
Manure Management Plan

Erection of a free range egg
production unit including silos and all
associated works

Prepared for Thomas Brothers

Cefn Gribin, Llanfyllin, Powys, SY22 5EN



land & property
professionals

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MANURE MANAGEMENT PLAN

Introduction

This manure management plan has been prepared for Thomas Brothers, Cefn Gribin, Llanfyllin, Powys, SY22 5EN, for the erection of a 32,000 free range egg production unit.

The Water Code states that, to reduce leaching losses from manure, you should not apply more than 250kg per ha of total nitrogen in organic manures in any 12 months. However these are guideline levels only and if a FACTS trained advisor can show that the crop requirements are higher the rates can be increased. The farm is not within a Nitrate Vulnerable Zone.

The farm extends to approximately 450 acres (182 hectares) of owner occupied and rented land. Approximately 389.5 acres (157 hectares) of spreadable ground is available to apply manure and slurry to after removing the ranging area all of which is owner occupied, this is subject to land to be excluded to meet the requirements of the relevant regulations.

Proposed Development and Farm Stocking

The proposed development is for the erection of a 32,000 bird free range poultry unit at Cefn Gribin. Messrs Thomas also run a flock of 1,000 ewes and 30 suckler cows on farm.

The applicants currently buy in fertiliser to spread on the land.

Storage of Manure

All solid manure produced within the poultry unit will be removed every four days and either directly spread upon the extensive land available or stored in the existing manure store upon farm.

Manures will be stored and spread in accordance with the water, soil and air Codes of Good Agricultural Practice.

Manures will be stored in field stores and manure heaps on arable ground and will be densely packed with a A shaped profile.

- Manure heaps will be well away from water courses, drainage schemes and ditches.
- Manure will be spread under suitable conditions
 - Wind direction will be chosen to be blowing with prevailing direction from the west which will blow any odours away from the closest dwellings.
 - The ground to receive the manure will not be water logged or frozen.
 - Spreading will be done at least 10 metres away from any water courses or ditches
- There is a covered concrete pad that can be used for emergency storage when conditions are not suitable to store manure on the fields. This shed has a dirty water system and has an impermeable base the shed used to be used for wintering cattle.
- Manure will be incorporated in the soil within 24 hours of application, where this is possible due to conditions.

Manure Application

A Manure Management Plan has been produced. In addition to identifying no-spread areas, high risk areas and those areas of the farm that are suitable for applications of manures for most of the year, the plan should also assess the amount of land available to take the manures produced. The map should be colour coded:

Red = No-spread areas, e.g. yards; within 10 metres of a watercourse or 50 metres of a borehole, spring or well used for drinking or parlour washings. Or areas not normally used for operational reasons but may be brought into use in the future.

Orange = Very high risk. Steeply sloping fields of gradients 1 in 7 to 1 in 5; fields at risk of flooding; sandy or shallow soil over fissured rock; fields where drains have been installed during the past 12 months; poorly drained or waterlogged land; severely compacted soils, etc.

Yellow = Moderate risk. Slopes between 1 in 14 to 1 in 8; land sloping towards watercourses; imperfectly drained land.

Hatched dark green = Lower risk with caution. This land may have manure applied to it but care must be taken prior to application of manure, that no flood warning have been raised or that excessive rainfall is forecast within 48 hours of the proposed application.

Green = Lower risk. Remainder of land upon which manures are applied and which has not been subsoiled or mole ploughed within the past 12 months.

The applicant has assessed his proposals against the above guidance of the Welsh Government.

A buffer of 10m has been provided to all watercourses, and no spreading will be done on this buffer zone. The farm has therefore sufficient capacity to dispose of all manure produced by all enterprises in accordance with all the relevant regulations and legislation.

The total amount of manure (N) that can be applied over the spreadable land on the farm would be 157 hectares x 250kg = 39,250kg N.

The total produced on the farm is 31,430kg N, which is well below the threshold, and therefore no manure will have to be exported (Table 1).

Table 1:

Stock Unit	Stock Numbers	Kg N per Stock Unit	Total Kg N Produced
Ewes	1000	12	12,000
Suckler cows	30	61	1,830
Free range hens	32,000	0.55	17,600
Total Kg N produced			31,430

Contingency Plan

There are a number of covered areas on the farm to allow for storing any manure, slurry and dirty water produced at times when spreading may not be possible e.g. due to wet, waterlogged or frozen conditions in accordance with the Code of Good Agricultural Practice. This is to ensure manures and slurry are spread at appropriate times to prevent pollution and maximise uptake of nutrients for crop growth. Manure will also be exported off site to local AD plants.

Areas on which solid manures and slurry should never be spread are:

Ditches and watercourses:

- Within at least 10 metres (11 yards) of either side of any watercourse including ditches and piped ditches. This will avoid direct spreading into the watercourse and also reduce the risk of run-off reaching the watercourse. Do not forget to include watercourses that form the boundary of your farm.

Other non-spreading (red) areas:

- Within at least 50 metres (55 yards) of any spring, well, borehole or reservoir that supplies water for human consumption or farm dairies.
- Very steep slopes where run-off is a high risk throughout the year.
- Any areas where you may not be allowed to spread for reasons such as a tenancy agreement, an abatement notice due to smell, set-aside land, Sites of Special Scientific Interest (SSSIs) or Environmentally Sensitive Areas (ESAs).
- The surface is rocky or uneven so that your equipment cannot be used effectively or safely.

Table 2

Total Manure Production			
Group	Kg N Produced	No of Animals	Total Kg N
Ewes	13	1000	12,000
Suckler cows	61	30	1,830
Laying hens	0.55	32,000	17,600
Total N Produced			31,430 Kg N
Total N Exported			0 Kg N
Spreadable Area			157 Ha
Total N/Ha			200kg N/Ha

Manure Storage

Existing manure store

Manure will be stored in the existing manure store upon farm.

'Dirty' Yard Areas

'Dirty' Yards

The 'dirty' yard areas on the farm will be kept to a minimum. This is due to the manure all being contained in the poultry unit and removed every four days together with the hardcore area to the front of the poultry unit. Messrs Humphreys will require all areas to be clean outside the building as they will be producing food products within the unit.

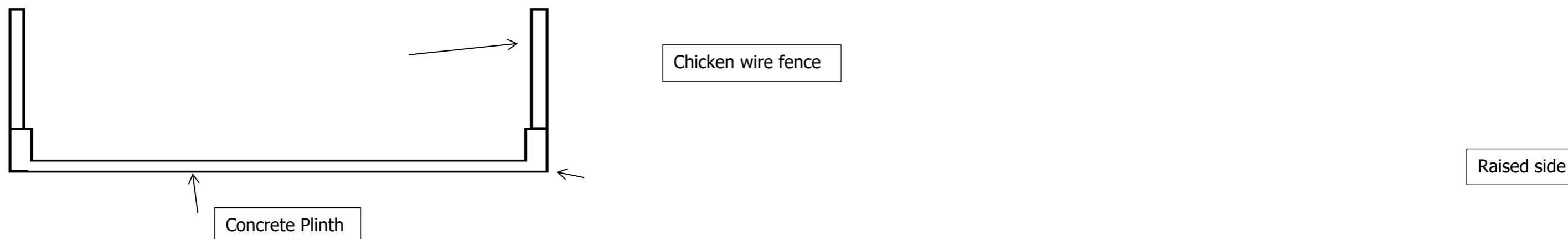
The poultry proposal will incorporate the installation of a dirty water tank adjacent to the poultry unit.

Ranging Plan

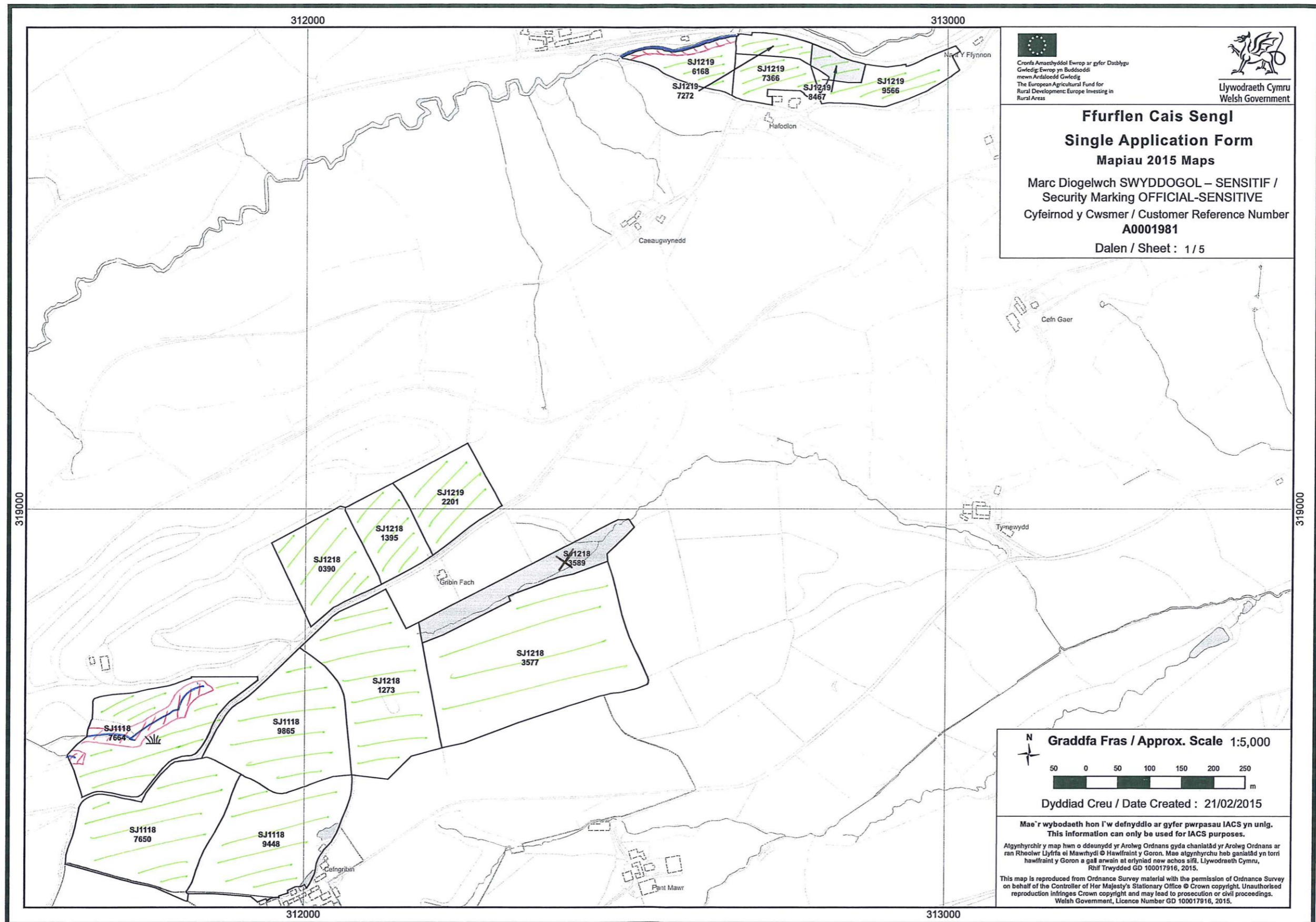
Please see below the ranging plan outlining the land to be used for the free range hens.


The watercourses running through the ranging area are to be fenced out and bridges erected in order to allow hens to cross the watercourse. The bridges will be erected with solid sides and the applicant will clean the bridges on a regular basis. The bridge will consist of a concrete plinth with raised sides constructed on top to serve as a deck area which will prevent any seepage through to the watercourse. The concrete plinth will also be easily cleaned to prevent any build-up of chicken manure, and the raised sides will prevent any run-off. The crossing points will be fenced off with chicken wire to prevent bird access to the watercourse. Any woodlands within/close by to the ranging area will also be fenced out.


Front view of crossing point:





The birds within the free range unit will graze the designated land in a rotational field system. The birds will step out of the building through the pop holes provided and onto a veranda, which shall ensure that the ground is not poached and compacted by the birds. The veranda shall also ensure that the feet of the birds are cleaned prior to entering the building. The birds will be then directed to those fields available for grazing in rotation to prevent over stocking of the ground and ensure the fertility of soil. Good pasture management is essential, and it is paramount the problems of parasitic intestinal worms and coccidian oocysts are avoided.




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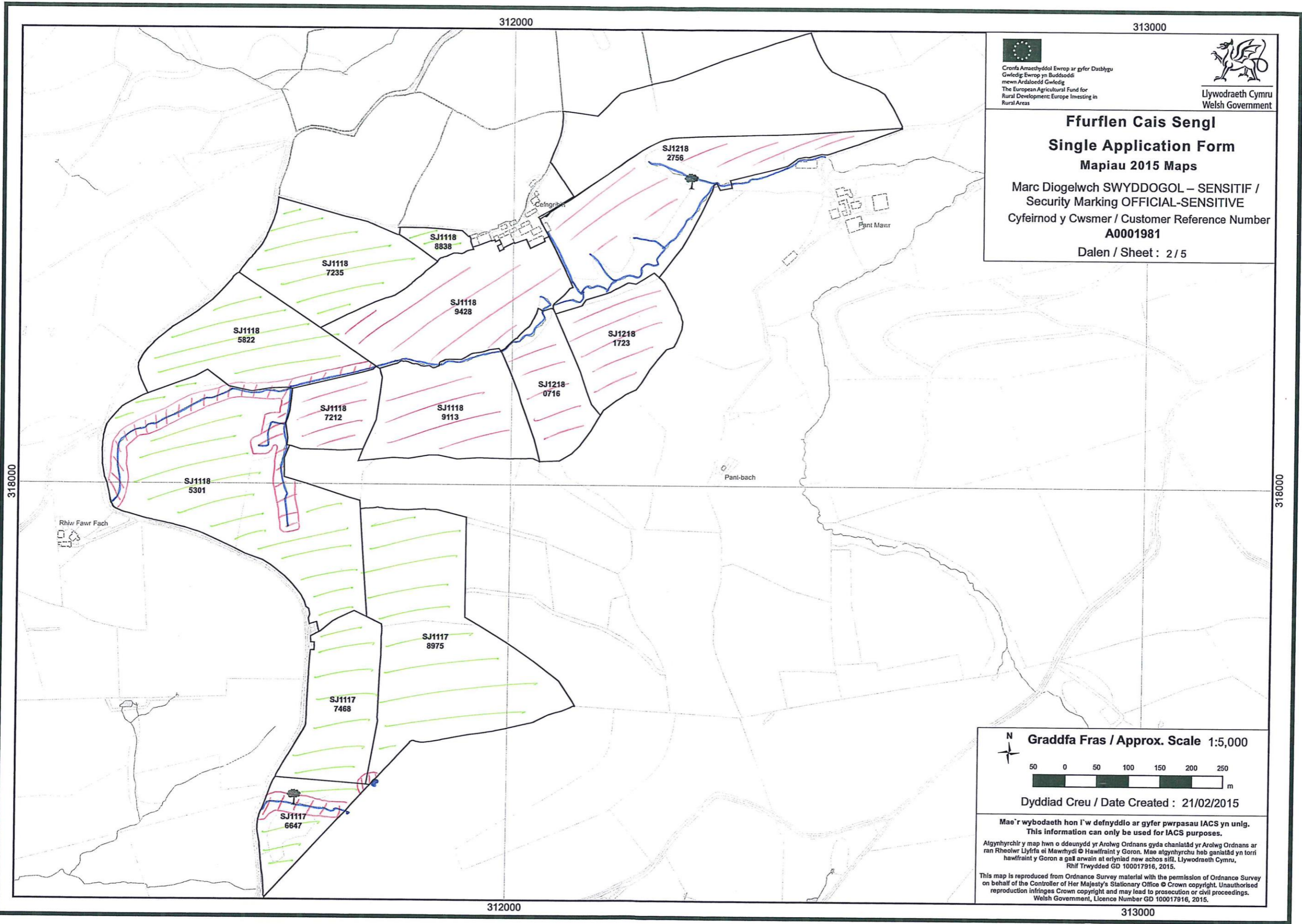
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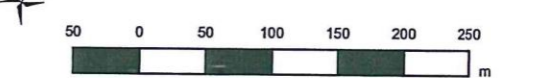
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Yr Ysgol Uwchradd



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Primary School

Gynradd Llanfyllin

Pol Sta

Waellys

Fron-y-Gog

Cymerau

Briar Rose

Cain House

Maesydre

Maesydre

S11418
5299

Rhoslwyn

Bronwydd

Denven Las

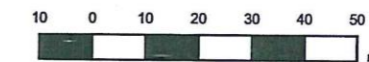
Rainbows

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Brambles

Elyrun

Bryn-cillyll

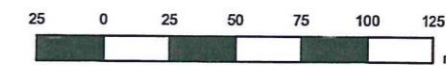
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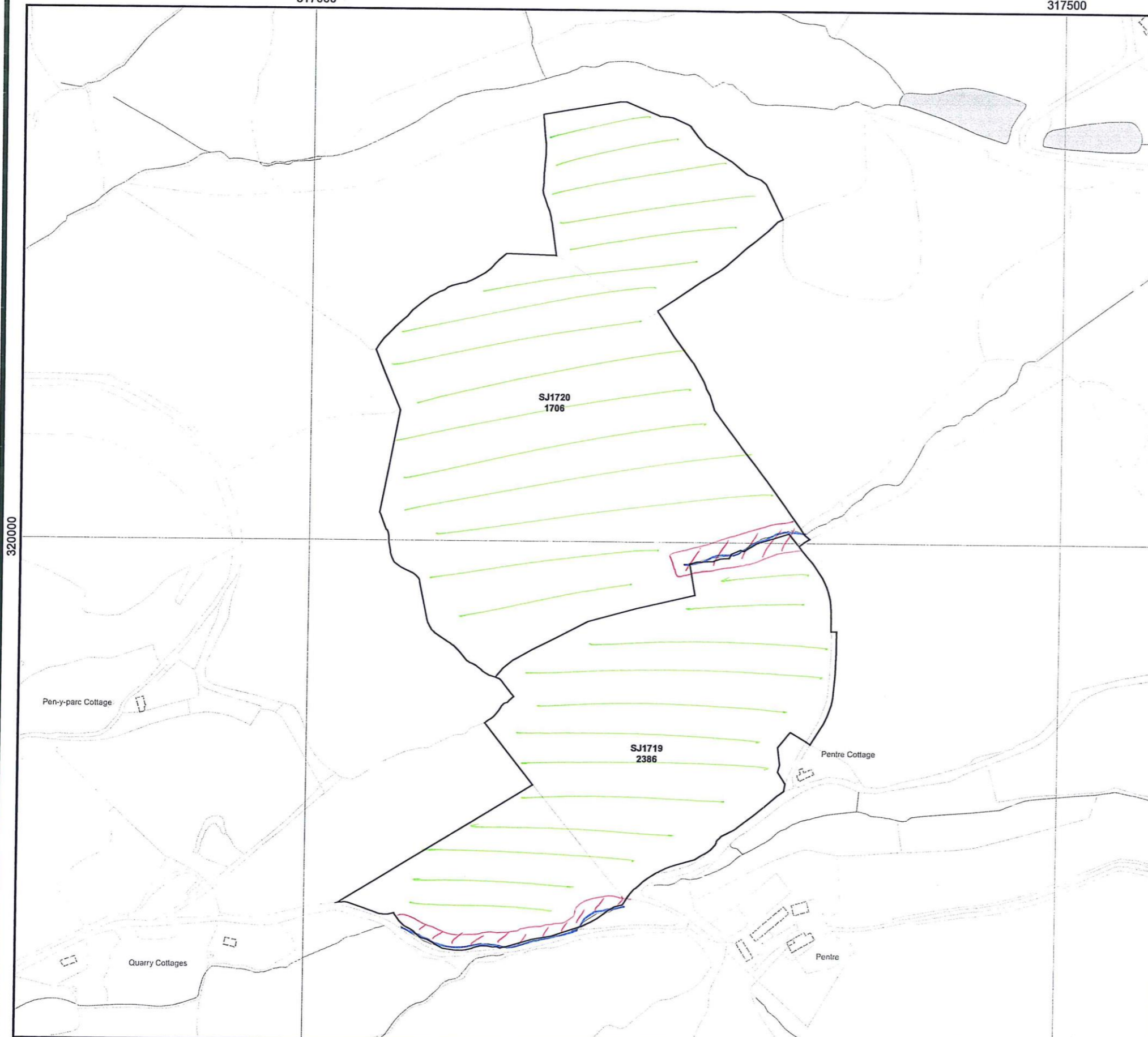
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Bodynfeol Lodge

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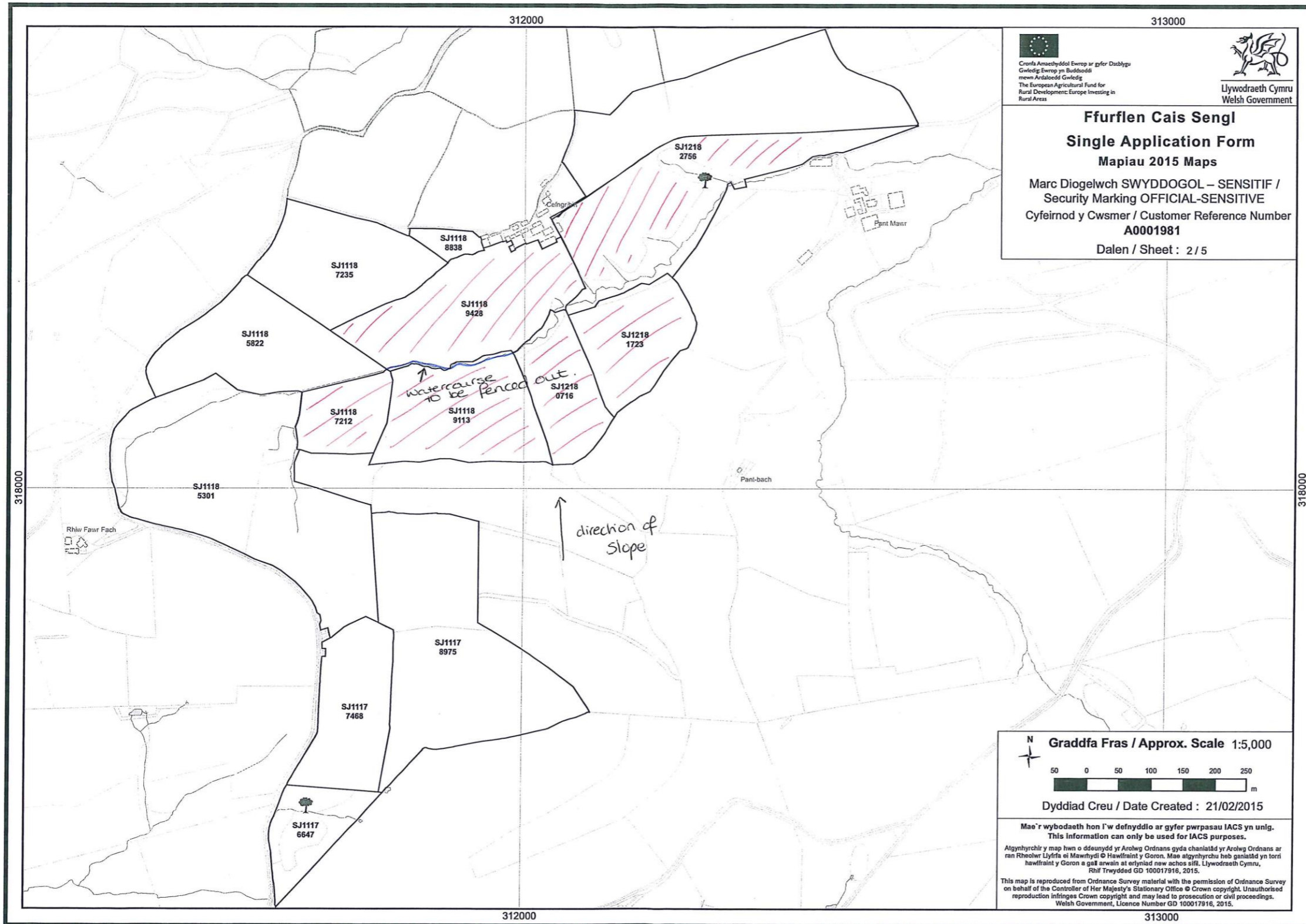
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Ranging Plan



Ranging Area – 40 acres

Soil Type – Freely draining acid loamy soils over rock

Sensitive Receptors – there are no sensitive receptors within 50m of the ranging area boundary

The watercourses running through the ranging area are to be fenced out and bridges erected in order to allow the hens to cross the watercourse.

At least 10 metres of either side of any watercourse including ditches & piped ditches will be fenced out. This will avoid direct spreading into the watercourse & also reduce the risk of run-off reaching the watercourse.

The bridges will be erected with soil sides and the applicant will clean the bridges on a regular basis. The bridge will consist of a concrete plinth with raised sides constructed on top to serve as a deck area which will prevent any seepage through to the watercourse. The concrete plinth will be easily cleaned to prevent the build-up of chicken manure, and the raised sides will prevent any run-off. The crossing points will be fenced off with chicken wire to prevent bird access to the watercourse.