Application for Agri-environment scheme

Frongoch Farm, Aberystwyth, SY23 3DG, Wales

https://osmaps.ordnancesurvey.co.uk/52.42483,-4.04167,16

Dear Mr and Mrs Farm-owners,

Thank you for applying for the Welsh Agri-environment Scheme (WAS). The main objective of this scheme is to reimburse farmers for their services to the countryside and to evaluate farm-scale opportunities to sustainability enhance biodiversity on a landscape scale.

After reviewing your audit and conservation plan we recommend:

- Adding three fields/areas to the audit with conservation value.
- Swapping two fields (arable with haymeadow) to create a heterogeneous landscape and taking advantage of better soil quality for spring cereal or fodder production.
- Improving hedges by closing gaps and coppicing.
- Choosing from three strategies for winter stubble/ winter bird feed seed mix/ pollen and nectar seed mix.
- Reconsidering the pond creation as it may drain the close-by priority habitats.
- Managing the two streams with buffer strips and cutting overhanging trees.
- Changing grazing exclusion timing on haymeadow field and wetlands.

Please review the improved audit and conservation plan, proposed timeline and estimated reimbursement. The final section of the report briefly describes the management practices.

Your sincerely,

Agri-environment Officer

1. Quality of Auditing

Prior to the WAS audit, the Welsh Predictive Agricultural Land Classification (ALC) Map was used to establish the soil quality, priority habitats, participation in woodland schemes, flood risk potential areas. The results of Phase 1 habitat surveys was also used as dominant species of each field. These surveys were completed by the Welsh Government, the Welsh Office Agricultural Department, ADAS Statutory and commercial organisations and is publicly available (http://lle.gov.wales/map/alc).

Based on the field visit by the Agri-environment Officer and the online data, the following suggestions are made. **Please see the updated Audit map on the next page.**

Adding fields of conservation interest:

O1 - Previously reported traditional orchard.

G2 - Species rich, wet grassland next to a woodland.

W7 - Small area of conifer plantation.

Adding habitat description of fields:

W2 - Conifer plantation does not have a healthy understorey (e.g. brambles, wildflowers of botanical interest).

W3 - Missing documentation and possibility of management was described while online records show that it was part of the Woodland Grant Scheme between 1996-2001 (Figure 1). Failure to provide documentation of contracts on any field can disqualify the Agri-environment scheme application.

G1, A1 - The hedges along these fields are gappy (more than 10% of the total length).

FEATDESC:	Scheme Boundary
PROPNO:	51000865
PLANNO:	1
PROPNAME:	Frongoch Farm
PLANTYPE:	Establishment
PROPTYPE:	FARM
OWNTYPE:	BUSINESS OCCUPIER
GRID REF:	SN608823
LOC AUTH:	Ceredigion County Council
CNT STRT:	1996-03-05Z
CNT END:	2001-03-31Z
WO NAME:	S Gray
APPR OFF:	DAVIES
CON NAME:	North Wales
TOT AREA:	1.4

Figure 1. The W3 plantation was part of the Woodland Grant Scheme and therefore has previous documentation.

A1 - A patch of gorse *(Ulex europaeus)* can be found on the top of the field.

W4 - The 'small pond' is permanent surface water, creating waterlogged conditions without a margin.

Highlighting the importance of plants/animals/mushrooms:

G3 - Owner described mushrooms formally growing on this field but turned it into a grassland.

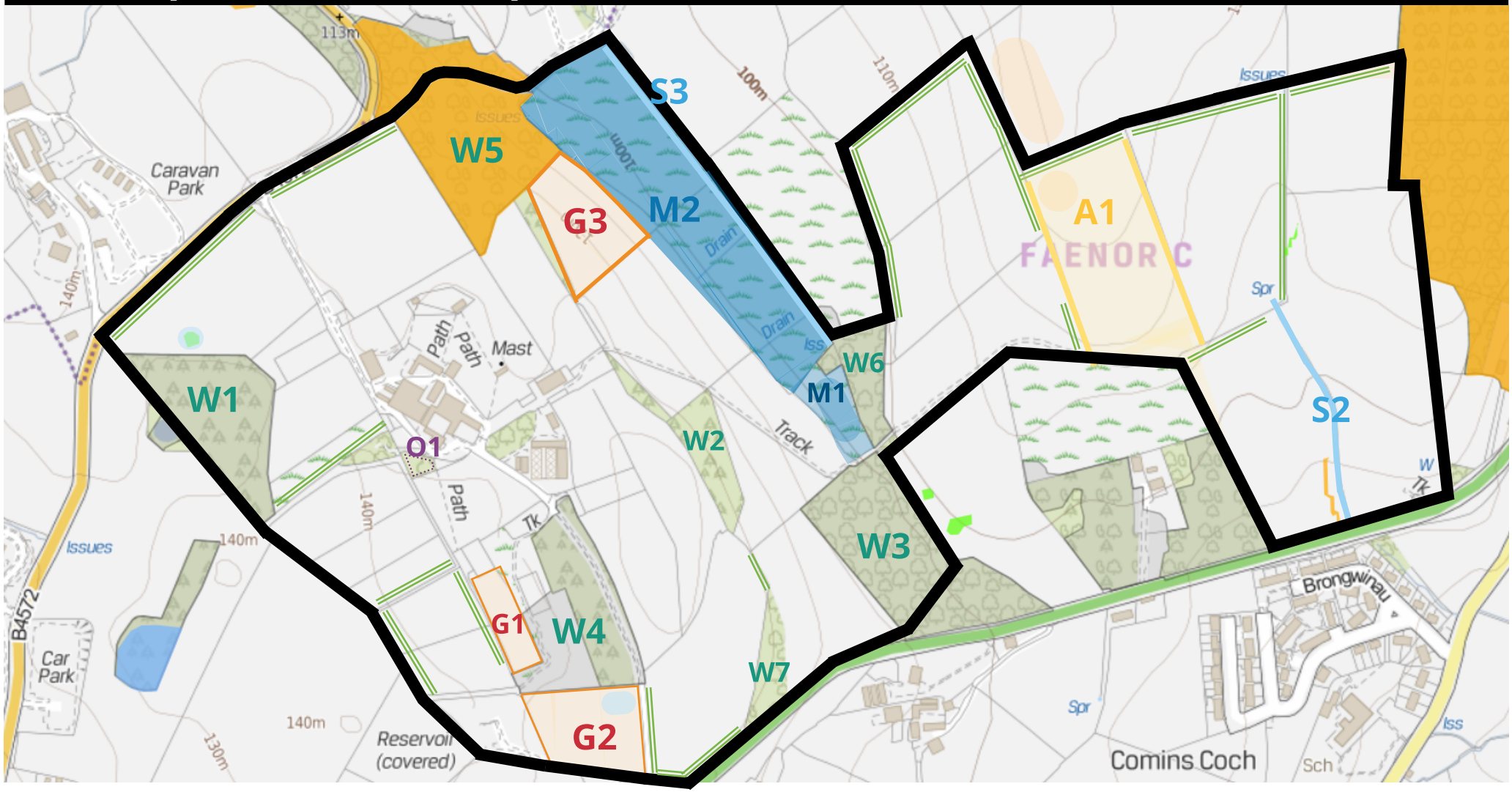
W6 - Marsh violet *(Viola palustris)* is a Priority Species under the UK Post-2010 Biodiversity Framework because it is declining and it is important the Fritillary buterfly which is priorty species according to the UK Biodiversity Action Plan (UK BAP). Rhododendrons are highly invasive, non-native plants and must be controlled.

M1 - Creeping buttercup *(Ranunculus repens)* can become serious weed, spread rapidly, lead to poor drainage and have negative effect on cattle health.

W4, W5, W6, M1 and M2 - Redshank *(Tringa tetanus)* priority habitats. Curlews *(Numenius arquata)* and snipes *(Gallinago gallinago)* are also priority species and therefor increase the conservation importance of those habitats.

M1 and M2 - According to the Amphibian and Reptile Conservation Trust, Palmate newts *(Lissotriton helveticus)*, Common toads *(Bufo bufo)* and Slow worms *(Anguis fragilis)* have been reported on this farm which are also BAP Priority species.

Farm Updated Audit Map, Grid Reference: SN 60908 82913, Scale 1:5,000



Grassland

Wetland

Stream

Woodland

Traditional orchard

Hedge

Ancient woodland

2. Management plan review

2. 1. Woodlands

Rhododendron management	£2,800/ha
Woodland improvement	£100/ha
Small wildlife box	£28.50/box

While no management was planned for W1, W2, W3, W5, W6 forests, the control of **Rhododendrons in W5**, and encouraging the **wet woodland in W4** would protect and enhance both habitats. While W6 consisting of willow carr will benefit from the new pond, it will be important to maintain it as a wet woodland and carry out willow **coppicing** in the next 5 years. Currently no stock is allowed in any of the woodlands.

Rhododendrons have negative impact on local biodiversity, disrupts woodland regeneration, spreads rapidly once established and can are hosts to fungal plant disease *Phytophthora ramorum,* which affects conifers. Removing all plant material and treating target area with herbicide is crucial to pro-actively control further damage.

Wet woodland areas are declining in the UK due to wood clearances, felling while supporting a highly diverse plant and invertebrate community. Felling only a few trees and leaving them to decompose would renew the habitat for invertebrates, fungi and mosses. Placing two small nest boxes would also encourage hole-nesting bats and birds.

2. 2. Grasslands

Hay making supplement	£85/ha
Creation of species rich wet grassland	£267/ha
Species rich wet grassland	£182/ha
Lenient grazing supplement	£44/ha
Arable reversion to grassland	£311/ha
Autumn sown bumblebird mix	£550/ha

Hay meadow establishment and management are strongly encouraged, however to make the most out of hay or silage production and enhancing biodiversity, a few modifications are recommended. Changing the location of the larger hay meadow (G2 to A1) and using an already species rich grassland (G4) are also opportunities for farm improvement.

Firstly, the **grazing exclusion** should start in March, giving the wildflowers and grasses to bloom between April - August. Secondly, **farmyard manure** or low rate of fertiliser application is allowed for hay making. A detailed plan for the hay cutting is suggested at section 3.2. in this report. Rolling or harrowing may be used to remove thatch between August - October.

Based on the ALC map, G2 consists of moderate quality agricultural land in comparison with A1 field consist of slightly stony, poor quality agricultural land. Therefore, we suggest using G2 as part of the extensive arable rotation and **A1 as a haymeadow** conversion. It would take advantage of the soil quality differences, promote crop growth. This habitat can increase crop yields by 24% on the nearby arable fields.

While an excess of surface water was found on **G4 field**, it could be utilised as a **species rich wet grassland** as it is adjacent to the W4 semi-natural woodland, under light grazing. G1 haymeadow was reported to experience drainage problems and it currently contains many docks (*Rumex* spp.). By reducing the stocking rate to 0.3-0.5 unit/ha, it would lower poaching problems.

The semi-improved **G3** grassland was reported to contain mushrooms which prefer low nitrogen levels. As this field is adjacent to the ancient woodland, W5, and close to the purple moor-grass priority habitat, M2, **lenient grazing** is recommended with an **autumn sown bumblebee flower** strip along M2. By maintaining the average sward height below 13 cm this field can encourage important spring and summer insect, spider and beetle communities and therefore providing food for nesting birds.

2. 3. Wetlands

The wetlands habitats, M1 and M2, are priority habitats on the farm and we recommend reconsidering the proposed pond creation. The quality of these habitats depends on the following conditions: wet or waterlogged soils, low nutrient levels and appropriate levels of management. The proposed large pond (100 m^2) on M2 would potentially lower W6 and M1 water tables, drain S2 and destruct the existing habitats. Pond creation is best in open pastures with clean water supplies without any negative impact on its surrounding environment. We suggest consulting with Freshwater Habitats Trust to establish if a **pond complex,** consisting of multiple, smaller ponds would lower impact of a much larger pond.

The management of the purple moor-grass *(Molinia caerulea)* should focus on the nesting sites of snipes *(Gallinago gallinago),* redshanks *(Tringa totanus)* and curlews *(Numenius arquata)*. The UK BAP priority birds start nesting in April and prefer tall vegetation and access to watercourses. **Grazing exclusion** should be between April - July while spring grazing is essential to prevent the dominance of purple moor-grass. The prescribed grazing management is ideal but it is also important to monitor and control the scrub encroachment by cutting in this area. The northern marsh orchid (*Dactylorhiza purpurella*) in M2 is a protected species as all wild orchids in the UK and therefore must not be picked or cut. To encourage vegetation growth and earthworm activity, minimal **farmyard manure** can be applied on M2.

2. 4. Streams

Riparian management strip	£440/ha

A riparian zone is the marginal area along a waterway or standing water and have important conservation value. Along the streams, a **non-grazed buffer zone** is crucial to prevent the pollution of water bodies by fertilisers and pesticides.

A 4 m wide buffer zone around S1 out of which 2 m wide strip would be cut every 3 years with care to any nesting birds would enable the vegetation to mature and decay naturally. As both streams have trees and shrubs surrounding them, it is important not to allow overshadowing the streams. Overhanging branches could be used as brash bundles, in-stream structures to slow down water flow, on the left side of the S2 which is prone to alluvial **gully erosion** according to the ALC map. These alluvial gullies are usually formed by an increase in surface run-off and can erode quickly. It is crucial to establish and maintain vigorous deep rooted perennial 6 - 8 m wide strips on both sides of the stream, graze under **low stocking rate** (0.3 unit/ha) to decrease any poaching damages to the banks.

2. 5. Hedges

Hedgerow gapping-up	£9.50/m
Planting new hedges	£11.60/m
Hedgerow coppicing	£4/m

Hedges are a priority habitat,have 135 associated priority species and they play a vital role connecting fragmented habitats, providing refuge to invertebrates and small mammals. Around arable fields, hedgerows can help control insect pests as predatory insects (e.g. spiders) overwinter in them and move into the crops in spring when pest numbers start to increase.

While no management is planned for hedge management, the hedges surrounding **G1 and A1 are gappy** (more than 10% of the total length) and as G1 is close to a priority habitat and A1 contains important gorse, management is advised. Moreover, creating a new hedge, **H1,** would greatly enhance the connected between W4 and W2, and the connectedness between the ancient woodland next to A3 and A5 to W6. The new hedges will require trimming and coppicing in the first 3-5 years but will greatly enhance the overall connectedness.

2. 6. Arable

Basic overwinter stubble	£84/ha
Legume and herb-rich swards	£309/ha
6 m rough grass strips	£557/ha
6 m winter bird cover	£640/ha
Brassica fodder crop	£100/ha
Pollen and nectar mix	£511/ha

The five year arable rotational plan will help with protect against pests, diseases and will support soil fertility and recovery. The low input system with buffer strips, under-sown with grass and clover, winter stubble retention, fodder crop to provide farmland birds needs detailed planning for G2, A2, A3, A4 and A5. In every field, **unmanaged field corners** will ease the managing the rest of the field and will support local biodiversity.

The 6 m **grass-margins** need to contain 85% of fine grasses and only 15% of the tussock-forming grasses (Figure 2.) The grass margin needs to be cut three times in the first year then it can be grazed by sheep or cattle. The margins of A3 and A4, next to the ancient woodland would be preferred to be seeded with **pollen and nectar mixture** containing legumes (Figure 2). These locations need to be at least 0.1 ha and can be cut or grazed from September.

Under-sowing will only be productive if the crop is spring barely which will then provide grain and straw post-harvest, and the field could be grazed late autumn. No stubble or winter bird seed mix is allowed with under-sowing.

To create a heterogeneous landscape and provide different flowering legumes and grasses, we provide a **potential rotation plan** (Figure 3). Starting at G3 with a spring cereal and leaving winter stubble until the next year would support birds and invertebrates from W5. In the second year, A2 could be under-sown spring barley followed by A3 with pollen and nectar strips. In the fourth year, brassica weedy fodder crop could be grown on A4 and spring cereal on A5 with 6 m winter bird cover in the fifth year.

In order to help the soil to prepare or to recover from the crop production, we suggest incorporating **legume and herb rich swards.** This will improve soil conditions, will not require any fertiliser application and will be beneficial to the grazing sheep and cattle. We encourage changing the location of these grasslands to different fields across the farm.

Rough grass margin	Pollen and nectar mixture
Tussock-forming grasses (15%)	Legume (20%)
Cocksfoot Timothy Yorkshire fog	Late flowering red clover Aliske clover Bird's foot trefoil Sainfoin
Fine grasses (85%)	Non-legume (80%)
Red fescue Sheep's fescue Creeping fescue Rough stalked meadow grass Smooth meadow grass Common bent Creeping bent Sweet Vernal grass Crested dog't tail Meadow foxtail	Lesser knapweed Creeping bent Crested dog's tail Meadow foxtail Rough stalked meadow grass Smooth meadow grass Sheep's fescue Sweet vernal grass

Figure 2. Grass mixed to be used as buffer strip for arable land.

2. 7. Additional flower/grass strips

As devil's bit scabious *(Succisa pratensis)* in M2 and marsh violet *(Viola palustris)* in W5 are sources for the marsh fritillary (*Eurodryas aurinia)*, priority species, we suggest the creating a 4 m wide wild flower strip between M2 and G3 and additionally **T1** strip.

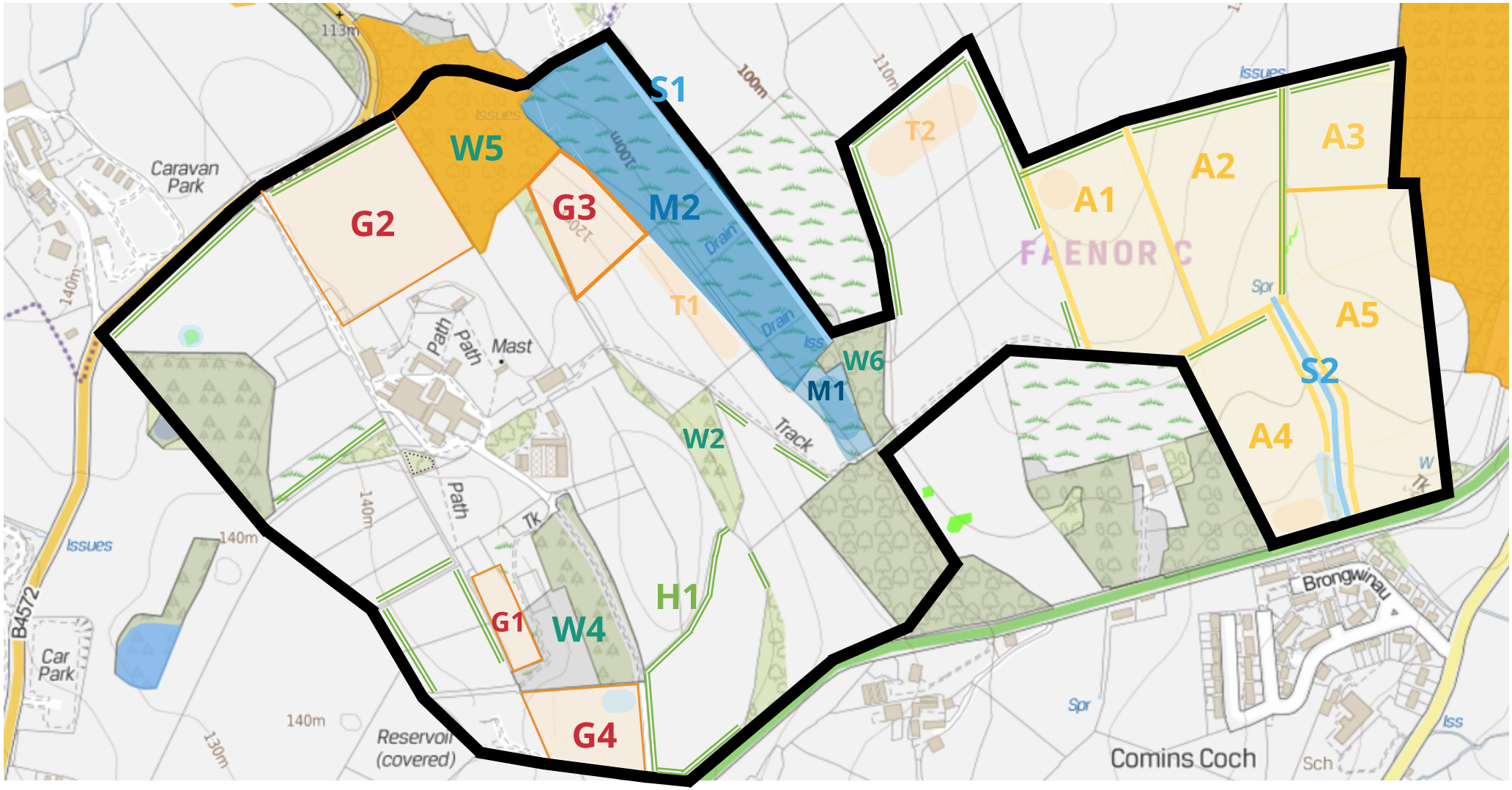
In-field grass strips consisting of rough and tussock-forming grasses can significantly reduce soil erosion and therefore **T2** strip, the margins of grasslands on the steep slopes, would help improve soil conditions. Creating this rough grass strip next to the hedge will also be beneficial to the insects, spiders and small mammals.

Year / Field	1	2	3	4	5	6
G2	A	S	L	L	G	A
A2	G	A_U	G	G	L	L
A3	L	L	A_P	P	P	G
A4	G	L	L	A	F	G
A5	G	G	L	L	A_W	W

Figure 3. Suggested rotation plan. A = Arable, S = Stubble, L = Legume, G = Grazing, F = Fodder, P = Pollen mix, B = Bird cover, U = Under-sown, W - Wild bird cover

Please see the next pages for conservation Management Map and Timescale of management practices

Farm Conservation Map, Grid Reference: SN 60908 82913, Scale 1:5,000



Grassland

Wetland

Stream

Woodland

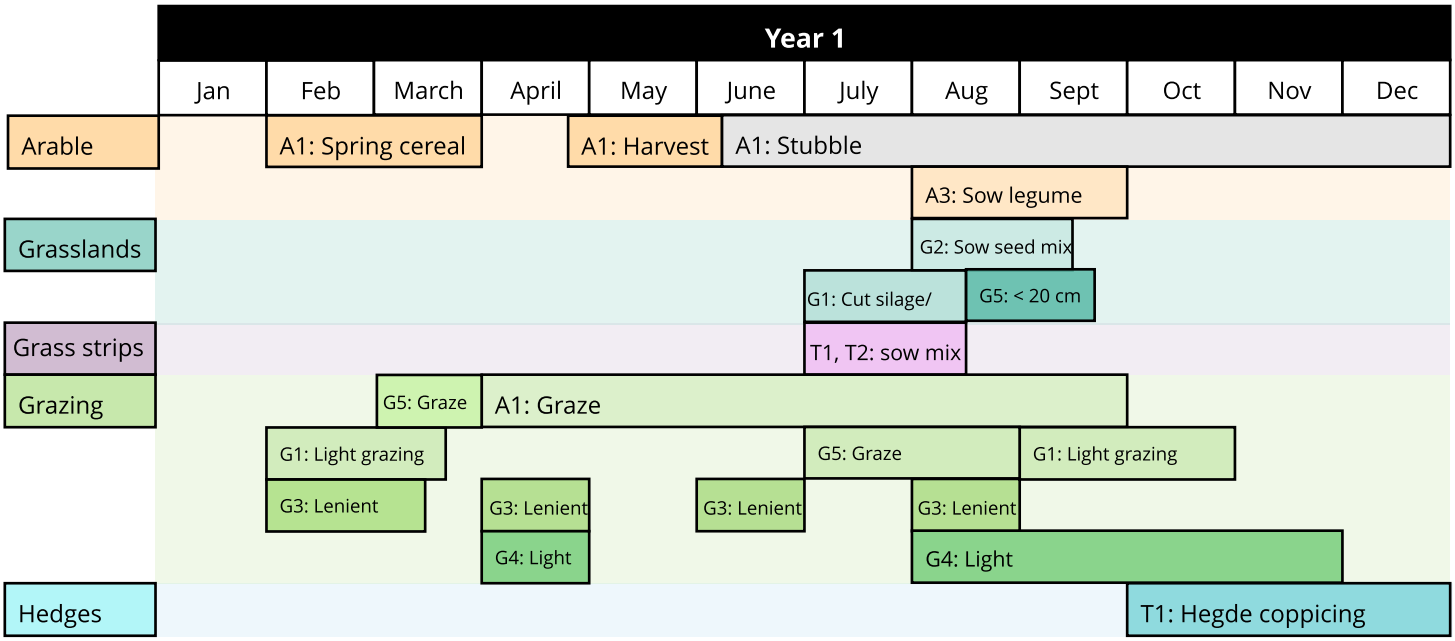
Tree line

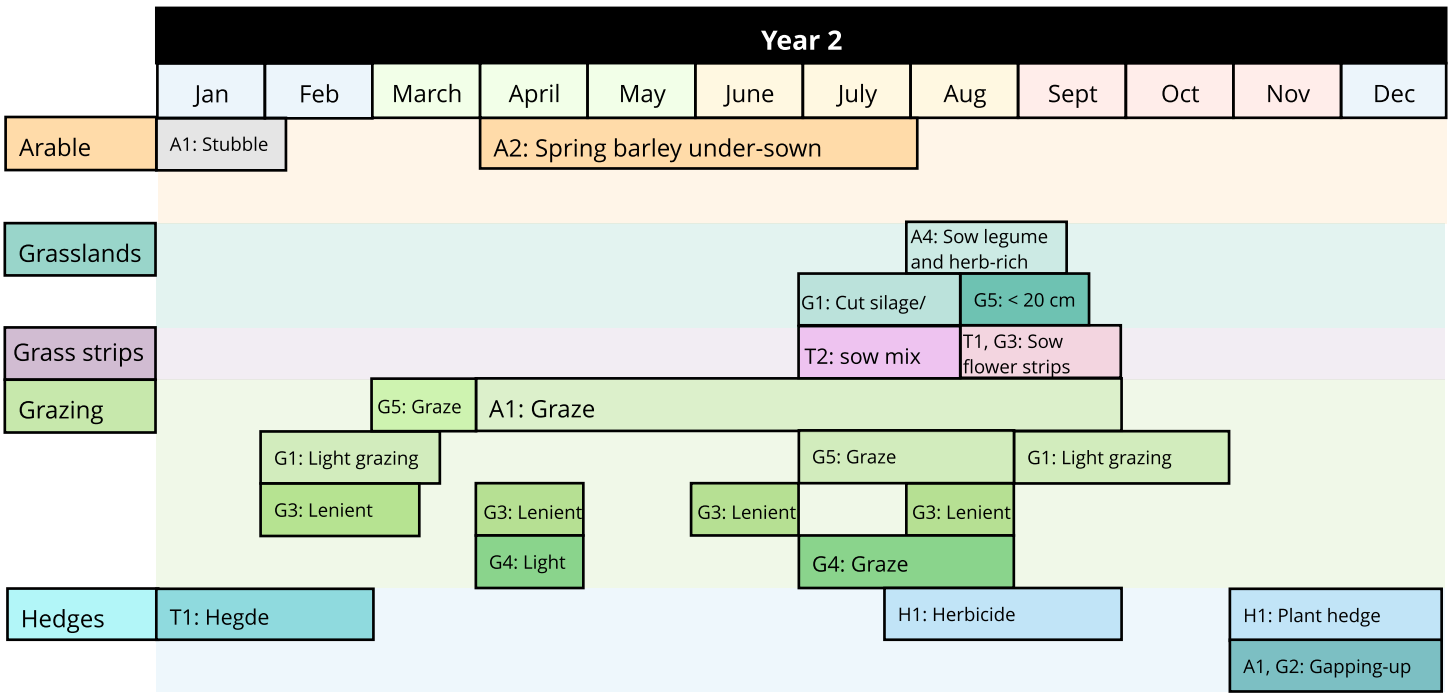
Hedge

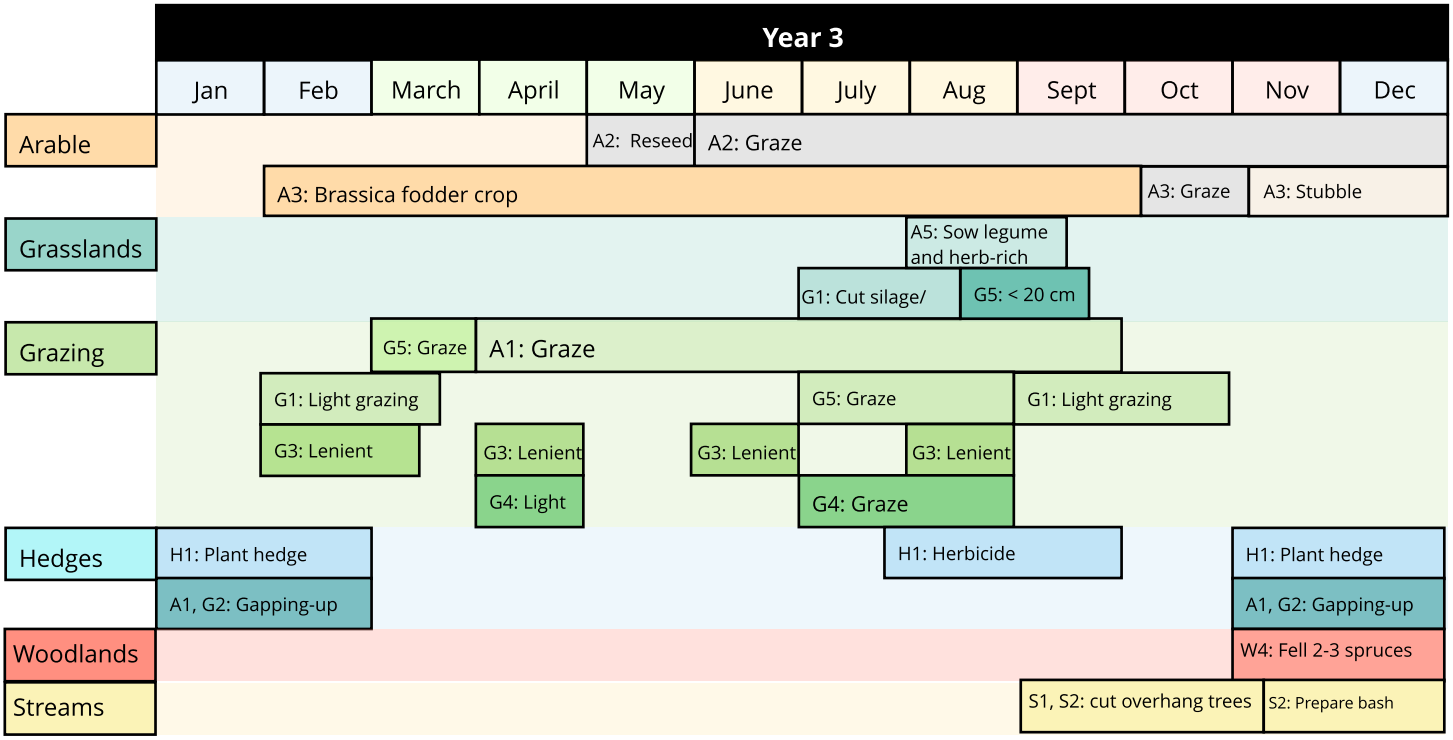
Ancient woodland

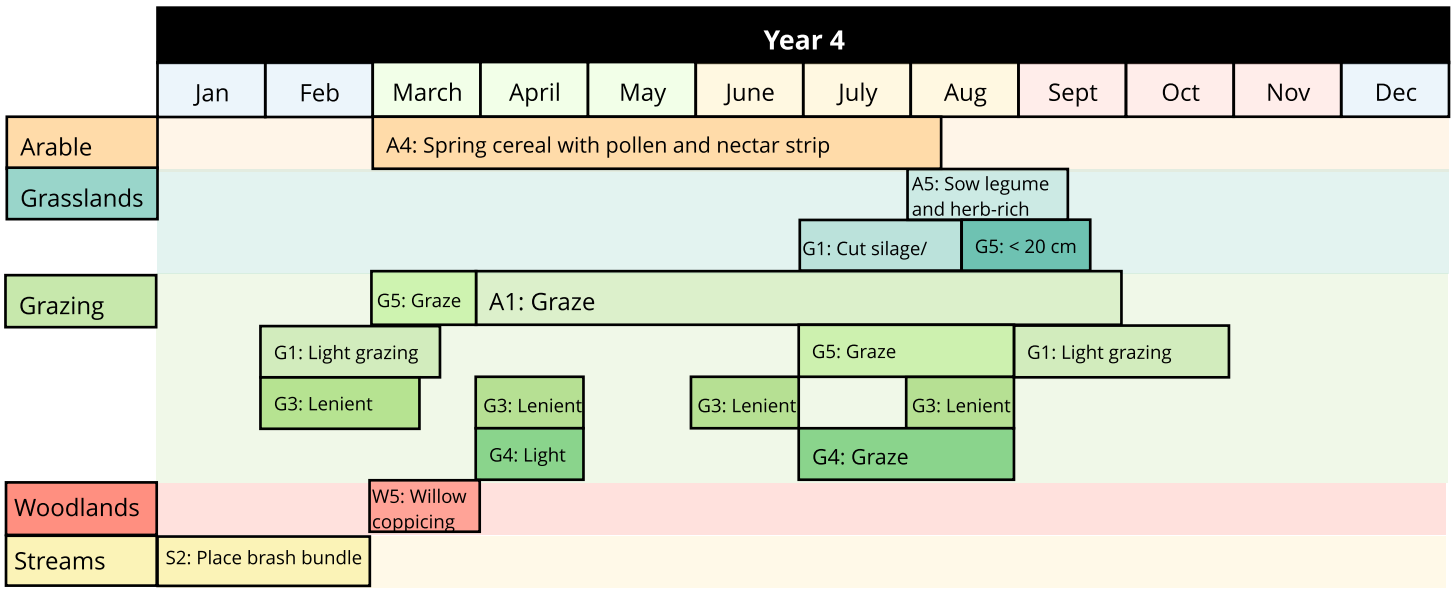
3. Timescale of 5-year farm conservation plan

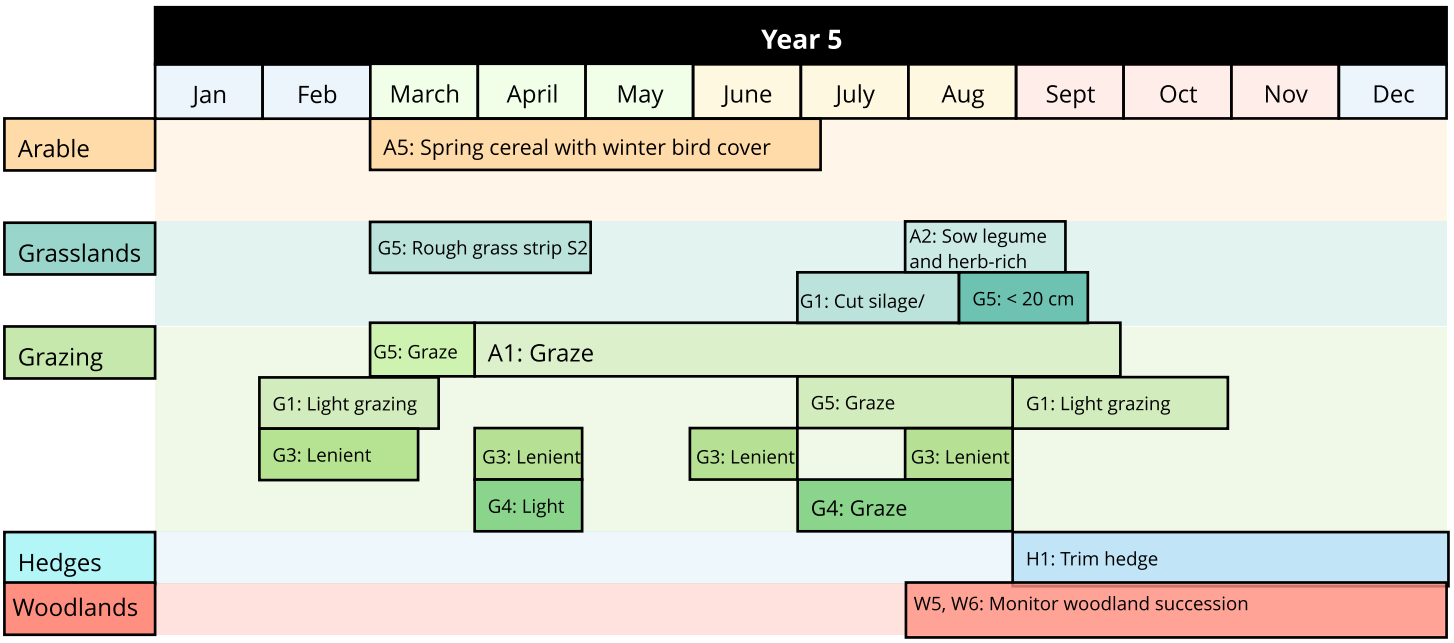
To put the recommended management into perspective, please see a potential 5-year timescale in the following pages. It aims to spread out the different management practices (e.g. sowing seeds in one year, managing hedges and woodlands in the next). Exact dates and details are listed in the next section of the report.






Year 3
Jan
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec
Arable
A2: Reseed
A2: Graze
A3: Brassica fodder crop
A3: Graze
A3: Stubble
Grasslands
A5: Sow legume and herb-rich
G1: Cut silage/
G5: < 20 cm
Grazing
G5: Graze
A1: Graze
G1: Light grazing
G5: Graze
G1: Light grazing
G3: Lenient
G3: Lenient
G3: Lenient
G3: Lenient
G4: Light
G4: Graze
Hedges
H1: Plant hedge
H1: Herbicide
H1: Plant hedge
A1, G2: Gapping-up
A1, G2: Gapping-up
Woodlands
W4: Fell 2-3 spruces
Streams
S1, S2: cut overhang trees
S2: Prepare bash


Year 4
Jan
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec
Arable
A4: Spring cereal with pollen and nectar strip
Grasslands
A5: Sow legume and herb-rich
G1: Cut silage/
G5: < 20 cm
Grazing
G5: Graze
A1: Graze
G1: Light grazing
G5: Graze
G1: Light grazing
G3: Lenient
G3: Lenient
G3: Lenient
G3: Lenient
G4: Light
G4: Graze
Woodlands
W5: Willow coppicing
Streams
S2: Place brash bundle


Year 5
Jan
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec
Arable
A5: Spring cereal with winter bird cover
Grasslands
G5: Rough grass strip S2
A2: Sow legume and herb-rich
G1: Cut silage/
G5: < 20 cm
Grazing
G5: Graze
A1: Graze
G1: Light grazing
G5: Graze
G1: Light grazing
G3: Lenient
G3: Lenient
G3: Lenient
G3: Lenient
G4: Light
G4: Graze
Hedges
H1: Trim hedge
Woodlands
W5, W6: Monitor woodland succession

4. Management practice descriptions

In this section, the recommended management practices are described. Additional leaflets and guides are included to help with implementation. For example, as W6, M2 are priority habitats, it is important to manage the stream bank, create an environment for nesting birds, control rushes in M2 and additional autumn sown bumblebee mix supports the invertebrate community for the birds and provides important nectar for the fritillary butterfly (Figure 4). Moreover, the lenient grazing in G3 will support expand the area for invertebrates and will provide habitat for different times of the year.

Autumn sown bumblebee mix - G3

- Establish 6 m wide strip by 1 September
- Sow between 15 February and 15 March at 30 kg/ha seed rate
- Re-establish every 2 years
- Can receive 50 kg/ha N fertiliser in the first spring but no fertiliser nor pesticides afterwards
- Do not allow grazing of the strips and cut a few centimeters in the second year

Species	Proportion by weight
Winter triticale	18%
Winter barley	18%
Fodder radish	15%
Crimson clover	15%
Birds toot trefoil	10%
Gold of pleasure	5%
Kale	5%
Phacelia	5%
Common vetch	5%
Common	2%
Wild carrot	1.5%
Ox-eye daisy	0.5%

Riparian management strip - S1, S2

- Establish a non-grazed, fenced off 6-12 m wide riparian strip
- Cut overhanging trees so the cover is between 50-80% of the total area
- No pesticide, fertiliser nor manure is allowed on the buffer strip

Read more: 'Riparian Vegetation Management' by Engineering in the Water Environment Good Practice Guide

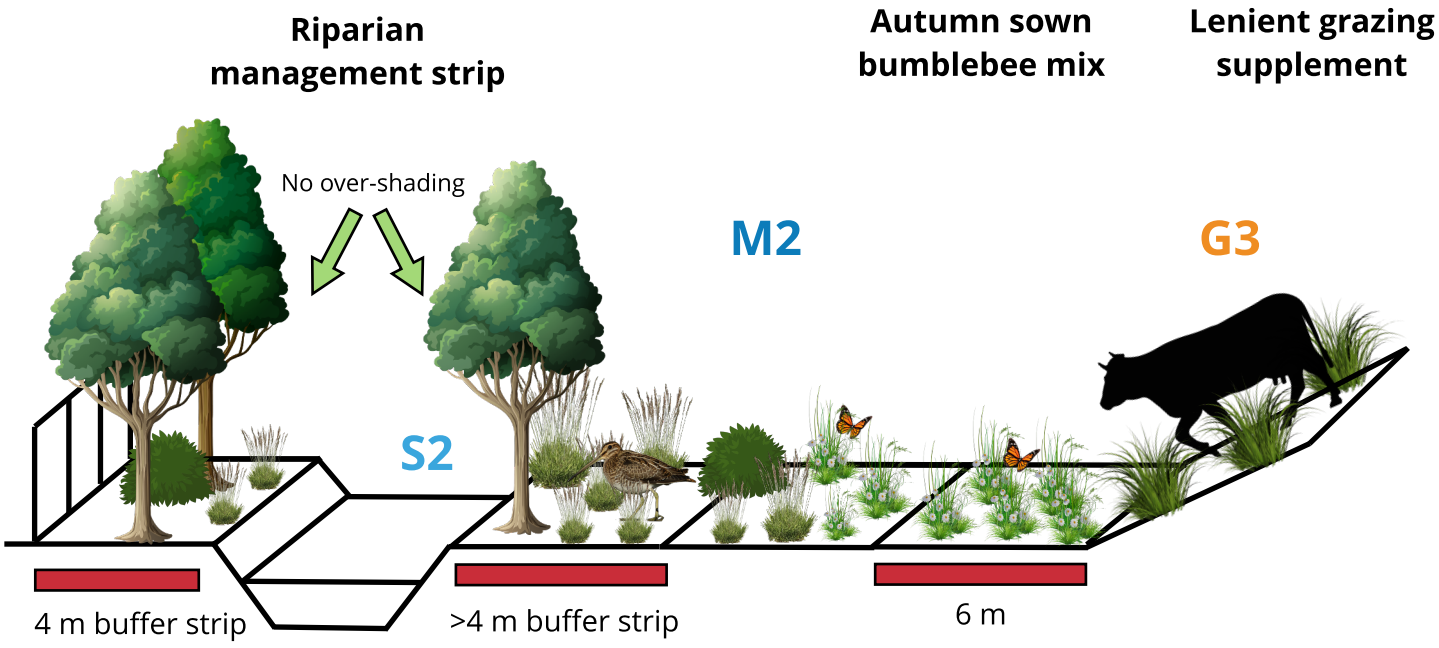


Figure 4. An example of nearby priority habitats benefiting from different agri-environment schemes.

Arable reversion to grassland - A1

- Aim is to establish a grass sward by 1 October using a seed mixture of at least 5 species
- In the second year, establish 5 - 15 cm sward height in November in year 2 and remove all cuttings
- Exclude livestock between 1 October to 15 March
- Use either up to 100 kg/ha livestock manure or 50kg/ha of nitrogen fertiliser, excluding between 15 Augusts and 1 February
- No pesticide is allowed nor any supplementary feed for livestock

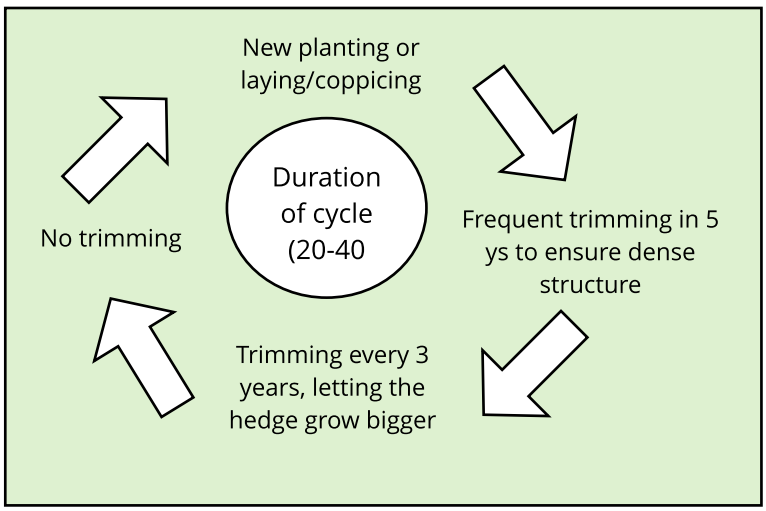
Species to use:

- Timothy
- Cocksfoot
- Crested dogstail
- Red fescue
- Smooth stalked meadow grass
- Ox-eye daisy
- Black knapweed
- Bird's-foot-trefoil
- Common sorrel

Read more: 'Arable reversion' by RSPB (Available at:https://www.rspb.org.uk/our-work/conservation/conservation-and-sustainability/farming/advice/techniques-to-help-wildlife/arable-reversion/

Hedgerow gapping-up - G1, A1

- Prepare a 1.5 m wide ground strip of a crumbly texture (friable) and apply herbicide between August or September
- Plant 2-year-old transplants of native species in a double row, 40 cm apart at a density of 6 plants/ha in November
- Protect new plants from livestock or rabbits/hares
- Leave deadwood at the base



Planting new hedges - H1

- Follow planting described above
- Trim the newly planted hedge in the first 2 years
- Use hawthorn, blackthorn and hazel plants
- Control competitive weeds manually or with herbicide

Hedgerow coppicing

- Carry out work between 30 September - 31 March
- Coppice less than 2.5 m tall plants, more than 15 cm diameter stems and gappy hedges
- Remove old fencing and wire
- Cut out elder plants, pull out brambles and other scrambling plants
- Cut stems back to less than 10 cm tall in a way that water can easily run off
- Remove all unused branches immediately and control weeds during first growing season
- Trim the hedge for 3 years to encourage growth
- Never cut back to the same point

Read more: 'The Complete Hedge Good Management Guide' by Hedgelink

Basic overwinter stubble - G2

- The main aim is to retain stubble after the first harvest until 15 February in the following year
- Do not apply any fertilisers, manures or lime to the stubble nor any post-harvest herbicides or pre-harvest desiccants
- Enhance the stubble by sowing seeds of nectar-producing plants (e.g. mustard, fodder radish) onto the maximum of 10% of the stubble area

Read more: 'Over-wintered stubble' by RSPB (Available at: http://ww2.rspb.org.uk/Images/owstubble_england_tcm9-207535.pdf)

Legume and herb rich swards - G2, A2, A3, A4, A5

- Establish a sward of at least 5 species of grass, 3 species of legumes and 5 species of herbs or wildflowers (Figure 2)
- Create 50-70% of bare ground and sow seed mixture directly into the grass sward before August
- Either manage by grazing or cutting but rest the field between 1 May - 31 July for at least 5 weeks to allow red clover flowers to blossom (monitor grazing as red clover can cause bloating)
- No pesticides or N fertiliser is allowed
- Manure, lime and PK fertiliser is allowed

Rough grass strips - A4, A5

- No cultivation/ploughing/manure/lime/pesticide/ herbicide is allowed after establishment
- The seed mix should consist of 15% of tussock forming grasses and fine grasses (85%) (Figure 2) and the sowing sowing rate should be 20 kg/ha in early autumn
- Cut at least three times between 15 July and 30 September in bird friendly manner
- No cultivation/ploughing/manure/lime/pesticide/ herbicide is allowed after establishment

Read more: 'Rough grass margins' by RSPB (Available at: https://www.rspb.org.uk/globalassets/downloads/documents/farming-advice/rough-grass-margins-advisory-sheet-ni-tcm9-230712.pdf)

Winter bird cover - A5

- The aim is to establish a 6 m wide strip of seed mix of barley, triticale, quinoa, linseed, millet, mustard, fodder radish and sunflower (one species should not be over 70% of the total mix)
- Establish fine seedbed for 1.5 - 2.5 cm sowing depth between 15 March to 5 June
- Can apply between 50 - 100 kg/ha N fertiliser
- Re-establish every year
- Under sowing is not permitted

Seed type	Seed rate (kg/ha)
Cereal	125
Linseed	60
Quinoa	10
Oilseed rape	7.5
Mustard	12

Brassica fodder crop - A4

- Establish weedy brassica fodder crop before 31 July, graze after 15 October (strip graze is preferred)
- No herbicide, insecticide application nor poaching are allowed
- Leaving uncultivated grass buffer strip to watercourses will help prevent any soil eroiion

Read more: 'Brassica fodder crops' by RSPB (Available at: https://ww2.rspb.org.uk/Images/Englishfoddercrops_tcm9-133248.pdf)

Pollen and nectar mix - A3, A5

- The aim is to establish a 6m strip to provide continuous supply of pollen and nectar for bumblebees, butterflies and other insects from March – September
- Pollen and nectar mix (80%), contains mix of legumes (20%) which flower at different times (early and late flowering red clovers, alsike clover, sainfoin, birdsfoot trefoil, black knapweed, musk mallow) and does not contain tussock forming grasses
- Sow into fine seedbed at 12-15 kg/ha sowing rate
- Establish the strip between 15 March - 30 April or 15 July and 30 August
- Graze only 1 Sept – 31 March, no poaching is allowed
- Cut whole area in two blocks (half and half) between 15 September and 30 March and remove cuttings

Species rich wet grassland - G4

- Protect and encourage this habitat by having at least 5 species of: meadowsweet, marsh bedstraw, marsh marigold, yellow flag iris, species of sedges/rushes
- There must be less than 25% ryegrass, timothy and white clover in the sward
- Grazing is permitted between 1 May and 31 December at a stocking density of 1.0 LU/ha but no grazing is permitted between 1 January and 1 May
- No pesticide, fertiliser, herbicide nor slurry application or poaching is allowed
- Rolling is not allowed in April, May or June

Lenient grazing supplementary - G3

- Establish a healthy sward with the average height of 7-13 cm where at least 20% is shorter than 10 cm, and 20% is over 10 cm tall
- Do not cut for hay or silage and grazing can be rotational or intermittent
- Can apply 12 tonnes/ha of farmyard manure or 9 kg/ha nitrogen, 23 kg/ha phosphate, 83 kg/ha potash but not between 15 March and 30 June

Under-sown spring barley - A2

- Establish under-sown spring barley with grass and 15% clover mixture after 15 February
- Prepare firm seedbed, roll after sowing cereal (9-25 mm depth, 100 kg/ha) and before sowing grass and clover seed (6 mm)
- Fertiliser, manure and lime can be applied to the crop
- Harvesting crop is not allowed before 1 August
- Retain ley until 15 July the following year
- Light grazing by sheep can control weeds around in mid

Read more:
'Managing Grass Establishment In Undersown Spring Cereals' by Farming Connect, Fact Sheet

Rhododendron management - W5

- Control should be on frost-free and rain-free days
- Manually cut back rhododendron before February, into 30 cm stumps when seed dispersal begins
- Drill 13 mm deep holes into stump and apply 2,4-D/dicamba/triclopyr herbicide on the same day as the cutting with a paint brush
- If regrowth appears between July - September, apply the same herbicide (7.5% solution in water)
- Walk through area in July and hand-pull all live seedlings

Read more: 'Managing and controlling invasive rhododendron' by the Forestry Commission

Wet woodland improvement - W4, W6

- Reduce the amount of coniferous species by year 5, as agreed with an adviser
- Replant native trees (birch, alder) if woodland has not started to regenerate after 2 years of the spruce felling
- Retain deadwood on forest floor and retain natural clearing habitat where possible
- Manage successional scrub through cyclical cutting
- Retain the existing pond

Read more: 'Wet woodland - A guide to management' by Greater Lincolnshire Nature Partnership

Small wildlife box - W4

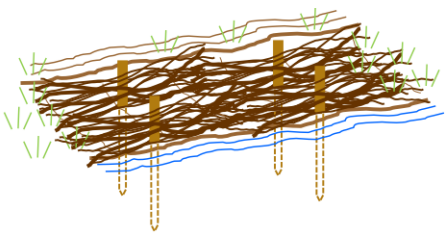
- Place near the existing pond in W5, out of the midday sun, at least 2 m from the ground
- Clean the box out each autumn
- Made from wood at least 15 mm thick with a 25 mm entrance hole

Read more: 'Nestboxes' by RSPB (Available at: https://www.gov.uk/countryside-stewardship-grants/rhododendron-control-sb6)


Argyll Fisheries Trust

Brash bundles against stream erosion - S2

- Brash and small trees with branches are good for diffusing flow energy
- Use of bundles of brash tied together and pinned in place to protect the eroding stream bank (S2, side to A4)
- Hammer a matrix of wooden posts 50mm in diameter into the stream and place the bundles on top



Read more:
'Reducing river bank erosion - A best practice guide for farmers and other land managers' by Scottish Environment Protection Agency

More information and task descriptions please visit: https://www.gov.uk/environment/countryside

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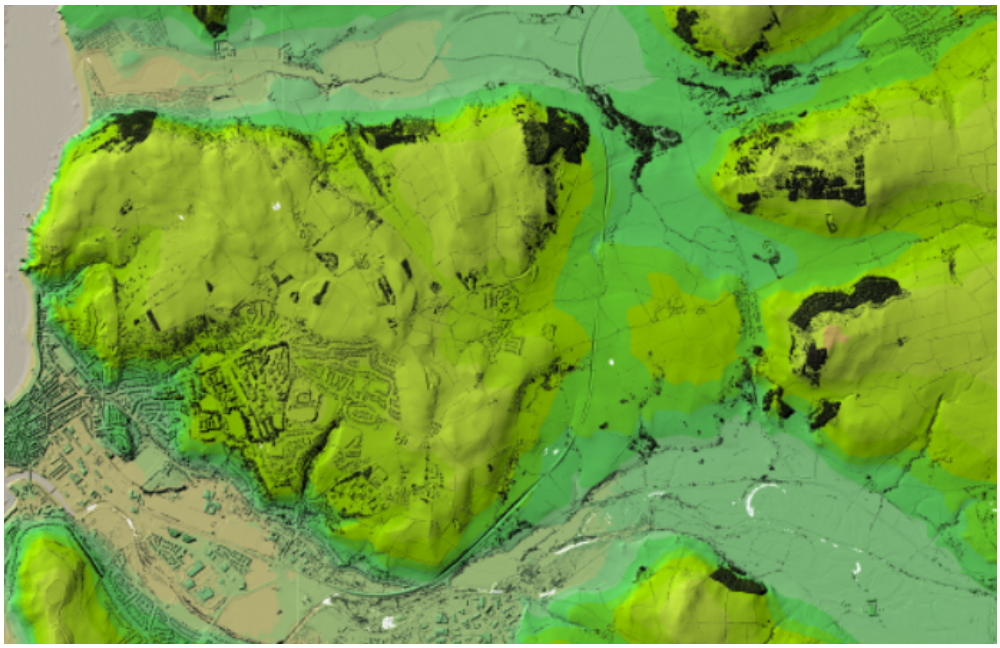
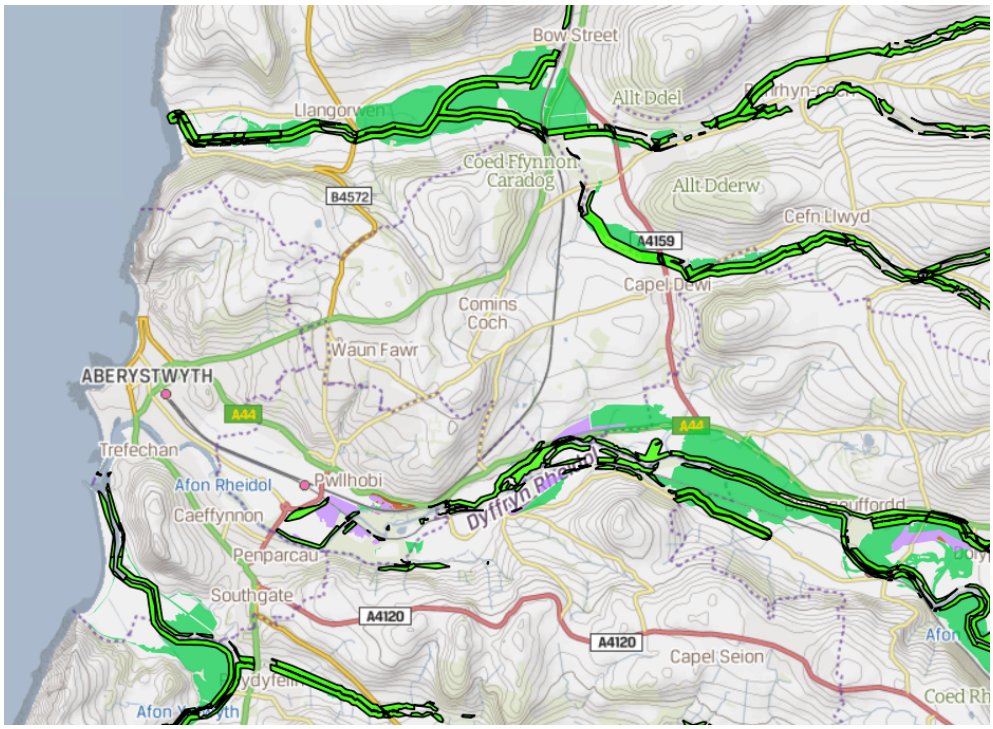


Light Detection and Ranging (LiDAR) at 1 m resolution mapping around the area.

Woodland Inventories from 2009 to 2016showing fragmentation.



Riparian Woodland Potential is an estimate of locations where tree planting may be possible on smaller floodplains close to flow pathways, and effective to attenuate flooding.