

**LAND NEAR LLANFYLIN,
NORTH WALES**

**AGRICULTURAL LAND
CLASSIFICATION**

January 2026





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CONTENTS

- 1 Introduction and Summary of Findings
- 2 Methodology
- 3 Factors Affecting Land Quality
- 4 Agricultural Land Classification

Appendices

- KCC1 Soil Pit Log
- KCC2 Soil Pit Description
- KCC3 Certificate of Soil Analysis

Plans

- KCC4084/01 Auger Points Plan
- KCC4084/02 Agricultural Land Classification Plan

1 INTRODUCTION AND SUMMARY OF FINDINGS

- 1.1 This report details the findings of a detailed Agricultural Land Classification (ALC) survey covering an area of 12.1 hectares (ha), of land near Llanfilylin, North Wales (the Site). The Site is shown in **Plan KC4084/01** and is outlined in red on the Google Earth insert below.

Insert 1. The Site Area (Boundary Approx.)



- 1.2 Part of the Site is identified as potentially Grade 2 on the Welsh Government predictive Agricultural Land Classification, and this area requires survey (the Study Area). Part is identified as subgrade 3b, and under the Guidance Note¹ survey of that area is not required.

The Results

- 1.3 The findings of the survey show the land to be recorded as Subgrade 3a and Subgrade 3b agricultural land.

The Authors

- 1.4 This report has been prepared by Kernon Countryside Consultants Ltd. We specialise in assessing the effects of development proposals on agricultural land and businesses.

¹ Predictive Agricultural Land Classification Map (Wales) Guidance Note version 2.1, May 2021

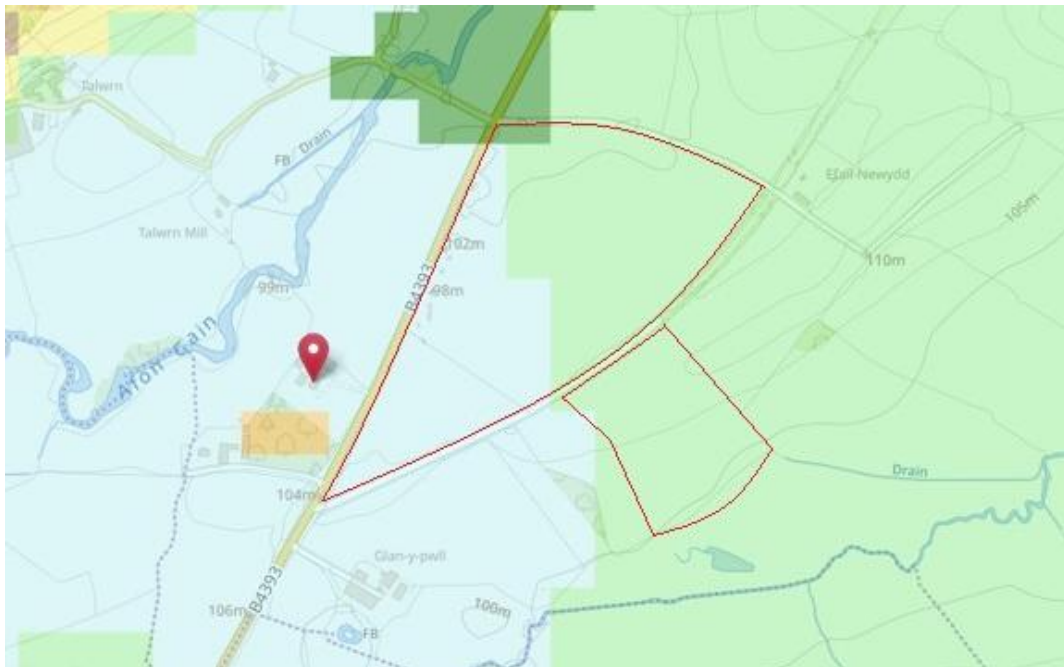
2 METHODOLOGY

- 2.1 The work has been carried out by a Chartered Scientist (CSci), who is a Fellow (F. I. Soil Sci) of the British Society of Soil Science (BSSS). This ALC survey has been carried out by a soil scientist who meets the BSSS Professional Competency Standard (PSC) scheme requirements for ALC (see BSSS PCS Document 2 '*Agricultural Land Classification of England and Wales*'²). The BSSS PSC scheme is endorsed, amongst others, by the Department for Environment, Food and Rural Affairs (Defra), Natural England, the Science Council, and the Institute of Environmental Assessment and Management (IEMA).
- 2.2 This assessment is based upon the findings of a study of published information on climate, geology, and soil in combination with a soil investigation carried out in accordance with the Welsh Government³ '*Agricultural Land Classification of England and Wales: Guidelines for Grading the Quality of Agricultural Land*', updated 2025 (henceforth referred to as the 'the ALC Guidelines').
- 2.3 The ALC system provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use. The ALC system divides agricultural land into five grades (Grade 1 'Excellent' to Grade 5 'Very Poor'), with Grade 3 subdivided into Subgrade 3a 'Good' and Subgrade 3b 'Moderate'. Agricultural land classified as Grade 1, 2 and Subgrade 3a falls in the '*best and most versatile*' category in paragraph 3.58 of Planning Policy Wales, edition 12 (February 2024).
- 2.4 The Site is shown on the predictive map as potentially Grade 2 and subgrade 3b, as shown below.

² British Society of Soil Science. Professional Competency Scheme Document 2 '*Agricultural Land Classification of England and Wales*'. Available online @ <https://www.soils.org.uk/sites/default/files/events/flyers/ipss-competency-doc2.pdf> Last accessed August 2025

³ Welsh Government/Defra, *Agricultural Land Classification of England and Wales: Guidelines for grading the quality of agricultural land*, updated 2025 (Joint Publication 069)

Insert 2: Extract from Welsh Government ALC Map 2



- 2.5 A detailed ALC survey of the area shown as Grade 2 was carried out on the 26th of November 2025. The ALC survey involved examining the soil's physical properties at a density of one auger bore per hectare (ha) of agricultural land within the Study Area, as shown in **Plan KCC4084/01**. One soil pit was excavated near auger bore 3 with a spade to examine specific soil physical properties, such as stone content and subsoil structure, in more detail.
- 2.6 The sample locations were located using a hand-held Garmin E-Trec Geographic Information System (GIS) to enable the sample locations to be relocated for verification, if necessary.
- 2.7 The soil profile was examined at each sample location to a maximum depth of approximately 1.2 m by hand with the use of a 5 cm diameter Dutch (Edleman) soil auger. The soil profile at each sample location was described using the '*Soil Survey Field Handbook: Describing and Sampling Soil Profiles*' (Ed. J.M. Hodgson, Cranfield University, 1997). Each soil profile was ascribed a grade following the ALC Guidelines.

3 FACTORS AFFECTING LAND QUALITY

3.1 As described in the ALC Guidelines, the main physical factors influencing agricultural land quality are:

- climate;
- site;
- soil; and
- interactive limitations.

3.2 These factors are considered in turn below.

Climate

3.3 Interpolated climate data relevant to determining the ALC grade of land in the ALC Survey Area is given in Table 1 below.

Table 1: ALC Climate Data for Brogan Solar Farm

Climate Parameter	Grid Ref: SJ176189
Average Altitude (m)	103
Average Annual Rainfall (mm)	877
Accumulated Temperature above 0°C (January – June)	1377
Field Capacity Days (FCD)	205
Moisture Deficit (mm) Wheat	87
Moisture Deficit (mm) Potatoes	73
Grade according to climate	1

3.4 Parameters used for assessing overall climate are accumulated temperature, a measure of relative warmth, and average annual rainfall, a measure of overall wetness. With reference to Figure 1 ‘*Grade according to climate*’ on page 6 of the ALC Guidelines, the quality of agricultural land at the Site is not limited by climate. As a result, agricultural land at the Site can be graded as high as Grade 1 in the absence of any other limiting factor (i.e. site and/or soil).

3.5 The soil profiles across the site are predicted to be at field capacity (i.e., the amount of soil moisture or water content held in the soil after excess water has drained away) for approximately 205 Field Capacity Days (FCD) per year, mainly over the late autumn, winter and early spring. The climate interacts with soil physical properties, i.e., soil texture and wetness class. It can limit agricultural land quality due to soil wetness as per Table 6 of the ALC Guideline ‘Grade according to soil wetness’. The number of FCD falls

within the 176-225 FCD category, which significantly affects the grade determination based on soil wetness (see 'Soil Limitations' below).

Study Area

- 3.6 The Study Area is located to the southwest of Llanfechain at National Grid Reference SJ176189. It is bordered by the B4393 along the western boundary, and by a farm track with agricultural land beyond on all other sides.
- 3.7 With regard to the ALC Guidelines, agricultural land quality can be limited by one or more of three main site factors as follows:
- gradient;
 - micro-relief (i.e., where complex change in slope angle over short distances, or the presence of boulders or rock outcrops, even on level ground or gentle slopes, can severely limit the use of agricultural machinery); and
 - risk of flooding.

Gradient and Micro-Relief

- 3.8 The site has a relatively level aspect, with the highest elevation in the south-east at approximately 106 metres (m) Above Ordnance Datum (AOD), and the lowest ground in the north-east at approximately 103 m AOD. The quality of agricultural land in the Study Area is not limited by gradient, as it does not exceed 7°. There are no 'micro-relief' limitations.

Risk of Flooding

- 3.9 From the Government Flood Map for Planning website⁴, the site has a very low risk of flooding, with <0.1% flood risk from rivers, the sea, surface water, and small watercourses. However, a minor area of flood zones 2 and 3 intrudes onto the site in the north-western corner.
- 3.10 There is no evidence to show that agricultural land in any part of the site is limited by flooding, according to the criteria for frequency and/or duration in Table 2 '*Grade according to flood risk in summer*' and/or Table 3 '*Grade according to flood risk in winter*' of the ALC Guidelines.

⁴Welsh Government Flood Map website. Available online @ [Geocortex Viewer for HTML5 \(cyfoethnaturiolcymru.gov.uk\)](https://geocortex.naturalresources.gov.uk/) Last accessed January 2026

Soil

- 3.11 **Geology/Soil Parent Material.** British Geological Survey (BGS) online information⁵ has been utilised to identify the Bedrock underlying the Study Area and any Superficial (Drift) Deposits over the Bedrock. This information helps to determine the parent material⁶ from and within which a soil has formed.
- 3.12 From the BGS information, the Study Area is underlain Siltstone and mudstone, interbedded, in the Allt-tair-ffynnon Formation. The bedrock is additionally covered by superficial deposits, identified as Alluvium, Devensian Till, and Devensian Glaciofluvial deposits.
- 3.13 **Published Information on Soil.** Soil information on the National Soil Map⁷ indicates that land in the Study Area is covered by soils in the Teme Association and the Conway Association. Additionally, the Cegin Association is present to the east of the study area.
- 3.14 As described by the Soil Survey of England and Wales (SSEW)⁸, the Teme Association occurs on river alluvium in Wales, Northern and South West England and in the Midlands. Deep permeable fine silty typical brown alluvial soils, Teme series, dominate the broader floodplains, covering more than half the land. Wetter fine silty typical alluvial gley soils, Conway series and gleyic brown alluvial soils, Clwyd series, are found mainly along valley margins and within abandoned meanders. There are well drained coarse loamy typical brown alluvial soils of the Alun series near the river or fringing abandoned channels often on the inside of small meanders. Most of the soils are well drained because stream levels are as much as 3 m below the floodplain and the permeable deposits locally rest on gravels. Some Wye tributaries drain red Devonian rocks, so here there are small fans of reddish alluvium adjoining the main floodplain giving Lugwardine soils. In Devon the association is found mainly in the wider parts of the floodplains of the rivers. As the Swale catchment includes Carboniferous Limestone, there are calcareous soils of the Ure and Swale series, as well as Clwyd, Wharfe and Trent series. Some similar alluvial soils are over gravel at shallow depth. Although most of the soils are permeable and well drained or only occasionally waterlogged (Wetness Class I or II), there is a risk of flooding, particularly in winter. The frequency and duration of floods which depends on location and control measures, are major factors limiting land use. The associated Conway series (Wetness

⁵ British Geological Survey 'Geology of Britain Viewer'. Available online @ <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html> Last accessed January 2026

⁶ British Geological Survey. A 'parent material' is a soil-science name for a weathered rock or deposit from and within which a soil has formed. In the UK, parent materials provide the basic foundations and building blocks of the soil, influencing their texture, structure, drainage and chemistry. Available online @ [Soil Parent Material Model - British Geological Survey \(bgs.ac.uk\)](http://www.bgs.ac.uk/soilparentmaterial/) Last accessed January 2026

⁷ Cranfield University (2025) Soil site report, Soil Report for location 317669E, 318925N, 1km x 1km, Cranfield University.

⁸ Cranfield University (2023). *The Soils Guide*. Available: www.landis.org.uk. Cranfield University, UK Available online at <https://www.landis.org.uk/soilsguide/index.cfm> Last accessed January 2026

Class IV or V) is waterlogged for long periods and benefits from attention to ditches and outfalls and in places responds well to underdrainage. The soils are generally non-droughty, but are slightly so for grass and potatoes along the Wye near Hereford.

- 3.15 Deep stoneless fine silty soils dominate the Conway Association which is found on the floodplains of rivers and streams. The soils are usually greyish brown or grey with yellowish brown mottles and are affected by high groundwater levels. Browner soils occur where the water-table is lower. Conway and Fladbury soils are seasonally waterlogged (Wetness Class IV), though Fladbury series in backswamps can be severely waterlogged (Wetness Class V).
- 3.16 The Cegin association comprises seasonally waterlogged loamy and clayey cambic stagnogley soils belonging to the Cegin, Brickfield and Greyland series. They are intractable for much of the year unless artificially drained and their slowly permeable subsoils are coarsely structured and often compact at depth. Sannan and Denbigh series occur on steep slopes or where the drift is thin over bedrock giving good drainage. The association, which covers 1622 km², is widespread over Silurian and Ordovician sedimentary rocks in Wales but also occurs in the Midlands and Northern England, commonly on undulating till-covered lowlands or on footslopes and valley floors. Hallsworth, Nercwys, Barton and East Keswick series are minor components occurring locally. The Cegin association absorbs only a small proportion of winter rain. In wet districts Cegin, Brickfield and Greyland soils are waterlogged for long periods in the growing season (Wetness Class V) and even with artificial drainage they can remain wet throughout the winter (Wetness Class IV). Where the field capacity period is less than 200 days, the soils are naturally drier (Wetness Class IV) and their drainage regime can be improved to Wetness Class III. Denbigh soils are naturally well drained (Wetness Class I) and Sannan soils occasionally waterlogged (Wetness Class III).

Soil Survey

- 3.17 The soil profiles recorded at each auger-bore location are given in **Appendix KCC1**. A detailed description of Soil Pit 1 is given in **Appendix KCC2**, as shown in **Plan KCC4084/01**. The soil survey determined greyish brown or brown (Munsell colour 10YR5/2 and 5/3), very slightly stony heavy clay loam topsoil over yellowish brown or pale brown (10YR5/4 and 10YR6/3), slightly or moderately stony heavy silty clay loam upper subsoil, and yellowish brown or pale brown (10YR5/4 and 10YR6/3) heavy silty clay loam lower subsoil. The soil profile was impenetrable due to stones/weathered parent material at approximately 70cm. The profiles show signs of gley between 40cm and 70cm and have been placed in Wetness Class II as a result.

- 3.18 **Topsoil Particle Size Analysis.** To substantiate topsoil texture determined during the ALC survey by hand-texturing, one topsoil sample was collected over the Study Area, i.e., from auger bore location 3 (Pit 1), see **Plan KCC4084/01**. The topsoil samples were sent to an accredited laboratory for analysis of particle size distribution (PSD), based on the British Standard Institution particle size grades. The certificate of analysis is provided as **Appendix KCC3**. The findings of the PSD analysis are shown in Table 2 below:

Table 2: Topsoil Particle Size Analysis

Topsoil Sample Location	% sand 0.063-2.0 mm	% silt 0.002- 0.063 mm	% clay <0.002 mm	ALC Soil Texture Class
3 (Pit 1)	21	47	32	Heavy Clay Loam

Interactive Limitations

- 3.19 From the information above, together with the findings of the detailed soil survey (see Soil Profile Log given in **Appendix KCC1**), it has been determined that the quality of agricultural land at the Site is limited by soil wetness, as described below.
- 3.20 **Soil Wetness.** From the ALC Guidelines, a soil wetness limitation exists where *‘the soil water regime adversely affects plant growth or imposes restrictions on cultivations or grazing by livestock’*. Agricultural land quality at the Study Area is limited by soil wetness as per Table 3 below (based on Table 6 ‘Grade According to Soil Wetness – Mineral Soils’ in the ALC Guidelines).

Table 3: ALC Grade According to Soil Wetness

Wetness Class	Texture of the Top 25 cm	176-225 Field Capacity Days
I	Sand, Loamy Sand, Sandy Loam, Sandy Silt Loam	1
	Sandy Clay Loam/Medium Silty Clay Loam /Medium Clay Loam*	2
	Heavy Clay Loam**	3a
	Sandy Clay/Silty Clay/Clay	3b
II	Sand, Loamy Sand, Sandy Loam, Sandy Silt Loam	2
	Sandy Clay Loam/Medium Silty Clay Loam /Medium Clay Loam*	3a
	Heavy Clay Loam**	3a
	Sandy Clay/Silty Clay/Clay	3b
III	Sand, Loamy Sand, Sandy Loam, Sandy Silt Loam	3a
	Sandy Clay Loam/Medium Silty Clay Loam /Medium Clay Loam*	3a
	Heavy Clay Loam**	3b
	Sandy Clay/Silty Clay/Clay	4
IV	Sand, Loamy Sand, Sandy Loam, Sandy Silt Loam	3b
	Sandy Clay Loam/Medium Silty Clay Loam /Medium Clay Loam*	3b
	Heavy Clay Loam**	4
	Sandy Clay/Silty Clay/Clay	4
Key * <27% clay; and ** >27% clay		

- 3.21 In a climate area with 205 FCD, soil profiles that suffer slight seasonal waterlogging (Wetness Class II) are limited by soil wetness to Subgrade 3a where the topsoil is heavy clay loam.

4 AGRICULTURAL LAND CLASSIFICATION

- 4.1 It has been determined that the quality of agricultural land at the Study Area is limited by soil wetness to Subgrade 3a (i.e., 205 FCD/heavy clay loam topsoil/Wetness Class II).
- 4.2 As described on page 7 of the ALC Guidelines '*...a degree of variability in physical characteristics within a discrete area is to be expected. If the area includes a small proportion of land of different quality, the variability can be considered as a function of the mapping scale.*' By convention, two or more contiguous auger bores of the same grade are mapped as a single unit. Where a single auger bore has a different ALC grade from those surrounding it, it is included in the predominant ALC grade. Accordingly, an isolated auger bore (2) that has been determined to be Subgrade 3b has been included in the predominant Subgrade 3a mapping unit (see **Appendix KCC1**).
- 4.3 The results for the Study Area have been combined with the results from the predictive ALC, and Table 4 sets out the ALC for the Site.
- 4.4 The area and proportion of agricultural land in each ALC grade have been measured from an ALC map given in **Plan KCC4084/02**. The findings are reported in Table 4 below.

Table 4: Agricultural Land Classification – Brogan Solar Farm

ALC Grade	Area (Ha)	Area (%)
Grade 1 (Excellent)	0	0
Grade 2 (Very Good)	0	0
Subgrade 3a (Good)	4.3	36
Subgrade 3b (Moderate)#	7.8	64
Grade 4 (Poor)	0	0
Grade 5 (Very Poor)	0	0
Non-agricultural / Other land	0	0
Total	12.1	100

As graded by the Welsh Government on the Predictive ALC Map (version 2)

Appendix KCC1
Soil Profile Log

Point	Grid ref.			Alt (m)	Slope °	Aspect	Land use	Depth (cm)			Matrix		Ochreous Mottles		Grey Mottles		Gley	Texture	Stones - type 1				Stones - type 2			Ped			SUBS STR	CaCO3	Mn C	SP	Drought			Wet		Final ALC						
	NGR	X	Y					Top	Bttm	Thick	Munsell colour	Form	Munsell colour	Form	Munsell colour	%			> 2cm	> 6cm	Type	%	> 2cm	> 6cm	Type	Strength	Size	Shape					MBw	MBp	Gd	WC	Gw	Limitation 1	Limitation 2	Limitation 3	Grade			
1	SJ 17600 19100	317600	319100	104	≤7	Level	CER	0	24	24	10YR4/2						No	HCL - Clay loam (heavy)	2	1	0	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	NON - Non-calcareous (<0.5% CaCO3)	No	No	66	45	1	WC II	3a	Wetness				3a		
								24	45	21	10YR5/2	FF - Few Faint	7.5YR5/8				No	HZCL - Silty clay loam (heavy)	2											Moderate	NON - Non-calcareous (<0.5% CaCO3)	Yes	No											
								45	90	45	10YR6/3	CD - Common Distinct	7.5YR5/8				Yes	HZCL - Silty clay loam (heavy)	4											Moderate		Yes	No											
								90	120	30	10YR7/2	CD - Common Distinct	7.5YR5/8				Yes	HZCL - Silty clay loam (heavy)	4											Moderate		Yes	No											
2	SJ 17564 19003	317564	319003	103	≤7	Level	CER	0	25	25	10YR5/2						No	HCL - Clay loam (heavy)	4	1	0	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	NON - Non-calcareous (<0.5% CaCO3)	No	No	-2	10	3a	WC III	3b	Wetness				3a		
								25	42	17	10YR6/3	CD - Common Distinct	7.5YR5/8				No	HZCL - Silty clay loam (heavy)	20											Moderate	NON - Non-calcareous (<0.5% CaCO3)	Yes	No											
								42	92	50	10YR6/3	CD - Common Distinct	7.5YR5/8				Yes	HZCL - Silty clay loam (heavy)	70											Moderate	NON - Non-calcareous (<0.5% CaCO3)	Yes	No											
3	SJ 17539 18921	317539	318921	103	≤7	Level	CER	0	25	25	10YR5/3						No	HCL - Clay loam (heavy)	4	1	0	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	NON - Non-calcareous (<0.5% CaCO3)	No	No	9	18	2	WC II	3a	Wetness				3a		
								25	40	15	10YR5/4	FF - Few Faint	7.5YR5/8				No	HZCL - Silty clay loam (heavy)	6											Moderate	NON - Non-calcareous (<0.5% CaCO3)	No	No											
								40	50	10	10YR6/3	CD - Common Distinct	7.5YR5/8				Yes	HZCL - Silty clay loam (heavy)	30											Moderate	NON - Non-calcareous (<0.5% CaCO3)	Yes	No											
								50	100	50	10YR6/3	CD - Common Distinct	7.5YR5/8				Yes	HZCL - Silty clay loam (heavy)	70											Moderate	NON - Non-calcareous (<0.5% CaCO3)	Yes	No											
4	SJ 17624 18864	317624	318864	103	≤7	Level	CER	0	25	25	10YR5/2						No	HCL - Clay loam (heavy)	4	1	0	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	NON - Non-calcareous (<0.5% CaCO3)	No	No	10	19	2	WC II	3a	Wetness				3a		
								25	42	17	10YR6/3	FF - Few Faint	7.5YR5/8				No	HZCL - Silty clay loam (heavy)	6											Moderate	NON - Non-calcareous (<0.5% CaCO3)	No	No											
								42	50	8	10YR6/3	CD - Common Distinct	7.5YR5/8				Yes	HZCL - Silty clay loam (heavy)	30											Moderate	NON - Non-calcareous (<0.5% CaCO3)	Yes	No											
								50	100	50	10YR6/3	CD - Common Distinct	7.5YR5/8				Yes	HZCL - Silty clay loam (heavy)	70											Moderate	NON - Non-calcareous (<0.5% CaCO3)	Yes	No											
5	SJ 17546 18811	317546	318811	103	≤7	Level	CER	0	25	25	10YR5/2						No	HCL - Clay loam (heavy)	4	1	0	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	NON - Non-calcareous (<0.5% CaCO3)	No	No	8	16	2	WC I	3a	Wetness				3a		
								25	50	25	10YR5/4						No	HZCL - Silty clay loam (heavy)	20											Moderate	NON - Non-calcareous (<0.5% CaCO3)	No	No											
								50	100	50	10YR5/4						No	HZCL - Silty clay loam (heavy)	70											Moderate	NON - Non-calcareous (<0.5% CaCO3)	No	No											
6	SJ 17459 18773	317459	318773	106	≤7	Level	CER	0	26	26	10YR5/3						No	HCL - Clay loam (heavy)	4	1	0	HR - All hard rocks or stones (i.e. those which cannot be scratched with a finger nail)							Not Applicable	NON - Non-calcareous (<0.5% CaCO3)	No	No	26	34	2	WC II	3a	Wetness				3a		
								26	50	24	10YR5/2	FF - Few Faint	7.5YR5/8				No	HCL - Clay loam (heavy)	8											Moderate	NON - Non-calcareous (<0.5% CaCO3)	No	No											
								50	70	20	10YR6/3	CD - Common Distinct	7.5YR5/8				Yes	HZCL - Silty clay loam (heavy)	25											Moderate	NON - Non-calcareous (<0.5% CaCO3)	Yes	No											
								70	120	50	10YR6/3	CD - Common Distinct	7.5YR5/8				Yes	HZCL - Silty clay loam (heavy)	70											Moderate	NON - Non-calcareous (<0.5% CaCO3)	Yes	No											
END																																												

Appendix KCC2
Soil Pit Description

Soil Survey					Surveyor	
Easting (X)	317539	Northing (Y)	318921	Alt (m)	103	Grid Reference SJ 17539 18921
Land Use	CER	Reference	3 (Pit 1)	Slope °	≤7	Date
Bedrock	Siltstone and mudstone, interbedded	Superficial	Alluvium	Aspect	Level	

Layer		Topsoil	2	3	4	5	6	7
Lower Depth (cm)		25	40	50	100			
Texture		HCL - Clay loam	HZCL - Silty clay loam (heavy)	HZCL - Silty clay	HZCL - Silty clay loam (heavy)			
Matrix Colour		10YR5/3	10YR5/4	10YR6/3	10YR6/3			
Gley (Y/N)		No	No	Yes	Yes			
Ochreous Mottles	Form		FF - Few Faint	CD - Common Distinct	CD - Common Distinct			
	Munsell Colour		7.5YR5/8	7.5YR5/8	7.5YR5/8			
Grey Mottles	Form							
	Munsell Colour							
Manganese (Y/N)		No	No	Yes	Yes			
% Stones (type 1)		4	6	30	70			
Stones > 2cm		1						
Stones > 6cm		0						
Stone Type		HR - All hard rocks	HR - All hard rocks or stones	HR - All hard rocks	HR - All hard rocks or stones (i.e. those which cannot be scratched)			
% Stones (type 2)								
Stones > 2cm								
Stones > 6cm								
Stone Type								
CaCO ₃		NON - Non-calcareous	NON - Non-calcareous (<0.5% CaCO ₃)	NON - Non-calcareous (<0.5% CaCO ₃)	NON - Non-calcareous (<0.5% CaCO ₃)			
Shape of Peds.		AB - Angular Blocky	AB - Angular Blocky	AB - Angular Blocky	AB - Angular Blocky			
Size of Peds.		M - Medium	C - Coarse	C - Coarse	C - Coarse			
Subsoil Structure		Not Applicable	Moderate	Moderate	Moderate			
Soil or Ped. Strength		Firm	Firm	Firm	Firm			
Degree of Ped. Development		M - Moderate	M - Moderate	M - Moderate	M - Moderate			
Slowly Permeable Layer (Y/N)		No	No	No	No			

MDw	MDp	FCD
87	73	204

Wetness	Class (WC)	WC II
	Grade (WE)	3a

Notes	Moisture Balance (MB): Wheat = 19mm; Potatoes = 8mm (Grade 2 according to soil droughtiness)
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Appendix KCC3
Laboratory Analysis

ANALYTICAL REPORT										
Report Number	32049-25	P248	SARAH KERNON							
Date Received	05-DEC-2025		KERNON COUNTRYSIDE							
Date Reported	15-DEC-2025		CONSULTANTS LTD							
Project	KCC4084		GREENACRES BARN							
Reference	BROGAN SOLAR FARM		PURTON STOKE							
Order Number	KCC4084		WILTSHIRE SN5 4LL							
Laboratory Reference		SOIL777040								
Sample Reference		AB3								
Determinand	Unit	SOIL								
Sand 2.00-0.063mm	% w/w	21								
Silt 0.063-0.002mm	% w/w	47								
Clay <0.002mm	% w/w	32								
Textural Class **		HCL								
Notes										
Analysis Notes		The sample submitted was of adequate size to complete all analysis requested. The results as reported relate only to the item(s) submitted for testing. The results are presented on a dry matter basis unless otherwise stipulated.								
Document Control		This test report shall not be reproduced, except in full, without the written approval of the laboratory.								
Reported by		** Please see the attached document for the definition of textural classes. <i>Teresa Clyne</i> Natural Resource Management, a trading division of Cawood Scientific Ltd. Coopers Bridge, Braziers Lane, Bracknell, Berkshire, RG42 6NS Tel: 01344 886338 Fax: 01344 890972 email: enquiries@nrm.uk.com								

ADAS (UK) Textural Class Abbreviations

The texture classes are denoted by the following abbreviations:

Class	Code
Sand	S
Loamy sand	LS
Sandy loam	SL
Sandy Silt loam	SZL
Silt loam	ZL
Sandy clay loam	SCL
Clay loam	CL
Silt clay loam	ZCL
Clay	C
Silty clay	ZC
Sandy clay	SC

For the *sand*, *loamy sand*, *sandy loam* and *sandy silt loam* classes the predominant size of sand fraction may be indicated by the use of prefixes, thus:

vf	Very Fine (more than 2/3's of sand less than 0.106 mm)
f	Fine (more than 2/3's of sand less than 0.212 mm)
c	Coarse (more than 1/3 of sand greater than 0.6 mm)
m	Medium (less than 2/3's fine sand and less than 1/3 coarse sand).

The subdivisions of *clay loam* and *silty clay loam* classes according to clay content are indicated as follows:

M	medium (less than 27% clay)
H	heavy (27-35% clay)

Organic soils i.e. those with an organic matter greater than 10% will be preceded with a letter O.

Peaty soils i.e. those with an organic matter greater than 20% will be preceded with a letter P.

Plan KCC4084/01
Auger Points Plan



KEY

- Auger sample location
- Topsoil texture sample
- Soil Pit

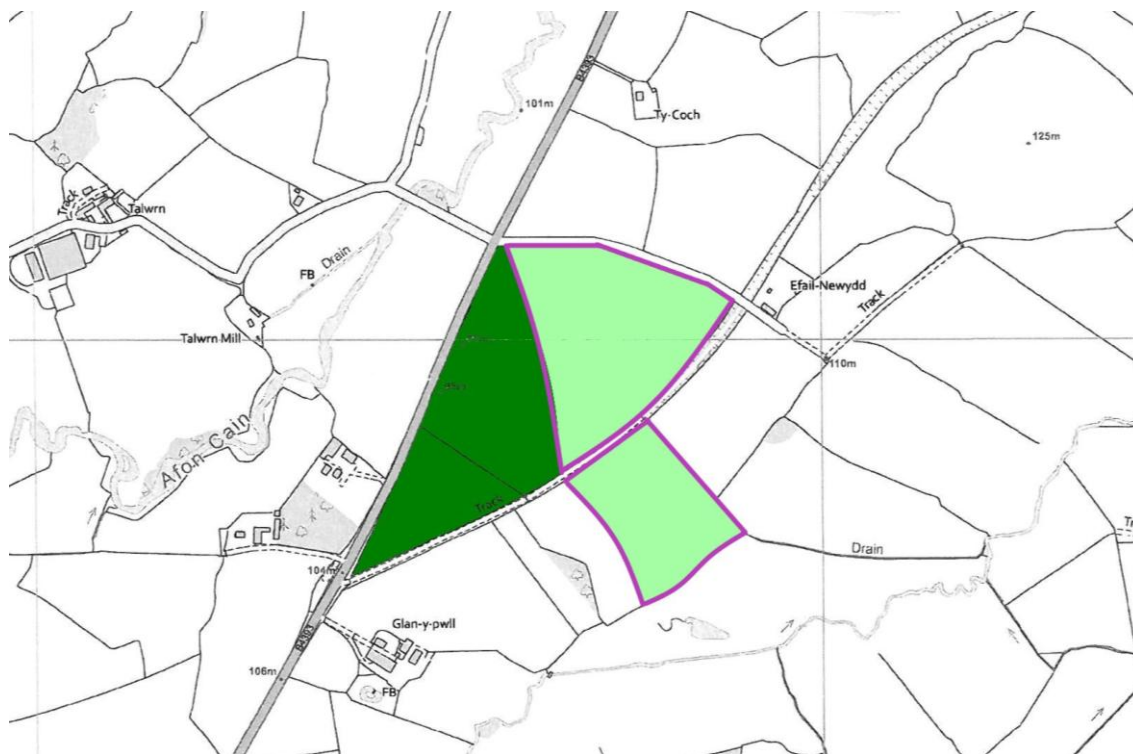
PLAN	KCC4084/01		
TITLE	Auger Points Plan		
SITE	Land Near Llanfyllin, North Wales		
CLIENT	Pegasus Group		
NUMBER	KCC4084/01 11/25hr		
DATE	January 2026	SCALE	NTS

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WILTSHIRE SN5 4LL

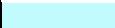
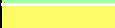
Tel 01793 771 333 Email: info@kernon.co.uk

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Plan KCC4084/02
Agricultural Land Classification Plan



 Denotes land classified as Subgrade 3b on the Welsh Predictive ALC map v2 , therefore no survey is required.

KEY		Ha	%	PLAN	KCC4084/02		
	Grade 1			TITLE	Agricultural Land Classification Plan		
	Grade 2			SITE	Land Near Llanfilylin, North Wales		
	Grade 3a	4.3	36	CLIENT	Pegasus Group		
	Grade 3b#	7.8	64	NUMBER	KCC4084/02 11/25hr		
	Grade 4			DATE	January 2026	SCALE	NTS
	Grade 5			KERNON COUNTRYSIDE CONSULTANTS LTD GREENACRES BARN, PURTON STOKE, SWINDON, WILTSHIRE, SN5 4LL Tel 01793 771 333 Email: info@kernon.co.uk This plan is reproduced from the Ordnance Survey under copyright license 100015226			
	Non-agricultural						
	Urban						
	Not surveyed						
	TOTAL	12.1	100				

As graded by the Welsh Government on the Predictive ALC Map (version 2)



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