Plas Dwbl

Site report and feasibility study

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Purpose of the Design

In conversation with site manager Laura Wallwork, farm support worker Louise Cartwright and other staff, the following potential functions for the area have been identified:

An area to locate graduation trees (and other plants) for students

A space for social interaction

A more beautiful space

A space to connect and bring together adjacent spaces and structures and their functions

An area to grow food and craft products

The College

Plas Dwbl is part of the Ruskin Mill Trust, a Further Education College aimed at supporting young people with behavioural needs to stay in education. Focus on the development of practical skills, therapeutic engagement and the ability to access land-based occupations. refurbishes run down farms and brings them back to life as “social farms” combining care for the land with support and education for young people with behavioural problems.

Plas Dwbl was acquired by Ruskin Mill College as site for their work in 2011. Before then the farm was run as a biodynamic livestock holding. Since then, the college has gradually improved site facilities. This is an ongoing process.

Typical intake is 8 students per year, 2 year programme with option to extend to a third “gateway year” of more independent and self directed work experience in the local community. Students are through individual education budgets.

Plas Dwbl staff consist of personal support workers – daytime support, holistic engagement workers (HEWs) residential support workers – and subject specific tutors. Currently the following areas are covered by the curriculum:

Horticulture, Gardening, Farm work, Cooking and kitchen safety

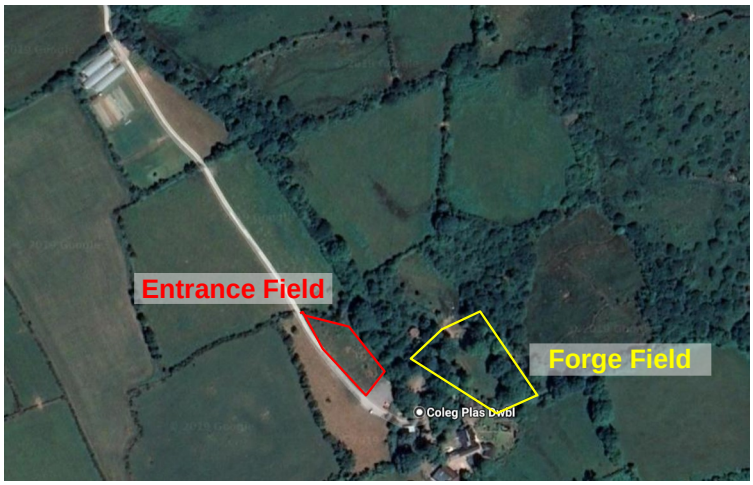
Forge, Woodwork and woodland management, Basketry

Arts and performing arts

For the College, the development of the forest garden would count as a special project of college enhancement which will need to be funded separately from core support work.

Site choice, functions and character

The initial choice was between two fields, here called Entrance Field and Forge Field



Aerial photo & photo showing both fields

Entrance and Forge Field compared

Criteria	**Entrance Field**	**Forge Field**
Location	Next to car park and visitor entrance; away from staff and students	Central to site facilities
Terrain	Shallow S slope, fairly homogeneous	Shallow NE slope Rugged terrain Earth banks and spoil heaps
Light	Well lit all year round	Some shade from the East
Wind	Exposed area	Wind tunnel
Water	Fairly dry	Some wet areas;
Soil	Poor; fairly free draining	Moderate to poor; clay loam
Future developments	Car park extension	Maggie's Hall redevelopment

SWOC ANALYSIS	**Entrance Field**	**Forge Field**
Strengths	Well lit all year round	Central location close to staff and students Needs attention anyway
Weaknesses	Exposure Poor soil Away from people's attention and use Weed control (bracken)	Shade Difficult soils

Opportunities	Create attractive entrance area Plenty of space for more trees	Big improvement to a central location Connect and integrate gardens, forge, wood workshop and Maggie's Hall Create a new social space
Constraints	Uncertainty about car park development	Slowed down due to Maggie's Hall redevelopment

In my view of the initial two sites under discussion, the development of the Forge Field offers the greater benefit, as it fits into the overall trajectory of the site's gradual improvement. Currently the Forge Field gives a neglected and fragmented impression. Given its central location, it would be desirable to give it a significant upgrade. The Entrance Field at the moment blends in with its surroundings. Any changes in its use and layout could be decided upon once the location of the car park is finalised.

The Forge Field – Site assessment

Location and area

Location: 51.92878 North; 4.70583 West

Elevation: 185 m

The field is located on a shallow, Northeast facing slope in the foothills of the Nynidd Preselli range. It is part of a 100 acre biodynamic farm. The Forge Field is close to the centre of the site between the gardens and several workshop areas, with two buildings in close proximity. The Entrance Field is relatively flat, above the centre of the site.

Climate

The site is under the influence of maritime climate, modified by its elevation and its location to the East and South of two hills. The field is sheltered from East and West, but there is a wind corridor going through its centre from Northwest to Southeast.

Climate data for Haverfordwest:

Average annual temperature: 9.9 C

Annual rainfall : 889 mm

Landscape and profile

The field is predominantly flat with several areas of rough, uneven ground. There is a spoil heap from works elsewhere on the farm next to the track in the Northwestern part of the site and an old

bank with mature trees in the Northeast corner. In addition there is a recently made bank between Maggie's Hall and the main North-South track through the centre of the site.

Water

The soil in the Forge Field appeared wet to temporarily waterlogged during my visit in December 2019. A number of springs issue from points just below the Eastern and Southern site boundary. There is an old septic tank next to spoil hep in NW corner, which was connected to Maggie Hall but is now thought to be defunct.

Habitats and species

The Forge Field itself is covered with rough wet acid grassland, with a few trees from sapling age to mature. To the East and South the field is bordered by old stone banks with trees of varying age and scrubby understorey. Mature trees along Southern and Eastern boundary. Adjacent to the East and Northwest is broadleaved native woodland, with boggy fields extending northwards.

Due to the season of my visit it was not possible to carry out a full vegetation survey. I recommend that this is done in May or June 2020.

Species identified in the field and adjacent hedges in December 2019 include:

> Field layer: Bracken, Bramble, ferns, foxglove, *Juncus spp*, mosses, Plantain, Stinging nettle, wood avens
>
> Woody plants: Ash (showing sgns of cattle damage and ash dieback), Blackthorn, Cherry laurel, Cotoneaster/Berberis, Elder, Hawthorn, Hazel, Sycamore (dominant canopy tree)

A recent survey of the local meadow vegetation is included as an appendix.

Historically the Forge Field has been grazed by livestock. Currently there are no large populations of deer, rabbit or squirrels.

Soil and Geology

The National Soil Database describes soils in this area as poor, with a mixture of freely draining acid loamy soil over rock and slowly permeable wet very acid upland soils with a peaty surface.

A basic soil testing was carried out for the Forge Field, with five samples taken (see Appendix). The field is covered by shallow clay loam soils, with bedrock close to the surface and frequent rocky outcrops and boulders across. The subsoil of the spoil heap in the Northwest corner is clay loam with a high grit and stone content.

No full soil survey including soil profiles was carried out due to lack of time and poor weather conditions; this would be advisable before making any final decisions on plant selection and planting preparation.

Access and structures

The Forge Field is crossed by a number of routes for cattle and vehicles. The main access routes are to be kept open, as are the public footpaths crossing the site. There currently is stock fencing around most of the site, with the exception of a short stretch at the Northern boundary.

The main structure in the field is Maggie's Hall, a corrugated metal structure built buy the previous owners. The intention is to replace it with a new purpose built structure for use of the College over the next few years.

Bordering the site to the South is the Smithy, a stone building from the 1960s just beyond the fence to the SW. It is currently used as a therapeutic space. Between Maggie's Hall and the Smithy there is a small dilapidated shed made of corrugated metal.

Adjacent structures are a wood workshop with drying shed and the Forge. Both have small separate outdoor areas that are currently fenced off from the main Forge Field.*Forge Field, Base map 12/2019*

Observations and reflections

Earthworks, access routes and boundaries

Stock fencing will be needed to protect the new forest garden. A permanent stock fence would make sense at the Northern boundary of the site, beyond the wide track past the woodwork area. This would allow a lot of other fencing to be removed, giving the site a more open and connected feel. Only temporary fencing is required for when animals are moved through the area.

Some of the current earth banks can be usefully retained to direct flow of people and livestock, while others no longer make sense with future plans and could be removed. Some of the boundary hedges are historically and ecologically significant and should therefore be retained. Others could be cut or replaced without loss of important features and wildlife value. This together with a general clear up of the site would give the site more integrity and coherence.

Plants with Potential

There are a number of plants already successfully growing on site that could be integrated into the planting scheme of the Forge Field

Fields	**Woodland and hedgerows**	**Gardens**
Dandelion Flag iris Plantain Tormentil	Elder Ground ivy Hazel Pennywort	Apple Blueberry Comfrey Currants Foxglove Geranium Hebe Ladies Mantle Lemon balm Mint Rose Rudbeckia Strawberry Wild strawberry

Many other plants thrive in similar conditions on comparable sites.

Recommendations for site development

The following operations would turn the field into a space that would feel less cluttered, more accessible and welcoming while keeping it stockproof and accessible for vehicles. All proposed changes are related to the objectives identified at the beginning of the report

Phase 1: Reshaping existing features

Objectives: "A space to connect and bring together the adjacent structures and spaces and their functions"

"A more beautiful space"

Retain **current main throughfares** connecting vehicle sized gates and the garden gate as accessible to tractors and livestock.

Retain existing **public footpaths** – keeping a wide strip along the Southern boundary to reduce risk of Japanese Knotweed spreading

Create a **new stockproof fence** with an additional tractor sized gate between the edge of the wood work area and the NE boundary. This would result in a fully enclosed and stockproof Forge Field. Following this protection, the now internal fences enclosing the woodwork and forge and separating the garden and Smithy could be removed, creating a larger and more coherent area. This will create a more free flow and feel of the place and allow the whoel area to be considered and developed to one coherent plan.

The **spoil heap** could be removed entirely or in parts, to enable better views and people flow across the site. Alternatively some of it could retained as a low-level planting area, which would help to give the entrance from the South more definition. In that case the mound should be reshaped to create a more even and planned appearance, and some organic material may have to be added to improve fertility and water infiltration.

Remove the large tree with extensive bark damage in the centre of the field, and consider whether to keep or remove any of the other existing **trees**. A case could be made for either decision.

Level the **bank and** fill in the **ditch** in front of Maggie's Hall in one operation. This will open up and unify the centre of the field. Also level areas of **uneven ground** between Maggie Hall and the Smithy.

Consider filling in the **septic tank**. Some of the land currently between Maggie Hall and the trackside edge of the spoil heap could be redeveloped to contain a new septic tank with an outfolw towards a plant treatment system. At the very least the area around the septic tank should be tidied up and given defined boundaries through planting and/or earthworks.

Remove the dilapidated **shed** and consider removing the **evergreen hedge** between Smithy and Maggie's Hall, to unify the area. Other plants could create a more pleasing and less imposing boundary if so desired.

Phase 2: New layout

Objective: "A space for social interaction "

Define main and subsidiary **routes** through plantings

Install **posts** to attach electric tape to in strategic locations, for temporary stock proofing as and when needed while livestock is moved through the area

Use the now free centre of the field to create a new **open space** for people to gather and socialise, with fire pit, seating, provisions for temporary shelter and other desired features. A more detailed design for this would come out of a separate process involving all site users and stakeholders.

It would be desirable to **involve students, tutors and staff**, especially the art tutor and students in visualising the future look of the field, for instance by creating drawings, watercolours, models etc. together with students and other interested staff.

Phase 3: Develop and carry out the planting plan

Objective: "An area to locate graduation trees (and other plants) for students"

It is anticipated that 6 people graduating each year. This allows for a **gradual planting** up of the site if desired. To guide this process it would be good to agree on a masterplan for the layout of beds and location of other features, followed by an implementation plan for the first 5 years including lists of trees, shrubs and perennials.

An **initial guild** could be designed for 2020, and planted by the students with help from staff. A training event for staff and students in year 1 would help create a shared understanding as to how the area is to be developed. After site preparation through spring and summer, the initial guild could be planted in late autumn or winter 2020.

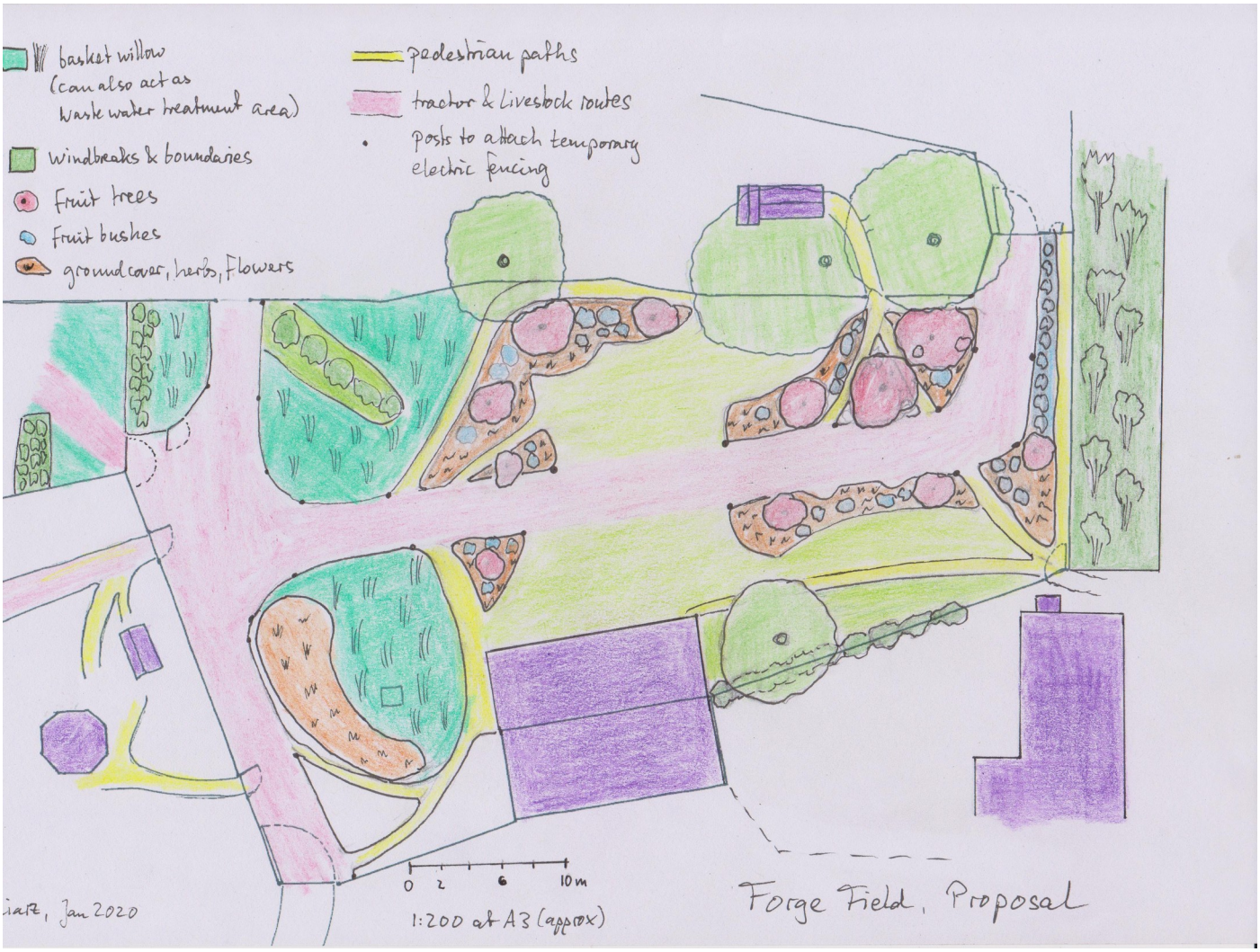
Plant selection

Objective: "An area to grow food and craft products"

While a small number of locally successful plants have already been identified (see Obsevations and reflections above), a further vegetation survey during the growing season, together with more thorough soil testing and observation of other nearby plantings will be needed to determine which plants will be likely to thrive in this area.

Forest garden guilds could be clustered around the edge of the central open spaces. These could contain semi-dwarf to semi-standard fruit trees, a widerange of bushes and cane fruit, as well as perennial herbs, vegetables and flowers and some annuals.

There is also some potential to grow craft products for basketry, woodwork and other activities. The wetter areas of the site could accommodate short-rotation willow coppice, while hazel and sweet chestnut for poles are other species with coppice potential.



Design Detail

Mood Board – examples from other sites of design elements proposed for Forge Field

Maintenance Schedule

To follow

Next steps

A rough implementation plan for the next 12 months could look as follows

What	When
Detailed vegetation and soil survey	May/June
Training event for staff and students	Summer
Discuss and agree overall plan with staff and other relevant parties, amend plans if necessary	Summer
Decide on initial planting areas and develop detailed planting plans for them	Autumn/Winter
Initial planting of a forest garden guild	Autumn
Plant windbreaks and willow coppice	Winter