, including access routes.

5.10.13 A number of breeding birds were recorded along the entire survey route during the 2009 surveys. Should the proposed work be undertaken during the recognised bird-nesting season (1st March to 30th September, RSPB 2000), then a full nesting bird survey (including ground nesting birds) will be undertaken prior to the start of the construction work. Access routes will be agreed prior to the start of the construction/decommissioning work in order to avoid any particularly important habitats with respect to nesting birds e.g. areas of marshy grassland, bracken, rush pastures etc.

5.10.14 Occasional access to the overhead line may be required for maintenance and emergency repair. Where work is planned on the overhead line cables and wood poles, the site ecologist will be informed in order that any risks to habitats and species may be assessed.

5.10.15 Access to the overhead line cables and wood poles particularly during the breeding season when birds are nesting could have an effect on bird species within the survey area. Disturbance will therefore be avoided as much as possible during the nesting season recognised as 1st March - 30th September by the RSPB.

5.10.16 To reduce the risk of predation to ground nesting birds, devices can be fitted to pole structures in order to prevent/deter birds roosting on wood poles, and this is proposed for sections of the overhead line where nesting bird habitats are likely.

Habitat Enhancement

5.10.17 The proposed habitat enhancement measures for the Amended Development remain the same as those proposed in the December 2009 ES.

5.10.18 It is considered that, if the mitigation measures discussed above and detailed fully in the draft are implemented, the effects of the Amended Development will not result in any significant long-term effects.

5.10.19 Good practice requires that, if additional evidence for the presence of legally protected or conservation notable species is identified prior to or during construction, appropriate mitigation will be put in place.

5.11 Summary

5.11.1 It is considered that, if the mitigation measures discussed above and detailed fully in the Draft Environmental Management Plan are successfully implemented, the ecological effects of the Amended Development will not result overall in any residual significant adverse long-term effects.

5.11.2 Careful planning and design have ensured that the proposed route for the overhead line responds to the specific nature conservation characteristics of the area and avoids specific features that are considered particularly sensitive to development of this type.

5.11.3 With respect to birds, significant adverse effects with respect to increased predation have been identified, however with mitigation, no long term significant effects are anticipated.

5.11.4 The potential for collisions with overhead lines is probably the most significant effect likely to arise. This represents a long-term, permanent hazard to certain groups of birds, primarily the larger species such as swans and to a lesser extent the smaller wildfowl. These species frequently fly at low altitude in poor light conditions. Collisions with overhead lines also tend to be fatal.

5.11.5 Protected species licences will be required with respect to badgers and bats for works carried out within 30m of a badger sett. A bat licence will only be required if a roost is actually confirmed in any of the nine individual trees highlighted as having the potential to support them. Detailed surveys will be undertaken for these trees to ascertain the presence or absence of bats. Where work is completed in proximity to otter, reptile and amphibian habitats, appropriate mitigation will provide adequate protection to these habitats and species.

5.11.6 Erection of bird deflectors in appropriate locations will reduce the risk of birds colliding with the overhead line.

5.11.7 Good practice requires that if additional evidence for the presence of legally protected or conservation notable species is identified prior to or during construction, appropriate mitigation will be put in place.

5.11.8 Whilst there are no significant effects identified, some trees will be lost to facilitate construction of the Amended Development, including trees that may have potential for bats. This tree loss may result in potential habitat loss for bats.

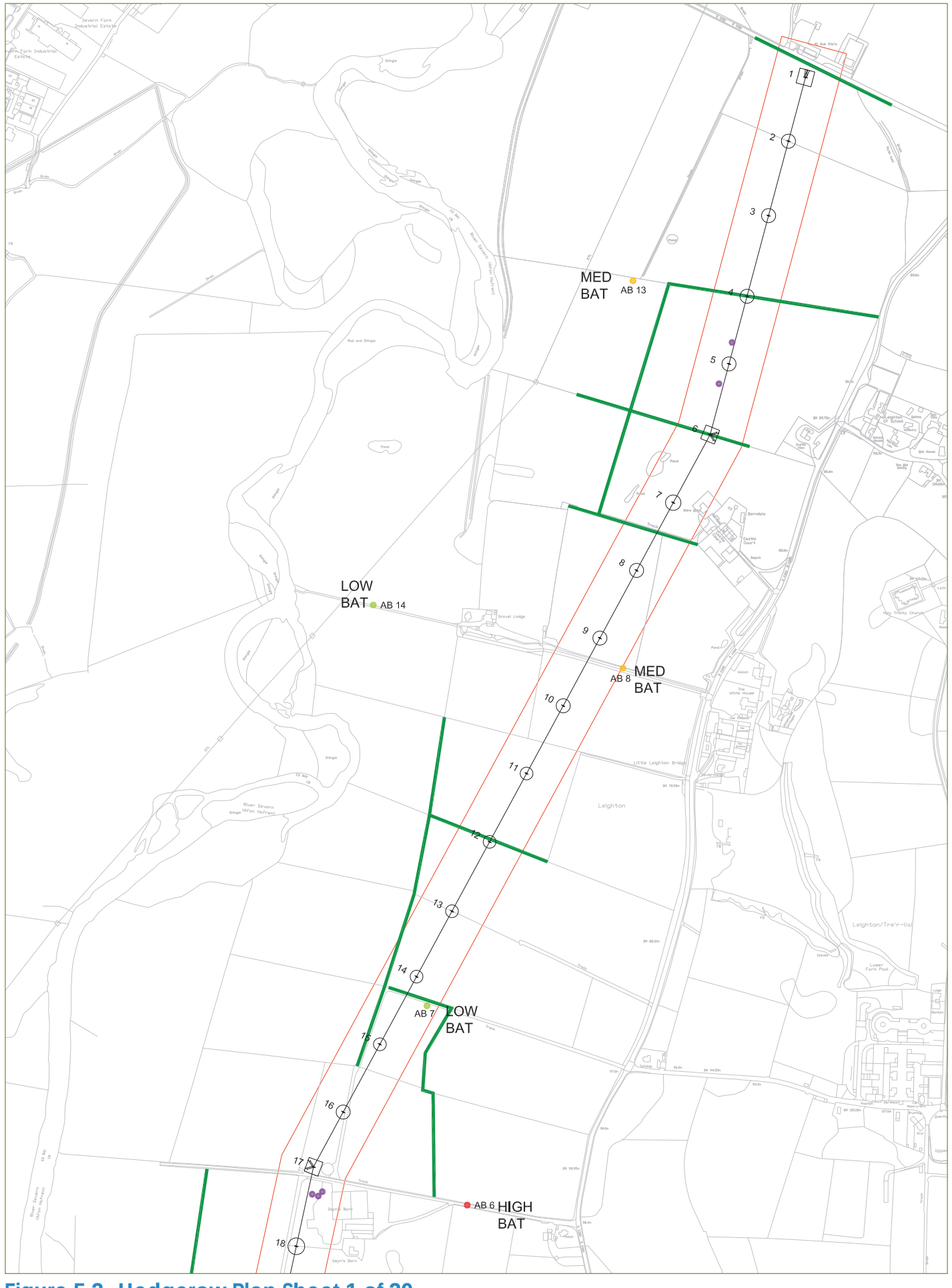


Figure 5.2- Hedgerow Plan Sheet 1 of 20

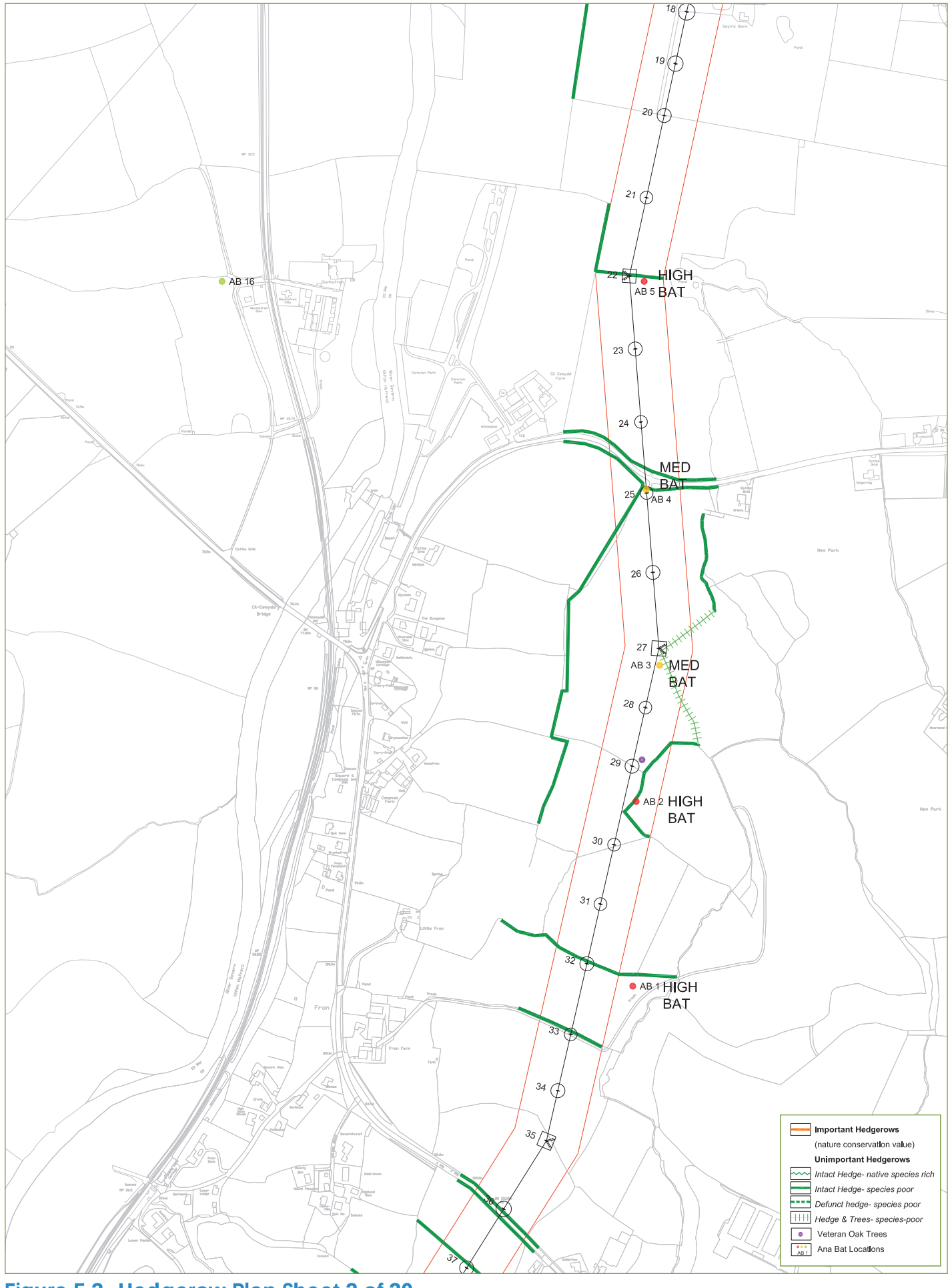


Figure 5.3- Hedgerow Plan Sheet 2 of 20

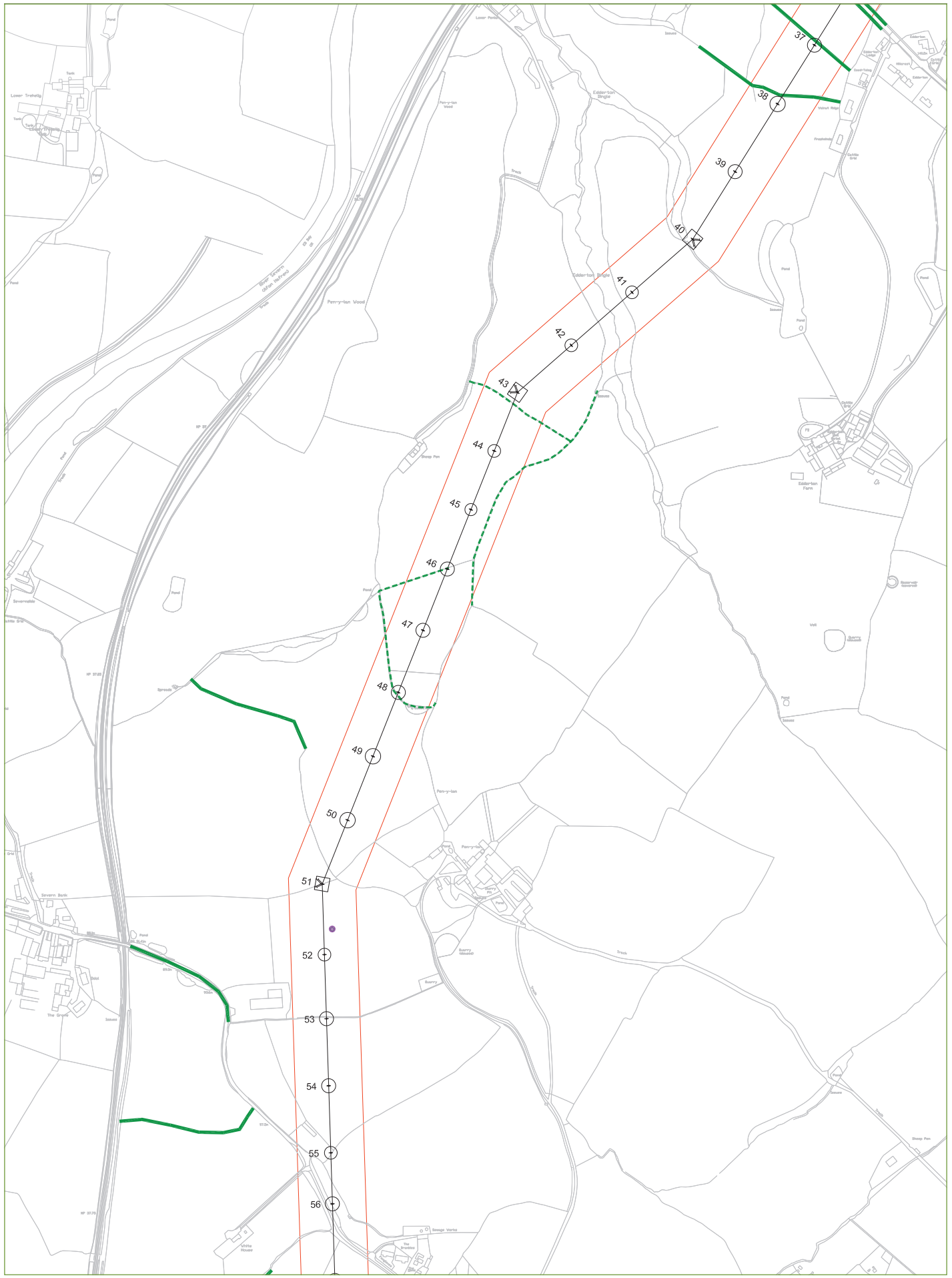


Figure 5.4- Hedgerow Plan Sheet 3 of 20

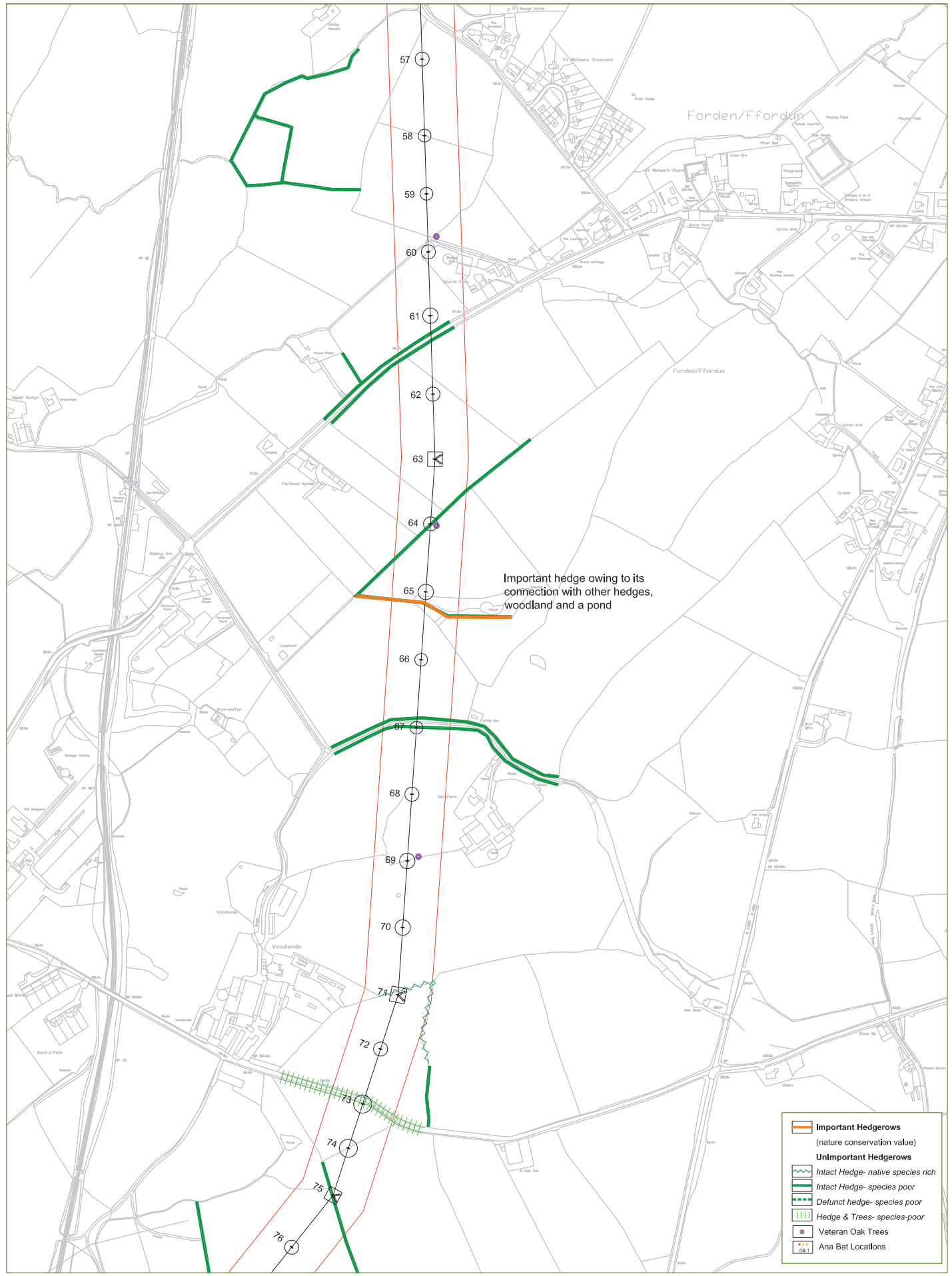


Figure 5.5- Hedgerow Plan Sheet 4 of 20

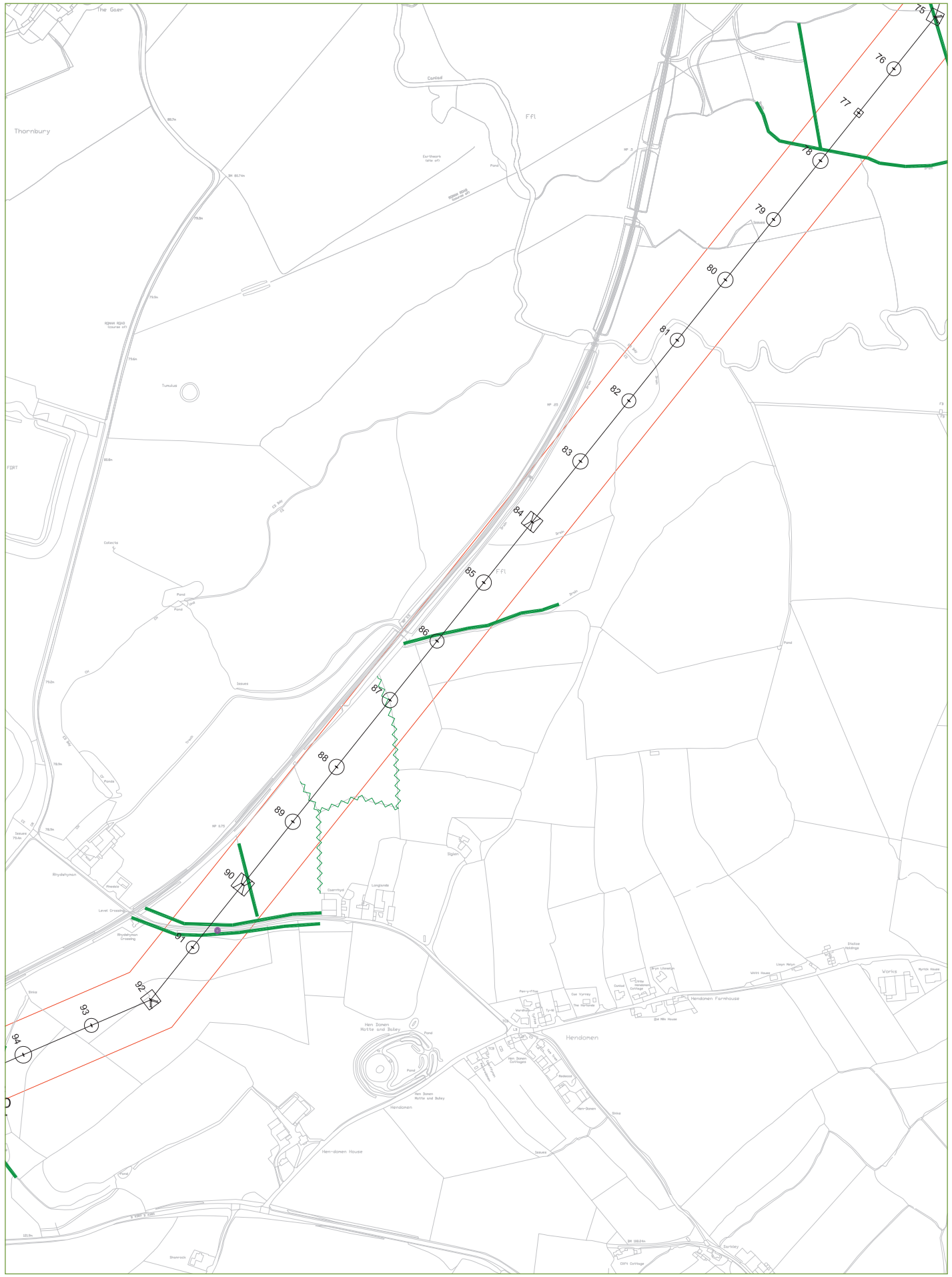


Figure 5.6- Hedgerow Plan Sheet 5 of 20

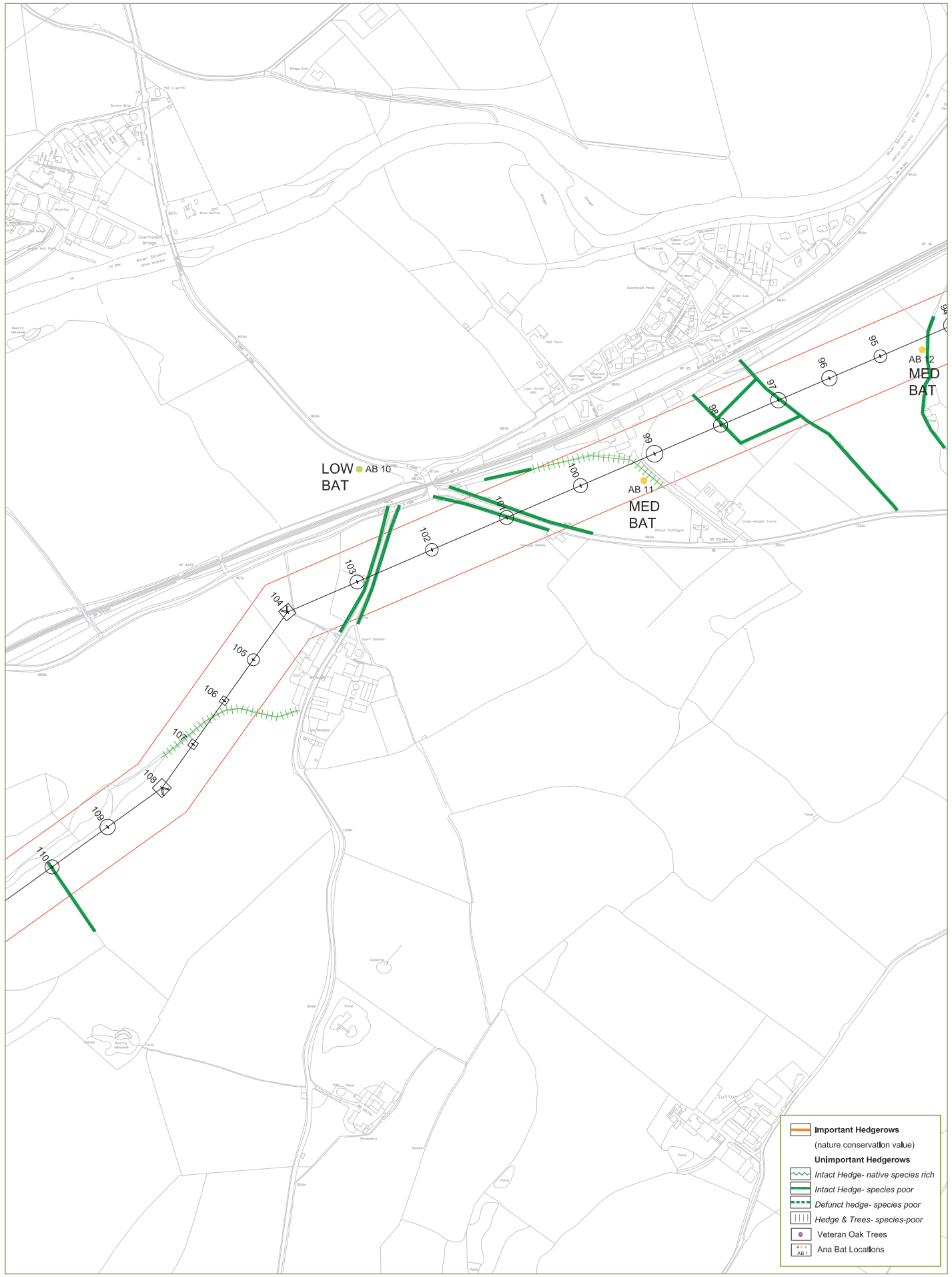


Figure 5.7- Hedgerow Plan Sheet 6 of 20

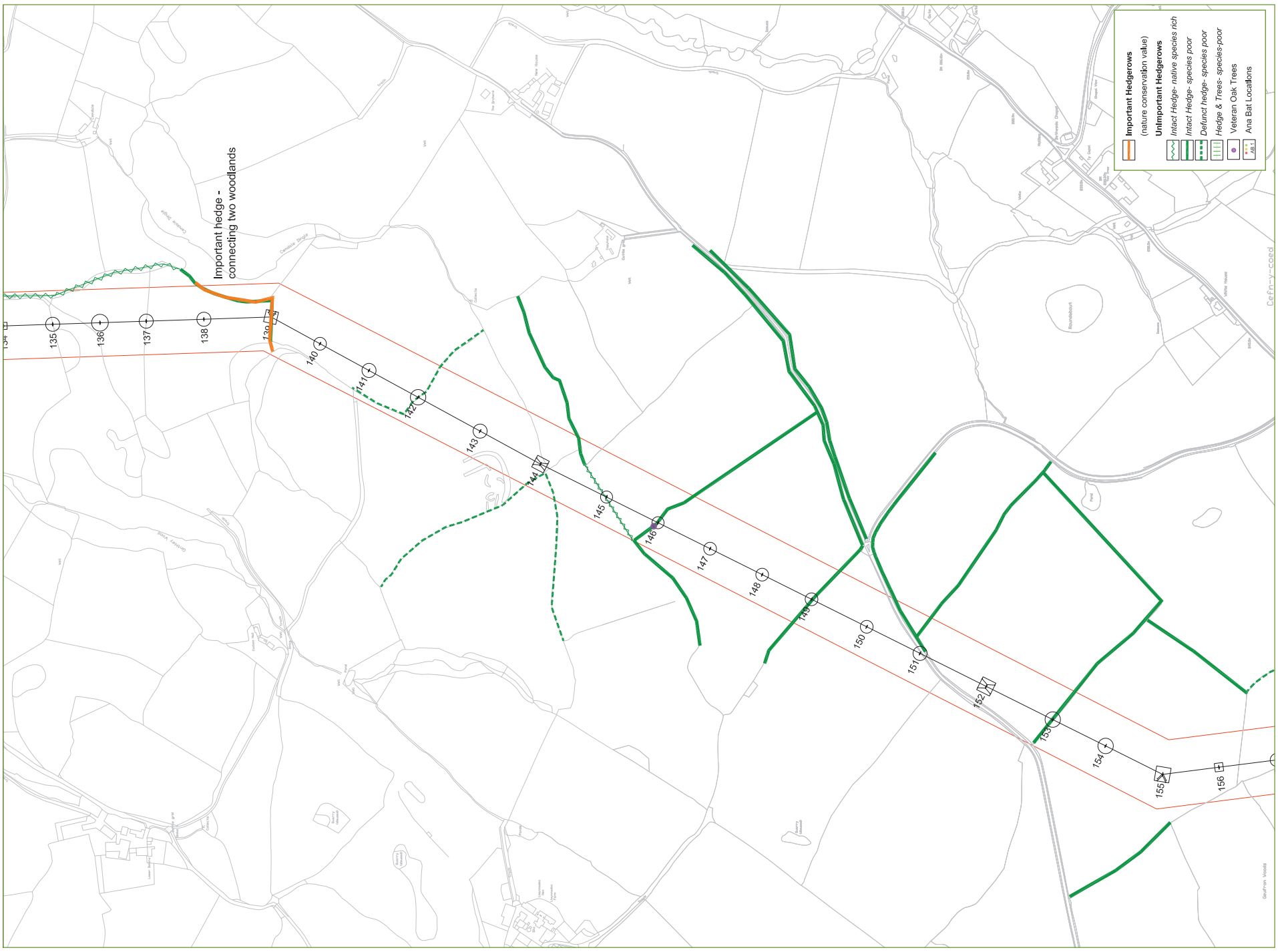


Figure 5.9- Hedgerow Plan Sheet 8 of 20

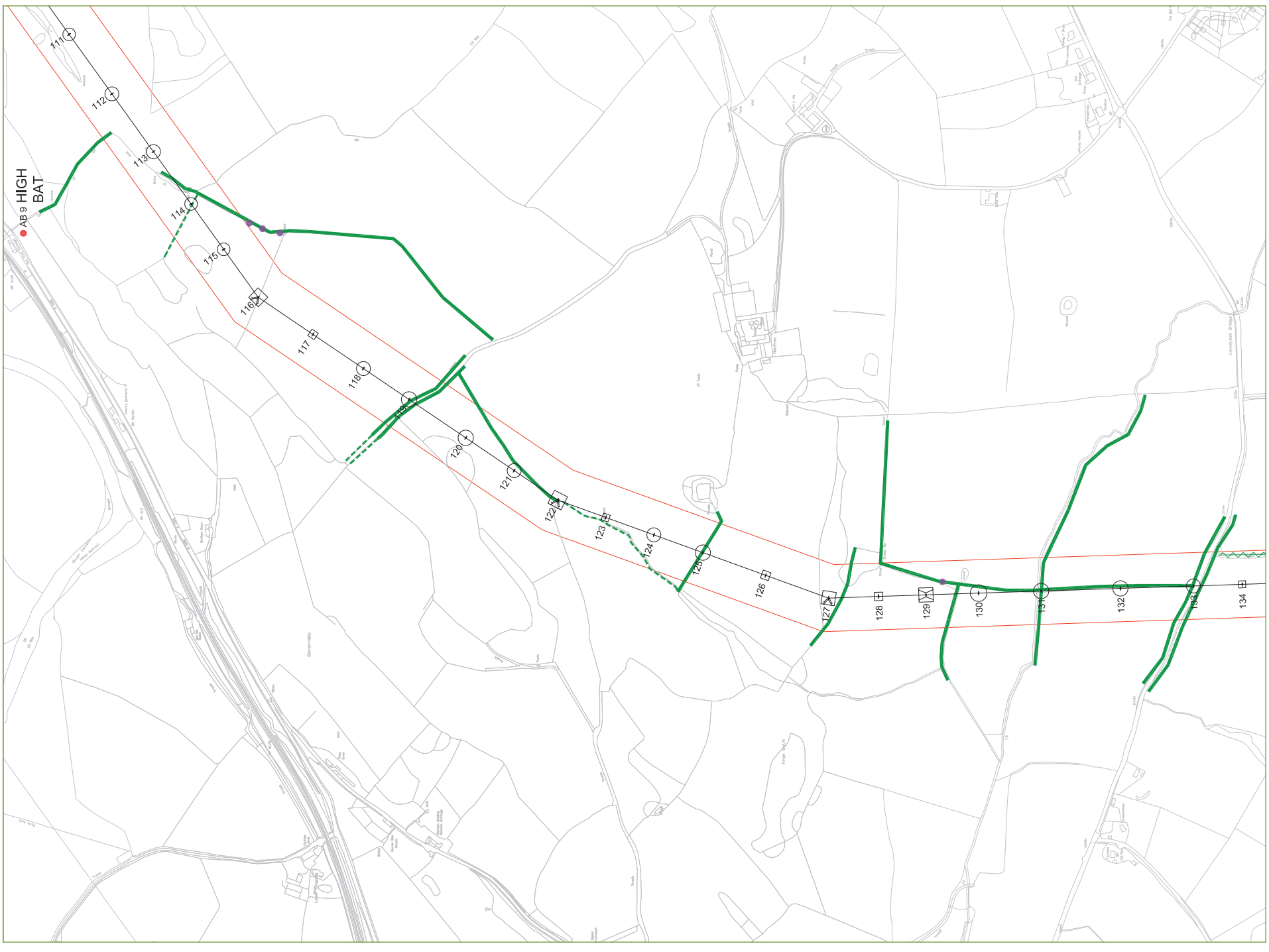


Figure 5.8- Hedgerow Plan Sheet 9 of 20

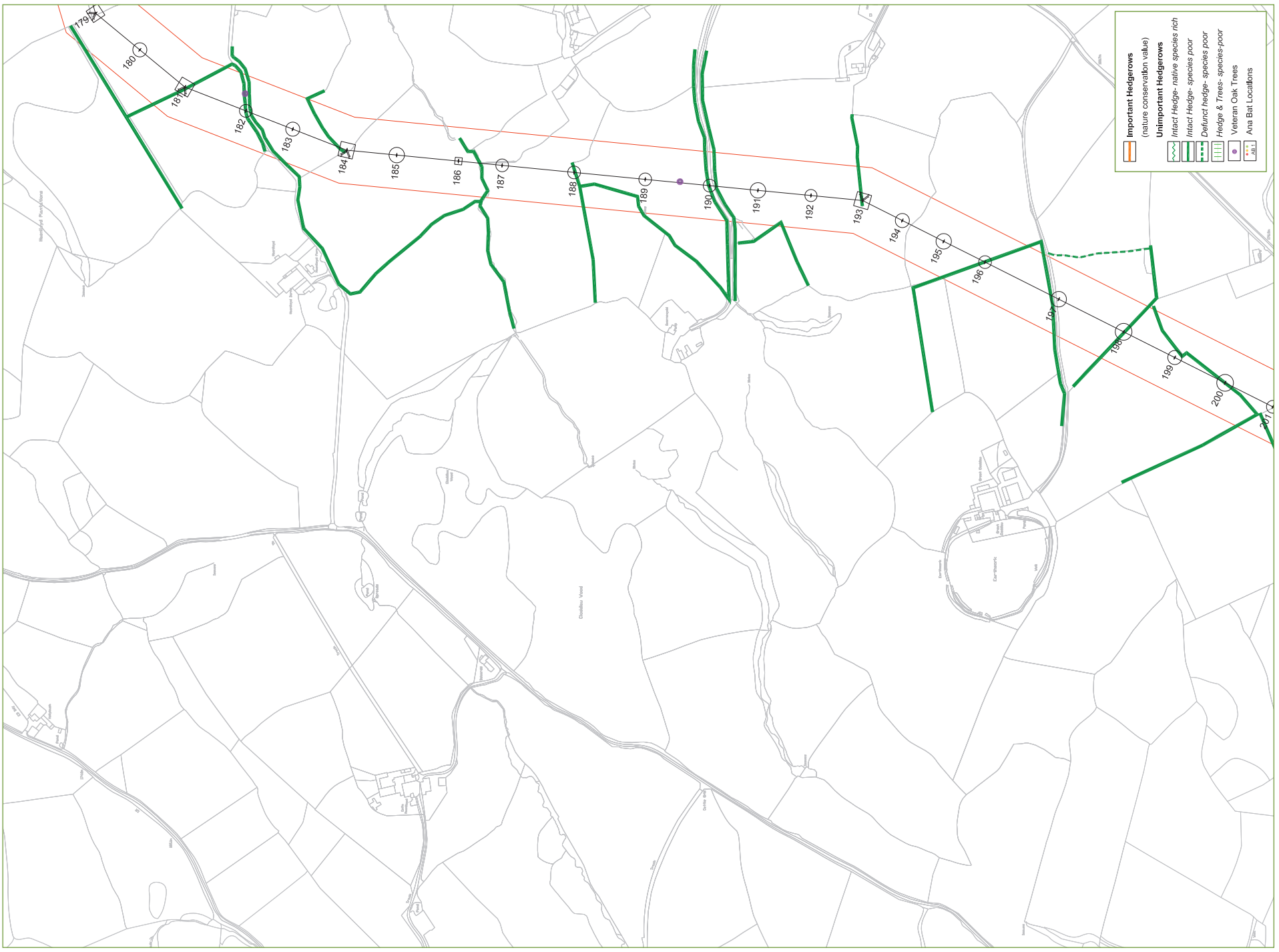


Figure 5.11- Hedgerow Plan Sheet 10 of 20

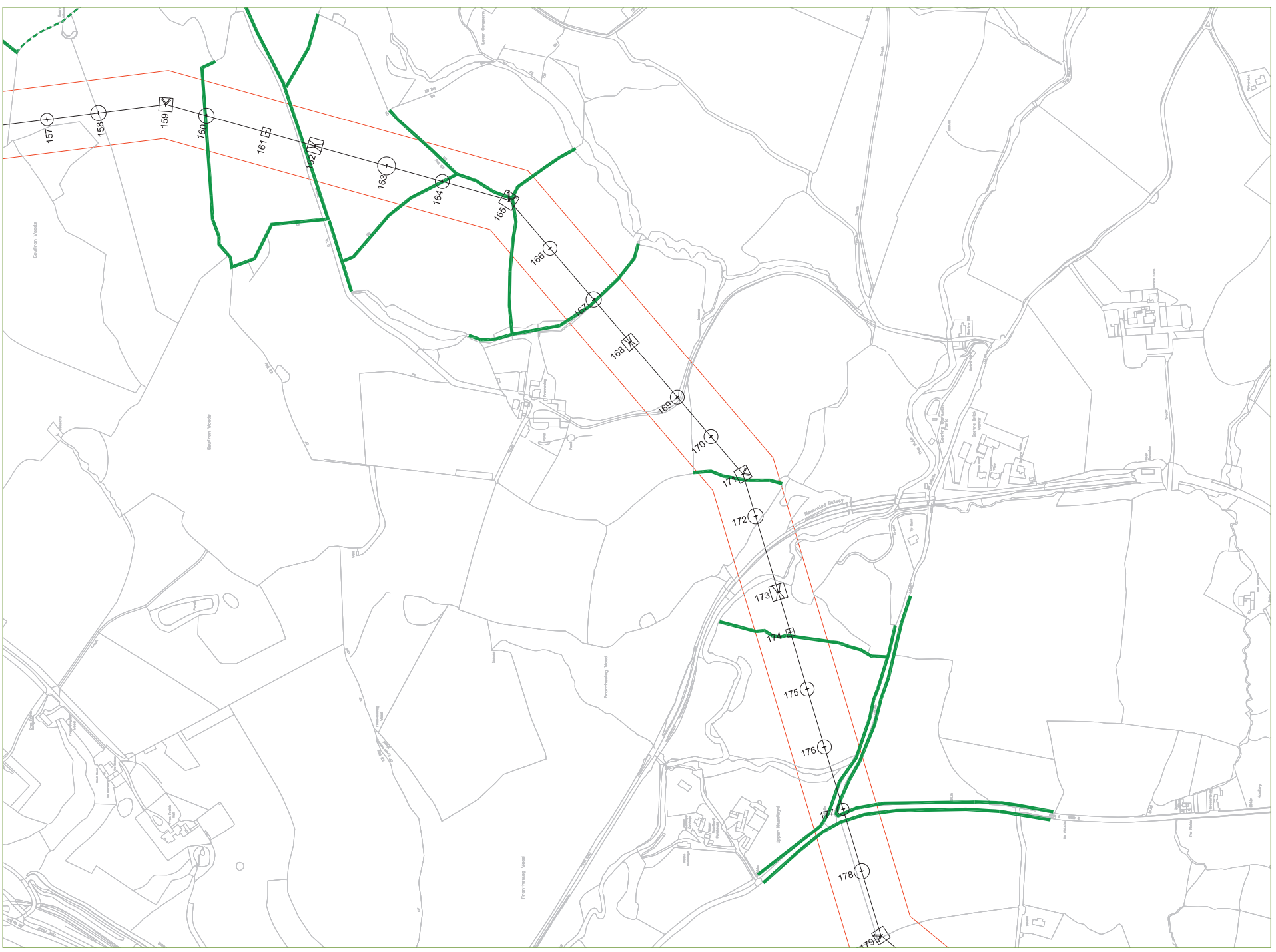


Figure 5.10- Hedgerow Plan Sheet 9 of 20

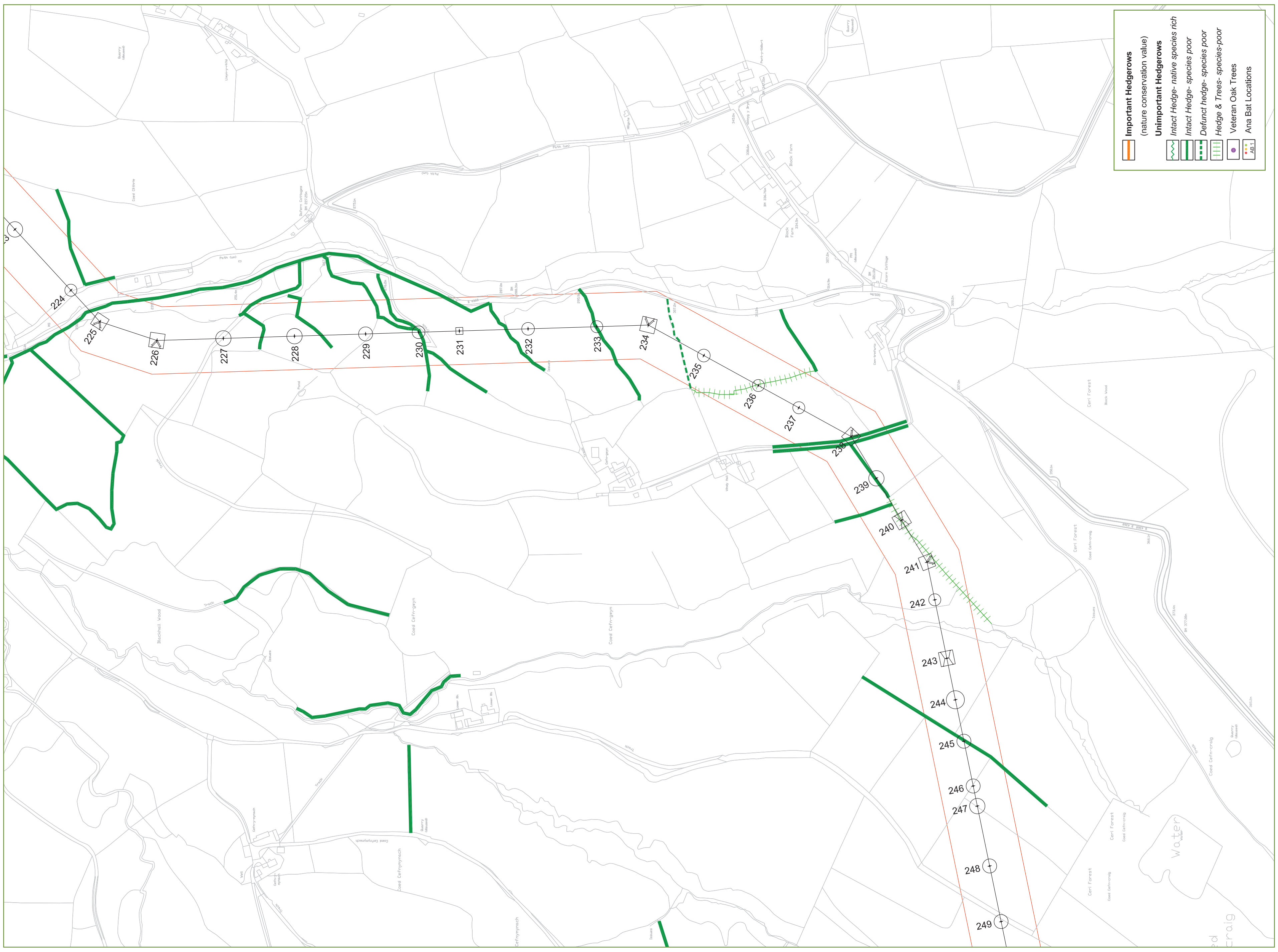


Figure 5.13- Hedgerow Plan Sheet 12 of 20

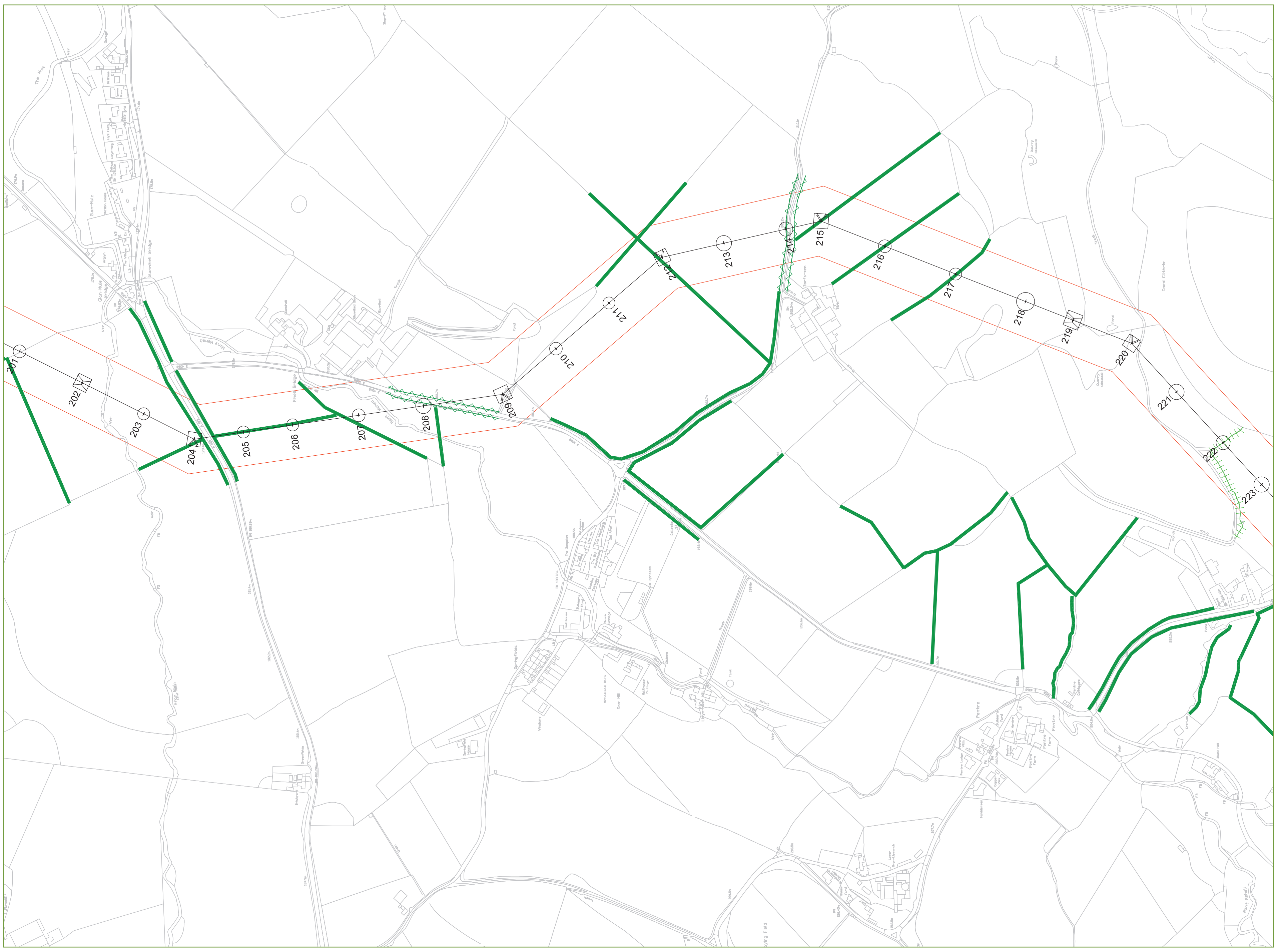


Figure 5.12- Hedgerow Plan Sheet 11 of 20

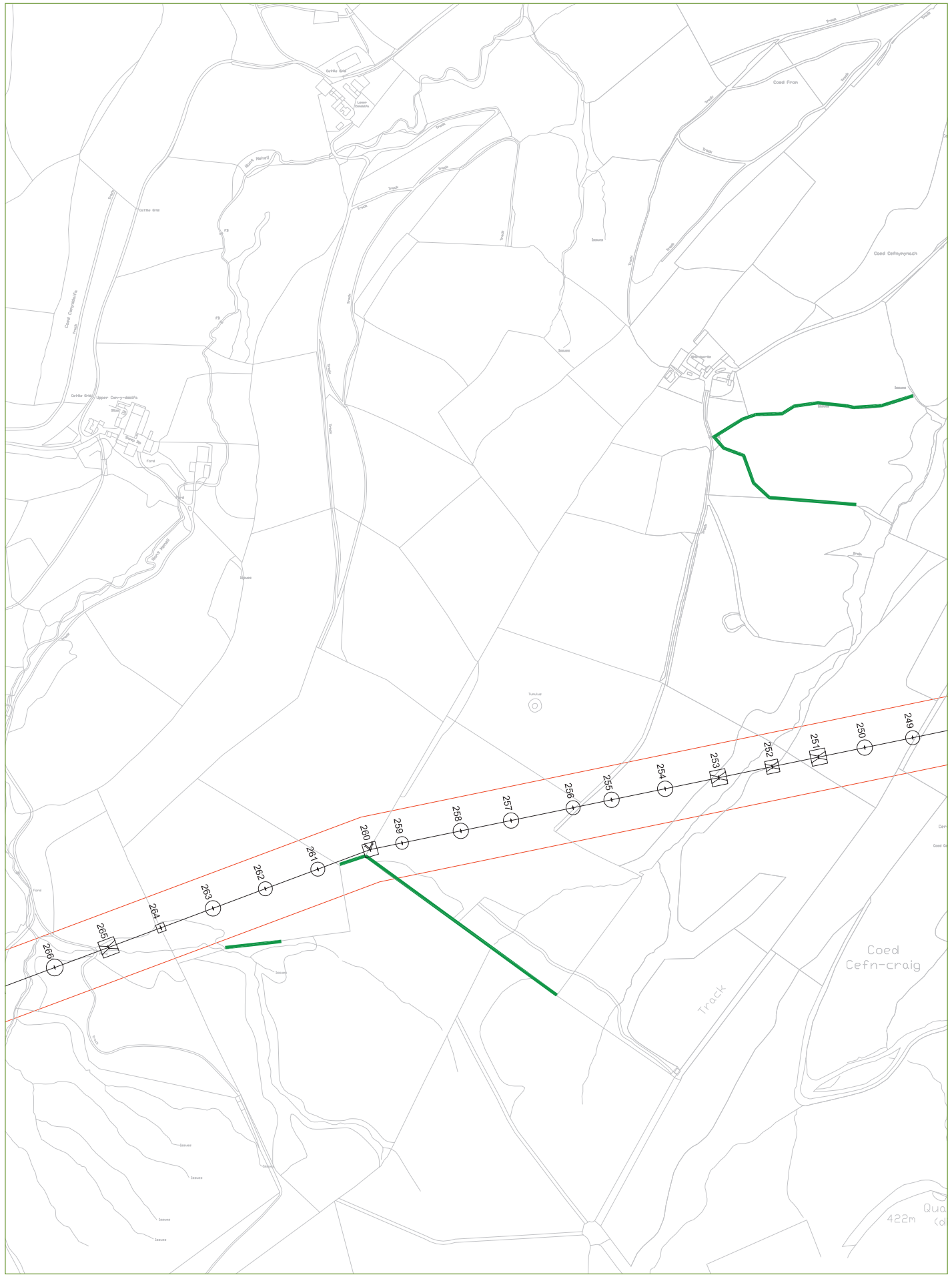


Figure 5.14- Hedgerow Plan Sheet 13 of 20

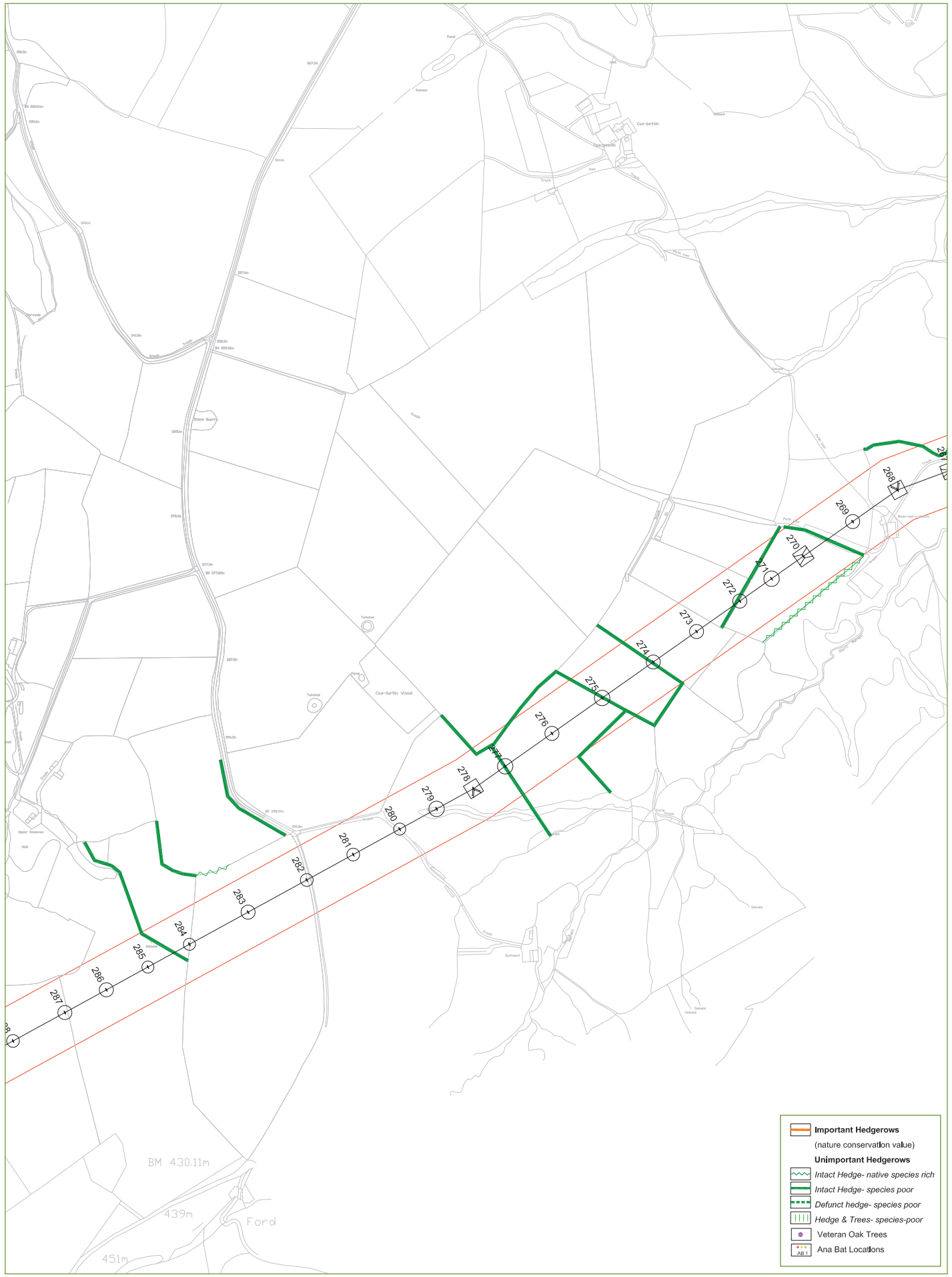


Figure 5.15- Hedgerow Plan Sheet 14 of 20

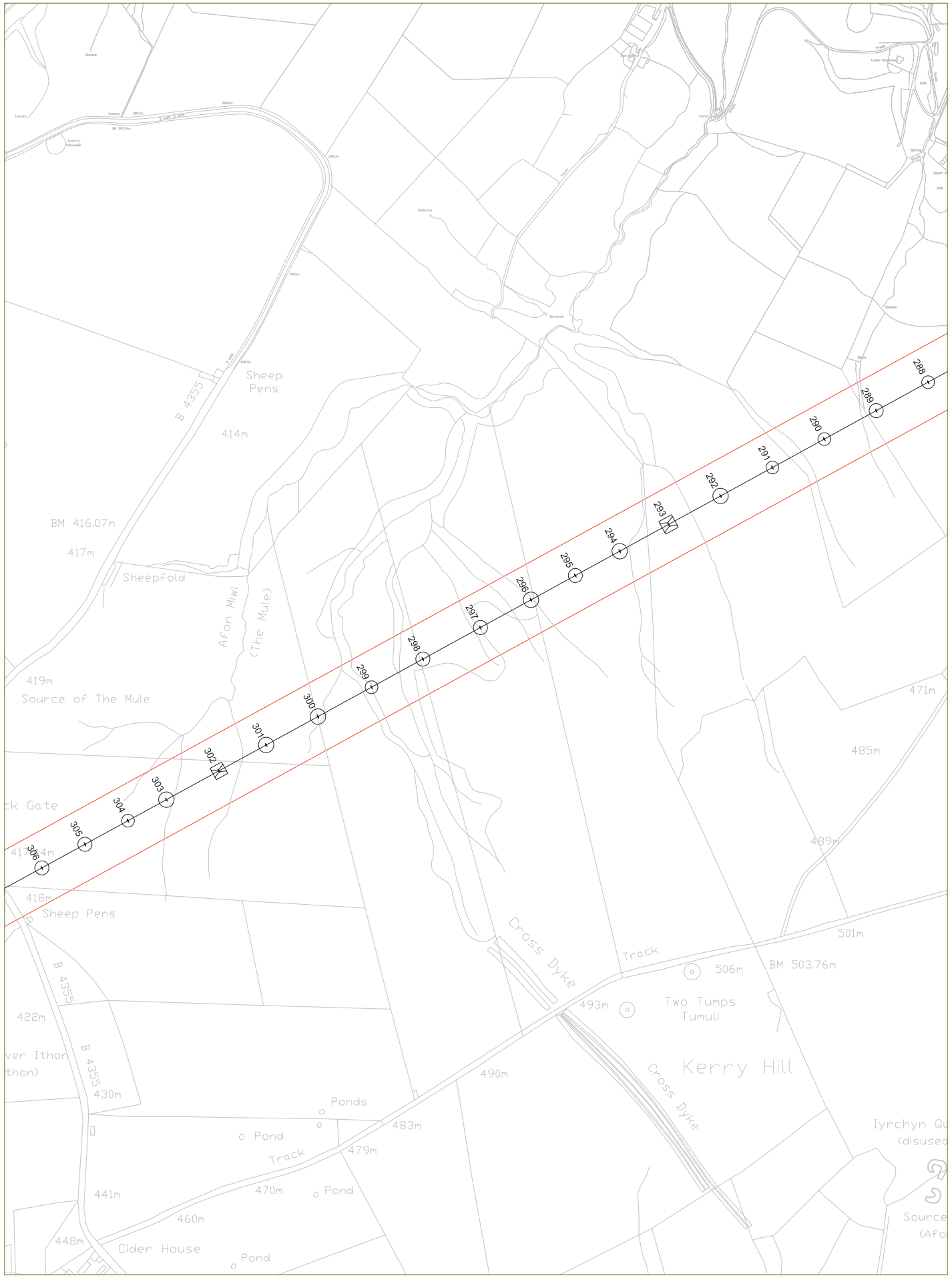


Figure 5.16- Hedgerow Plan Sheet 15 of 20

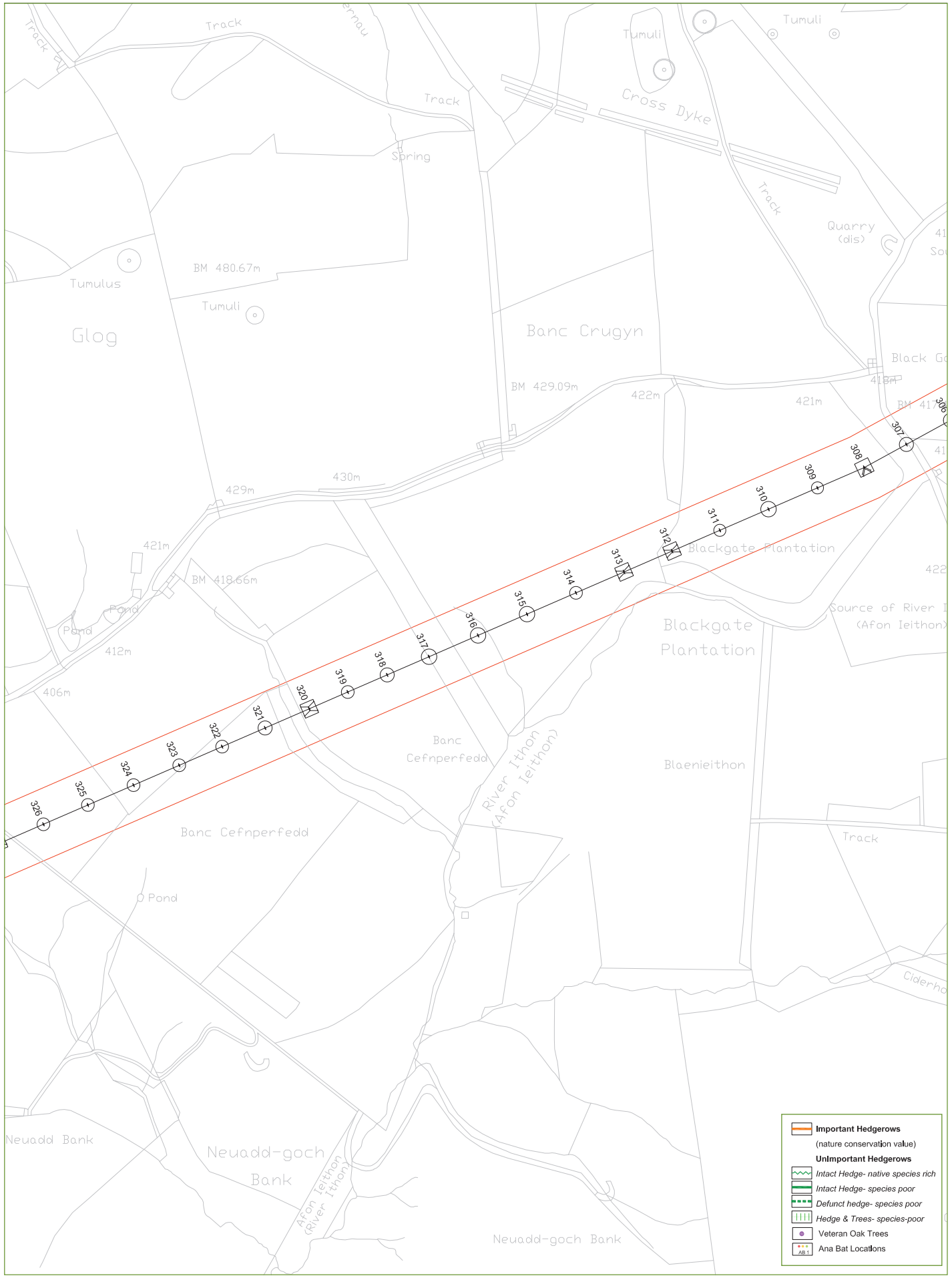


Figure 5.17- Hedgerow Plan Sheet 16 of 20

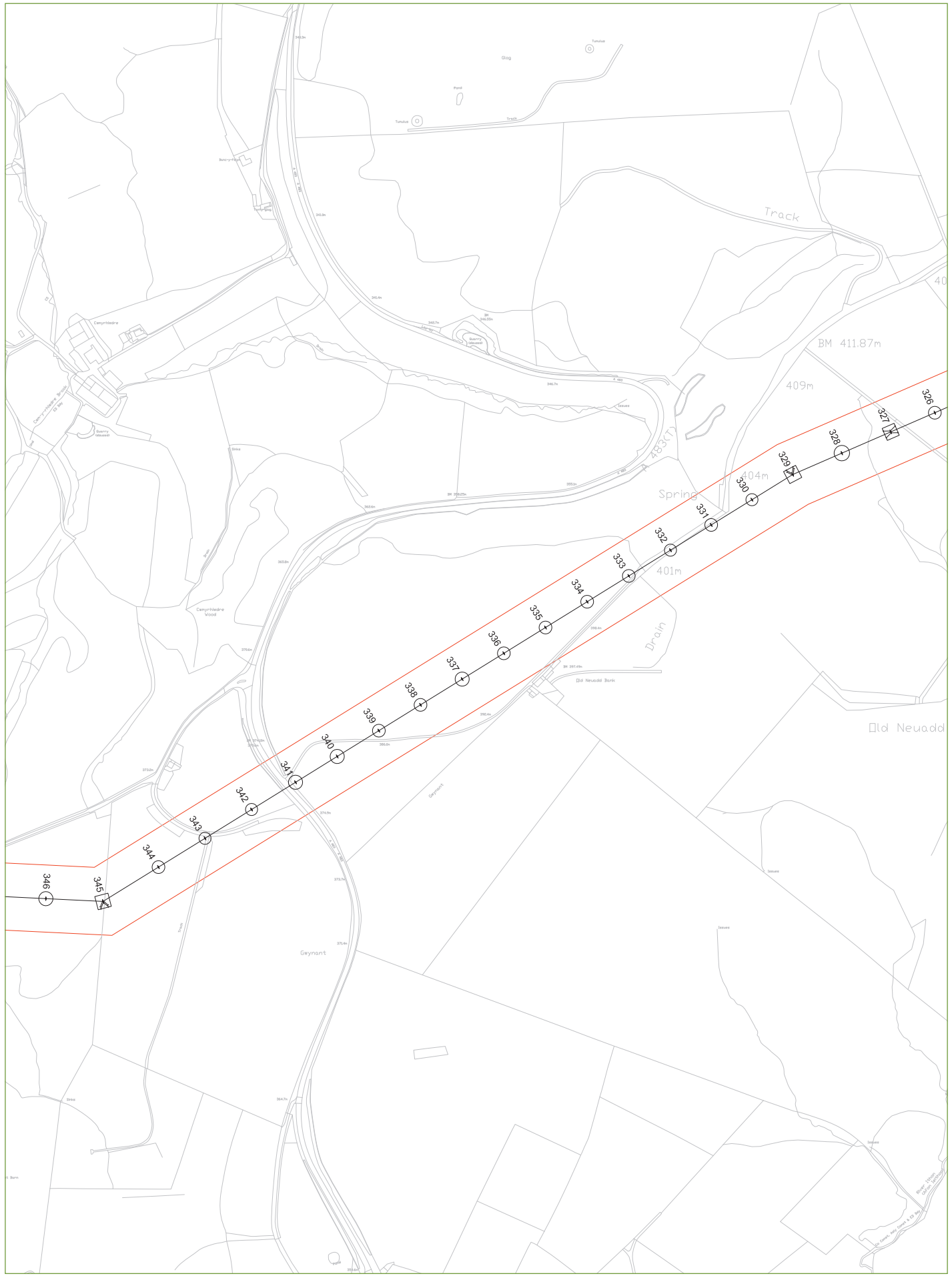


Figure 5.18- Hedgerow Plan Sheet 17 of 20

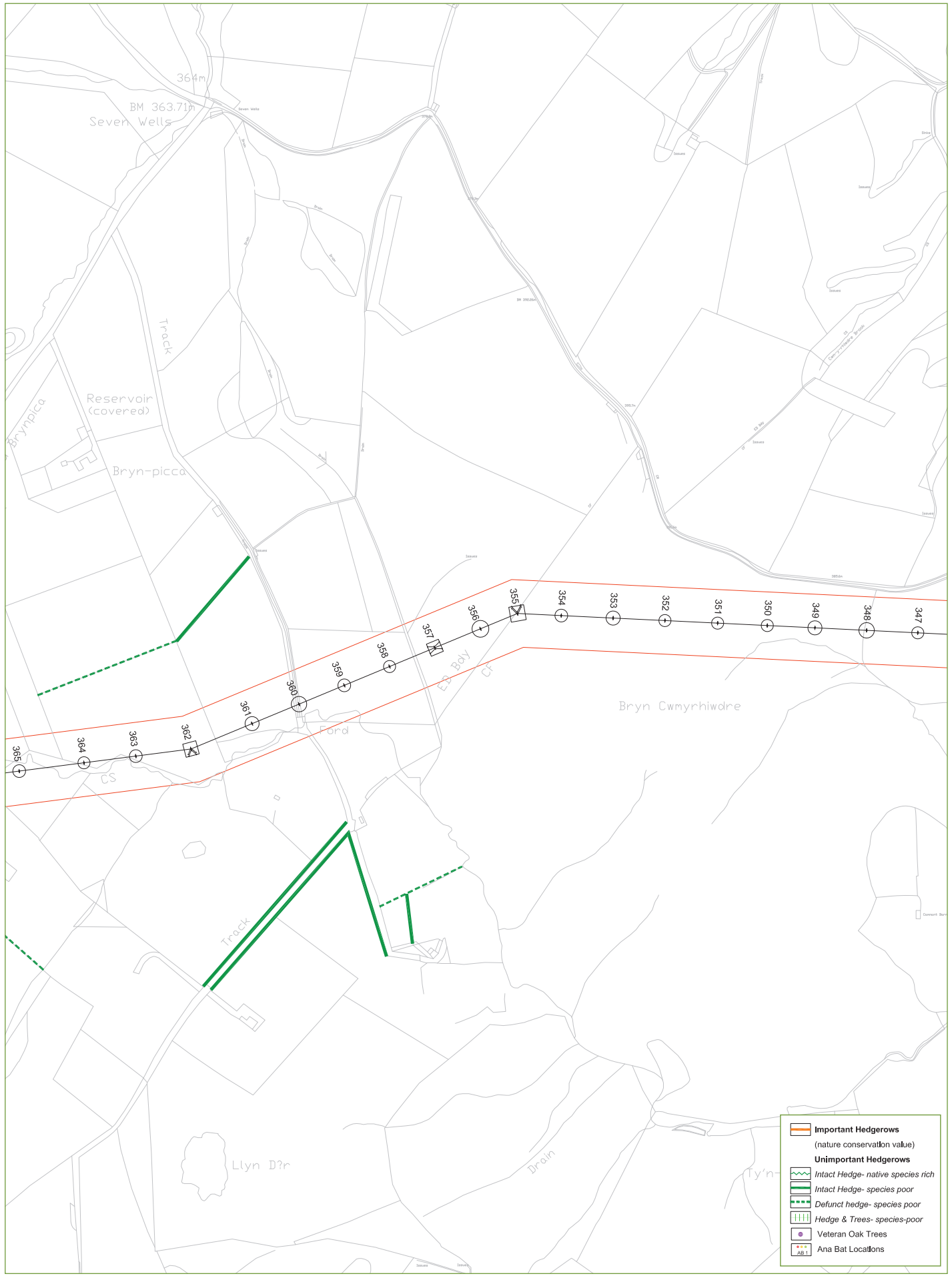


Figure 5.19- Hedgerow Plan Sheet 18 of 20

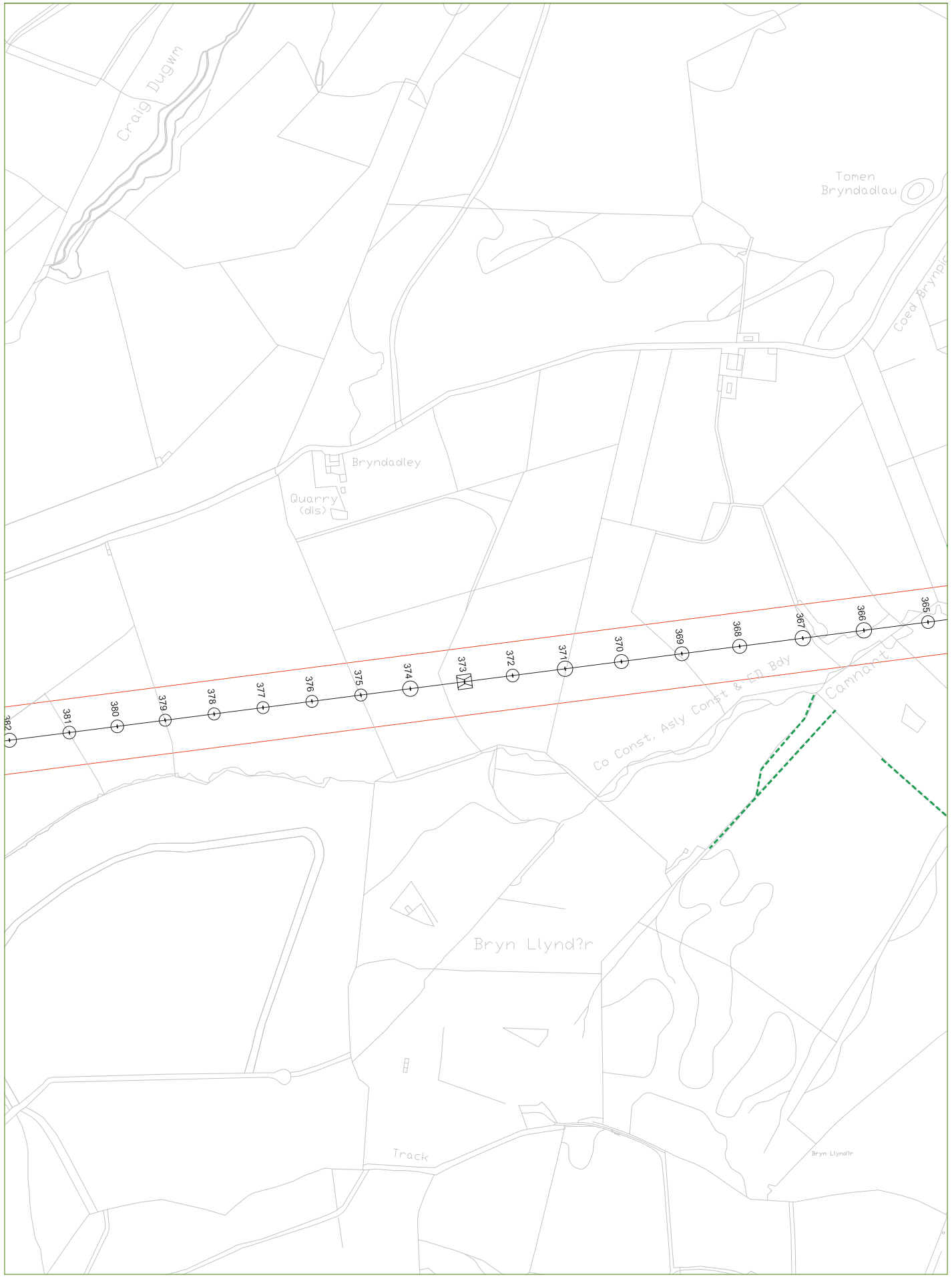


Figure 5.20- Hedgerow Plan Sheet 19 of 20

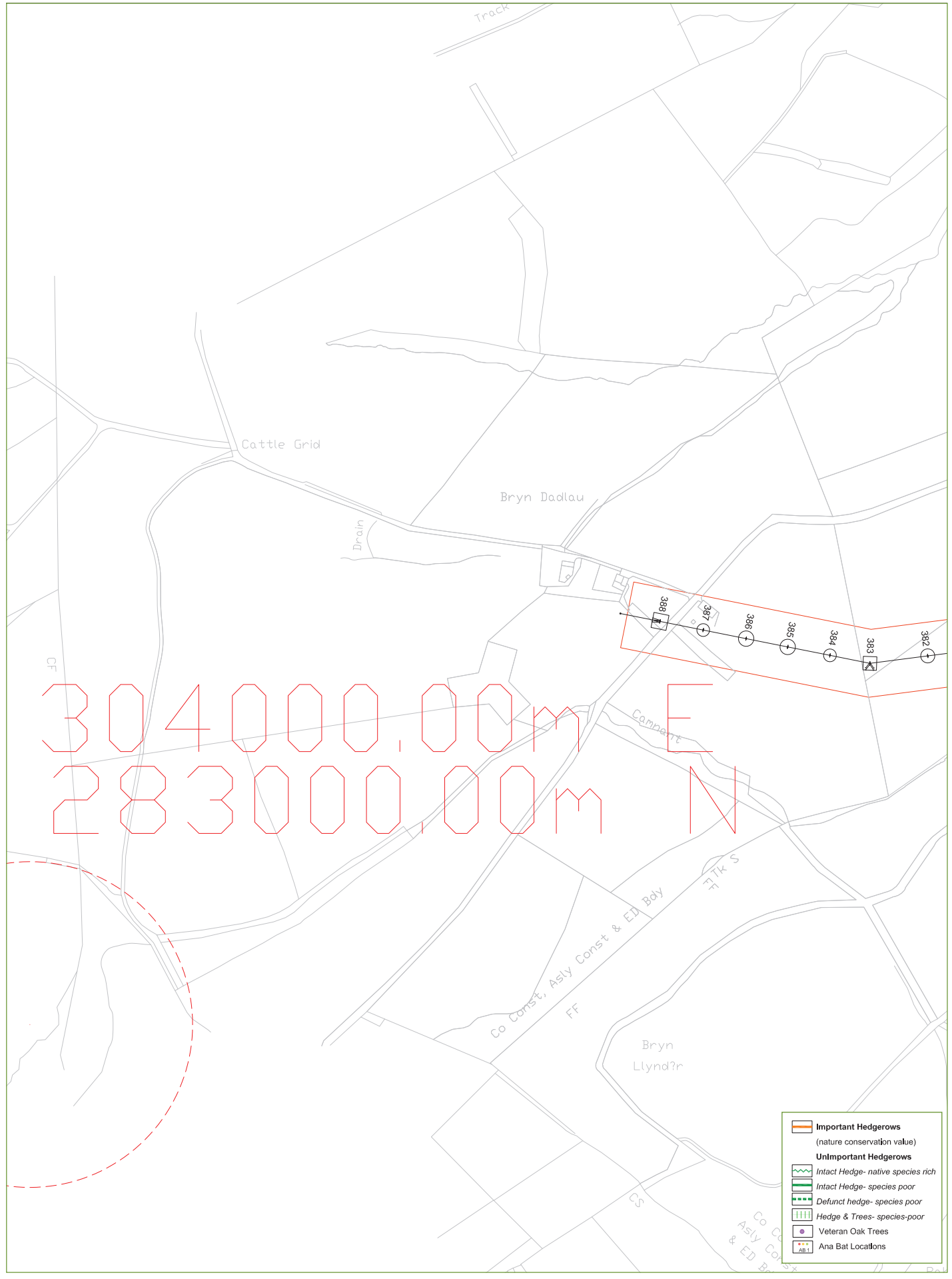


Figure 5.21- Hedgerow Plan Sheet 20 of 20