

**PROPOSED RESIDENTIAL DEVELOPMENT  
At GLANFFYNNON, LLANRUG, GWYNEDD.**

**Green Infrastructure Statement**

**June 2025**

**Tirlunbarr Associates Chartered Landscape Architecture**

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Issue	Author	Reviewed	Date	Status
v1	JB	PW	10.06.25	DRAFT for comment and contribution
V2	JB	PW	11.06.25	Issued

APPENDICES AND REFERENCES (At the rear of the document)

*This report has been prepared by Tirlunbarr Associates on behalf of ADRA (Tai) Cyfyngedig in connection with a proposed residential development on land at Glanffynnon, Llanrug and takes into account their particular instruction and requirements. It is not intended for and should not be relied on by any third party and no responsibility is undertaken to any third party.*

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## Introduction

- 1.1 Tirlunbarr Associates Chartered Landscape Architects were appointed in Autumn 2024 to assist with the Soft Landscape Design aspects of a proposed residential scheme alongside with the Project Ecologists, and to prepare a Green Infrastructure Statement\* (\* the Statement) to accompany a Planning Application for a proposed Housing Development of 17no. dwellings on Land at Glanffynnon, Llanrug in Gwynedd NGR: SH 53626 63077 on behalf of ADRA (Tai) Cyfyngedig as a Social Housing Landlord.
- 1.2 The preparation of this Statement follows the production of detailed Site Layout Proposals which have entailed input on behalf of the Clients and from a number of disciplines including Enfys as Project Ecologists and their sub consultants Green Space Tree and Landscape Arboricultural Consultancy, SAER as Project Architects, Cadarn Consulting Engineering Ltd. as Civil Engineering/ Project Engineers and specifically Drainage Designers and Tirlunbarr as Landscape Architects.
- 1.3 Further input into the site proposal has involved:
  - Cadnant Planning Cyf - Planning Consultants.
  - Cadarn Consulting Engineering Ltd.- Traffic Consulting
  - CR Archeology/Heritage.
  - UCML – Utility Consultation.
- 1.4 The design proposals have been under development since Summer 2024 and refined through a series of team development meetings, and with this document responding to the legislative need for a Green Infrastructure Statement and as part of a Pre APP consultation and in advance of any future detailed Planning Application.
- 1.5 In October 2023 the preparation of a Green Infrastructure Statement to accompany all development submitted for Planning Consent was made a legal requirement by Julie James Minister for Climate Change (Welsh Government) via a letter dated 11.10.23 which provided an immediate update of Chapter 6 of National Planning Policy Wales (PPW11) 'Addressing the Nature Emergency through the Planning System'.
- 1.6 The Policy Change aimed to shape strategic Local Authority Policy and decision making '*to maximise contribution to the protection and provision of Green Infrastructure assets and networks as a spatial resource to meet societies wider social and economic objectives, and needs of local communities*' and will be achieved via the production of a Green Infrastructure Assessment by local authorities.
- 1.7 The Assessment at County Level seeks to demonstrate Net Biodiversity Benefit - and enhancement and longer-term management at each step of a design development, and strengthens Protection for Sites of Special Scientific Interest (SSSI's) and increases protection of Trees and Woodland - including promoting new planting as part of any development proposal.
- 1.8 To contribute to a local Green Infrastructure **Assessment**, the requirement to produce a Green Infrastructure **Statement** forms part of the Chapter 6 update, as a way to demonstrate both positive multi-functional outcomes, and to demonstrate how the intended Stepwise Design Approach of the Policy update has been applied within any submitted project proposals via the Planning Process.
- 1.9 The final Policy requirements were issued in February 2024 Wales 12 (PPW12 -Ref 6.4.16) and requires that;

*"all development must deliver a proportionate net biodiversity and ecosystem resilience from the baseline state through a proactive process to secure enhancement through the design and implementation of the development"*.

- 1.10 This Green Infrastructure Statement is intended to accompany the Pre App Consultation and any future Planning Application for residential development on land off Glanffynnon Llanrug, Gwynedd.

## 2.0 **Green Infrastructure definition**

- 2.1 The Environment (Wales) Act 2016 provides the context basis for the delivery of multi-functional green infrastructure which can make a significant contribution to the sustainable management of natural resources and protection maintenance and enhancement of biodiversity and ecosystem resilience through improved connectivity enabling them to better recover resist and adapt to pressure.
- 2.2 Within Chapter 6 (para 6.2.1) of Planning Policy Wales (PPW 12) - Green Infrastructure is defined as;
- “the network of natural and semi natural features, green spaces, rivers and lakes that intersperse and connect places”.
- “Components of Green Infrastructure can function at a range of difference scales; from trees and woodland to entire ecosystems such as wetlands and rivers to parks, fields and gardens at the local scale and street trees, hedgerows, roadside verges and green roofs/walls at the microscale”
- 2.3 Paragraph 6.2.3 of PPW12 cites the importance and benefit of Green Infrastructure whereby;
- “The components of Green Infrastructure, by improving the resilience of ecosystems, can result in positive benefits to well-being including flood management, water purification improved air quality reduced noise pollution and local climate moderation, climate change mitigation and food production. These benefits are important in urban environments where they can facilitate health and well – being related benefits of open space, clean air and improved tranquility for example, as well as creating a sense of place and improved social cohesion. In addition, green infrastructure has a role in protecting local distinctiveness providing economic benefits and social and community opportunities.”
- 2.4 Within Chapter 6 it is intended that Planning Authorities must adopt a strategic and proactive approach to green infrastructure biodiversity and ecosystem resilience by producing up to date inventories and maps of existing green infrastructure and ecological assets and networks which will underpin future development plans on a spatial basis where “further fragmentation and isolation of habitats and species is avoided wherever possible and wildlife corridors and stepping stones forming wider ecological networks are protected maintained and enhanced”.
- 2.5 These Assessments will be multi-functional across administrative boundaries, and also reference evidence provided by NRW’s Area Statements and Nature Network Maps intended to assist early consideration of development proposals and inform the design and implementation of projects.
- 2.6 It is understood that at present Gwynedd Councils Green Infrastructure Policy is under active consideration and developing via the Green Gwynedd Plan which seeks to ensure the following;
- Significant reduction in carbon emissions.
  - We respond to the effects of climate change.
  - An increase in biodiversity and nature habitats.
  - An excellent network of routes for residents to have the choice of active travel to their place of work, education or leisure.
  - A public transport network that meets the needs of Gwynedd’s communities.
- 2.7 The Policy development is reliant on existing Planning Policy Wales Edition 12 (Welsh Government Chapter 11) and National Policy which includes:

- Future Wales - The National Plan 2040 - (Welsh Government 2021) – Policy 9
- The Well Being of Future Generations Act (2015)
- Active Travel (Wales) 2015 – walking accessibility
- Building Better Places, The Planning System Delivering Resilient and Brighter Futures Placemaking and the Covid 19 Recovery - Welsh Government (2020)
- Natural Resources Wales (NRW). 2016. The State of Natural Resources report 2016. Assessment of the sustainable management of natural resources.
- National Site Network – (formerly Natura 2000 network)
- DECCA Framework NRW
- ‘Statutory SuDS Standards’
- TAN 5, TAN 12, TAN 16 of PPW1
- Updated TAN 15

- 2.8 Green Infrastructure Assessments will need to recognise the need for ecosystems, habitats and species to adapt to climate change and other pressures, and include identification of ways to avoid or reverse the fragmentation of habitats and improve habitat connectivity where appropriate which will be reflected in consideration of development proposals via the Planning system.

The role of development within any Local Authority Green Infrastructure Assessment will be two-fold:

- 1. To ensure that development avoids and minimises impact upon biodiversity and ecosystems.**
- 2. Provides opportunity for enhancement within areas identified as important for the ability of species to adapt and/or to move to more suitable habitats.**

- 2.9 In due course all LPA's, including Gwynedd will develop a set of Key Indicators for development effects upon biodiversity and green infrastructure functions which will be place specific, such as key species, and habitats, opportunities for the protection, retention, restoration and recovery of nature and benefits /ecosystem services which contribute to the health and wellbeing of communities and which it is intended will be secured by conditions or obligations in addition to management plans for sites.
- 2.10 The Statement for the proposed development in Llanrug therefore seeks to adopt the above aims of PPW12 Chapter 6 Green Infrastructure Assessment whilst a Final Green Infrastructure Assessment is under preparation for the County.

### 3.0 Scheme Proposals

- 3.1 The proposed scheme is for a residential development of 100% affordable homes to meet unmet demand for affordable homes in Gwynedd on grazed agricultural land located off a local road known as Ffordd Glanffynnon on the village outskirts as the location map below indicates. **NGR: SH 53634 63069**  
**Postcode: LL55 4PP**



*Fig .1. Site Location Source Bing Maps Ordnance Survey ©2025 Microsoft*

- 3.2 The total proposed site area extends to 0.7ha hectares with the net developable area extending to 0.52ha; the site currently comprises of three small fields of grazed agricultural land - with native bounded hedges, cloddiau, hedgerow trees, and wetland vegetation on the outskirts of the village's southern boundary.
- 3.3 An overhead Power Supply wayleave exists across the site (which will be relocated as part of the scheme), and this is reflected within the proposed site layout which has been drafted to take account of this proposed alteration as well as the presence of the existing Public Footpath reference Llanrug 74 which crosses the site from east to west.
- 3.4 The site is located on the edge of the village and rural in Character – bordered by existing residential development to the north, scrub woodland to the east, the adjacent comprises a dwelling to the south with open fields beyond this with occasional individual farmsteads, roads and cottages as the aerial photograph illustrates within Figure 2 below.



*Fig .2. Site Aerial View - Source Bing Maps Aerial Photography ©2025 Microsoft*

- 3.5 The Proposed Site Layout (Figure 4 below) has been developed by SAER Architects with input from a wide range of disciplines namely, Arboricultural, Ecological, Highways, Landscape, Drainage, Traffic, and Energy Consultants with the built content of the proposal subject to the requirements of ADRA Housing Association as Registered Social Landlords as the client body.
- 3.6 It is intended to provide a single central vehicular and pedestrian site access into the development from Ffordd Glanffynnon, as the development layout (within Figure 2) indicates and which includes 17no. affordable tenure dwellings as two storey accommodation and as a mix of houses and bungalows.
- 3.7 Full details are contained within the Planning Statement accompanying the Application.
- 3.8 The development includes 17 dwellings, a central spine road with pavements on either side, and with a small area of Public Open Space Provision (POS) areas of Habitat mitigation and proposed Soft Landscape (and integral SUDS Drainage provision) located along the sites northern and eastern boundaries.
- 3.9 The Soft Landscape Proposals and Site Layout reflect the Ecological and Arboricultural reporting recommendations provided separately within the ecological reports, and discussed later within the document.
- 3.10 The site lies within Flood Zone 1 with a small area adjacent to the eastern boundary (habitat retention zone) as Zone 2 and therefore there is no perceived flood risk from fluvial, coastal/tidal or surface water/small watercourses to the proposal.
- 3.11 The proposed drainage design prepared by Cadarn Consulting Engineers (provided separately) includes;
- Surface water** – creation of two areas of proposed Attenuation located in the areas of proposed Public Open Space (POS) to the northern and eastern edges of the site and a number of small Rain Gardens throughout the site as indicated within Cadarn Drainage Proposals within Appendix 3 at the rear of this report.
- Foul Water** – generated by the development will be directed to an Off -Site connection into the existing drainage system in the highway and as agreed with Welsh Water and as indicated within the submitted Drainage proposals provided separately.
- 3.12 Full details of the proposal are contained within the Planning Statement which accompanies the Planning Application.

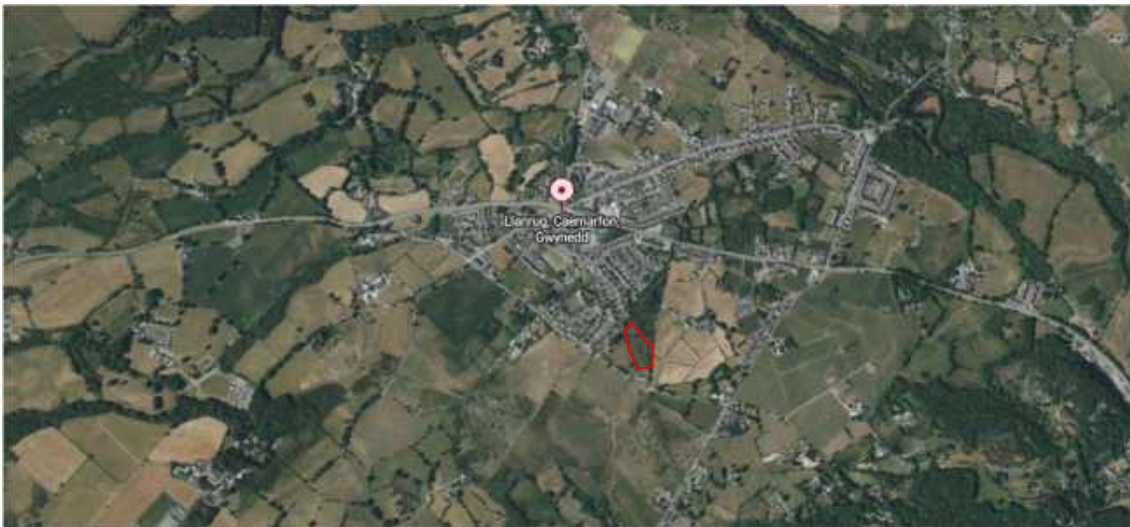


Fig .3. Site context Aerial Source Bing Maps ©Microsoft 2025





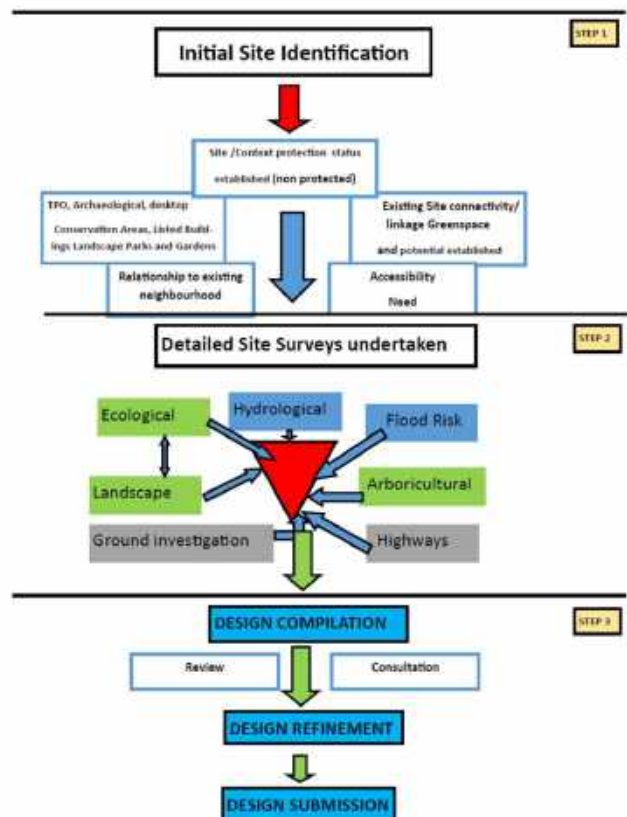
Fig 4. Proposed Site Layout SAER Architects

## 4.0 Green Infrastructure Approach and Statement

### STEP ONE- SITE FEASIBILITY REVIEW

- 4.1 In order to progress to a detailed design for both a Pre App and subsequent Planning Application for housing on the proposed site, ADRA as client undertook in house studies and engaged consultants at an initial stage to assess the possibility of development being achieved on the land and to identify its potential for further detailed design as an initial step.
- 4.2 This entailed background desktop study to ascertain the landscape status with regard to Statutory and Local designation and any legislative protection such as Flood Risk, Archaeological Potential, Sites of Special Scientific Interest (SSSI's) Conservation Areas, Special Areas of Conservation (SAC), Tree Protection Orders (TPO's), Contaminated Land, Restrictive covenants, Agricultural Land Quality, Restrictive Easements, or Mining interests for example.
- 4.3 Following this initial review the site was confirmed as NOT BEING SUBJECT TO ANY STATUTORY or NON-STATUTORY PROTECTION OR FLOOD RISK other than being located within the Glanffynnon Wildlife Site,\* which after consultation and review by the Project Ecologists and identification as a Grazed habitat with no evidence of being of Principal Importance, the proposed site was considered suitable for further consideration and detailed further input for the refining of a proposed layout including the following:
- Flood Risk Assessment- including topographical survey
  - Transport Assessment
  - Arboricultural Survey
  - Ecological PEA Survey
  - Adopted Sustainability Building design principles

\* Refer to Ecological PEA report for full reporting and Figures 5 and 6 following.



## STEP TWO - DETAILED SURVEY AND DRAFT PROPOSED SITE LAYOUT

- 4.4 Following initial sketch plans, a preliminary site design was commenced in Summer 2024 when Architectural Consultant SAER Ltd. were appointed by ADRA to develop initial site proposals for a capacity and feasibility review and thereafter, if possible, a schematic layout for preliminary comment and refinement with input from all disciplines.
- 4.5 The Ecology survey identified that the site is located within the Glanffynnon Wildlife extent which extends contiguous with the site's eastern boundary. (see extract map below) extracted from the Enfys Ecology PEA Report.



Fig 5. Glanffynnon Wildlife Site extent – Source © Enfys Ecology PEA

- 4.6 A review of available information relating to flood risk and the identification of the nearby watercourse along the eastern site boundary confirmed the need for attenuation capacity on site, and onsite attenuation was indicated as part of the proposal as two attenuation Ponds and cellular containment to parking areas.
- 4.7 The Arboricultural Survey identifies existing hedges and trees within the site as being of Good to Fair quality but with the highlighted presence of Ash Dieback, and the proposed layout reflects the removal and replacement of a number of dead and dying trees, as well as retained specimen trees (Oaks) and the species Rich hedgerow crossing the site, and localised hedgerow removal for access purposes.
- 4.8 The topographical survey and engineering review preserves existing levels as much as possible to remove the need for excessive cut and fill operations whilst achieving adoptable levels throughout the proposal and avoiding export/import of materials and hence reduce vehicular movements, and retains levels reflecting the habitat importance of the eastern flank of the site.
- 4.9 The Enfys PEA Ecological reporting confirms that the proposed site forms a Grazed extent of the Glanffynnon Wildlife Site, - and confirms that the proposed site extent has no evidence of being a Habitat of Principal Importance as the extract below confirms;

***“Impacts on the Glanffynnon Wildlife Site will be unavoidable as part of the Wildlife Site overlaps a large part of the development site. The proposed site layout has been designed to reduce the impact on the Wildlife Site as far as possible by minimising development along the northern and eastern edges of the site. This will retain as much of the area of marshy grassland as possible, and keeps a buffer zone and habitat corridor in the areas***

*adjacent to the stream and the larger part of the Wildlife Site which is outside of the development site (wet woodland extending to the north-east).*

*With regards to the habitat features listed in the citation for the Glanffynnon Wildlife Site, both types of grassland present within the site were assessed to have been relatively low-quality examples of (respectively) rush pasture and lowland meadow, likely as a result of previous management and grazing pressure, although both habitats would have potential for improvement. Wet woodland was not present in the survey area and its condition was not assessed.*

- ***Adequate protection and long-term management must be put in place for all areas of retained wildlife habitat within the Site boundary, including ensuring continuation of habitat connectivity”.***
- 4.10 The Enfys Ecological Survey provides specific mitigation recommendations including highlighting a need for carefully considered Lighting proposal as part of the scheme mitigation proposals to avoid Bat disturbance.
- 4.11 Additionally the proposed layout of the site avoids extending development to the full eastern side of the site extent, by retaining and promoting a maintained wet grass strip as part of the proposal, and with restricted access for longer term maintenance purposes to respect the proximity of the habitat associated with the remaining Glanffynnon Wildlife designation.
- 4.12 Existing Hedgerows within the site are retained- reflected by a sensitive site layout as well as specimen feature mature Oak trees and the proposed areas of Public Open Space are located at the lowest site topography along the northern and eastern boundaries including providing an area of Reptile habitat and refugia provision, further Native tree planting and SUDS water attenuation provision.
- 4.13 Planting along the eastern boundary offers a buffer between the development and wildlife site and retained grassland strip of wet land, whilst the retention of hedgerows and additional native hedgerow planting helps provide replacement potential habitat.
- 4.14 The initial proposed Masterplan has been refined reflecting the proximity to the ungrazed extent of the Glanffynnon Wildlife Site (by leaving a parallel undeveloped strip adjacent to the watercourse and managing it in the longer term as part of the proposals as a wet pasture habitat), and due to the existence of an overhead Power Supply (which currently exists over the proposed site and which will be moved as part of the proposals) which help define the potential development extent.
- 4.15 Additionally the housing layout sought to respect the presence of existing dwellings to the north and south, the Public Footpath (Reference 74) which runs through the site on an east west axis, as well as attempting to retain as much existing internal and boundary vegetation as possible and provide workable Drainage solutions and habitat promotion such as providing reptile habitat and hibernacula.
- 4.16 Consequently this helped determine where areas of Public Open Space were provided, locating the drainage solutions such as attenuation, and habitat potential, linking to the ungrazed extents of the Wildlife Site and watercourse adjacent to the eastern boundary.
- 4.17 Additional Mitigation Measures include the inclusion of Native trees and Shrubs and pollinator beneficial planting in Amenity Areas, as well as proposed Street trees and areas of Longer Grass Sward to link hedgerows and the site boundaries and reflecting the ground conditions envisaged – such as the Attenuation Areas.
- 4.18 Bat and Bird Boxes have also been included within the proposal, and in addition – signed Hedgehog Open Access Corridors between gardens as shown within Figure 4 of the appendices, and as part of the reporting there are a number of mitigation recommendations within the PEA as follows:
- Translocation of lizards prior to commencement of any works.
  - Creation of a floodplain meadow adjacent to the stream.
  - Creation of an artificial reptile hibernaculum on site.
  - Retaining wall construction
  - a 300-500mm wide underpass beneath the site access road will be required

Figure 12: Summary of the Step-Wise Approach

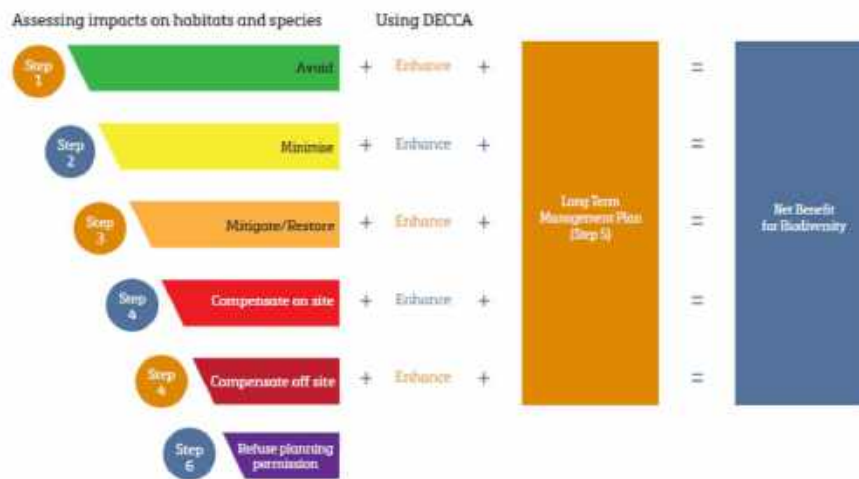


Fig .6. Green Infrastructure Stepwise Approach - Source PPW12 February 2024

- 4.19 As the Drainage Reporting details, the bulk of the site lies within Flood Zone 1 and is consequently deemed to be at low risk of flooding by Natural Resources Wales (NRW). The overall risk to the proposed development is therefore low, and therefore there is no perceived flood risk from fluvial, coastal/tidal or surface water / small watercourses.
- 4.20 In accordance with TAN 15 and the latest national standards on Sustainable Urban Drainage Systems (Flood and Water Management Act 2010) a drainage strategy has been prepared and accompanies the Planning Application and ensures that the proposed development will not exceed greenfield run off rates and utilises SuDS to ensure that flood risk is not increased both on, adjacent, or downstream of the proposed site.



Fig .7. Flood Maps for Planning © NRW

- 4.21 Locating the drainage provision as areas of Open Infiltration area within the site and areas of POS helps provide a combined green open area of Species Rich seeding potential and links to the adjacent watercourse and Wildlife habitat beyond - providing both Biodiversity potential and amenity value for occupants and users of the site.



- 4.22 A Water Conservation measures have included as part of the design proposals which through design efficiency and saving measures - which seek to utilise as little water as possible through dual flush toilets and flow restrictors on taps for example, and likewise the housing design incorporates a very high level of insulation specification, Air source heat pumps and points for electric vehicle charging, cycle storage and waste management and recycling provision.
- 4.23 Likewise the building designs adopt Sustainable Design measures including:
- Materials sourcing - BRE Green Guide to Specification
  - Carbon reduction
  - Building orientation and Built form
  - Passive Solar Gain
  - Natural light and wind protection
  - High performance PVC fenestration and doors
  - Sustainable materials locally sourced - reducing carbon footprint mileage during construction.
  - Low air loss design minimising heat loss / energy required to heat the property
- 4.24 Linkages to the existing footpath network and travel links and areas of greenspace surrounding the site are via the existing highway network primarily i.e. via Ffordd Glanffynnon as well as Footpath reference 74 which runs through the centre of the proposed site and connects Ffordd Glanffynnon to the wider Public Footpath network surrounding the site.

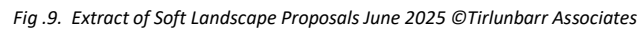


Fig 8. Ordnance Survey Mapping showing footpath locations - source Bing Maps Microsoft 2025

- 4.25 Soft Landscape proposals were developed with the following aims:
- habitat mitigation and linkage
  - native tree addition including field trees
  - creation of Species Rich Seeded areas
  - provision of Bird boxes and Bat Boxes
  - location of designated Hedgehog highways for connectivity.
  - inclusion of night scented climbers
  - visual integration of the built development into the wider landscape
  - visual amenity of adjacent existing dwellings and proposed dwellings
  - safety and cost of future maintenance and management

### STEP 3 FINAL DESIGN

- 4.26 Following team design comments the site layout was refined finally for this submission reflecting the submitted Site Masterplan and Soft Landscape and Habitat migration proposals extracted overleaf.



- Glanffynnon Llanrug GIS ISSUED v2

## 5.0 Summary

- 5.1 A Green Infrastructure Statement has been prepared for the proposed development of 17 dwellings in Llanrug, on land off Ffordd Glanffynnon in accordance with the requirements of Chapter 6 (PPW12) issued by Welsh Government in February 2024.
- 5.2 As a fairly recent introduction this Statement cannot yet reflect details of a specific Gwynedd Authority Green Infrastructure Strategy (which we understand will be available in due course), but fully accords with stated ambitions within the Cyngor Gwynedd Plan - A Greener Gwynedd 2023-2028.
- 5.3 The submitted Design Proposals and their refinement have been undertaken by experienced professionals who were able to use their experience and expertise as a team - to produce a Site Layout and content which reflects the Chapter 6 ethos and aims as advocated in the stepwise staged approach on behalf of their client ADRA.
- 5.4 As a result the development;
- Has taken a stepwise approach to the development provision
  - Incorporates Flood Alleviation Measures
  - Minimises impacts of development on a wildlife site utilising grazed land identified as having no evidence of Principal Habitat importance
  - Has not involved any Pre-Site clearance (other than for survey access)
  - Delivers net benefit for Biodiversity and Ecosystem gain through a series of proposed measures for mitigation and enhancement
  - Has minimised the loss of existing trees where possible, and replaced and supplemented them to increase overall canopy cover and tree health
  - Contributes towards climate change moderation
  - Provides sustainable energy measures
  - Retains the existing footpath linking to surrounding areas along its original alignment
  - Management of existing trees due to Ash Dieback
  - Provides areas of POS for public access assisting Health and well being
  - Provides linkage and maintenance of/to adjacent habitat
  - Will be actively managed via a Maintenance and Establishment Plan for soft landscape proposals and a longer-term Management Plan - monitored appropriately - to achieve maturity and successful establishment of the Green Infrastructure Proposals
  - Provides species translocation and habitat provision
- 5.5 In summary habitat extents provided as part of the proposal are as follows:

	Habitat	No/Area	Notes
1	Trees (no)	54 trees	Specimen street trees and forestry trees also planted as part of the proposed Native scrubland planting area mix
2	Species Rich Grassland m <sup>2</sup>	+148m <sup>2</sup>	In addition to amenity short mown grass and individual private garden seeded areas
3	Amenity low/shrub planting/herb areas	212m <sup>2</sup>	Pollinator friendly planting including low hedging
4	Native tree and shrub Forestry Planting	123m <sup>2</sup>	Mixed native tree and shrub planting
5	Bat Boxes	5no.	
6	Bird Boxes	5no	
7	Swift Bricks/Boxes	4no	
7	Hedgehog routes (hole no)	18no.	Hedgehog Holes 13cm x13cm with signed hedgehog highways



	Other Features		
8	Water Attenuation basin areas	2no.	Approximately 150m <sup>2</sup> seeded with Species Rich Seed wet ground Mix in addition to grassland extents provided above
9	Rain Garden provision	27 no.	Planted with drought resistant and flowering species, for Amenity and Pollinator value.

J.A.Barr Issued v2 11.06.25

## FIGURES

### FIGURES

- 1.0 Site Location Plan
- 2.0 Proposed Site Plan – SAER Proposed Site Plan ref P1212-FGL-SAL-01-ZZ-DR-A\_003 Rev P9
- 3.0 Drainage Proposals – Cadarn Consulting Engineers- Proposed SuDS Approval Body (SAB) Layout May 2025
- 4.0 Soft Landscape and Ecological Mitigation Proposals - Tirlunbarr Drawing Reference: 11/025/PP/01.01 Rev v4

### REFERENCES

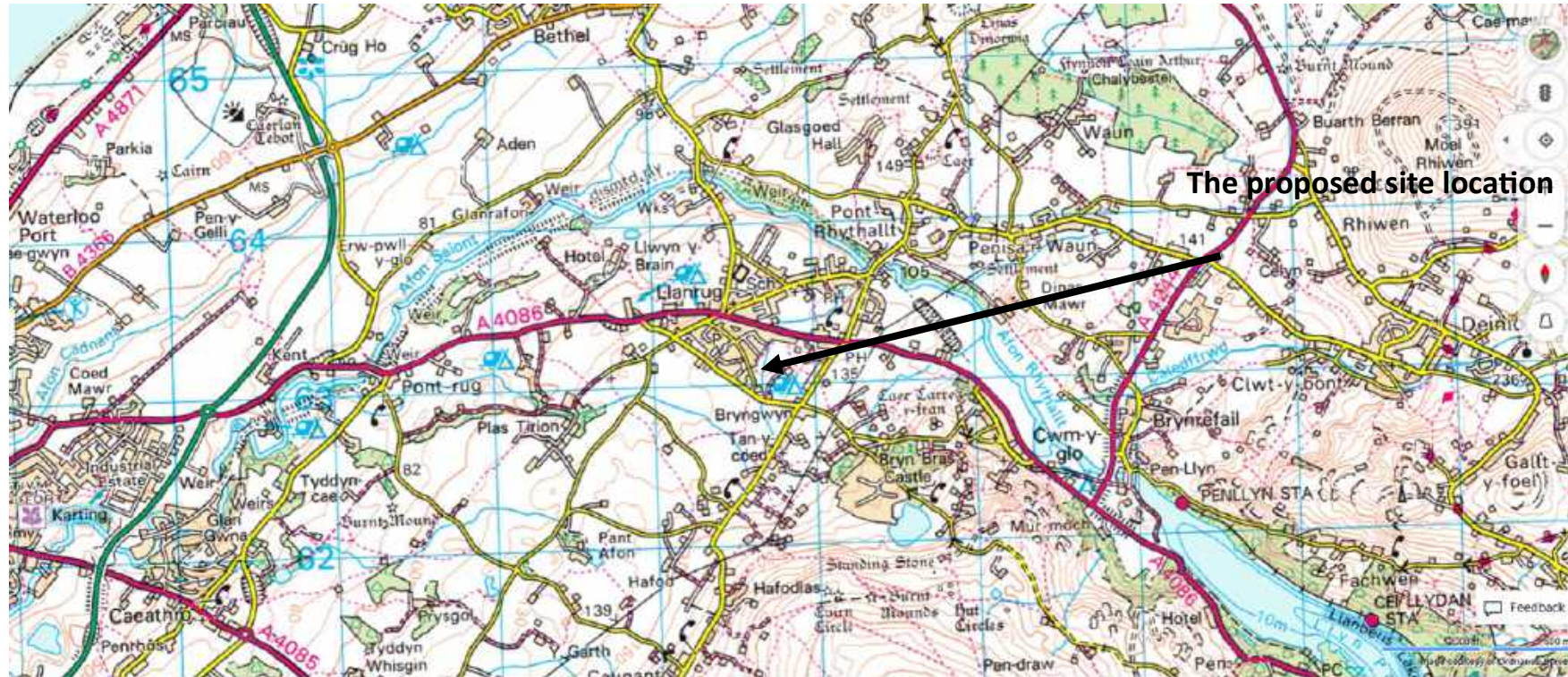
- 1. Glanffynnon Design and Access Statement FINAL (May 2025) SAER
- 2. PPW12 Chapter 6 Green Infrastructure February 2024
- 3. Enfys Ecology Preliminary Ecological Assessment v3 June 2025
- 4. Enfys (Greenspace Tree and Landscape Consultancy Ltd.) Arboricultural Assessment September 2024 updated May 2025
- 5. Cadarn Consulting Engineers- Proposed SuDS Approval Body (SAB) Layout May 2025
- 6. Enfys Reptile Survey October 2024 updated May 2025
- 7. Cadarn Transport Assessment
- 8. Cadarn Flood Risk Assessment
- 9. CR Archaeology Geo-Phys Survey.
- 10. PPW12 February 2024

# Proposed residential development on land off Glanffynnon Llanrug, Gwynedd

FIGURE 1

SITE LOCATION PLAN

May 2025



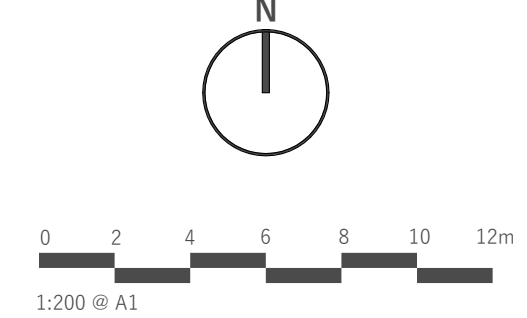




PRINTED: 03/06/2025 09:54:30				
REV.	DESCRIPTION:	DATE:	BY:	CHK:
P1	WIP ISSUED FOR COMMENTS	31/10/2024	ME	DP
P2	PROW UPDATED	01/11/2024	ME	DP
P3	DRAFT UPDATES FOLLOWING DTM	28/11/2024	ME	DP
P4	UPDATED LEVELS	06/01/2025	ME	DP
P5	ISSUED FOR COMMENTS	15/01/2025	ME	DP
P6	ISSUED FOR WG TECHNICAL APPROVAL	07/02/2025	ME	DP
P7	UPDATES FOLLOWING WG COMMENTS	19/05/2025	ME	DP
P8	ISSUED FOR PAC	29/05/2025	ME	DP
P9	UPDATES FOLLOWING CLIENT COMMENTS	03/06/2025	ME	DP

WAL GYNHALIOL  
RETAINING WALL  
(3m EASEMENT)

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PROJECT:  
**FFORDD  
GLANFFYNNON,  
LLANRUG  
ATTICUS LAND AND  
DEVELOPMENT**

DRAWING TITLE:  
**PROPOSED SITE PLAN**

DRAWING STATUS:	STATUS:
PLANNING	S3
DRAWING No:	PROJECT No:
FGL-SAL-A1-ZZ-DR-A-0003	P1212
SCALE:	REVISION:
As indicated@A1	P9

BIODIVERSITY KEY		
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	BIRD BOXES	3
	SWIFT BRICK/BOXES	3
	REPTILE REFUGIA	3
	HEDGEHOG HOLE	
MATHAU O DAI - HOUSE TYPES		
MATH / TYPE	NIFER / AMOUNT	
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	Tŷ 4P2B HOUSE	5
	Tŷ 5P3B HOUSE	6
	Tŷ 8P5B HOUSE	1
	BUNGALOW 6P4B	1

Cyfanswm / Total 17

DARPARIAETH MAN AGORED CYHOEDDUS YN  
SEILIEDIG AR SYLWADAU CYN-GEISIAD CYNLLUNIO  
(SAFON FIT): 24000M² FESUL 1000 O BOBL

24M² (ARWYDDFA PP) X 76 (POBL Y SAFLE) = 1920M²

GOFYNIAD: 1824M²  
MAN AGORED CYHOEDDUS A GYRAEDDODD: 996.5M²

PUBLIC OPEN SPACE PROVISION BASED ON PRE  
PLANNING APPLICATION COMMENTS (FIT  
BENCHMARK) : 24000m² PER 1000 POPULATION

24m² (AREA PP) x 76 (SITE POPULATION ) = 1920m²

REQUIREMENT: 1824m²  
PUBLIC OPEN SPACE ACHIEVED: 996.5m²

AIL-LEOLIAD WEIREN PŴER ARFAETHEDIG –  
LLEOLIAD I'W GADARNHAU  
PROPOSED CABLE DIVERSION - EXACT  
LOCATION TBC

COEDEN  
CATEGORI A  
CATEGORY A TREE

WEIREN PŴER PRESENNOL  
UWCHBEN I'W DYNNU  
EXISTING OVERHEAD CABLES  
TO BE REMOVED

ISODRAGFA CYNEFIN WEDD  
GRSOD O DAN Y Ffordd  
ARFAETHEDIG - LLEOLIAD  
I'W GADARNHAU  
HABITAT UNDERPASS  
INSTALLED BELOW  
PROPOSED ROAD -  
POSITION TBC

E 253,628.985 m  
N 362,998.750 m  
E 253,628.985m  
N 362,998.750m





NOTES CONTINUED

21. OPTIMUM TRENCH WIDTH  
OPTIMUM TRENCH WIDTH = PIPE + 300mm. CONTRACTOR TO ENSURE TRENCH WALLS ARE SUITABLY PROPPED.

22. BACKFILLING TO PIPE TRENCHES BENEATH ROADS, CAR PARKING AND STRUCTURES TO BE M.O.T. TYPE 1 GRANULAR MATERIAL UP TO FORMATION LEVEL FROM THE TOP OF THE SPECIFIED PIPE SURROUND (WELL COMPACTED IN 150mm LAYERS).

23. BACKFILLING TO PIPE TRENCHES BENEATH LANDSCAPED AREAS TO BE SELECTED EXCAVATE MATERIAL FREE FROM LARGE STONES GREATER THAN 50mm, LUMPS OF CLAY OVER 100mm, ANY TIMBER, FROZEN MATERIAL OR VEGETATION MATTER UP TO FROMATION / GROUND LEVEL FROM THE TOP OF THE SPECIED PIPE SURROUND (WELL COMPACTED IN 150mm LAYERS).

24. GRANULAR MATERIAL NOMINAL SIZE 20mm SINGLE SIZED OR 14mm TO 5mm GRADED.

25. BACKFILL MUST NOT BE PLACED ON CONCRETE BEDDING OR SURROUND UNTIL THE CONCRETE COMPRESSIVE STRENGTH HAS REACHED 15N/mm².

26. BRICKS OR BLOCKS MUST NOT BE PLACED IN THE BEDDING MORTAR FOR SETTING THE PIPES TO LEVEL .

27. ALL ROCKER PIPE LENGHTS TO BE MIN 600mm.

28. PROVIDE ROCKER PIPES AT TRANSITION FROM CONCRETE SURROUND TO GRANULAR SURROUND.

29. MAX DISTANCE FROM FACE OF CONCRETE SURROUND TO FIRST FLEXIBLE JOINT TO BE 150mm.

30. MANHOLE COVERS AND FRAMES  
MANHOLE COVERS AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF THE BS EN 124:M BS 7903 AND HIGHWAYS AGENCY GUIDANCE DOCUMENT HA 104/09. THEY SHALL BE OF NON ROCKING DESIGN WHICH DOES NOT RELAY TO THE CUSHION INSERTS.  
  
MANHOLE COVER ON FOUL ONLY SEWERS SHALL BE OF LOW LEAKAGE TYPES IN ORDER TOP PREVENT EXCESSIVE SURFACE WATER INGRESS  
  
AS A MINIMUM, CLASS D400 SHALL BE USED IN CARRIAGEWAYS OR ROADS (INCLUDING PEDESTRIAN STREETS), HARD SHOULDERS AND PARKING AREAS USED BY ALL TYPES OF VEHICLES.

31. CONSTRUCTION OF SEWER TO BE IN ACCORDANCE WITH WELSH MINISTERS STANDARDS AND SFA 7TH EDITION.

32. REPRODUCED FROM THE ORDNANCE SURVEY'S MAPS WITH THE PERMISSION OF THE CONTROLLER OF HIS MAJESTY'S STATIONARY OFFICE. CROWN COPYRIGHT. LICENCE NO. AC0000855691
1. ALL LEVELS IN METERS UNLESS NOTED OTHERWISE ON DRAWING.

2. ALL DIMENSIONS AND LEVELS TO BE CHECKED ON SITE PRIOR TO UNDERTAKING ANY WORKS. ORDERING MATERIALS OR FABRICATING ANY COMPONENTS.

3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS AND ARCHITECT'S DRAWINGS AND RELEVANT SPECIFICATION CLAUSES.

4. PLEASE REFER TO ARCHITECTS DRAWINGS FOR FINAL BUILDING LOCATION.

5. THE LOCAL AUTHORITY AND SERVICE COMPANIES ARE TO BE NOTIFIED PRIOR TO COMMENCEMENT OF WORK ON SITE.

6. ALL DRAINAGE COMPONENTS ARE TO COMPLY WITH CURRENT BRITISH STANDARDS AND BUILDING REGULATIONS REQUIREMENTS.

7. ALL WORKS TO BE IN ACCORDANCE WITH THE LOCAL AUTHORITY'S ROADS FOR ADOPTION SPECIFICATION.

8. ALL WORKS AND MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS (SHW SERIES 500).

9. DRAIN PIPE THROUGH WALLS OR BENEATH FOUNDATIONS (SPREAD ONLY) TO HAVE R.C BRIDGE LINTELS OVER AND PIPE SURROUNDED IN FLEXIBLE MATERIAL (50mm).

10. FINAL LOCATIONS AND DETAILS OF SOIL VENT PIPES, STUB STACKS, RAINWATER DOWN PIPES, GULLIES ETC. TO BE CONFIRMED BY REFERENCE TO ARCHITECT' DRAWINGS.

11. ALL THRESHOLD DRAIN DETAILS TO BE TO ARCHITECT' DETAILS.

12. ALL PIPES INTO CHAMBERS TO SOFFIT TO SOFFIT U.N.O.

13. AT ALL OUTFALL POINTS TO AN EXISTING NETWORK, THE POSITION AND EXISTING DRAINS MUSTING BE CONFIRMED WELL IN ADVANCE OF THE PROGRAMMED DATE FOR INSTALLING ANY OF THE UPSTREAM DRAINAGE, OR ORDERING OF ANY MATERIALS IN ORDER TO ALLOW TIME FOR ANY NECESSARY REVISIONS TO THE HYDRAULIC DESIGN.

14. ALL GRAVITY UPVC PIPEWORK TO BE TO BS 4660 OR BS 5481 WHERE RELEVANT UNLESS NOTED OTHERWISE.

15. ALL NON ADOPTABLE DOMESTIC FOUL AND SURFACE WATER PIPE RUNS SHALL CONSIST OF 100mm DIA. PIPES LAID AT NO FLATTER THAN 1:80 FALLS U.N.O. A SEWER OR LATERAL DRAIN WITH A NOMINAL INTERNAL DIAMETER OF 100mm, OR A LATERAL DRAIN SERVING TEN OR LESS PROPERTIES IS LAID TO A GRADIENT NOT FLATTER THAN 1:80, WHERE THERE IS AT LEAST ONE WC CONNECTED AND 1:40 IF THERE IS NO WC CONNECTED.

16. ALL CONNECTIONS FROM HIGHWAY GULLIES TO BE 150mm DIA. LAID AT FALLS OF BETWEEN 1/20 AND 1/100 WITH TYPE S BED AND SURROUND TO ALL CONNECTIONS WITH MIN. 1.20m COVER, TYPE Z BED AND SURROUND TO ALL OTHER CONNECTIONS.

17. THERMOPLASTIC PIPES & FITTINGS:  
THERMOPLASTIC PIPES, JOINTS & FITTINGS FOR GRAVITY SEWERS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 1401-1, BS EN 1852 & BS EN 12666-1.

18. THERMOPLASTIC STRUCTURED WALL PIPE:  
THERMOPLASTIC STRUCTURED WALL SEWER PIPE SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 13476-1 & WIS 4-35-01 AND BS EN 13476-2 OR BS EN 13476-3. PIPES SHALL BE BSI KITEMARKED OR HAVE EQUIVALENT THIRD PART CERTIFICATION. PIPES LESS THAN OR EQUAL TO 500mm IN DIAMETER SHALL HAVE NOMINAL SHORT-TERM RING STIFFNESS NOT LESS THAN 8kN/m² (SN8) OR BE SUBJECT TO A QUALITY SYSTEM FOR STORAGE & EMBEDMENT.  
  
Nom. SHORT TERM RING STIFFNESS OF 2kN/m² (SN2) IS ACCEPTABLE FOR PIPES GREATER THAN 0500mm, SUBJECT TO SUPPORTING STRUCTURAL DESIGN LOAD CALCULATIONS BEING PROVIDED.

KEY

- DENOTES PROPOSED FOUL CHAMBER & PIPE RUN TO BE ADOPTED BY WELSH WATER.
- DENOTES EXISTING FOUL SEWER.
- DENOTES PROPOSED SURFACE WATER CHAMBER & PIPE RUN, MAINTAINED BY ADRA'S MANAGEMENT AND MAINTENANCE TEAM.
- DENOTES PROPOSED DETENTION BASIN.
- DENOTES PROPOSED RAIN GARDEN WITH PERFORATED PIPE TO INTERCEPT SURFACE WATER THROUGH INFILTRATION.  
DENOTES ABOVE GROUND WATER BUTT AT BASE OF RAIN WATER DOWN PIPE.
- DENOTES PROPOSED WAVIN AQUACELL BELOW GROUND ATTENUATION.
- DENOTES PROPOSED GRANULAR BELOW GROUND ATTEUATION STORAGE.
- DENOTES PROPOSED POROUS PAVING TO BE LOACTED MIN 3m FROM ANY FOUL SEWER.
- DENOTES EXISTING ORDINARY WATERCOURSE.

TRANSPORTATION, HANDLING, STORAGE AND LAYING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

WHERE A FITTING IS INSTALLED ON A SEWER LENGTH, IT SHALL HAVE THE SAME INTERNAL BORE AS THE SEWER. Max. LENGTH OF PIPE FOR LAYING IS 3.0m OR Ø x 10, WHICHEVER IS THE GREATER, UNLESS WELDED JOINTS ARE USED.

19. CONNECTION TO THE PUBLIC SEWER  
A SECTION 106 APPLICATION TO CONNECT MUST BE MADE TO DCWW. THE DEVELOPER SHALL GIVE 21 DAYS NOTICE PRIOR TO CONNECTION, THE WORKS MAY ONLY BE UNDERTAKEN BY A DCWW HEALTH AND SAFETY APPROVED CONTRACTOR.

NOT FOR  
CONSTRUCTION

S2	P07	30.05.25	UPDATED TO MATCH ARCHITECTS COMMENTS	M.J.		
S2	P06	19.05.25	UPDATED TO MATCH SAB COMMENTS	M.J.		
S2	P05	03.02.25	UPDATED TO MATCH CLIENT COMMENTS	M.J.		
S2	P04	13.01.25	UPDATED DRAINAGE TO MATCH NEW LAYOUT	M.J.		
S2	P03	09.01.25	UPDATED DRAINAGE TO MATCH NEW LAYOUT	M.J.		
S2	P02	11.12.24	AMENDED LAYOUT	M.J.		
S2	P01	04.12.24	FIRST ISSUE	M.J.		
SUITABILITY	REV	DATE	DESCRIPTION	Org	CMR	App'd Auth.

PROJECT TITLE:  
FFORDD GLANFFYNNON, LLANRUG

DRAWING TITLE:  
PROPOSED SUDS APPROVAL  
BODY (SAB) LAYOUT

DRAWING No:  
15824L-CCE-XX-XX-DR-C-0008

ORIGINATOR:	DATE:	SCALE @ A1:	SUITABILITY:	REVISION:
M.Jones	04.12.2024	1:250	S2	P07

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