PROPOSED RESIDENTIAL DEVELOPMENT, CWM ROAD, LLANDUDNO , CONWY

Green Infrastructure Statement

March 2025

Tirlunbarr Associates Chartered Landscape Architecture

OFFICE: Tan y Berllan,

Llanbedr y Cennin,

CONWY.

LL32 8UY.

T:01492 650333

www.tirlunbarr.com

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Issue	Author	Reviewed	Date	Status
Draft v1	JB	PW	13.11.24	DRAFT
Issued v1	JB	PW	19.11.24	Approved
Draft v2	JB	PW	12.03.25	DRAFT
Issued v3	JB	PW	14.03.25	Final

APPENDICES (At the rear of the document)

FIGURES

1.0 Site Location Plan
2.0 Proposed Site Plan – Ainsley Gommon Architects Site Layout Option 5 C1054 014 Rev K
3.0 Drainage scheme (provisional) – Waterco-Datrys Drawing ref 24168/SK501 Rev 4
4.0 Soft Landscape and Ecological Mitigation Proposals Tirlunbarr Drawing - Soft Landscape Proposals - Drawing Ref 16/024/PP/01 Rev V3 Issued dated 14.03.25

This report has been prepared by Tirlunbarr Associates on behalf of First Choice Housing and Grŵp Cynefin in connection with a proposed residential development on land at Cwm Road Llandudno, 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.

1.0 Introduction

1.1 Tirlunbarr Associates Chartered Landscape Architects were originally appointed in October 2024 to prepare a Green Infrastructure Statement* (* the Statement) to accompany a Planning Application for a proposed Housing Development of 29 dwellings on Land at Cwm Road Llandudno, Conwy County, LL30 1HB on behalf of Grŵp Cynefin as Social Housing Landlords and First Choice Housing as specialist providers of accommodation for people with disabilities, veterans and additional complex needs.

1.2 The preparation of this Statement follows the production of detailed Site Layout Proposals which have entailed collaborative input on behalf of the Client from Ainsley Gommon Architects as the project Architects, Waterco-Datrys Civil Engineering as Project Engineers and Drainage Designers.

1.3 Further input into the site proposal has been provided by:

- Cadnant Planning .

1.4 The design proposals have been under development since late 2023 and refined through a series of team workshops, and consultation and this document responds to the legislative need for a Green Infrastructure Statement to be provided as part of Planning Applications.

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 aims 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 will seek to demonstrate Net Biodiversity Benefit - and enhancement and longer-term management at each step of design development, and strengthen Protection for Sites of Special Scientific Interest (SSSI's) and increase 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 Application Process.

1.9 The final Policy requirements were issued in February 2024 Wales 12 (PPW12 -Ref 6.4.16) which 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 a Planning Application for the residential development at Cwm Road, Llandudno, LL30 1HB.

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 befits 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 corridoes 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 Conwy Councils Green Infrastructure Assessment was produced in 2023, and seeks to:

> *'' provide the guiding principles to support the creation of a multifunctional green infrastructure (GI) network, which supports and improves health and wellbeing, the economy, nature and biodiversity, contributes to tackling climate change and crucially, meets the needs of the local population''.*

2.7 The assessment relies on existing Planning Policy Wales Edition 12 (Welsh Government 2021) 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 PPW12

2.8 Green Infrastructure Assessments will need to recognise the need for ecosystems, habitats and species to adopt 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.

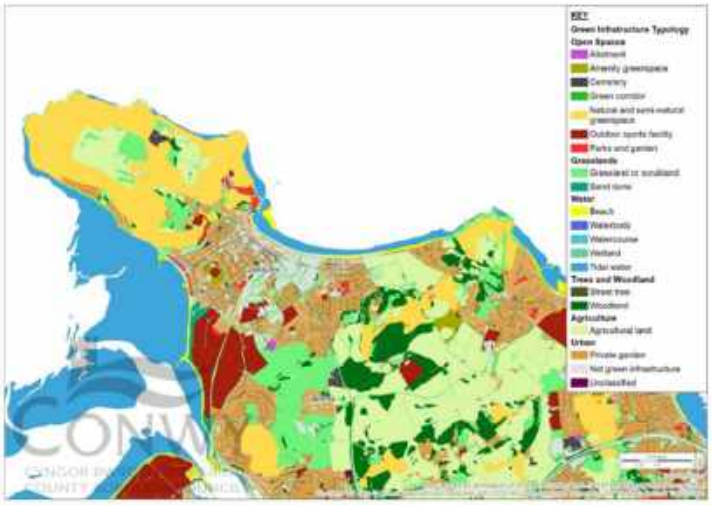
2.9 The role of development within any Local Authority Green Infrastructure Assessment will be two-fold:

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

2.10 Conwy Council have developed a set of Key Indicators for development effects upon biodiversity and green infrastructure functions which is 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 within their Conwy Green Infrastructure Assessment.

2.11 Conwy's BP/47 Green Infrastructure Assessment (GIA) is one of the first of such studies undertaken in Wales and it aligns with Natural Resources Wales North West Wales Area Statement. The Conwy Green Infrastructure Assessment, guides the delivery of a greener, healthier, more biodiverse, and prosperous Conwy, and sets a baseline for green infrastructure and will inform the Council's Replacement Local Development Plan 2018-2033, creating the basis for development briefs and requirements.

Figure 6: GI Typology - Llandudno



©Conwy Council BP/47 Green Infrastructure Assessment

2.12 The Statement for the proposed development at Cwm Road therefore seeks to adopt the above aims of PPW12 Chapter 6 Green Infrastructure Assessment and reflects the Green Infrastructure Assessment produced by the Council.

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 Conwy including specialist provision for residents with complex additional needs, veterans and disabled residents on vacant land adjacent to Ty Hapus at Cwm Road Llandudno `as the location map below indicates. **NGR**: SH784 816 **Postcode:** LL30 1HB

Fig .1. Site Location Source Bing Maps Ordnance Survey ©2024 Microsoft

3.2 The total site area extends to approximately 0.49 hectares and currently comprises a former and now derelict Multi Use Games Area of vacant land formerly used for external recreational area comprising hard-standing and ruderal grassland.

3.3 The MUGA was formerly of the adjacent Ty Hapus communal centre and with no direct access to the surrounding highways, the site is bordered by existing residential development centrally located within Llandudno and its urban extent.

3.4 The Proposed Site Layout (Figure 2 below) has been developed by Ainsley Gommon Architects with input from a wide range of disciplines namely, Highways, Landscape, Drainage, Traffic, and Energy Consultants with the built content and final layout of the proposal subject to the requirements of the clients Grŵp Cynefin and First Choice Housing.

3.5 The development layout includes 29no. affordable tenure dwellings as two storey accommodation as a mix of apartments, terraced and semi-detached houses and bungalows including specific accommodation as listed below.

- three 2-person 1-bed accessible apartments;
- one 3-person 2-bed walk up apartments;
- five 4-person 2-bed houses;
- two 5-person 3-bed houses;
- six 2-person 1-bed common access assisted living apartments; and
- 10 2-person 1-bed walk up general needs apartments.

3.6 The development includes a single access road from Cwm Road into the site and a cul de sac with access to a rear internal and central housing area with parking.

3.7 The site lies within a C1 Flood Zone 3 and therefore a Flood Consequence Assessment has been undertaken and is provided under separate cover.

Fig .2. Proposed Site Layout

3.8 The proposed drainage design includes;

Surface water – creation of Rain Gardens

Foul Water – generated by the development will be directed into the existing Network

Fig .3. Site context Aerial Source Bing Maps ©Microsoft 2024

3.9 Full details of the proposal are contained within the Planning Statement provided separately.

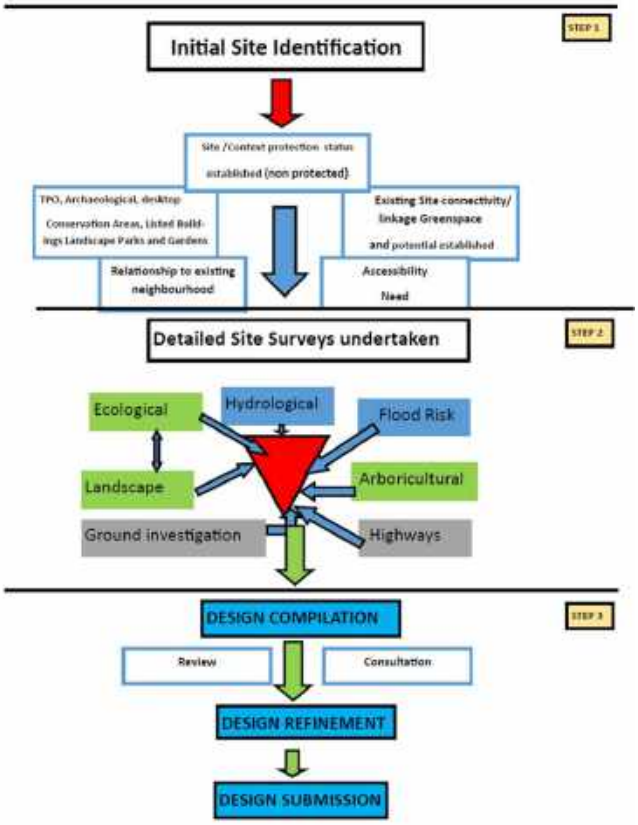
4.0 Green Infrastructure Approach and Statement

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 the clients (Grŵp Cynefin and First Choice Housing) undertook in house studies and engaged consultants at an initial stage to identify or rule out the possibility of development being achieved on the land and to identify its potential for further detailed design.

4.2 This entailed background desktop study to ascertain the landscape status with regard to any Statutory and Local designations and any legislative protection such as Flood Risk, Scheduled Ancient Monument, 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 other than being within the Conwy and Creuddyn Historic Landscape Area and therefore considered suitable for further review and input towards the creation of a proposed layout in the form of the following:



STEP TWO - DETAILED SURVEY AND DRAFT PROPOSED SITE LAYOUT

4.4 Following initial sketch plans, the proposed detailed site design was commenced in Autumn 2023 when Architectural Consultants (Ainsley Gommon Architects Ltd.) were appointed and together with Grŵp Cynefin and First Choice Housing 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 engaged disciplines.

Fig 4. Site sketch development

4.5 The initial proposed Masterplan (Figure 5) developed in 2023 commenced with a similar site layout to the Layout forming part of this Application, with the housing extents reflecting separation distances from existing dwellings and retaining all boundary vegetation and providing a secure location and single access to the site from Cwm Road.

4.6 The proposed site does not contain any existing trees and hence an Arboricultural Survey was not required, and identified native boundary vegetation in the form of established shrubs and small trees located on adjacent land have all been retained where possible as part of the proposal through a considered site layout.

4.7 The topographical survey and engineering review confirmed the site is relatively level at around 4.4m AOD, and enclosed by existing development including the adjacent Ty Hapus Building, – and bounded by Cwm Road to the west and Ffordd Penrhyn to the south east.

4.8 Consultation with the Local Authority Ecological Officer in June and August 2024 confirmed that a detailed Ecological Survey was not required (email Kate Surry 05.08.24) but that a Landscape/green infrastructure Plan should be submitted with a Planning Application adopting the DECCA Principles below to provide diversity, (greater) extent, condition, connectivity and adaptability.

Fig .5. Green Infrastructure Stepwise Approach - Source PPW12 February 2024

4.9 As documented the application site lies within a C1 Flood Zone in relation to Technical Advice Note (TAN) 15 as well as being within a Zone 3 Flood Risk Areas on NRW's Flood Risk Map which deems it to be at Flood Risk but benefitting from Flood Defence provisions.

4.10 A Flood Consequence Assessment FAC) has been provided by Waterco- Datrys under separate cover.

4.11 In accordance with TAN 15 and the latest national standards on Sustainable Urban Drainage Systems (Flood and Water Management Act 2010) a preliminary drainage strategy has been prepared reflecting the Site Investigation which accompanies the Application, and utilises SuDS to ensure that flood risk is not increased both on, adjacent, or downstream of the proposed site.

4.12 Given the urban location and developed nature of the site it has limited green infrastructure connectivity or cover at present, and the proposals within the soft landscape design has sought to observe the County Ecologists recommendations in seeking to enhance the sites potential for Biodiversity Net Gain through Native Tree and shrub planting, areas of species rich grassland and pollinator friendly shrub and perennial planting areas for amenity and Rain Garden function.

4.13 A Water Conservation statement has also been prepared as part of the design proposal which accompanies the Planning Application and likewise the housing design incorporates a very high level of insulation specification, Air source heat pumps, cycle storage and water consumption targets.

4.14 Likewise the building designs adopt Sustainable Design measures including:

- In roof solar PV
- Air source heat pump for heating and hot water
- Low concrete raft foundations. Sustainable materials locally sources reducing carbon footprint mileage during construction.
- Low air loss design minimising heat loss / energy required to heat the property

4.15 Linkages to the existing footpath network and travel links and surrounding urban areas of greenspace are via the existing highway network provision, and which include Llandudno Town Centre, the north and west Shore beaches, Great Orme Country Park and the National Wales Coastal Path.

Fig 6. Ordnance Survey Mapping showing footpath locations and surrounding Open Landscape - source Bing Maps Microsoft 2024

4.16 Soft Landscape proposals have been developed with the following aims, and after useful feedback from Conwy Councils Ecologist and the clients as end users:

- habitat provision and linkage to adjacent areas by boundary retention and strengthening
- native tree planting provision
- creation of Species Rich Seeded areas
- provision of Bird boxes and Bat Boxes within the proposed buildings
- location of designated Hedgehog highways for connectivity.
- visual integration of the built development into the wider landscape
- Safety of vulnerable future occupiers
- safety and cost of future maintenance and management
- Inclusion of native and non-native pollinator friendly planting species

STEP 3 FINAL DESIGN

4.17 The latest Proposed Site Plan (Ainsley Gommon Architects Drawing reference: Site Layout Option 5 C1054 014 Rev K) forms the submitted proposed Site Layout, and the base drawing for the detailed landscape proposals which are both appended to this document.

Fig .7. Soft Landscape Proposals extract March 2025 ©Tirlunbarr Associates

4.18 The proposals include Establishment and Maintenance operations to ensure the proposed measures establish fully as well as monitoring responsibilities. This will include an annual review of the site and ongoing in-house Maintenance works, and whereby changes to maintenance activities may be undertaken to ensure the Net Biodiversity gain is met via establishment of the soft landscape and in the interests of the end users including replacement of any failed stock.

4.19 The submitted proposals seek to meet the requirements of Chapter 6 of PPW12 by ensuring avoidance and minimisation of impact upon the sites Biodiversity and Ecosystem as the Stepwise approach above demonstrates, and provides enhanced opportunity for natural linkage of habitats and strengthening of existing resources for the future through a careful and collaborative design approach from all disciplines.

4.20 This accords with the recommended NRW DECCA framework- by meeting their **D**iversity, **C**onnectivity, **E**xtent, **C**ondition and **A**daptability targets in meeting Ecosystem resilience and the requirement, and PPW 12 (Ref 6.4.16) 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.

5.0 Summary

5.1 A Green Infrastructure Statement has been prepared for the proposed development of 29 dwellings in at Cwm Road Llandudno, in accordance with the latest requirements of Chapter 6 (PPW11) required by Welsh Government within PPW12 in February 2024.

5.2 This Statement reflects the recommendations of Conwy Councils Green Infrastructure Assessment in proving greater Diversity, Extent, Condition, Connectivity and Adaptability of the projects green infrastructure resource.

5.3 The 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 which reflects the Chapter 6 ethos and aims as advocated in the stepwise staged approach.

5.4 As a result the development;

- Has taken a stepwise approach to the development provision
- Incorporates Flood Alleviation Measures
- Does NOT propose development on a designated site
- Has not involved any Pre-Site clearance
- Delivers net benefit for Biodiversity and Ecosystem gain through a series of proposed measures for mitigation and enhancement
- Has limited the loss of existing trees and replaced and supplemented them to increase canopy cover
- Contributes towards climate change moderation
- Provides sustainable energy measures
- Provides linkage and maintenance of/to adjacent habitats and areas of nearby green infrastructure
- Will be actively managed via a Maintenance and Establishment Plan for soft landscape proposals to achieve maturity and successful establishment of the Green Infrastructure Proposals

5.4 In summary habitat extents and planting material provided as part of the proposal are as follows:

	Habitat	No/Area	Notes
1	Trees (no)	21No. new specimen trees	Including 2 within proposed Rain Garden and Aqua cell tree pits
2	Grassland m²	464+m²	Amenity (m²)
3	Amenity low/shrub planting/herb areas	199m²	Pollinator friendly tree shrub and perennial planting
4	Native tree and shrub Planting	34m²	Mixed native tree and shrub planting for strengthening of existing boundary
5	Bat Boxes	4no	
6	Bird Boxes	8no.	
6	Hedgerow	259 linear m	Native and/or pollinator based
7	Hedgehog routes (no)	22 holes	As signed hedgehog highways
8	Scented native climbers	7no.	
9	Rain Garden Provision	Circa 40m²	Planted areas pollinator based.

FIGURES

FIGURES

1.0 Site Location Plan
2.0 Proposed Site Plan – Ainsley Gommon Architects Site Layout Option 5 C1054 014 Rev F
3.0 Drainage Proposals – Waterco - Datrys Drainage Scheme Provisional Drawing ref 24168/SK501 Rev P4 dated 14.03.25
4.0 Soft Landscape and Ecological Mitigation Proposals Tirlunbarr Drawing - Soft Landscape Proposals - Drawing Ref 16/024/PP/01 Rev V3 Issued dated 14.03.25

FIGURE 1 SITE LOCATION

ACCOMMODATION SCHEDULE

	GIFA'S	No.
3No. 2P1B W/C ACCESSIBLE APARTMENT (GF) 3No. 3P2B WALK UP APARTMENTS (FF)	62.9m² 71.1m²	x6
4P2B HOUSE	84.6m²	x5
5P3B HOUSE	96.9m²	x2
2P1B WALK UP ASSISTED LIVING APARTMENTS	53m²	x6
5No. 2P1B WALK UP APARTMENT (GEN NEEDS) (GF) 5No. 2P1B WALK UP APARTMENT (GEN NEEDS) (FF)	54.8m² 60.4m²	x10

TOTAL UNITS 29

REV	DESCRIPTION	DATE	BY
K	SITE AMENDEMENTS FOLLOWING WG FEEDBACK	07/03/25	IO
J	WINDOW TO DINING ROOM ON FLAT 24-25 REMOVED	12/02/25	GT
H	ASSISTED LIVING APARTMENT BLOCK MOVED DOWN 0.5M, TOWARDS TY HAPUS COMMUNITY CENTRE	07/02/25	GT
G	OFFSET DISTANCES ADDED	21/01/25	GT
F	UNITS 24-29 CHANGED TO WALK UP FLATS	17/12/24	IO
E	NEW COMMON & DIRECT ACCESS OPTION A FOR FLAT 24-29. PATH AROUND COMMON ACCESS FLATS 24-29 MOVED CLOSER TO BUILDING FOOTPRINT	24/10/24	GT
D	ACCOMMODATION SCHEDULE AND GIFA'S ADDED	02/10/24	GT
C	CHANGES FOLLOWING HIGHWAYS COMMENTS	08/08/24	IO
B	SECTION ADDED. WINDOWS ADDED TO PLOT 22	10/07/24	IO
A	TOPO SURVEY OVERLAID, RED LINE UPDATED, BIN STORE ADJUSTED, SIDE BAY TO PLOT 17	02/07/24	GT

PROJECT

Cwm Road, Llandudno
for First Choice Housing
and Grŵp Cynefin

DRAWING TITLE

PROPOSED LAYOUT - OPTION 5

SCALE	DATE	DRAWN	CHECKED
1 : 200 @A1	12/12/22	TA	SV

DRAWING STATUS: PLANNING

JOB No	DRAWING No	REVISION
C1054	014	K

AINSLEY GOMMON ARCHITECTS
THE OLD POLICE STATION, 15 GLYNNE WAY, HAWARDEN, CH5 3NS
Tel: 01244 537 100 | wales@agarchitects.co.uk | www.agarchitects.co.uk
Ainsley Gommon Architects Ltd. Registered in England & Wales No. #10794B
Registered Office: 1 Price Street, Hamilton Square, Birkenhead CH41 6JN

PRINTED: 07/03/2025 15:17:18

0m 4m 8m 12m 16m 20m

VISUAL SCALE 1:200 @ A1

A1

PROJECT No. 24168 | DRG No. SK501 | **DO NOT SCALE**

WATERBUTTS AND RAINGARDENS/SUDS PLANTERS TO BE USED AT RAINWATER DOWNPIPES

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S, ENGINEER'S AND OTHER SPECIALISTS' DRAWINGS.
2. PLEASE REFER TO ARCHITECTS DRAWINGS FOR FINAL BUILDING LOCATION
3. ALL DRAINAGE COMPONENTS ARE TO COMPLY WITH CURRENT BRITISH STANDARDS & BUILDING REGULATIONS REQUIREMENTS

KEY

- SITE BOUNDARY
- ASSUMED LINE OF EXISTING FOUL SEWER
- ASSUMED LINE OF EXISTING COMBINED SEWER
- ASSUMED LINE OF EXISTING SURFACE WATER SEWER
- PROPOSED FOUL CHAMBER AND SEWER
- PROPOSED SURFACE WATER CHAMBER AND SEWER
- PROPOSED LAND DRAIN CHAMBER AND PIPE
- PROPOSED PERMEABLE PAVING
- PROPOSED IMPERMEABLE PAVING
- PROPOSED RAINGARDEN
- PROPOSED HYDROPLANTER
- PROPOSED ATTENUATION STORAGE

REV	DATE	DESCRIPTION	BY	CHK	APP
P3	12.03.25	LAYOUT AMENDED	LI	AC	AC
P2	14.01.24	SURFACE WATER LAYOUT AMENDED	LI	AC	AC

REVISIONS

PRELIMINARY ISSUE

CLIENT

Grŵp Cynefin

PROJECT

Housing Development adj.
Ty Hapus,
Llandudno

TITLE

Drainage Scheme

DATRYS

Caernarfon:
Unit 1 Block C, Doc Victoria
Caernarfon, LL55 1TH
Tel: 01286 671027
Mold:
Suite 4A, Bronsyod House
Wrexham Road, Mold, CH7 1HP
Tel: 01352 706205
info@datrys.coop | www.datrys.net

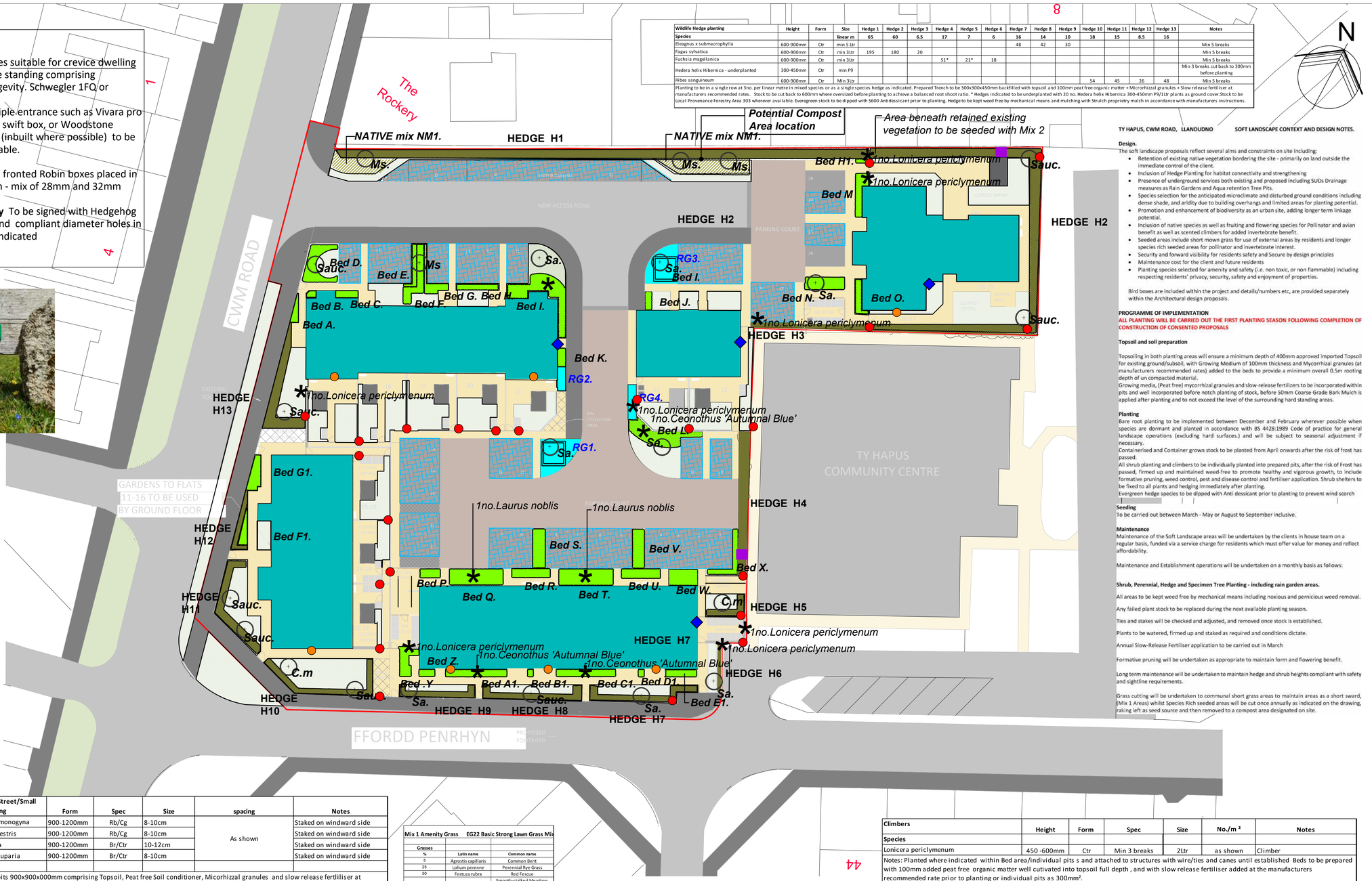
DRAWN LG	CHECKED LI	PASSED EPW	
DATE 05.09.24	DATRYS REF.		
SCALE AT A1 1:250	AUTOCAD REF. 24168/SK501		
DRAWING No. 24168/SK501	REVISION P3		

ECOLOGY
Notes:
Bat boxes 4x boxes suitable for crevice dwelling bats, Inbuilt or free standing comprising woodcrete for longevity. Schwegler 1FQ or equivalent.
Swift boxes - multiple entrance such as Vivara pro Madrid, Schwegler swift box, or Woodstone invisible swift box. (inbuilt where possible) to be placed high near gable.

Robin Boxes open fronted Robin boxes placed in cover in vegetation - mix of 28mm and 32mm round hole boxes
Hedgehog highway To be signed with Hedgehog Highway signage and compliant diameter holes in fencing routes as indicated

Wildlife Hedge planting	Height	Form	Size	Hedge 1	Hedge 2	Hedge 3	Hedge 4	Hedge 5	Hedge 6	Hedge 7	Hedge 8	Hedge 9	Hedge 10	Hedge 11	Hedge 12	Hedge 13	Notes
Species			linear m	65	60	6.5	17	7	6	16	14	10	18	15	8.5	16	
Elaegnus x submacrophylla	600-900mm	Ctr	min 5 ltr							48	42	30					Min 5 breaks
Fagus sylvatica	600-900mm	Ctr	min 3ltr	195	180	20											Min 5 breaks
Fuchsia magellanica	600-900mm	Ctr	min 3ltr				51*	21*	18								Min 5 breaks
Hedera helix Hibernica - underplanted	300-450mm	Ctr	min P9														Min 3 breaks cut back to 300mm before planting
Ribes sanguineum	600-900mm	Ctr	Min 3ltr										54	45	26	48	Min 5 breaks

Planting to be in a single row at 3no. per linear metre in mixed species or as a single species hedge as indicated. Prepared Trench to be 300x300x450mm backfilled with topsoil and 100mm peat free organic matter + Microrhizzal granules + Slow release fertiliser at manufacturers recommended rates. Stock to be cut back to 600mm where oversized before planting to achieve a balanced root shoot ratio. * Hedges indicated to be underplanted with 20 no. Hedera helix Hibernica 300-450mm P9/1Ltr plants as ground cover.Stock to be Local Provenance Forestry Area 303 wherever available. Evergreen stock to be dipped with S600 Antidessicant prior to planting. Hedge to be kept weed free by mechanical means and mulching with Strulch proprietry mulch in accordance with manufacturers instructions.



Key

- Site Boundary
- Proposed dwellings - refer to Architects drawings for details
- Proposed Hardstanding - refer to Architects drawings for details

Proposed Planting

- Proposed Specimen tree (species as indicated within schedules)
- Proposed Specimen tree Aqua Pit (species as indicated within schedules)
- Proposed Low Shrub& Perennial Pollinator planting (species as indicated)
- RG1 Proposed Raingarden Planter (species as indicated - see note below)
- Proposed Permeable paving
- Short mown Garden amenity grass seeded areas Mix 1 (species as indicated)
- Proposed Hedge (species as indicated)
- Proposed Native Tree and Shrub Mix planting Mix NM1 (species as indicated)
- Specimen Shrub/Climber (species as indicated)

Proposed additional Biodiversity Mitigation

- Proposed Hedgehog Hole (Highway route)
- Proposed Swift Box - see drawing for details
- Proposed Bat Box - see drawing for details
- Proposed Robin Box - see drawing for details

TY HAPUS, CWM ROAD, LLANDUDNO SOFT LANDSCAPE CONTEXT AND DESIGN NOTES.

Design.
The soft landscape proposals reflect several aims and constraints on site including:

- Retention of existing native vegetation bordering the site - primarily on land outside the immediate control of the client.
- Inclusion of Hedge Planting for habitat connectivity and strengthening
- Presence of underground services both existing and proposed including SUDs Drainage measures as Rain Gardens and Aqua retention Tree Pits.
- Species selection for the anticipated microclimate and disturbed ground conditions including dense shade, and aridity due to building overhangs and limited areas for planting potential.
- Promotion and enhancement of biodiversity as an urban site, adding longer term linkage potential.
- Inclusion of native species as well as fruiting and flowering species for Pollinator and avian benefit as well as scented climbers for added invertebrate benefit.
- Seeded areas include short mown grass for use of external areas by residents and longer species rich seeded areas for pollinator and invertebrate interest.
- Security and forward visibility for residents safety and Secure by design principles
- Maintenance cost for the client and future residents
- Planting species selected for amenity and safety (i.e. non toxic, or non flammable) including respecting residents' privacy, security, safety and enjoyment of properties.

Bird boxes are included within the project and details/numbers etc, are provided separately within the Architectural design proposals.

PROGRAMME OF IMPLEMENTATION
ALL PLANTING WILL BE CARRIED OUT THE FIRST PLANTING SEASON FOLLOWING COMPLETION OF CONSTRUCTION OF CONSENTED PROPOSALS

Topsoil and soil preparation

Topsoiling in both planting areas will ensure a minimum depth of 400mm approved imported Topsoil for existing ground/subsoil, with Growing Medium of 100mm thickness and Mycorrhizal granules (at manufacturers recommended rates) added to the beds to provide a minimum overall 0.5m rooting depth of un compacted material.
Growing media, (Peat free) mycorrhizal granules and slow-release fertilizers to be incorporated within pits and well incorporated before notch planting of stock, before 50mm Coarse Grade Bark Mulch is applied after planting and to not exceed the level of the surrounding hard standing areas.

Planting
Bare root planting to be implemented between December and February wherever possible when species are dormant and planted in accordance with BS 4428:1989 Code of practice for general landscape operations (excluding hard surfaces.) and will be subject to seasonal adjustment if necessary.
Containerised and Container grown stock to be planted from April onwards after the risk of frost has passed.
All shrub planting and climbers to be individually planted into prepared pits, after the risk of Frost has passed, firmed up and maintained weed-free to promote healthy and vigorous growth, to include formative pruning, weed control, pest and disease control and fertiliser application. Shrub shelters to be fixed to all plants and hedging immediately after planting.
Evergreen hedge species to be dipped with Anti dessicant prior to planting to prevent wind scorch

Seeding
To be carried out between March - May or August to September inclusive.

Maintenance
Maintenance of the Soft Landscape areas will be undertaken by the clients in house team on a regular basis, funded via a service charge for residents which must offer value for money and reflect affordability.

Maintenance and Establishment operations will be undertaken on a monthly basis as follows:

Shrub, Perennial, Hedge and Specimen Tree Planting - including rain garden areas.

All areas to be kept weed free by mechanical means including noxious and pernicious weed removal.

Any failed plant stock to be replaced during the next available planting season.

Ties and stakes will be checked and adjusted, and removed once stock is established.

Plants to be watered, firmed up and staked as required and conditions dictate.

Annual Slow-Release Fertiliser application to be carried out in March

Formative pruning will be undertaken as appropriate to maintain form and flowering benefit.

Long term maintenance will be undertaken to maintain hedge and shrub heights compliant with safety and sightline requirements.

Grass cutting will be undertaken to communal short grass areas to maintain areas as a short sward, (Mix 1 Areas) whilst Species Rich seeded areas will be cut once annually as indicated on the drawing, raking left as seed source and then removed to a compost area designated on site.

NOTES:
1.Proposals based upon layout provided within Ainsley Gommon Architects Proposed Site Layout Option 5 Drawing Ref: C1054 0014 Rev K dated 07.03.25. Drawing issued for Planning purposes only - not for tendering.
3. Ecological and Drainage reporting provided separately.
4..All fencing to have compliant Hedgehog Holes and signage as indicated .
5. Bat Bird and Hedgehog House types as detailed within Architects proposals.
6.* All Species Rich seeded areas to have 400mm short mown edging to adjacent paths and areas of hardstanding/walls etc.
7. Drainage proposals -including Rain garden planters to Downpipes detailed within Waterco-Datrys Drainage Scheme (provisional) Drawing Ref :24168/SK501 Rev 4 dated 14.03.25

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0m 4m 8m 12m 16m 20m

Scale 1:250 @ A1

Native - N	Code	Specimen Street/Small Tree planting	Form	Spec	Size	spacing	Notes
N	**Cm**	Crataegus monogyna	900-1200mm	Rb/Cg	8-10cm	As shown	Staked on windward side
N	**Ms**	Malus sylvestris	900-1200mm	Rb/Cg	8-10cm		Staked on windward side
N	**Sauc**	Sorbus aria	900-1200mm	Br/Ctr	10-12cm		Staked on windward side
N	**Sauc**	Sorbus aucuparia	900-1200mm	Br/Ctr	8-10cm		Staked on windward side

Trees to be planted into prepared pits 900x900x000mm comprising Topsoil, Peat free Soil conditioner, Micorhizzal granules and slow release fertiliser at Manufacturers recommended rates.*Where existing boundary vegetation is retained and planting is amongst/close to retained vegetation - planting positions to be adjusted accordingly to underplant and promote long term establishment. All extraeneous material to be removed from pits. Stock to be Local Provenance Forestry Area 303 where available.

Mix 1 Amenity Grass	EG22 Basic Strong Lawn Grass Mix
Grasses	
%	Latin name / Common name
5	Agrostis capillaris — Common Bent
25	Lolium perenne — Perennial Rye Grass
50	Festuca rubra — Red Fescue
20	Poa pratensis — Smooth-stalked Meadow-grass
100	
Sowing rates	

Climbers	Height	Form	Spec	Size	No./m ²	Notes
Species						
Lonicera periclymenum	450 -600mm	Ctr	Min 3 breaks	2Ltr	as shown	Climber

Notes: Planted where indicated within Bed area/individual pits s and attached to structures with wire/ties and canes until established Beds to be prepared with 100mm added peat free organic matter well cutivated into topsoil full depth , and with slow release fertiliser added at the manufacturers recommended rate prior to planting or individual pits as 300mm².

Native tree and shrub planting - Mix NM1	Height	Form	Size	%mix	Spacing	Notes
Species						
Corylus avellana	450-600mm	Br	2+0	40	0.8/m²	Min 3 breaks
Crataegus mongyna	450-600mm	Br	2+0	40	0.8/m²	Min 3 breaks
Rosa canina	450-600mm	Br	1+1	15	0.8/m²	Min 3 breaks
Sorbus aria	450-600mm	Br	2+0	5	0.8/m²	
Sorbus aucuparia	450-600mm	Br	2+0	5	0.8/m²	

Planting to be a 1.5m centres into prepared pits in staggered rows max. no in groups of the same species to be 7. Pits to be 300x300x300mm backfilled with topsoil and 100mm organic matter + Microrhizzal granules + Slow release fertiliser at manufacturers recommended rates.NOTES: Stock to be local provenance (Forestry Area 303-where available) to be planted into prepared ground comprising well incorporated compost and slow release fertiliser - Enmag or equivalent at manufacturers recommended rate. All stock to be fitted with proprietry biodegradeable tree and shrub shelters - Tubex or equivalent immediately after planting. Shelters to be removed after 4-5 years dependant upon growth rates. Preparation and planting to be carried out between December - March seasonally dependant.

Species Rich Seeded areas MANAGEMENT NOTES:

Species Rich seeded Areas to be cut once (late July - August) or twice (February) per year, to a minimum height of 100mm. The cuttings should be left for 2no. weeks to seed before collection The cuttings to be piled in designated compost area within the site. A small area to be left uncut annually to provide for wintering insects; rotated each year.
N.B. Species rich grassland areas will be managed under meadow management specifications.

Perennial /Low Shrub pollinator based planting Numbers/area	Form	Size	Density/m²		Bed A	Bed B	Bed C	Bed D	Bed E	Bed F	Bed G	Bed H	Bed I	Bed J	Bed K	Bed L	Bed M	Bed N	Bed O	Bed P	Bed Q	Bed R	Bed S	Bed T	Bed U	Bed V	Bed W	Bed X	Bed Y	Bed Z	A1	D1	C1	D1	E1	F1	G1	H1
				M²	4.5	1	9.5	2.5	3	7.5	7.5	4	15	1.8	2.5	15.3	7.5	7.5	5.5	2.5	12	5.5	7.5	12	5.5	7.5	6.8	8	6.6	1	6.5	1	6.5	1	4	3	5.5	2.5
Berberis thunbergii f. atropurpurea 'Bagatelle	2Ltr	300-450mm	6																9			20			20			24										
Brachyglottis Sunshine	2Ltr	450-600mm	3				9					12	12			9		18					24			24												
Ceonothus 'Autumnal Blue' (SPECIMEN PLANT)	10Ltr	900-1200mm	as shown																												1		1					
Cornus alba Elegantissima	2Ltr/Br	600-900mm	3										3			3		5																		8		
Euonymus f. Harlequin	2Ltr	450-600mm	5				8						15															15										
Fuchsia magellanica	3Ltr	600-900mm	3													6					18			18			12									9		
Gaultheria procumbens	1Ltr	300-450mm	6												15						36	12		36	12		30	24										
Geranium Roxanne	P9/1Ltr	300-450mm	6		18			15					18	16		24																				18		
Lavandula angustifolia	2Ltr	450-600mm	8			8	16		24							12	56		44	8								22	8	24	8	24	8	16			20
Laurus noblis (SPECIMEN PLANT)	10Ltr	900-1200mm	as shown																		1			1													
Rosa Frau Dagmar Hastrup	2Ltr/BR	450-600mm	3				9			23			12			12														12		12		6				
Spirea japonica Goldflame	2Ltr	450-600mm	4																																			
Verbena bonariensis	2Ltr	450-600mm	3		5																																	
Viburnum opulus compactum	2Ltr	450-600mm	3								23																											

Beds to be topsoiled with min 600mm depth of soil Cultivation of top 300mm comprising topsoil, with 100mm added well incorporated Peat free Rooting medium, Micorhizzal additive and slow release fertiliser at manufacturers recommended rate. Stock to be planted in blocks of single species evenly spaced as set out on site. Minimum 50mm coarse grade bark mulch applied after planting.

v3	PW	JB	JB	14/03/25
v2	PW	JB	JB	11/03/25
v1	PW	JB	JB	05/11/24
Issue	Drawn	Checked	Approved	Date

Tirlun Barr
Chartered Landscape Architecture
Tan y Berllan, Llanbedr y Cennin, Conwy, LL32 8UY
Tel Office :01492 650333
www.tirlunbarr.com

Client
First Choice Housing and Grŵp Cynefin

Project Title
Cwm Road, Llandudno

Drawing Title
Soft Landscape and Ecological Mitigation Proposals

16/024/PP/01

Size	Scale	Issue
A1	1:250	v3