

### Jubilee Pasture

Note – plans have been developed in Inkscape with layered vector graphics so they can be readily altered to show/hide/change/add features as required.

30 Oct 2023 is the final version of this document. With the extension from the National Lottery Heritage Fund, the funded project ends 30 November and tasks relating to that have been completed. Ongoing records for future reference include the calendar of maintenance tasks and the record of plant species introduced to the site.

#### Site description

Area: 1.75 acres, bounded to north/west by narrow road, to east by ditch, hedge and mature trees, and to south by beck and mature trees.

Soil type: Clay, poorly drained with areas of standing water in winter

Soil nutrients: Samples of drier parts of grassland in February 2022 gave measurements of P index 0.9 (very low), K index 2.2 (normal), Mg index 4.1 (very high), pH 5.6.

The low P index suggests a potential for high plant diversity. The wet, slightly acidic conditions should be taken into account when choosing species to introduce.

#### Existing features (see Plan 1)

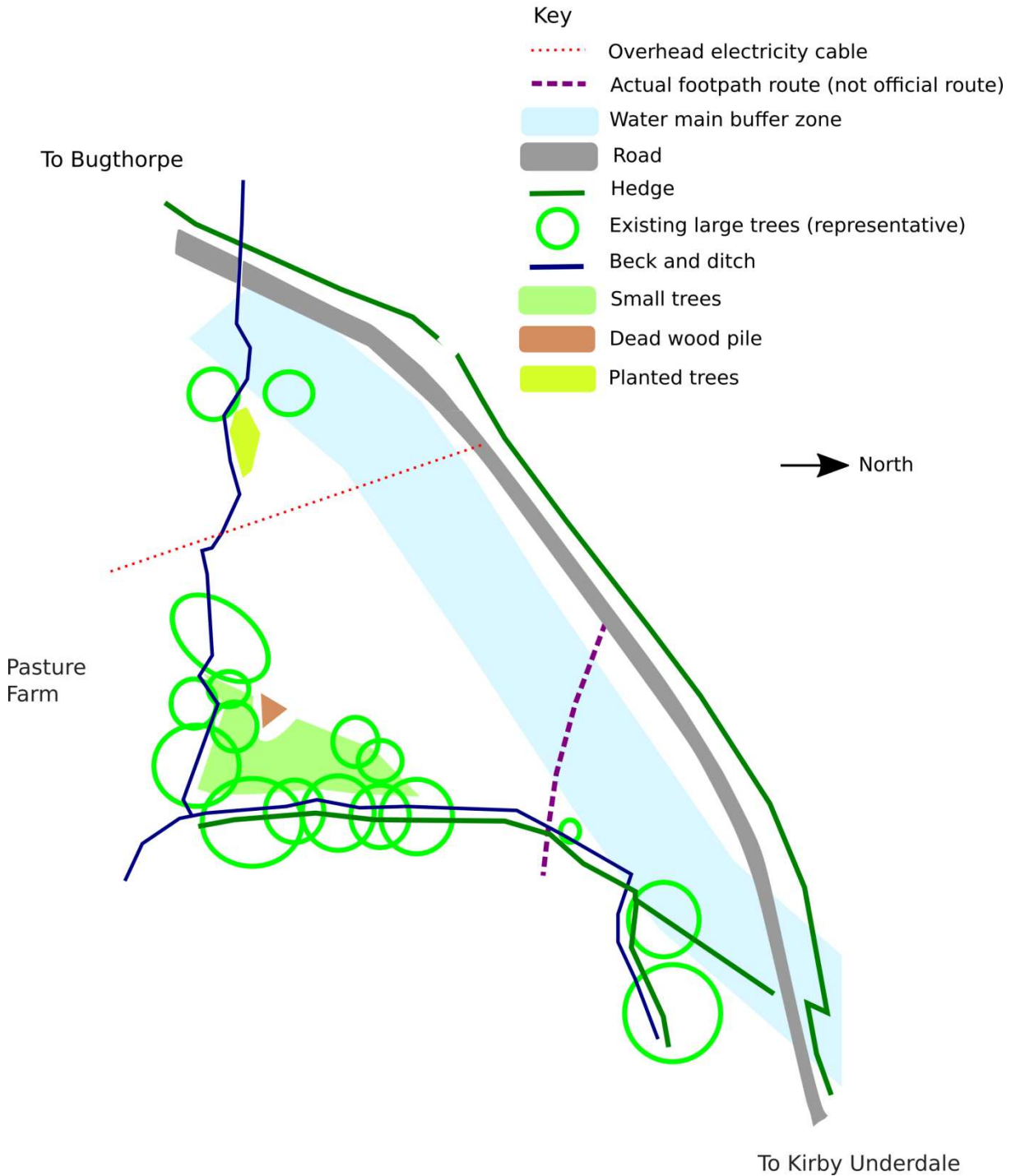
Feature	Comments
Public footpath	Provides opportunity to link to footpath network.
	Route must not be obstructed.
	Note that actual route on ground differs from route on maps.
Overhead electricity cable:	Restricts tall tree planting underneath.
Water main	Restricts tree planting within 10m.
Beck and ditch	Small beck arising from springs on Cheesecake Wold.
	Ditch draining fields between here and Kirby Underdale.
	Flow increases rapidly and greatly after heavy rain. Beck can stop flowing in prolonged dry weather.
	Probably no fish present, which is valuable for pond development.
Hedge	Composed mainly of blackthorn. Dog rose present.
	Cut annually or biannually by neighbouring tenant.
Existing area of mature and small trees in SE corner	Canopy creates areas of full and partial shade.
	Mature trees forming canopy include horse chestnut, ash, sycamore, aspen.
	Small trees developing at the edge of the area include aspen, goat willow.
	Trees in the understory include elder.
	Ground flora including ivy, nettle, bramble, cleavers, dog's mercury, arum lily, herb robert, herb bennet, red campion, creeping buttercup, hogweed, male [?] fern, cow parsley, celandine, dock spp., grass spp..
	No current management.
Beckside	Includes an old dead wood pile.
	Beck-level area not studied as to be dug out for beck-fed pond.
	Ground-level area of not recorded yet but no interesting species seen.
	Area of ornamental trees planted by Pasture Farm with mown grass

	underneath.
Meadow	Cut annually for silage/haylage/hay in July.
	Flora includes wet meadow species such as great burnet and meadowsweet, meadow vetchling, lesser stitchwort, common knapweed, common sorrel. See separate list of species from monitoring.

**Plan 1**

**Jubilee Pasture, Existing features**

Traced from Halifax Estates 1:1000 map and Google Maps satellite image



## Proposed Developments

Developments of the site will be consistent with, and seek to achieve, the following aims:

- To create an area where the residents of Bugthorpe, Kirby Underdale and nearby villages, and visiting walkers and cyclists, can enjoy the flora and fauna of the site and benefit from the surrounding landscape.

The site will be visually attractive, in keeping with it being in the countryside rather than a garden, and will allow for people to walk throughout the area.

- To encourage existing plant species of conservation value, and to introduce additional plant species of conservation value.

Species will be native and within their natural range, with some exceptions for non-invasive historically naturalised species such as wild-type snowdrops (not cultivars). Wherever possible, seed and plant material will be obtained from non-commercial local sources to help maintain genetic diversity.

- To create habitats for, and provide food for, invertebrates, birds, mammals, amphibians and fungi.

This will be achieved through vegetation management, creation of a pond and consideration of microhabitats such as dead wood.

Fertilisers (synthetic or organic) and insecticides will not be used. Herbicides will only be used as method of last resort.

- To educate people, especially children, about the nature and history of the local area.

This will be achieved through an information board and through organised activities.

- To commemorate HM The Queen's Platinum Jubilee of 2022.

This will be marked by an inscribed bench.

The developments will:

- Provide a range of one-off or regular activities in which residents can participate, and so benefit from the social activity and sense of contribution to the project.
- Be planned to ensure that they do not require undue time or cost in future maintenance or management.
- Be under the oversight of Bugthorpe and Kirby Underdale Parish Council but organised by the Friends of Jubilee Meadow. They will be agreed by the owner, Halifax Estates.

The aims above have been agreed by representatives of Friends of Jubilee Pasture, Bugthorpe and Kirby Underdale Parish Council, Halifax Estates and the tenants prior to re-organisation of the relevant tenancies. The proposed developments described below will be refined as the project gets underway in 2022, and as it evolves in future years.

**Zones for proposed developments (see Plan 2)**

Black text is notes on development and management for the different zones of jubilee pasture, as identified at the start of the project. Green text is comments added periodically to reflect progress through the duration of the lottery funded project. Versions of the plan with different header dates have different green comments.

Number on plan	Description
<p>1 Existing trees</p>	<p>Manage existing area of trees to increase diversity of understory. This may include reducing ground cover of ivy. Depending on how they develop through the year, other species such as nettle and cleavers may need to be reduced. This may need to be managed on a regular basis. <b>FIRST CLEARING COMPLETED</b> of patches of ivy, cleavers and nettles to make space for planting/sowing woodland flora and to create a pathway through the wooded area. <b>FURTHER CLEARING COMPLETED</b> as required for sowing and planting (see below) and to reduce the impact of cleavers in some areas.</p>
	<p>Species which may be introduced at appropriate times of year, in the first year or later years, in areas with an appropriate degree of shade: wild garlic, wood anemones, bluebells, violets, primroses. Future action will depend on the success of initial introductions. <b>FIRST PLANTING COMPLETED</b> including primroses and violets donated from gardens. <b>SECOND PLANTING COMPLETED</b> of a small number of bluebells, wild garlic and wood anemones transplanted from wild sources. <b>FIRST SOWING COMPLETED</b> of bluebell, violet and primrose seed collected from local wild sources. Seed was sown around the plants of the same species. <b>THIRD PLANTING COMPLETED</b> with sweet violets, common dog violets and honeysuckle transplanted from local wild sources.</p>
	<p>Spread of aspen may need to be managed in future years. <b>Suckers cut in winter 2022 and autumn 2023 (see '3' below).</b></p>
	<p>Leave dead wood pile undisturbed.</p>
<p>2 Pond</p>	<p>In first spring, dig out a pond in the sunken area beside the beck (to be constructed by Halifax Estates following the methods they have used previously). Allow natural colonisation of the new habitat. <b>COMPLETED. Pond constructed. Surrounding bare area seeded with Lower Derwent Valley seed.</b> Planting around (but not in) pond completed with plants raised from locally collected seed of species which grow in wet conditions (hemp agrimony, common valerian, water figwort, water avens), Large stones positioned around pond edge to provide additional habitat and visual appeal, and to improve safety.</p>
	<p>In first spring, transplant marginal vegetation from local sources [?] e.g. marsh marigold, butterbur [?]. <b>FIRST PLANTING COMPLETED</b> including butterbur (transplanted from downstream) and purple loosestrife (grown from commercial seed). <b>SECOND PLANTING COMPLETED</b> now stones are in position, including marsh marigold and more of the species listed above. <i>Further transplanting from other estate ponds, as recommended by YWT, still to do.</i></p>
<p>3 New trees and shrubs</p>	<p>In first spring, plant trees from Woodland Trust. Plant in a random pattern with areas of higher and lower density. Plant taller species nearer the existing trees. <b>COMPLETED (planted silver birch, rowan, oak sp, wild cherry, field maple, grey willow).</b></p>
	<p>In first spring, plant spring flower species suited to partial shade e.g. snowdrops, aconites. <b>FIRST PLANTING COMPLETED</b> including snowdrops and aconites donated from gardens (planted by footpath). <b>SECOND PLANTING COMPLETED</b> Cowslips planted at other end of path by road (donated from garden).</p>
	<p>In first autumn, plant shrubs in clusters within new tree area. Choose species which will provide floral resources e.g. guelder rose, spindle, hazel, alder buckthorn. <b>REVISED and COMPLETED. Relocated to area by road bridge over beck which was cleared in pond construction (see '5' below).</b></p>

	Trees may be managed in future years to prevent the whole area becoming inaccessible as they grow together.
	Tree guards to be removed as soon as possible.
	Future management of grass etc [?] Poss need to cut as would cut a verge, at least where spring flowers are planted. Aspen suckers will need to be cut within this area to prevent it dominating. Ideally, management would support existing meadow species such as pignut and great burnet while they are not abundant elsewhere on the site. <b>Grass and aspen cut with brushcutter/trimmers in first winter (2022) and autumn 2023.</b>
4 Becksides	Becksides vegetation – Shrubs to provide screening for Pasture Farm and floral resources e.g. dogwood, male goat willow [?] <b>REVISED and ONGOING. Planting by parishioners who want to plant non-native species, for example, as memorials.</b>
5 Near bridge	Currently area of dense uncut vegetation, primarily meadowsweet. No particular plan for this area. <b>REVISED and COMPLETED</b> Vegetation largely removed and covered with bare soil during pond construction. Planted male goat willow and dogwood (grown from locally-sourced cuttings), and guelder rose, hazel and alder buckthorn (from commercial tree nursery). Sown with seed from Lower Derwent Valley National Nature Reserve. <b>Mesh cages constructed around some shrubs to prevent further browsing damage.</b>
6 Meadow	Meadow to be converted to flower-rich meadow (over the course of a number of years), through altered management and introduction of material from local hay meadows.
	In first spring, reduce vegetation and create some disturbed soil to encourage germination from seed bank, ideally by grazing. <b>ALTERNATIVE ACTIVITY COMPLETED. Due to the weather, by the time the soil and animals were ready for grazing, various desirable species had already started growing and cuckoo flower was flowering. It was therefore decided that spring grazing would be counterproductive. Instead, small areas were raked to remove dead vegetation (primarily grass) and micro areas within these were disturbed manually. This was not considered likely to be particularly effective due to a mat of roots covering much of the soil, and disturbance of this simply revealing solid clay rather than a friable tilth. Therefore, only a small proportion of the site was covered.</b>
	In first spring, grow seed from Lower Derwent Valley in pots. <b>COMPLETED</b> Seed sown and some seedlings potted up. Large number of annuals indicated contamination of seed when it was used in another project (we received the leftover seed). Some perennials, albeit common species, potted up and cared for by volunteers. <b>Some plants were unexpectedly identified as species which prefer calcareous soils. These were donated to a site further up the hill where conditions are more suitable.</b>
	In first summer, cut hay, harrow to generate bare areas, then apply seed, ideally in form of green hay from a local species rich meadow. Graze or roll to ensure seed contact with soil if possible. <b>COMPLETED. Hay cut. Harrowing done but didn't create significant bare areas due to dry conditions. Potential sources of weed seed along becksides and verge cut down (i.e. creeping thistle, willowherbs, broad-leaved dock). Green hay, sourced from meadow at Nunburnholme, whose own origin was Bishop Wilton Poorlands. Spread over 2/3rds of meadow area. Brush-harvested seed from Lower Derwent Valley scattered in remaining area, with some overlap. Yellow rattle seed, hand-collected separately from Nunburnholme, scattered over whole area. After some rain, additional seed of individual species, collected by hand from local sites, was scattered in small areas where the grass had been scraped/pulled away. Due to difficult timing with the weather and seed germination, instead of grazing the regrowth was cut and baled.</b>
	In first autumn, plant out pot-grown plants if ready. <b>COMPLETED</b> The plants grown from Lower Derwent Valley seed have been planted out by Bugthorpe school. <b>ADDITIONAL PLANTING COMPLETED</b> in second year by school of plants grown from locally collected seed including great burnet from JP.
	In first year after hay spreading, possibly cut several times to reduce dominance by established species. <b>NOT NEEDED</b> due to high density of yellow rattle and slow growth of

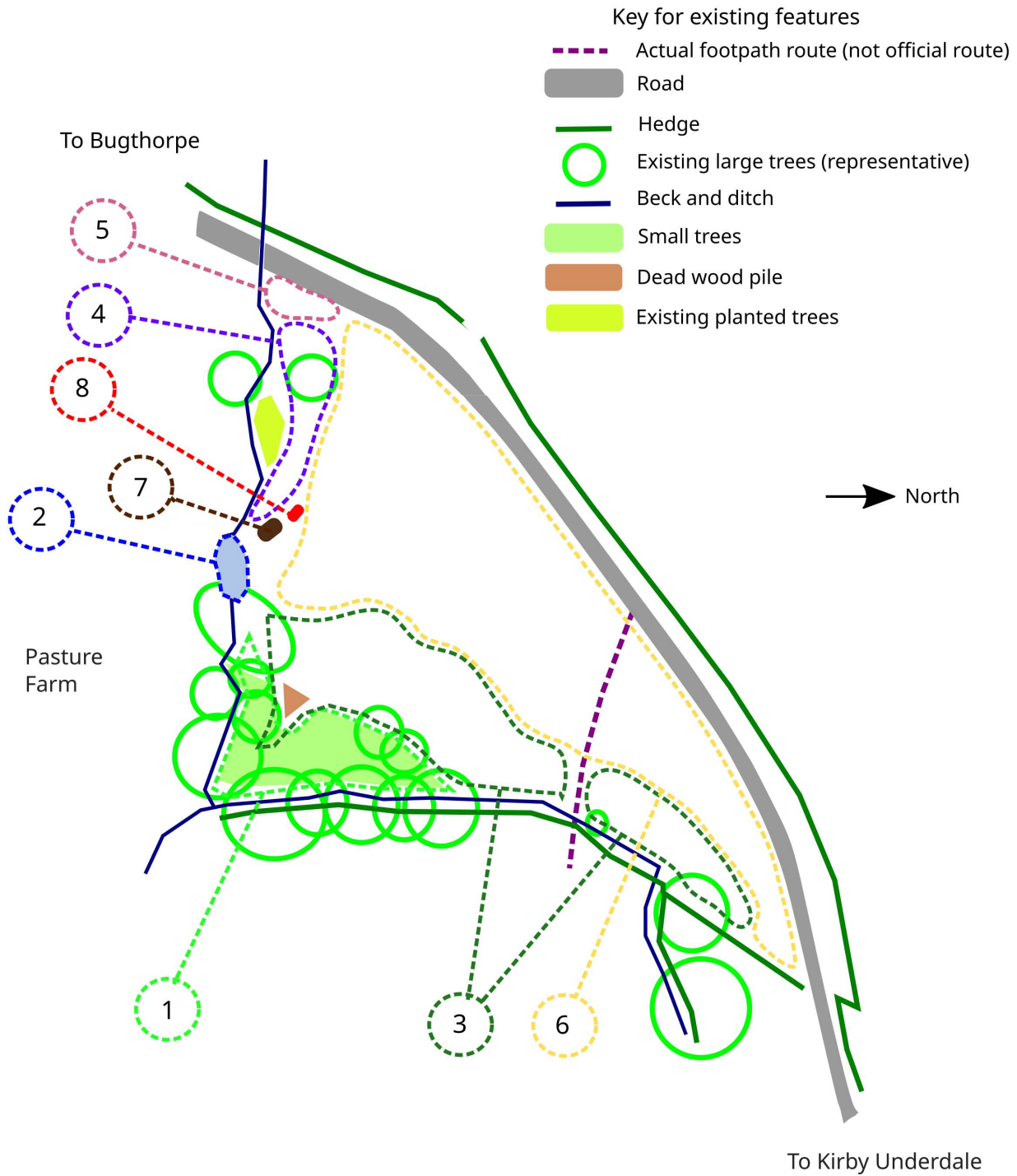
	<p>grass by June.</p> <p>Ongoing management as per traditional hay meadow i.e. cutting after seeding, removal of plant material, followed by grazing if possible. Cut in second year and dried + turned as hay but not grazed due to tenancy changes affecting ability to comply with animal movement legislation.</p> <p>Determine appropriate way ahead following spring and summer monitoring of plant species present. Possible spreading of additional hay and planting of further pot-grown plants in future years.</p> <p>Further seed collected from wild local sources in second year and sown for intended planting out in third year.</p>
7 Bench	<p>Bench commemorating jubilee. To be positioned to give a view of the pond and meadow, and not overlook Pasture Farm. COMPLETED Stone bench from old bridge stone commissioned from local stone mason and installed.</p>
8 Sign	<p>Information sign. Position and content to be decided. To be designed with help of school. COMPLETED. Designed and installed (no school involvement due to change of plan, installed nearer road than shown on plan 2).</p>

**Plan 2**

### Jubilee Pasture, Proposed Zones for Development

See accompanying text for descriptions of each zone.

Traced from Halifax Estates 1:1000 map and Google Maps satellite image



Updated 30 October 2023

### **Wildlife-based activities**

See separate timetable for full list of activities including bench, picnics etc., and see action plan for evaluation activities relating to national lottery heritage fund application.

### **Potential activities for Friends of Jubilee Pasture in 2022**

- Spring flower planting in suitable areas of new trees: snowdrops, aconites, primroses [done] .
- Reducing ivy and other dominant species in wooded area, followed by planting of bluebells, wild garlic, wood anemones [done].
- Growing on plants if LDV seeds germinate [modified due to dominance of annuals following mixing of seed sources by previous users but now done].
- Spreading of green hay [done].
- Spread seed from Lower Derwent Valley [done].
- Help set up electric fence for grazing if needed [cut and baled instead].
- Planting of pot-grown plants if ready [LDV plants done].
- Plant shrubs propagated from local sources, and replant plants transplanted prior to pond construction, around pond [done].
- Shrub planting [done].
- Woodmeadow Trust propagation workshop [plan revised].

### **Other Activities in 2022**

- Planting of Woodland Trust trees [done, Halifax Estates].
- Spring grazing [alternative undertaken due to conditions, Katherine Robinson].
- Try germinating LDV seeds and pot up desirable forbs [done, Katherine Robinson].
- Grow cuttings of local willow and dogwood [done, Katherine Robinson].
- Pond construction [done, Halifax Estates].
- Preparing grassland for hay spreading [done, Wardells].
- Approx. monthly monitoring of flowering species [ongoing, see spreadsheet, Katherine Robinson].

### **Potential activities for Friends of Jubilee Pasture in 2023**

- Further clearing of ivy in wooded area for further planting of spring flowers [done].
- Weed management, especially in areas cleared during pond construction [ongoing as required].
- Plant out tray-grown plants around pond and in meadow if successful, and possibly additional shrubs [done].
- Help clear aspens and vegetation among new trees [ongoing, annually]

### **Other activities in 2023**

- Arrange large stones at pond edge [done, Ian Grice]
- Alternative to Woodmeadow Trust propagation workshop? [village hall talks arranged from Woodmeadow Trust and Yorkshire Wildlife Trust]
- Grow wild-collected seeds for planting out around pond due to delay being able to sow *in situ*, and grow great burnet seeds collected from JP to plant out in meadow [done, Katherine Robinson]
- Approx. monthly monitoring of flowering species [ongoing, see spreadsheet, Katherine Robinson].



## Updated 30 October 2023

- Cut paths as grass grows [ongoing, as required]
- Possible cutting of some of meadow area early in season to assist new flower plants. [not needed]
- Cut hay in July and then graze [cut but not grazed, ongoing annually]
- Erect bat and owl boxes [done, Sean Edwards *et al.*]

### **Outstanding activities at Oct 2023**

- Transplant marginal plants from other estate ponds as recommended by YWT
- Plant out any plants arising from seed collected from local wild plants in 2023 season
- See calendar of maintenance tasks for ongoing activities