

Ty Menyn, Swansea
Coastal Housing

Green Infrastructure Statement

Document Ref: 2490001-SBC-00-XX-RP-L-003-P01

Date: 06th November 2024

1. Context

- 1.1. As part of the development process, the existing Green Infrastructure (GI) asset has been assessed through landscape desktop and site survey, and the context of the site in its wider GI network, and within the policy framework within Wales and Swansea and in particular the updated Chapter 6 of PPW 12. The following statement reports on the iterative GI process and how it has influenced the design approach, focusing on avoiding and minimising impacts and the GI benefits that development can contribute to the site, with regard to enhancement and management.

Definition of Green Infrastructure

- 1.2. The term ‘Green Infrastructure’ first came to prominence in the early 2000’s most notably in the Landscape Institute Position Statement ‘Green Infrastructure An integrated approach to land use’ (2009). This document defined Green Infrastructure as.

‘The network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect villages, towns and cities. It is a natural, service-providing infrastructure that is often more cost effective, more resilient and more capable of meeting social, environmental and economic objectives than ‘grey’ infrastructure.’

GI Functions are described as the:

‘roles that assets can play if planned, designed and managed in a way that is sensitive to, and includes provision for, natural features and ecosystems services. They may have obvious primary functions, but each asset can perform different functions simultaneously – ‘multifunctionality.’

Future Wales: The National Plan 2014

Policy 9 – Resilient Ecological Networks and Green Infrastructure

- 1.3. “To ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure, the Welsh Government will work with key partners to:
- identify areas which should be safeguarded and created as ecological networks for their importance for adaptation to climate change, for habitat protection, restoration or creation, to protect species, or which provide key ecosystems services, to ensure they are not unduly compromised by future development; and
 - identify opportunities where existing and potential green infrastructure could be maximised as part of placemaking, requiring the use of nature-based solutions as a key mechanism for securing sustainable growth, ecological connectivity, social equality and well-being.
- 1.4. Planning authorities should include these areas and/or opportunities in their development plan strategies and policies in order to promote and safeguard the functions and opportunities they provide. In all cases, action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit), the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment.”
- “As part of a green infrastructure assessment, broad opportunities for habitat protection, restoration or creation and the provision of green infrastructure may be specified as part of identifying areas to be safeguarded or may take the form of more specific allocations. This may be achieved, for example,

through the provision of buffer areas around protected sites or stepping stones connecting habitats or through the identification of green infrastructure in and around urban areas.”

Planning Policy Wales 2024 (Edition 12)

- 1.5. “Green infrastructure plays a fundamental role in shaping places and our sense of well-being, and is intrinsic to the quality of the spaces we live, work and play in. The planning system must maximise its contribution to the protection and provision of green infrastructure assets and networks as part of meeting society’s wider social and economic objectives and the needs of local communities. Taking a proactive and spatial approach, which links to wider activity being taken by local authorities to protect and provide green infrastructure, will help provide clarity around the contribution which the planning system can make. This means considering how it complements existing and future maintenance and management regimes within urban areas and contributes towards wider land management activities in rural areas to aid nature recovery, and its underpinning natural resources. This will require effective joint working and collaboration across various sectors and activities, including administrative boundaries. Establishing arrangements to promote collaboration across local authority borders will be necessary, especially where the provision of off-site compensatory land to address biodiversity loss and provide enhancement will have the greatest benefit for biodiversity and resilient ecological networks.”
- 1.6. “The quality of the built environment should be enhanced by integrating green infrastructure into development through appropriate site selection and use of creative design. With careful planning and design, informed by an appropriate level of assessment, green infrastructure can embed the benefits of biodiversity and ecosystem services into new development and places, help to overcome the potential for conflicting objectives, and contribute to health and well-being outcomes.”
- 1.7. Chapter 6 of PPW states *‘All reasonable steps must be taken to maintain and enhance biodiversity and promote the resilience of ecosystems and these should be balanced with the wider economic and social needs of business and local communities’*

Swansea Local Development Plan 2010-2015

Policy ER 2: Strategic Green Infrastructure Network

- 1.8. “Green Infrastructure will be provided through the protection and enhancement of existing green spaces that afford valuable ecosystem services. Development that compromises the integrity of such green spaces, and therefore that of the overall Green Infrastructure network, will not be permitted. Development will be required to take opportunities to maintain and enhance the extent, quality and connectivity of the County’s multi-functional Green Infrastructure network, and where appropriate:
 - i. Create new interconnected areas of Green Infrastructure between the proposed site and the existing strategic network.
 - ii. Fill gaps in the existing network to improve connectivity; and
 - iii. In instances where loss of Green Infrastructure is unavoidable, provide mitigation and compensation for the lost assets.”
- 1.9. “Green Infrastructure is the network of multifunctional green and blue spaces, corridors and environmental features which surround, thread through, shape and help form settlements and the wider countryside. Many Green Infrastructure features such as green roofs, SuDS, and green walls can provide benefits beyond their primary functions.”
- 1.10. “The County supports a wealth of Green Infrastructure assets that together comprise the strategic network, which is illustrated, in a simplistic form in Appendix 9. Green Infrastructure should be regarded as a single resource to be safeguarded, enhanced and managed to deliver a wide range of environmental, economic and quality of life benefits for the community. To this end development proposals will be expected to conserve and enhance existing Green Infrastructure. Such schemes will be of an appropriate size, type and standard to

ensure no fragmentation or loss of connectivity. In some instances, it may be necessary to create new Green Infrastructure and create connections to the existing Green Infrastructure network.”

Policy ER 9: Ecological Networks and Features of Importance for Biodiversity

- 1.11. “Development proposals will be expected to maintain, protect and enhance ecological networks and features of importance for biodiversity. Particular importance will be given to maintaining and enhancing the connectivity of ecological networks which enable the dispersal and functioning of protected and priority species.
- 1.12. Development proposals that could result in an adverse effect on the connectivity of ecological networks and features of importance for biodiversity will only be permitted where:
 - i. The need for the development outweighs the nature conservation value of the site.
 - ii. It can be demonstrated that there is no satisfactory alternative location for the development.
 - iii. A functional connected element of the natural resource is retained as part of the design
 - iv. of the development; and
 - v. Compensatory provision will be made of comparable or greater ecological value to that lost as a result of the development.”

Biodiversity and Development (SPG)

- 1.13. The below figure sets out the key ecological features which should be maintained and enhanced in order to contribute to the resilience of local biodiversity in Swansea. Each is considered a highly significant green infrastructure asset, and together they comprise Swansea’s Green Infrastructure Network.

- ♣ **International and National Designated Sites** Ramsars, SACs, SPAs, NNRs
- ♣ **Priority habitats and Priority species** (section 7 of the Environment (Wales) Act 2016) (the S7 list)
- ♣ **Habitats that provide green corridors or stepping-stones** across the landscape and urban area, such as pocket woodlands, hedgerows or networks of ponds. Ecological connectivity allows species to forage, migrate, colonise new areas and respond to habitat and climate change.
- ♣ **Locally designated sites** designated for their nature conservation importance (SINCs/LNRs)
- ♣ **The wider landscape**, that can provide important complementary habitat and act as a buffer protecting priority habitats from the adverse impacts of developed areas and associated activities and have potential for biodiversity enhancement or habitat creation. They are also important in maintaining habitat connectivity.
- ♣ **Trees, Hedgerows and Woodland** This includes both the trees themselves and species and habitats that comprise hedgerow and woodland ecosystems (See Trees, Hedgerows and Woodland on Development Sites SPG)

2. GI Approach

- 2.1. The stepwise approach set out in PPW 12 (page 148 figure 12) has been implemented as part of this project. The following is a summary of this stepwise approach.

Avoid

To avoid damage to biodiversity and ecosystem functioning.

Minimise

Alternative sites that would result in less harm, no harm or gain are to be fully considered to minimise the any harmful environment effects.

Mitigate / Restore

‘...ensure that features and elements of biodiversity or green infrastructure value are retained on site and enhanced or created wherever possible.’

Compensate on-site

Onsite compensation must be sought when all other options have been exhausted.

Compensate off-site

Offsite compensation must be sought when all other options have been exhausted.

Long Term Management

Long Term Management of retained and new GI assets to secure enhancement.

3. Project Description

- 3.1. The proposed development is for the conversion and roof top extension of the former Ty Gwalia Building, Swansea, to provide residential apartments over five floors with ground floor office space.
- 3.2. The existing Ty Gwalia Building covers the full extent of the development site with only small internal courtyards and alley way undeveloped. Therefore, there is not considered to be any existing green infrastructure within the proposed development site. As shown on the drawing *249001-SBC-00-XX-DR-L-201 Green Infrastructure Context Plan*, the closest existing Green Infrastructure elements to the development site are the trees and soft landscaped verges to the opposite side of Newton Street, which connect east-west and south with the wider Green Infrastructure corridors of central Swansea.
- 3.3. The proposed development seeks to introduce Green Infrastructure elements into the proposed building. As there is no external space at ground level within the proposed development, these include a green roof on the fourth floor and part of the third, along with a full height living green wall within the semi-enclosed central atrium. These are shown on drawing *2490001-SBC-00-XX-DR-L-401 Strategic Soft Landscape Plan*.

Avoid

- 3.4. As there is not considered to be any existing Green Infrastructure on the site, there is no potential to damage the biodiversity and ecosystem of the site through its removal and therefore avoidance is not required.

Minimise

- 3.5. As there is not considered to be any existing Green Infrastructure on the site, there is no potential to cause harmful environmental effects through its removal and therefore minimising its removal is not required.

Mitigate / Restore

- 3.6. As there is not considered to be any existing Green Infrastructure on the site, there is no Green Infrastructure to be removed and therefore mitigated. The project does however seek to create new Green Infrastructure through the inclusion of green roofs and a living green wall. The introduction of these features within this development will strengthen the Green Infrastructure provision at this important junction between the green corridors east-west along St Helen’s Road and The Kingsway and the north-south green corridor along Dillwyn Street.

Compensate on-site/Enhancements

- 3.7. As there is not considered to be any existing Green Infrastructure on the site, there is no Green Infrastructure to be removed and therefore no need for compensation, however GI enhancements are proposed which will represent beneficial enhancement outcomes, addressed in the section 4.0 text below.

Compensate off-site

- 3.8. As there is not considered to be any existing Green Infrastructure on the site, there is no Green Infrastructure to be removed and therefore no need for compensation.

Long Term Management

- 3.9. The long term management strategy for the landscape associated with the proposed development is to promote the establishment and long term health of the planting, ensuring a successful and diverse habitat is created allowing for a vibrant ecosystem to thrive.
- 3.10. The living green wall is to be managed primarily for its aesthetics and amenity value, benefits the environment for residents and providing a direct connection with nature and natural processes. These will also include some micro-climate moderation within the internal atrium. This will be achieved through a maintenance regime to encourage fresh growth and flowering, along with the removal of dead foliage to ensure a year round attractive display of colour and texture. This management strategy is to be finalised and detailed once the plant species have been selected as part of the specialist detail design.
- 3.11. The management of the green roof will be structured to promote species diversity and aiming to achieve the highest ecological and biodiversity benefits possible. This is to be achieved through a traditional annual meadow cut once the meadow has gone to seed, along with spring cuts as required to control the grass species growth. This management strategy is to be finalised and detailed once the meadow species have been selected as part of the specialist detail design.

4. SAB

- 4.1. The Green Infrastructure landscape elements proposed with this development are to also provide water management functions as set out within the SAB application. These include hydraulic control through the management of rainwater at source and reducing discharge rates, improving water quality through the natural substrate filtration. These also include enhancing both amenity value and biodiversity within the scheme as set out within this GI statement.

5. Urban Greening Factor

- 5.1. The proposed development has been designed to maximise its achievable Urban Greening Factor as assessed using the Swansea Green Space Factor Tool, a tool used to measure the quantity and function of green infrastructure. Along with meeting the required quantity and function, the green infrastructure proposed as part of the development will provide a quality feel and appearance which will link with the neighbouring recent developments in this area of the city. The two features incorporated into the proposed development to provide urban greening are a living green wall within the central atrium and green roof covering as much of the available roof as possible.

Living Green Wall

- 5.2. To maximise the Urban Greening Factor a significant five story high living green wall has been incorporated within the central atrium of the building. This will provide health and wellbeing benefits to the buildings' residents and users, provide a habitat for insects and create a defining, high quality, feature within the development.

Green Roof

- 5.3. A green roof is to be created on the building third and fourth floor roofs. This green roof is to incorporate a substrate with a minimum depth of 150mm and sustain the growth of a diverse sedum planting typology. This will provide an important habitat and food source for both insects and birds within this highly developed area of central Swansea. The green roof will also provide an element of visual interest and softening when viewed from above from the taller neighbouring buildings.

6. Summary of Project Benefits

- 6.1. As highlighted throughout this statement, the landscape green infrastructure proposed with this development will provide several benefits both to users and residents of the development and the wider local environment.
- 6.2. These benefits include.
- Creating new ecosystems and habitats for wildlife through the inclusion of diverse planting both within the wildflower meadow green roof and the planted living green wall, improving the biodiversity of the site.
 - Reducing the heat island effect by reducing the area of hard surfacing through the inclusion of the green roof, helping the development adapt to climate change and improving the immediate micro-climate.
 - Improving water quality through the filtration of rainwater through the green roof substrates and air quality through plant respiration, removing pollutants, bath gasses and particulates, from the environment.
 - Providing visual amenity both to users and residents of the development experiencing the living green wall, and neighbouring resident viewing the green roof, intern providing mental health and wellbeing improvements.
- 6.3. Each of these benefits, will in combination, improve the economic value within the local area through the improved visual and environmental quality, encouraging further investment within this area of the city.

7. Conclusion

- 7.1. The proposed development will result in a significant improvement in the Green Infrastructure value of the site through both a quantity and quality increase. The biodiversity of the site will be improved through the introduction of diverse species planting and the creation of new habitats, which in turn will provide visual amenity benefits for the users and residents of the development and neighbouring users. The GI proposals for the site will increase the connectivity of the existing green corridors within this part of the city strengthening this junction between two key corridors. This will there result in potential benefits beyond the boundaries of the development site.
- 7.2. The management of the proposed landscape GI elements will promote the establishment and long term health of the planting, ensuring a successful and diverse habitat is created allowing for a vibrant ecosystem to thrive while providing a year round attractive display of colour and texture.



- Key**
- Red Line Boundary
 - Existing Significant GI
Structural vegetation including trees, shrubs, hedgerows and lawn.
 - ↔ Primary GI Corridor
Linear areas of trees, shrubs and hedgerows which provide habitat for wildlife.

PAC

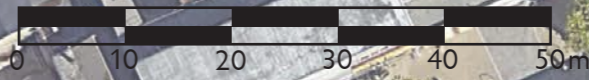
| | | | | |
|------|----------|-------------|-------|----------|
| P01 | 29.10.24 | First Issue | JM | SM |
| Rev. | Date | Comment | Drawn | Approved |

| | | | | |
|-------------|----------|--------|--------|--------------|
| PRELIMINARY | PLANNING | DESIGN | TENDER | CONSTRUCTION |
|-------------|----------|--------|--------|--------------|

soltysbrewster

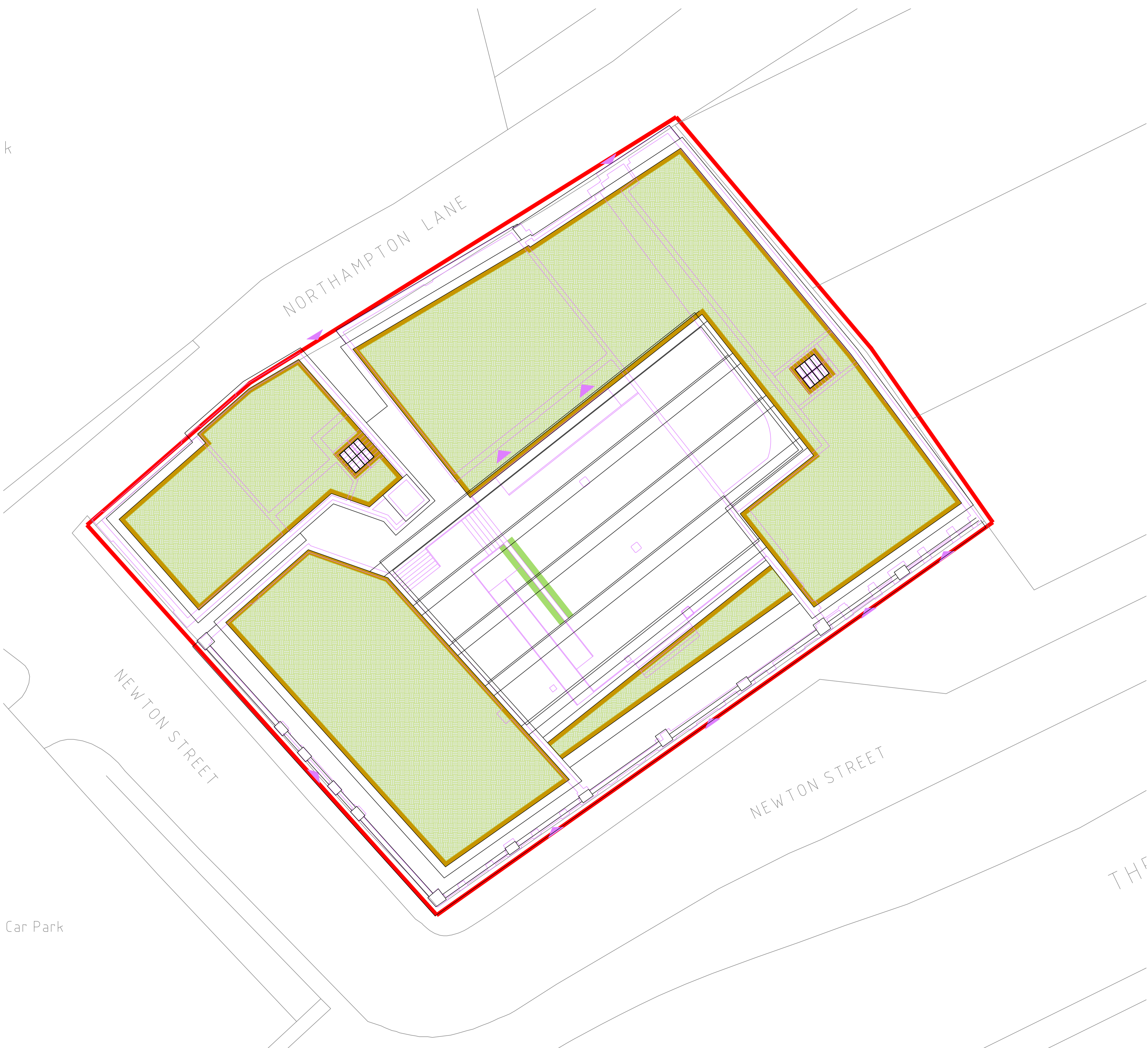
4 Stangate House,
Stangate Road, Penarth, Vale of Glamorgan, CF64 2AA.
Telephone: +44(0) 29 2040 8476
e-mail: enquiry@soltysbrewster.co.uk

| | |
|-----------------------------------|----------|
| o client | |
| Coastal Housing | |
| o project | |
| Ty Menyn, Swansea | |
| o figure title | |
| Green Infrastructure Context Plan | |
| o scale | o drawn |
| o approved | o date |
| NTS@A3 | JM |
| SM | Oct 2024 |
| o figure number | o rev. |
| 2490001-SBC-00-XX-DR-L-101 | P01 |



Soltys Brewster Consulting is the trading name of Soltys Brewster Consulting Ltd. Registered Offices: 4 Stangate House, Stangate Road, Penarth, Vale of Glamorgan, CF64 2AA. Registration No. 6262312. Dimensions should not be scaled from this drawing, only figured dimensions are to be used. All discrepancies or queries regarding this drawing should be referred to Soltys Brewster Consulting Ltd. Soltys Brewster Consulting Ltd accept no liability for any expense, loss or damage of whatever nature and however arising from variation made to this drawing or in the execution of the work to which it relates which has not been referred to them and their approval obtained.

k



- Green Infrastructure Site Plan Key**
- Red Line Development Boundary
 - Proposed Roof Layout
 - Proposed Ground Floor Layout
 - Removed Site Vegetation / GI
 - Retained Site Vegetation / GI
 - Proposed Wildflower Meadow Green Roof
Min. Substrate depth 150mm
 - Proposed Gravel margin to edge of Green Roof
Indicatively shown at 300mm.
 - Potential location for Living Green Wall.
Subject to Fire Regulation confirmation.
Plant Mix / Species to be determined at detail design with specialist supplier.

Car Park

PAC

| | | | | |
|------|----------|---------------------------------------|----------|-------|
| P02 | 08.11.24 | Update to latest architectural layout | SB | SM |
| P01 | 06.11.24 | Issue for PAC | SB | SM |
| Rev. | Date | Comment | Approved | Drawn |

| | | | | |
|-------------|----------|--------|--------|--------------|
| PRELIMINARY | PLANNING | DESIGN | TENDER | CONSTRUCTION |
|-------------|----------|--------|--------|--------------|

soltysbrewster

4 Stangate House
Sawwell Road
Paworth
Vale of Glamorgan
CF84 2AA

Telephone: +44(0)33 0013 0012
e-mail: enquiry@soltysbrewster.co.uk

| | |
|---------------|--------------------------------|
| client | Coastal Housing |
| project | Ty Menyn, Swansea |
| drawing title | Green Infrastructure Site Plan |
| scale | 1:125 @ A1 |
| drawn | SM |
| approved | SB |
| date | Nov 2024 |
| drawing no. | 2490001-SBC-00-XX-DR-L-201 |
| revision | P02 |

Soltys Brewster Consulting is the trading name of Soltys Brewster Consulting Ltd. Registered Office: 4 Stangate House, Sawwell Road, Paworth, Vale of Glamorgan, CF84 2AA. Registration No. 4263132.
Dimensions should not be asked from this drawing, only figured dimensions are to be used. All discrepancies or queries regarding this drawing should be referred to Soltys Brewster Consulting Ltd. Soltys Brewster Consulting Ltd accept no liability for any expense, loss or damage of whatever nature and however arising from variation made to this drawing or in the execution of the work to which it relates which has not been referred to them and their approval obtained.