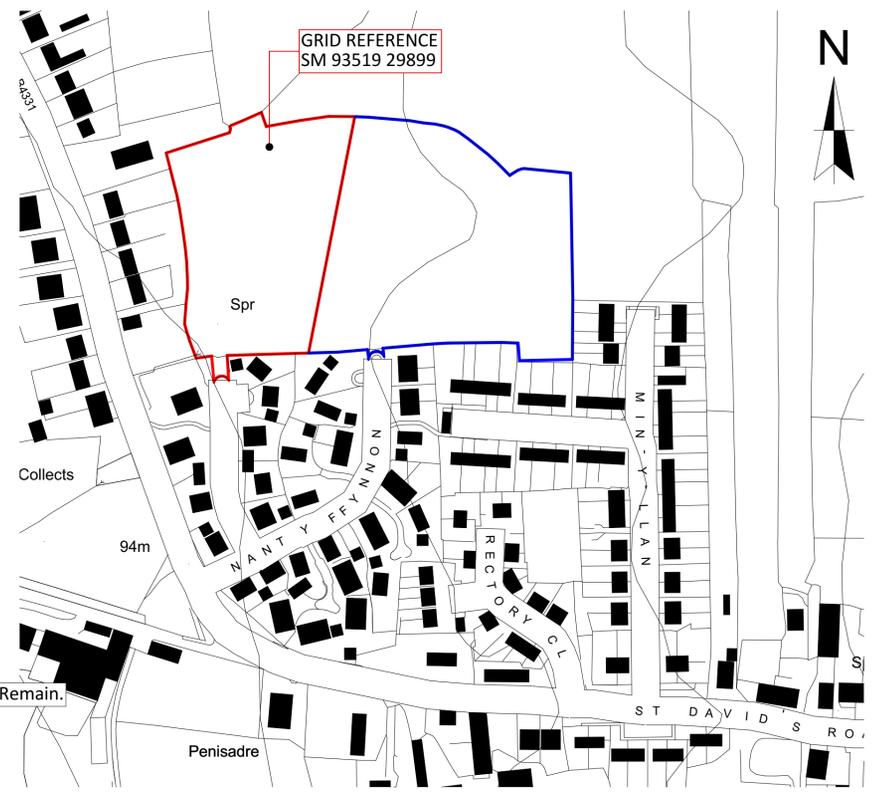


Appendix 1

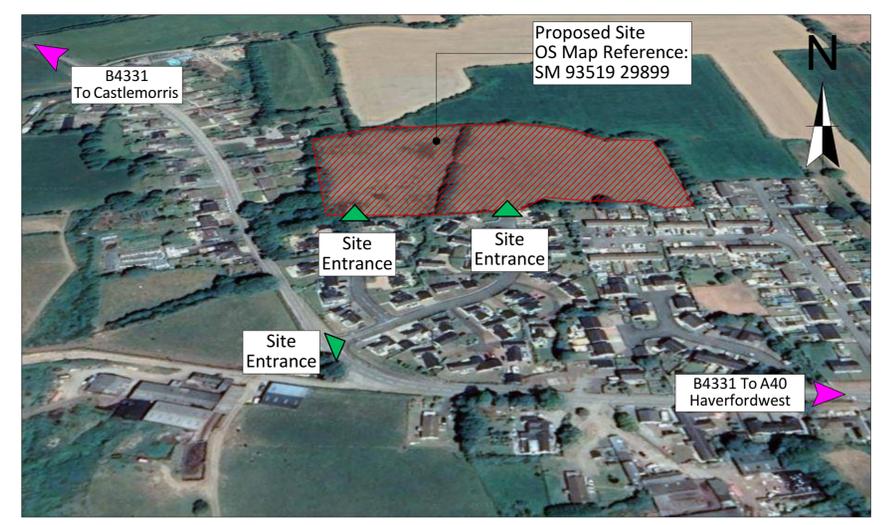
Illustrative Site Layout Plan/Masterplan



Site Location Plan 1:2000

Legend:

- Indicates Application Site Boundary;
- Indicates Additional Land Available for purchase



Aerial View 1:500 NTS 1:1

Revision:	Date:	By:	Notes:
Rev A - Welsh Government Concept Issue following Clients review.	2nd Dec 2020	SE	

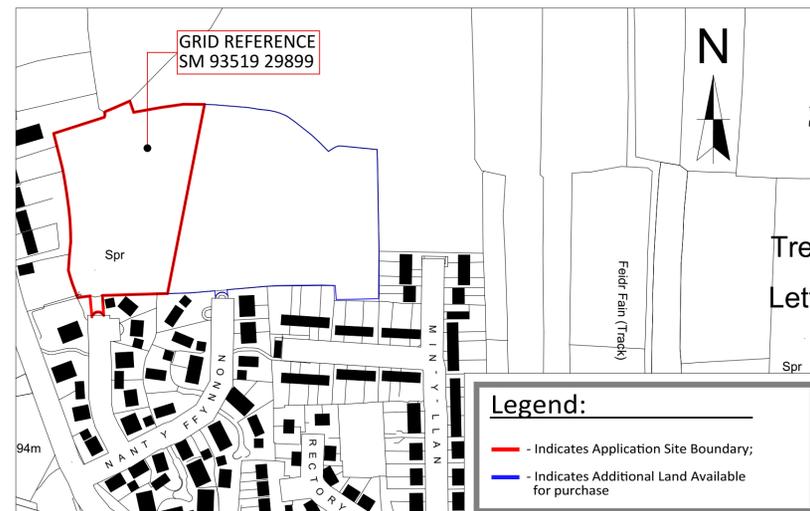


Client: Wales & West Housing Association
Scale: Noted
Date: Oct '20
Drawn: SE/RH

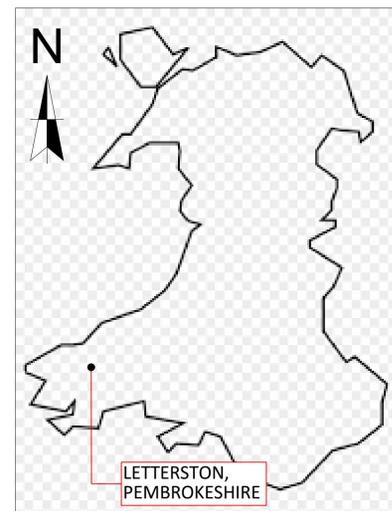
Job Title: Proposed Development, Nant Y Ffynnon, Letterston, Pembrokeshire SA62 5SX

Drawing Title: SKETCH SCHEME DRAWINGS - Concept Site Plan

R521 SK-28A



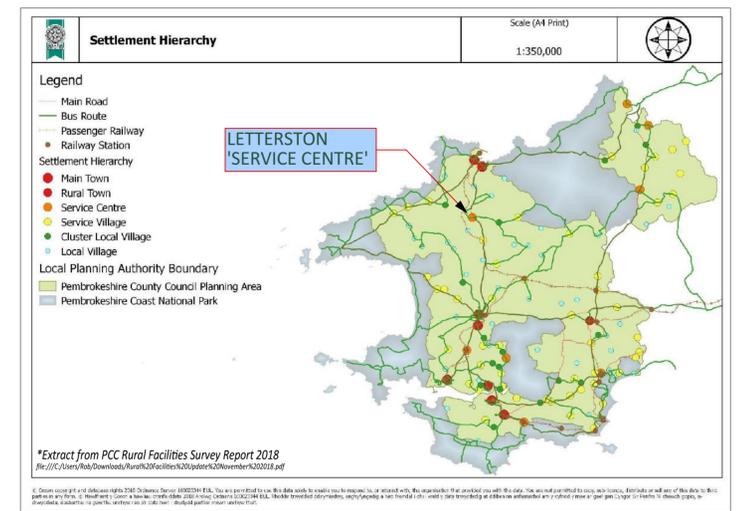
Site Location Plan 1:2500



Map of Wales NTS



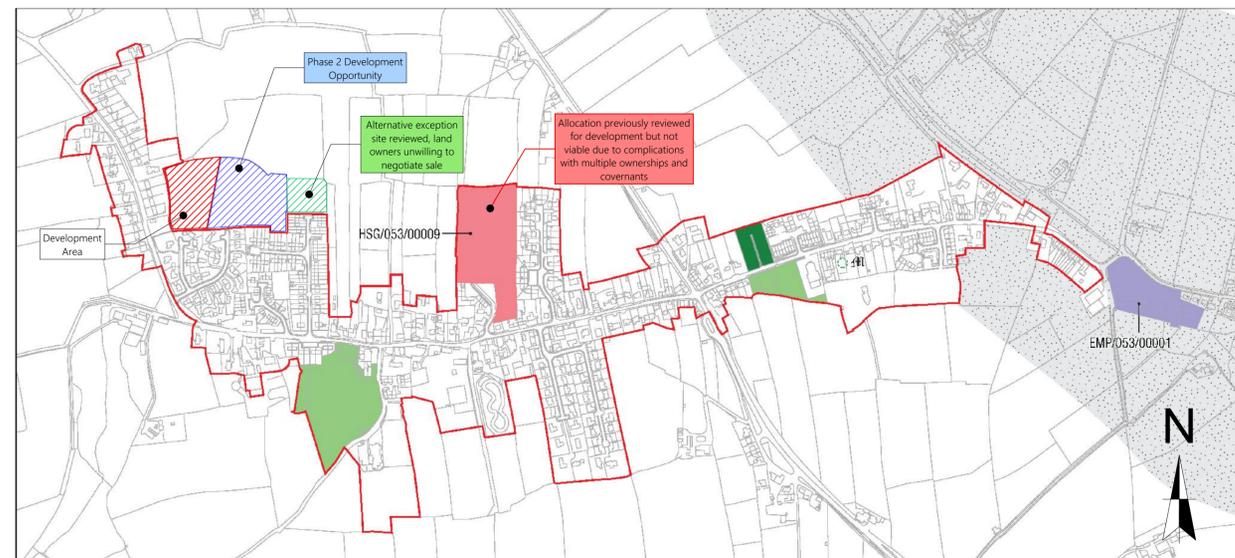
Aerial View NTS



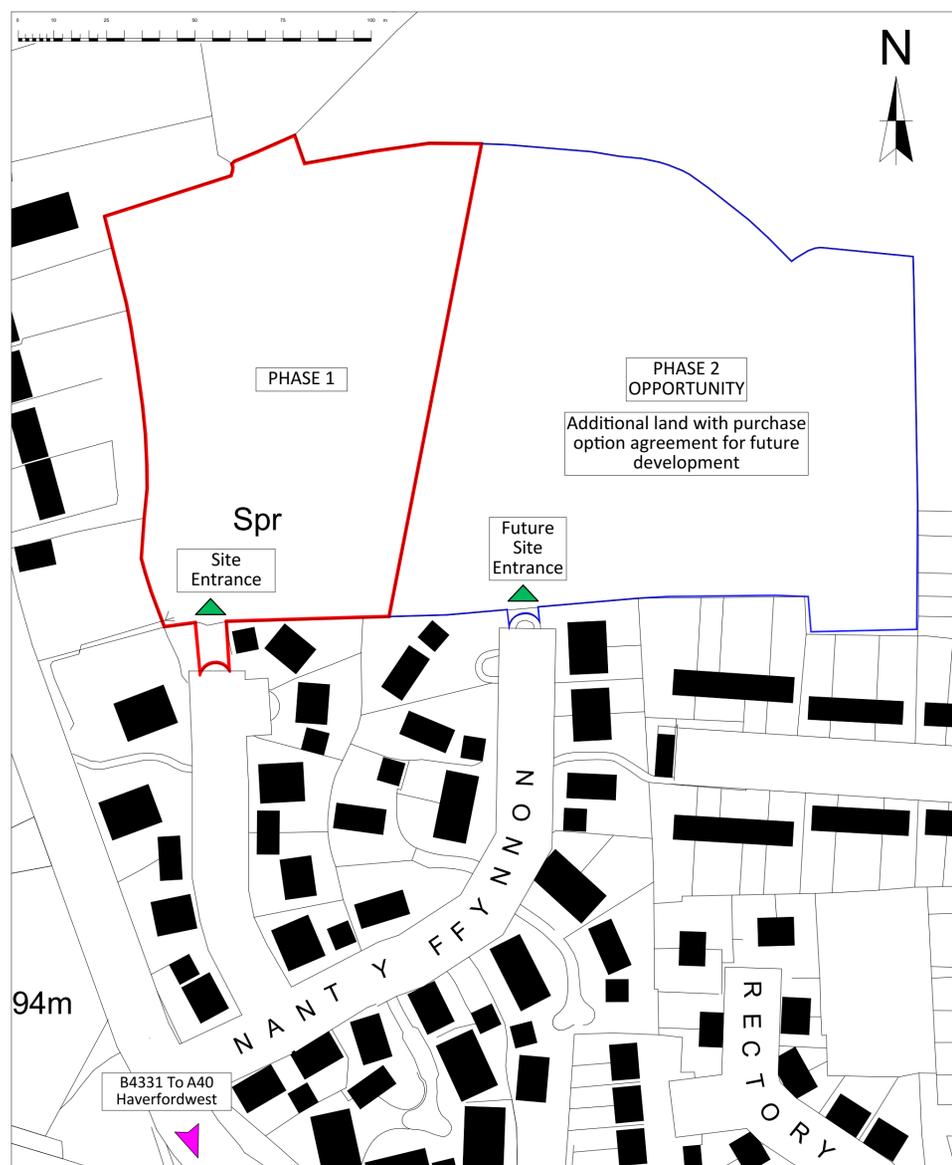
PCC Settlement Hierarchy NTS



PCC Local Development Plan 2 (2017- to 2033), Deposit Proposal Map - Letterston NTS



PCC Adopted Local Development Plan (up to 2021), Proposal Map - Letterston NTS



Block Plan 1:1000

Resident Population

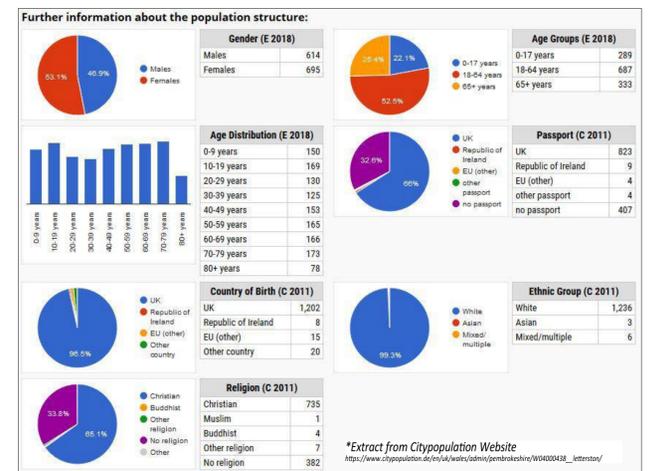
*Extract from Office for National Statistics Website
http://www.nomisweb.co.uk/reports/eng/19/2946357951/report.aspx#top

	Pembrokeshire (Numbers)	Wales (Numbers)	Great Britain (Numbers)
Total population (2018)			
All People	125,100	3,138,600	64,553,900
Males	61,300	1,547,300	31,864,000
Females	63,700	1,591,300	32,689,900

Source: ONS Population estimates - local authority based by five year age band
view time-series compare other areas download (xls) query dataset...

	Pembrokeshire (Numbers)	Pembrokeshire (%)	Wales (%)	Great Britain (%)
Population aged 16-64 (2018)				
All People Aged 16-64	71,500	57.2	61.3	62.7
Males Aged 16-64	35,500	57.9	62.0	63.4
Females Aged 16-64	36,000	56.5	60.6	62.0

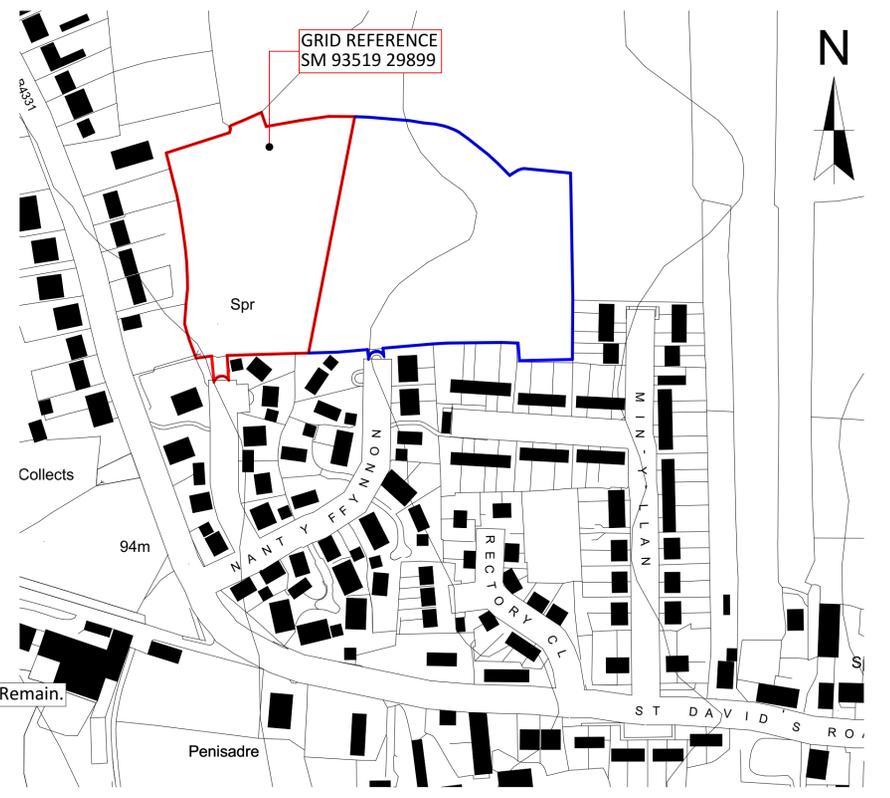
Source: ONS Population estimates - local authority based by five year age band
Notes: % is a proportion of total population



Letterston Housing Register Applications

	1 Bedroom	2 Bedroom	3 Bedroom	4 Bedroom	5 Bedroom
Letterston =	90	26	11	6	0
Total = 133 Applications					

Revision:	Date:	By:	Notes:



Site Location Plan 1:2000

Legend:

- Indicates Application Site Boundary;
- Indicates Additional Land Available for purchase

House Type Mix:

- P**** 4 x 2 Person 1 Bedroom Bungalows
Floor Area = 51M² & 54M²
Affordable for Rent
- P**** 12 x 4 Person 2 Houses
Floor Area = 83M²
Affordable for Rent
- P**** 6 x 5 Person 3 Houses
Floor Area = 94M²
Affordable for Rent

Total No of Units = 22
Total No of Standard Parking Spaces = 44
Refer to SK-25 for Development Site Services & Constraints Plan

Key

- Low level Post & Rail Fencing.
- Close board timber boundary fence 2m high
- Bin Store
- Rotary Washing Line
- Cycle Store/ Shed
- 3x3m Patio Areas
- Air Source Heat Pump
- Identifies areas of open space
- Identifies amenity areas
- Identifies SUDs Feature/Open space.



Aerial View 1:500 NTS 1:1

Proposed Site Plan 1:500

Revision:	Date:	By:	Notes:
Rev A - Welsh Government Concept Issue following Clients review.	2nd Dec 2020	SE	

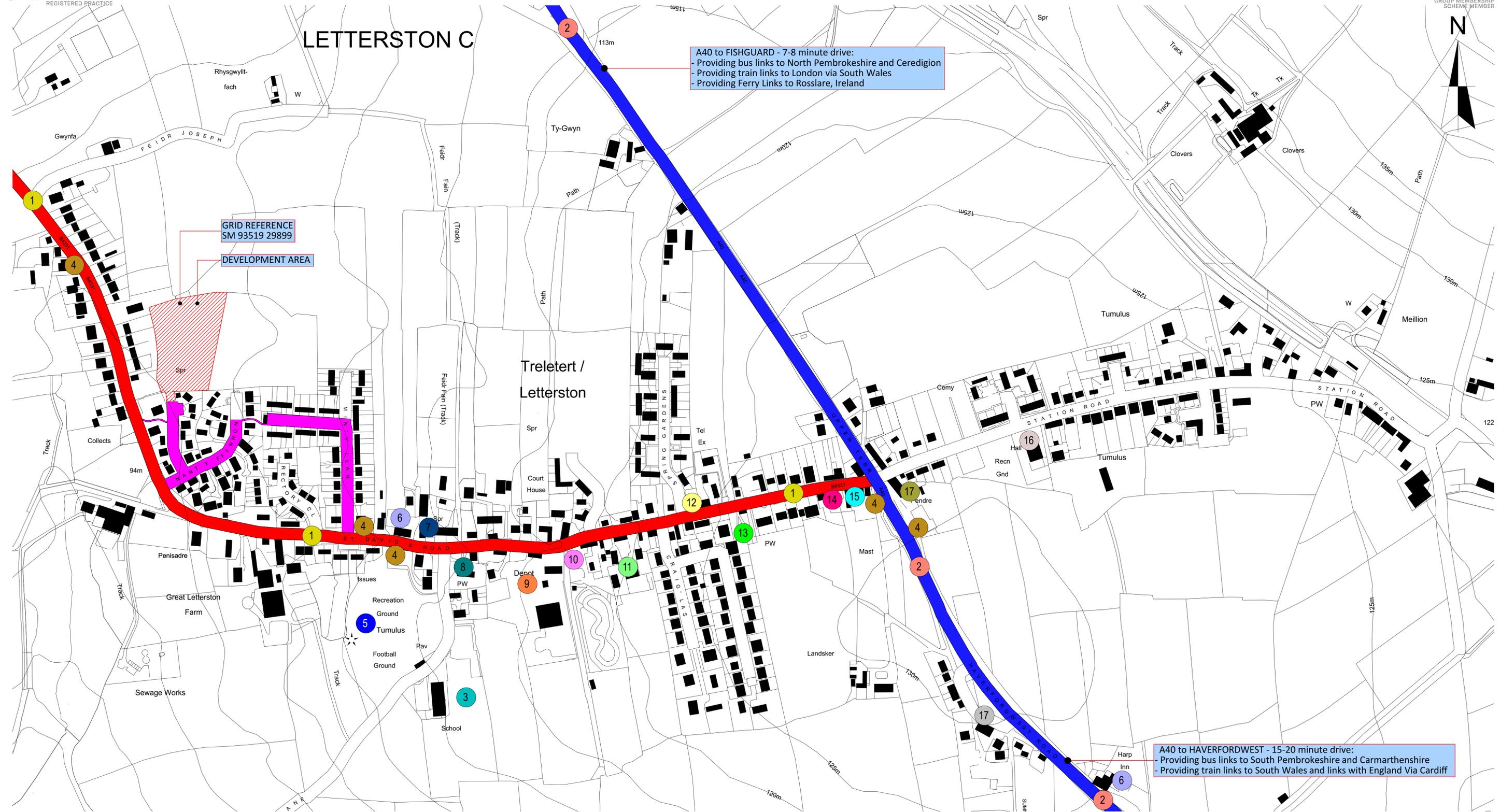
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Client: Wales & West Housing Association
Scale: Noted
Date: Oct '20
Drawn: SE/RH

Job Title: Proposed Development, Nant Y Ffynnon, Letterston, Pembrokeshire SA62 5SX

Drawing Title: SKETCH SCHEME DRAWINGS - Concept Site Plan

R521 SK-28A



A40 to FISHGUARD - 7-8 minute drive:
 - Providing bus links to North Pembrokeshire and Ceredigion
 - Providing train links to London via South Wales
 - Providing Ferry Links to Rosslare, Ireland

A40 to HAVERFORDWEST - 15-20 minute drive:
 - Providing bus links to South Pembrokeshire and Carmarthenshire
 - Providing train links to South Wales and links with England Via Cardiff

Key		A40 Trunk Road		B4331 PCC Adopted Road		Pedestrian Links to B4331/St Davids Road	
1	B4331 - Link road to the A40, headed to Haverfordwest of Fishguard.	4	Location of bus stop - 3-4 Minute Walk (nearest)	7	Electrical Shop (appliances & repairs) - 6-7 Minute Walk	10	Letterston Village Store - 7-8 Minute Walk
2	A40 - Trunk Road running between Hub Towns of Haverfordwest and Fishguard.	5	Public open space/ LEAP - 5-6 Minute Walk	8	St Giles Church & Centre - 6-7 Minute Walk	11	Garage (repairs & sales) - 7-8 Minute Walk
3	Ysgol Ger Y Llan - 5-6 Minute Walk	6	Public House - 5-6 & 15-16 Minute Walk	9	Transport Depot (freight) - 7-8 Minute Walk	12	Newsagent/Gift Shop - 8-9 Minute Walk
						13	Chapel - 9-10 Minute Walk
						14	Florist - 10-11 Minute Walk
						15	Post Office & Butchers - 10-11 Minute Walk
						16	Community Hall - 12-13 Minute Walk
						17	Chip Shop & Restaurant - 11-12 Minute Walk
						17	Petrol Station & Shop - 14-15 Minute Walk

Revision:	Date:	By:	Notes:



Client: Wales & West Housing	Scale: 1:2500 Date: Oct '20 Drawn: RH/SE	Drawing Title: SKETCH SCHEME DRAWING - Key Points Plan
Job Title: Proposed Development, Nant Y Ffynnon, Letterston, Pembrokeshire SA62 5SX	R521 SK-21	



Site Constraints Plan

1:500

Revision:	Date:	By:	Notes:

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Client: Wales & West Housing
Scale: Noted
Date: Oct '20
Drawn: SE/RH
Drawing Title: SKETCH SCHEME DRAWINGS - Site Constraints Plan
Job Title: Proposed Development, Nant Y Ffynnon, Letterston, Pembrokeshire SA62 5SX
R521 SK-25

**LAND AT LETTERSTON,
PEMBROKESHIRE**

**AGRICULTURAL LAND
CLASSIFICATION**

December 2024





**LAND AT LETTERSTON,
PEMBROKESHIRE**

**AGRICULTURAL LAND
CLASSIFICATION**

December 2024

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CONTENTS

- 1 Introduction
- 2 Methodology
- 3 Factors Affecting Land Quality
- 4 Agricultural Land Classification

Appendices

- KCC1 Soil Profile Log
- KCC2 Soil Pit Description
- KCC3 Laboratory Analysis

Plans

- KCC3823/01 Auger Point Plan
- KCC3823/02 Agricultural Land Classification Plan

1 INTRODUCTION

- 1.1 This report sets out the findings of a detailed Agricultural Land Classification (ALC). It is based on a desktop study of relevant information on climate, topography, geology and soil in conjunction with a soil survey. The Site, which measures approximately 2.6 hectares (ha) in area, is shown in plan **KCC3823/01**, and outlined in red on the Insert below.

Insert 1. The Site Area (Boundary Approx.)



- 1.2 A detailed Agricultural Land Classification has been carried out over the Site. The Site is recorded to be Subgrade 3b “moderate” quality land under the ALC.
- 1.3 This report has been prepared by Kernon Countryside Consultants Ltd. We specialise in assessing the effects of development proposals on agricultural land and businesses.

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 requirements of the BSSS Professional Competency Standard (PSC) scheme for ALC (see BSSS PCS Document 2 '*Agricultural Land Classification of England and Wales*'¹). The BSSS PSC scheme is endorsed, amongst others, by the Welsh Government, 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 Ministry of Agriculture, Fisheries and Food (MAFF)² '*Agricultural Land Classification of England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land*', October 1988 (henceforth referred to as 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 category in paragraph 3.54 of Planning Policy for Wales (2018) and Technical Advice Note 6. Further details of the ALC system and national planning policy implications are set out by the Welsh Government (WG) in a guidance note, which is available online³.
- 2.4 The WG's Predictive ALC Map Version 2 online predicts that agricultural land within the Site is Subgrade 3a.
- 2.5 A detailed ALC survey of the Site was carried out on the 11th November 2024. 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 Site, as shown on Plan KCC3823/01. One soil

¹ 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 December 2024

² The Ministry of Agriculture, Fisheries and Food (MAFF) was incorporated within the Department for Environment, Food and Rural Affairs (Defra) in 2001

³ Welsh Government (2021). Agricultural land classification: frequently asked questions. Available online at <https://www.gov.wales/agricultural-land-classification-frequently-asked-questions> Last accessed December 2024

pit was excavated near auger bore 2 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 at the Site is given in Table 1 below.

Table 1. ALC Climate Data for Letterston, Pembrokeshire

Climate Parameter	Grid Ref: SM936299
Average Altitude (m)	103
Average Annual Rainfall (mm)	1229
Accumulated Temperature above 0°C (January – June)	1445
Field Capacity Days (FCD)	249
Moisture Deficit (mm) Wheat	67
Moisture Deficit (mm) Potatoes	50
Grade according to climate	2

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. Regarding Figure 1 'Grade according to climate' on page 6 of the ALC Guidelines, agricultural land on the Site cannot be graded higher than Grade 2 due to an overriding climate limitation.

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 249 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 in this Site falls in the >225 FCD category, which significantly affects the grade's determination according to soil wetness (see 'Soil Limitations' below).

Study Area

- 3.6 As shown on Plan KCC3823/01, the Study Area is located on the northwestern edge of Letterston, Pembrokeshire. The Study Area is located at National Grid Reference SM936299. It is bordered by residential development to the west and south, with agricultural land to the north and east. The land was under grassland at the time of the survey, but no livestock were present.
- 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 is located on a very gentle, west-facing slope, with the highest elevation in the center of the site at approximately 103 metres (m) Above Ordnance Datum (AOD), and the lowest ground in the west at approximately 100mAOD. The quality of agricultural land in the Site 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. 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.

Soil

- 3.10 **Geology/ Soil Parent Material.** British Geological Survey (BGS) online information⁵ has been utilised to identify the Bedrock underlying the Site and any Superficial (Drift)

⁴ Welsh Government Flood Map website. Available online @ [Geocortex Viewer for HTML5 \(cyfoethnaturiolcymru.gov.uk\)](https://geocortex.naturalresources.gov.uk/) Last accessed November 2024

⁵ British Geological Survey 'Geology of Britain Viewer'. Available online @ <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html> Last accessed December 2024

Deposits over the Bedrock. This information helps to determine the parent material⁶ from and within which a soil has formed.

- 3.11 From the BGS information, the Site is underlain by mudstone in the Penmaen Dewi Shale Formation. The bedrock is not covered by any superficial deposits.
- 3.12 **Published Information on Soil.** Soil information on the National Soil Map⁷ indicates that land in the Site is covered by soils in the Manod Association.
- 3.13 As described by the Soil Survey of England and Wales (SSEW)⁸, the Manod Association consists mainly of free draining fine loamy soils over Palaeozoic mudstone, siltstone or slate. It is widespread in Wales and occurs in Northern and South West England and the Midlands. Although some is level or gently sloping, much is steeper than 11 degrees. Typical brown podzolic soils, mainly Manod series, predominate and typical brown earths such as the Denbigh series occupy a fifth of the land.
- 3.14 The Powys soils, loamy rankers, are locally common where bedrock is close to the surface. The Manod series has solid or shattered rock within 80 cm depth and is a permeable clay loam with dark topsoil over ochreous subsoil, usually with granular structure. Denbigh series differs in having a brownish subsoil with blocky structure; it usually occurs on gentler slopes and is more common on farmland. Powys soils, with solid or broken rock within 30 cm depth are most frequent in hilly country, on knolls and ridges or on slopes eroded by cultivation or solifluction.
- 3.15 The main soils are permeable and well drained (Wetness Class I) but because of the climate, the soils remain moist throughout most years. Where average annual rainfall exceeds 1100 mm there is little or no drought restriction to grass growth on Manod and Denbigh soils. Grass on shallow very stony soils such as the Powys series can, however, suffer from drought. The soils readily absorb excess winter rainwater except on steep land or where bedrock is near the surface.

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 \(bgs.ac.uk\)](https://www.bgs.ac.uk/soil-parent-material-model/) Last accessed December 2024

⁷ Cranfield University (2024) Soil site report, Soil Report for location 212000E, 218894N, 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 December 2024