AEWC Ltd

Animal Ecology & Wildlife Consultants

Biodiversity Net Gain Assessment

Frithknowle Farm

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RH13 8AN

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Summary

- AEWC Ltd were commissioned by Batcheller Monkhouse Ltd on behalf of their client to undertake a Biodiversity Net Gain (BNG) Assessment at Frithknowle Farm, Picts Lane, Cowfold, West Sussex, RH13 8AN at central grid reference TQ 21839 23981 to help inform the proposed development of the site.

- The estimated baseline and post-development biodiversity value of the habitats on the site has been calculated using the Defra Statutory Biodiversity Metric Calculation Tool.

- The proposed development works will involve the loss of modified grassland, bramble scrub, developed land sealed surface, artificial unvegetated unsealed surface, and ruderal/ephemeral vegetation. These areas will be replaced with two residential dwellings and associated private gardens. Two of the existing trees within the scrub will be retained along with the existing pond.

- Biodiversity enhancements incorporated into the proposed site layout outside of the private gardens include the creation of a traditional orchard within the southern portion of the site and the planting of six native, non-orchard trees along a strip of grassland in the southwest of the site.

- **The habitat unit results show an increase of 0.07 habitat units which equates to a 12.06% net gain.**

- **As such, the minimum target of 10% net gain has been exceeded achieved. Trading rules have also been satisfied.**

- **A Habitat Management and Monitoring Plan (HMMP) will need to be produced for the proposed habitat enhancement and creation. This will set out exactly how the proposed habitats will be created through planting and ongoing management. Regular monitoring will be required to ensure the habitats maintained at the quality that has been proposed. The HMMP will need to secure the land management for a period of at least 30 years.**

This report has been prepared by AEWC Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client, and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

The information and data which has been prepared and provided is true and has been prepared and provided in accordance with the 'Guidelines for Preliminary Ecological Appraisal' and 'Code of Professional Conduct' issued by the Chartered Institute of Ecology and Environmental Management (CIEEM). We confirm that the opinions expressed are our true and professional bona fide opinions.

1. Introduction

1.1 AEWC Ltd were commissioned by Batcheller Monkhouse Ltd to undertake a Biodiversity Net Gain (BNG) Assessment for Frithknowle Farm, Picts Lane, Cowfold to help inform the proposed development of the site.

1.2 In England, BNG is mandatory under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). This came into force in February 2024 for major developments and April 2024 for minor developments. Under the legislation, developers must deliver a minimum biodiversity net gain of 10%.

1.3 The purpose of this report is to give an estimate of the BNG units that will be achieved under the current development proposals.

2. Background

2.1 The proposed development site is located at Frithknowle Farm, Picts Lane, Cowfold, West Sussex, RH13 8AN at central grid reference TQ 21839 23981. The site is located to the north of the rural village of Cowfold. The surrounding landscape comprises a mosaic of woodland, wood pasture and farmland, High Wield AONB is positioned within 200m to the north-east of the site. See Figure 1.

2.2 The site is approximately 0.24 ha and largely comprises grassland with a collection of disused barns and farm buildings situated within the centre of the site. Additionally, a disused forge on the north-west boundary of the site and a collapsed barn within the east of the site. Rough grassland, scrub and a pond provide a partial buffer between the buildings and the farmland which surrounds the site. See Figure 2.

2.3 AEWC Ltd undertook a Preliminary Ecological Appraisal at the site in December 2025, during which the on-site habitats were mapped and condition assessed.



FIGURE 1: SHOWING THE SITE LOCATION



FIGURE 2: AERIAL VIEW OF THE SITE SHOWING THE BOUNDARY

2.4 The proposed development plan involves the construction of two new residential buildings and landscaping of the area surrounding this new development. This will involve the demolition of the existing barns and car port, whilst the forge will be retained. Additionally, the rough grassland and scrub which surround the buildings will be cleared to make way for vegetated garden. The majority of the habitat area on site will be affected by these proposals. See Figure 3.



FIGURE 3: PROPOSED SITE LAYOUT

3. Method and Constraints

3.1 The estimated baseline and post-development biodiversity value of the habitats on the site has been calculated using the Defra Statutory Biodiversity Metric Calculation Tool (Version 1.0.4 released July 2025) Habitat condition was assessed using the Statutory Biodiversity Metric – Technical Annex 1 Condition Assessment Sheets (Version 1.0.2 released July 2025).

3.2 The following assumptions have been made and therefore associated constraints should be considered when looking at BNG unit values obtained:

- The potential for protected and notable species is not covered within the scope of this report.

- Baseline habitats on-site are taken from those identified within the survey undertaken in December 2025.
- Post-development habitats have been inferred from those given with the Proposed Site Layout as shown in Figure 3 and as discussed with the client.
- All areas and lengths are approximate and have been obtained from QGIS mapping software.
- Areas in hectares and lengths in km are both given to four decimal places, therefore small rounding errors are unavoidable.
- Habitat condition has been estimated for post-development habitats using the proposed development plans and professional judgement.
- Tree areas are calculated using the tree helper tool within the metric.
- The area of new trees has been estimated using small trees in the tree helper tool.
- In line with the User Guide, proposed habitats that will fall inside private gardens have been included as 'vegetated garden' only.

3.3 Given the above constraints, the BNG results obtained should be considered to be an **estimate** only.

3.4 Calculations may need to be adjusted in future should the proposed site layout plan changes or the BNG metric or requirements be revised.

4. Habitat Data

4.1 At baseline, the site comprises modified grassland, bramble scrub, developed land; sealed surface, artificial unvegetated unsealed surface, and ruderal/ephemeral vegetation. A small non-priority pond is also present as well as two small trees.

4.2 The majority of the site comprises modified grassland which has been assessed as being in poor condition, with the grassland being species-poor throughout the site, consistently having less than six species per m^2 present. The grass has been kept to a very short sward within the northwest portion of the site with the exception of the modified grassland to the south where it has not been consistently managed. However, this area of grassland still has less than six species per m^2 present and was assessed as being in poor condition.

4.3 An area of bramble scrub is present within the southwest portion of the site, which surrounds a small pond. The pond was assessed as being in moderate condition as it lacks emergent, submerged or floating plants and was heavily shaded by the bramble scrub and interspersed young willow trees.

4.4 Areas of developed land, sealed surface comprise the existing buildings on site, excluding the collapsed building to the western corner of the site which, along with the access drives and areas of rubble and building materials, was classified as artificial unvegetated, unsealed surface.

4.5 Full, detailed habitat descriptions can be found in the Preliminary Ecological Appraisal by AEWC Ltd dated January 2026, and habitat condition assessment information can be found within the accompanying condition assessments sheets. See Photographs 1 - 4 below for the site baseline in December 2025.



Photograph 1 – Modified Grassland and gravel access track



Photograph 2 – Bramble scrub and pond within western portion of the site



Photograph 3 – Ruderal vegetation present to the west the car port



Photograph 4 – Area of developed land sealed surface.

4.6 Post-development, the site will comprise a retained pond, modified grassland, individual trees, traditional orchard, vegetated gardens, developed land; sealed surface, artificial unvegetated; unsealed surface, and the retained Old Forge building and associated access track.

4.7 The proposals will result in the loss of much of the existing modified grassland, bramble scrub, hardstanding, and ruderal and ephemeral habitats to facilitate the proposed residential development and associated landscaping.

4.8 The two existing tree and the existing pond will be retained and will not be directly impacted by the proposed works. A new pond will also be created within the rear garden of Unit 2, and new trees and native hedgerows will be planted within both gardens, however due to these being within private gardens, in accordance with guidelines they have not been included in the BNG.

4.9 To provide enhancement, a traditional orchard is proposed in the south of the site, which will fall outside of the private garden space and will be managed separately. This will be created through planting at least five fruit and/or nut trees and managing the habitat appropriately. Additionally, six native, non-orchard trees will be planted along a strip of grassland in the southwest of the site, outside of the private gardens.

4.10 The baseline and post-development habitats used for this BNG assessment are illustrated in Figures 4 and 5 respectively.

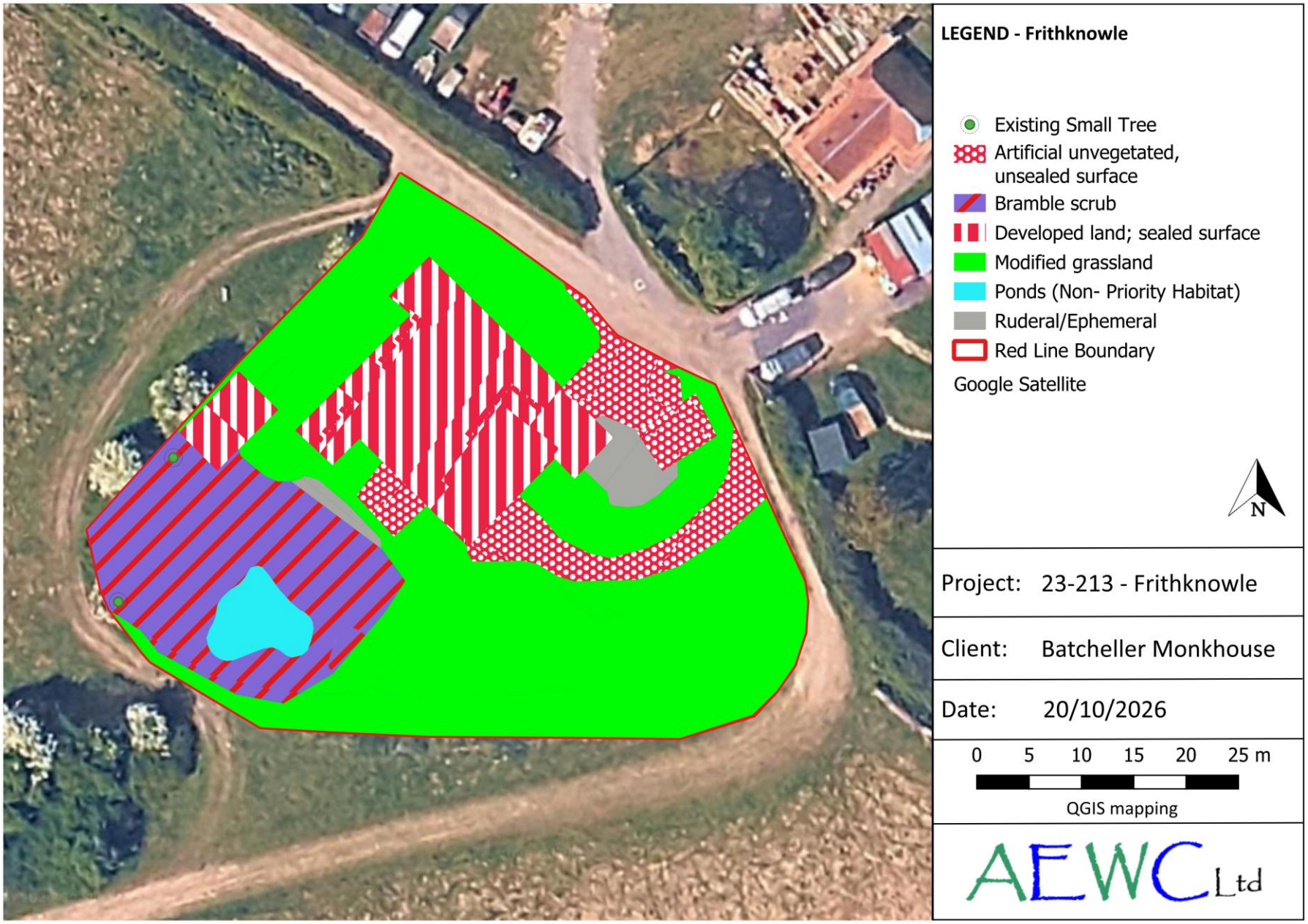


FIGURE 4: BASELINE ON-SITE HABITATS

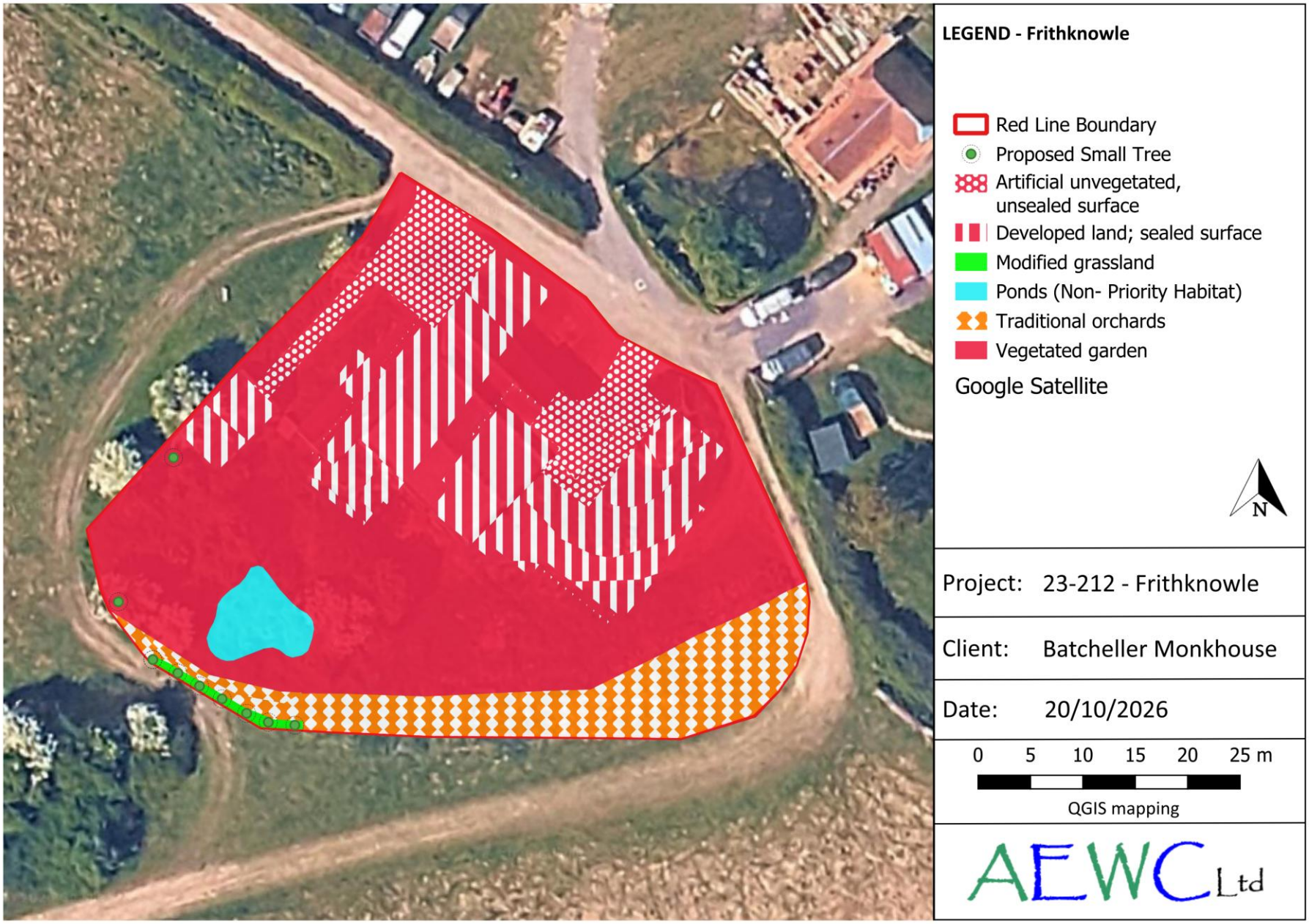


FIGURE 5: POST-DEVELOPMENT ON-SITE HABITATS

5. Results

5.1 The headline results of the BNG assessment using the habitats detailed in Section 4 are shown below (refer to the Metric for full details).

Table 1: Headline Results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Area habitat units*	0.07
	Hedgerow units	0.22
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Area habitat units*	12.06%
	Hedgerow units	N/A
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

6. Conclusions & Recommendations

6.1 The proposed development works will involve the loss of modified grassland, bramble scrub, developed land sealed surface, artificial unvegetated unsealed surface, and ruderal/ephemeral vegetation. These areas will be replaced with two residential dwellings and associated private gardens. Two of the existing trees within the scrub will be retained along with the existing pond.

6.2 Biodiversity enhancements incorporated into the proposed site layout outside of the private gardens include the creation of a traditional orchard within the southern portion of the site and the planting of six native, non-orchard trees along a strip of grassland in the southwest of the site. In terms of the BNG metric, these are sufficient to offset the loss of the existing habitats on the site, satisfy trading rules, and provide an overall gain.

6.3 **The habitat unit results show an increase of 0.07 habitat units which equates to a 12.06% net gain.**

6.4 There are no hedgerows on the site at baseline or post-development outside of private gardens, therefore hedgerow units are not included.

6.5 There are no watercourses on the site at baseline or post-development, therefore watercourse units are not included.

6.6 **As such, the minimum target of 10% net gain has been exceeded achieved. Trading rules have also been satisfied.**

6.7 The proposals for the site include creation of notable areas of medium and high distinctiveness habitats, therefore the proposal is considered to deliver 'significant gain'.

6.8 **A Habitat Management and Monitoring Plan (HMMP) will need to be produced for the proposed habitat creation and enhancement where significant gains are proposed. This will set out exactly how the proposed habitats will be created through planting and ongoing management. Regular monitoring will be required to ensure the habitats are maintained at the quality that has been proposed. The HMMP will need to secure the land management for a period of at least 30 years.**

7. Draft Habitat Creation, Management, and Monitoring Plan

7.1 A draft plan for the creation, management and monitoring of the habitats to be created or enhanced on-site is provided below. These habitats include modified grassland in moderate condition, traditional orchard in moderate condition, and individual trees in moderate condition.

7.2 Other habitats created include vegetated garden and developed land; sealed surface. These habitats do not require specific management to achieve their target condition and therefore are not included in the draft HMMP.

Modified Grassland

Condition Targets

7.3 Modified grassland along the southern boundary of the public portion of the site are proposed as moderate condition. These will be enhanced from the existing, poor condition modified grassland. The following criteria will be targeted:

- A – There are 6-8 vascular plant species per m2 present, including at least 2 forbs.
- C – Any scrub present accounts for less than 20% of the total grassland area.
- D – Physical damage is evident in less than 5% of total grassland area.
- F – Cover of bracken is less than 20%.
- G – There is an absence of invasive non-native plant species.

Enhancement

7.4 Instructions for the modified grassland enhancement and initial aftercare are as follows:

- Initial works to enhance the grassland should be undertaken in spring/early summer (March – June) or autumn (September – November).

- Where applicable, the existing grassland is to first be heavily cut back, with cuttings removed after mowing. 50-70% bare soil patches are to be created prior to overseeding using harrowing, raking, or light tilling.
- A good quality grass seed mix will need to be selected to suit the soil type, drainage, and regional conditions. This will include a range of fine grasses and modest proportion of native wildflowers.
- The seed mix should be sown at a density of 4-5 g/m2. The seeds can be mixed with damp sand or similar for even distribution. They can then be hand sown or sown with a seed spreader. Following distribution of the seeds, the ground must be firmed with a roller or by treading to ensure good soil contact. Any specific guidance given by the seed mix provider should be followed.
- In the first year of establishment, the grassland should be mown regularly to a height of 5-10cm to prevent grasses from overshadowing emerging wildflowers. Cuttings must be removed to prevent nutrient enrichment. Dominant and/or invasive species should be regularly checked for, and spot-treated or removed as required. Any invasive species listed on Schedule 9 of The Wildlife and Countryside Act must be immediately removed. Any areas of poor establishment are to be re-seeded.

Management

7.5 After the first year of establishment, the modified grassland may be mown as required to achieve the desired appearance. Grass cuttings should always be removed to avoid nutrient accumulation.

7.6 No fertiliser is to be applied to the grassland. Herbicide should be used for spot treatments only.

7.7 The grassland should be continually checked for invasive species and encroaching bracken or scrub, and removals undertaken as required.

7.8 Where bare ground exceeds 10% of the total grassland area, bare patches are to be re-seeded. Encouraging residents to use formalised paths will minimise trampling across the entire grassland area.

Monitoring

7.9 Monitoring will be undertaken annually for the first five years and once every five years thereafter, during the optimal growing season. The modified grassland will be assessed against the five targeted condition criteria. Where any criteria are not met, remedial actions or adjustments to the management regime will be implemented.

Traditional Orchard

7.10 The traditional orchard to be created within the communal portion of the site is proposed as moderate condition. This will be enhanced from the existing, poor condition modified grassland. The following criteria will be targeted:

- C – Less than 5% of fruit trees are smothered by scrub. Small patches of dense scrub and/or scattered scrub growing between trees may be retained to benefit biodiversity, provided these occupy less than 10% of the total ground cover.
- D – There is evidence of formative and/or restorative pruning to maintain the health, structure and longevity of fruit trees.
- E – At least 95% of fruit trees are free from damage caused by humans or animals, including browsing, bark stripping and damage from rubbing against unadjusted tree ties.
- F – Grassland is not overgrazed, and poaching around trees is minimised, with no more than 10% of trees showing poaching beneath their canopies.
- H – There is an absence of invasive non-native plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981, and species indicative of suboptimal condition make up less than 10% of the total ground cover.

Creation

7.11 At least five fruit trees are to be planted. Species selected should be appropriate for the local area and habitat type.

7.12 Instructions for the tree planting and initial aftercare are as follows:

- The planting of bare rooted trees should be carried out between November and March, avoiding periods of frost, snow, or waterlogged soil. Container trees can be planted throughout the year, but if planted in the summer they will need a lot more watering.
- Prior to planting, vegetation must be cleared in a one-metre circle where the tree will be planted. Competition for water and nutrients can severely affect trees, particularly when young. This circle around the tree should therefore be kept clear of grass and weeds for at least three years after planting, through weed-suppressant matting, application of a thick mulch or regular weeding.
- If using bare-root trees, soak the roots in water for 1-2 hours before planting to prevent drying out.
- Where the soil structure is good, maidens can be notch-planted. For larger trees, and where soil structure needs to be improved, a hole at least twice as wide as the tree’s root ball and slightly deeper than the roots must be dug.
- Place the tree in the hole with the root collar (where the trunk meets the roots) at soil level. Do not bury the trunk. Fill in the hole, firming the soil gently.

- The trees should be staked with a short stake of no more than 30 cm above ground level. This will allow the tree to flex and strengthen the trunk and roots.
- Apply a 5-10cm layer of mulch (such as wood chips or well-rotted compost) around the base of the tree, leaving a gap around the trunk to prevent rot, to suppress weeds and retain moisture.
- Use tree guards or fencing to protect young trees from grazing animals. Guards should be checked regularly and adjusted if they are causing the tree any damage.
- Water regularly during the first 2-3 growing seasons, especially during dry periods.

Management

7.13 The traditional orchard will be managed to maintain moderate condition through appropriate management of fruit trees, grassland and scrub.

7.14 Fruit trees will be inspected annually, with formative and/or restorative pruning undertaken as necessary once established to maintain tree health, structure and longevity.

7.15 Scrub will be controlled to ensure less than 5% of fruit trees are smothered, with scrub ground cover maintained below 10%. Beneficial scrub patches may be retained where practicable.

7.16 Tree guards, stakes and ties will be inspected and adjusted as required to prevent damage from browsing, bark stripping and rubbing. The fruit trees should remain free from human or animal damage.

7.17 Grassland will be managed through appropriate mowing or controlled grazing to maintain a diverse sward. Grazing pressure will be managed to prevent overgrazing and ensure that no more than 10% of trees show poaching beneath their canopies.

7.18 No fertiliser will be applied unless specifically justified. Herbicides will be restricted to targeted treatments where necessary and appropriate.

7.19 The orchard will be regularly checked for invasive non-native plant species and species indicative of suboptimal grassland condition. Invasive species will be controlled appropriately, and species indicative of suboptimal condition will be maintained below 10% total ground cover.

7.20 Any issues identified, including tree damage, excessive scrub encroachment, poaching of the ground or invasive species, will be addressed through appropriate remedial management.

Monitoring

7.21 Monitoring will be undertaken annually for the first five years and once every five years thereafter, during the optimal growing season. The traditional orchard will be assessed against the five targeted condition criteria. Where any criteria are not met, remedial actions or adjustments to the management regime will be implemented.

Individual Trees

Condition Targets

7.22 New trees in moderate condition will be planted along the southern boundary of the communal area of land. The following criteria will be targeted (criterion A may be passed for a low proportion of the trees, if required):

- A – The tree is a native species (or at least 70% within the block are native species).
- B – The tree canopy is predominantly continuous (individual trees automatically pass this criterion).
- D – There is little or no evidence of an adverse impact on tree health by human activities. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age and height.
- F – More than 20% of the tree canopy area is oversailing vegetation beneath.

Creation

7.23 A range of native tree species are to be selected, appropriate for the local area and habitat type. Up to 30% of the trees may be non-native species if required, however these must not be species with invasive tendencies.

7.24 Trees are to be planted on vegetated areas, not within hardstanding.

7.25 Instructions for the tree planting and initial aftercare are as follows:

- The planting of bare rooted trees should be carried out between November and March, avoiding periods of frost, snow, or waterlogged soil. Container trees can be planted throughout the year, but if planted in the summer they will need a lot more watering.
- Prior to planting, vegetation must be cleared in a one-metre circle where the tree will be planted. Competition for water and nutrients can severely affect trees, particularly when young. This circle around the tree should therefore be kept clear of grass and weeds for at least three years after planting, through weed-suppressant matting, application of a thick mulch or regular weeding.
- If using bare-root trees, soak the roots in water for 1-2 hours before planting to prevent drying out.

- Where the soil structure is good, maidens can be notch-planted. For larger trees, and where soil structure needs to be improved, a hole at least twice as wide as the tree's root ball and slightly deeper than the roots must be dug.
- Place the tree in the hole with the root collar (where the trunk meets the roots) at soil level. Do not bury the trunk. Fill in the hole, firming the soil gently.
- The trees should be staked with a short stake of no more than 30 cm above ground level. This will allow the tree to flex and strengthen the trunk and roots.
- Apply a 5-10cm layer of mulch (such as wood chips or well-rotted compost) around the base of the tree, leaving a gap around the trunk to prevent rot, to suppress weeds and retain moisture.
- Use tree guards or fencing to protect young trees from grazing animals. Guards should be checked regularly and adjusted if they are causing the tree any damage.
- Water regularly during the first 2-3 growing seasons, especially during dry periods.

Management

7.26 Stakes should be removed after 2-3 years, once the tree is stable.

7.27 Tree guards should be removed once the tree is well-established (typically after 3-5 years) or if the tree begins to outgrow the guard.

7.28 Once the trees are established, no ongoing maintenance should be required. Any trees that fail to establish, die, or fall should be replaced in the next appropriate planting season.

7.29 Trees should not be subject to regular pruning, allowing the tree canopy to achieve at least 75% of its expected size. Light pruning may be undertaken where identified as necessary for tree health or where trees present a health and safety risk or obstruction.

7.30 No herbicides are to be used on the trees other than for targeted, short-term treatments if required. Should vandalism of trees become an issue, action must be taken to prevent this.

Monitoring

7.31 Monitoring will be undertaken annually for the first five years and once every five years thereafter, during the optimal growing season. The trees will be assessed against the three-four targeted condition criteria. Where any criteria are not met, remedial actions or adjustments to the management regime will be implemented.

8. Wildlife Enhancements

Bats and Birds

8.1 To enhance the site for bats and birds known to be present within the local area it is recommended that at least two bat boxes and two bird boxes be installed on-site. Boxes could be installed on existing retained trees or buildings or integrated into the new buildings

8.2 Ideally bat boxes would be woodcrete or similar hard-wearing material (rather than the less durable wooden boxes) and should be installed at least 3m above the ground (where safe installation is possible), sheltered from strong winds and exposed to the sun for part of the day (usually south or south-west facing).

8.3 Example tree-mounted bat boxes are shown below: Schwegler 1FF bat box (below left, suitable for pipistrelle bats *Pipistrellus sp*.), and a Schwegler 2F bat box (below right, suitable for long-eared bats *Plecotus sp.*), or similar bat boxes.



8.4 Example integrated bat boxes are shown below: Integrate Eco Bat Box (below left), Habibat Bat box - Plain for rendering (below centre) and a Schwegler 1WI Summer and Winter bat box (below right) or similar bat boxes.



8.5 Tree-hung bird boxes should comprise a mix of traditional ‘32mm round-holed’ (below left: which are suitable for tits, sparrows, redstarts and nuthatches) and open-fronted boxes (below right: these are suitable for pied wagtails, robins and wrens), and also ideally be woodcrete or similar hard-wearing material (rather than the less durable traditional wooden boxes). Boxes should be installed with an aluminium nail or screw to prevent tree damage between 2m and 4m above ground for round-holed and low down, below 2m, well hidden in vegetation for open-fronted boxes, and (unless shaded by buildings or trees) be facing north or east.



8.6 Integrated bird boxes should include swift bricks (below left), these should be installed at a minimum of 4m above the ground, north or east facing and with open flight access, or sparrow terraces (below centre), which should be installed in line with vegetation such as trees or hedge lines to allow the birds the use of jumping off points, and be installed a minimum of 3m above the ground on a north or east elevation. Where suitable overhanging eaves are present, house martin cups (below right) may also be suitable.



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