

# GREEN INFRASTRUCTURE STATEMENT

## SITE LOCATION:

63 Heol Cae Gurwen, Gwaun Cae Gurwen SA18 1HG

## PROPOSAL:

Construction of new first floor rear extension and installation of solar PV arrays, construction of new box dormer extension to rear roof slope and new velux rooflights to front roof slope and alterations to existing shopfront. Conversion of building to provide 9 no. studio flats including retention of existing external yard area for ancillary parking and storage.

## INTRODUCTION:

This proportionate Green Infrastructure Statement (GIS) has been prepared with full regard to the guidance as set out in Chapter 6 of the Planning Policy Wales (Edition 12) in particular, the 'Stepwise Approach' detailed in Paragraph 6.4.21 and Figure 12, that is illustrated below:



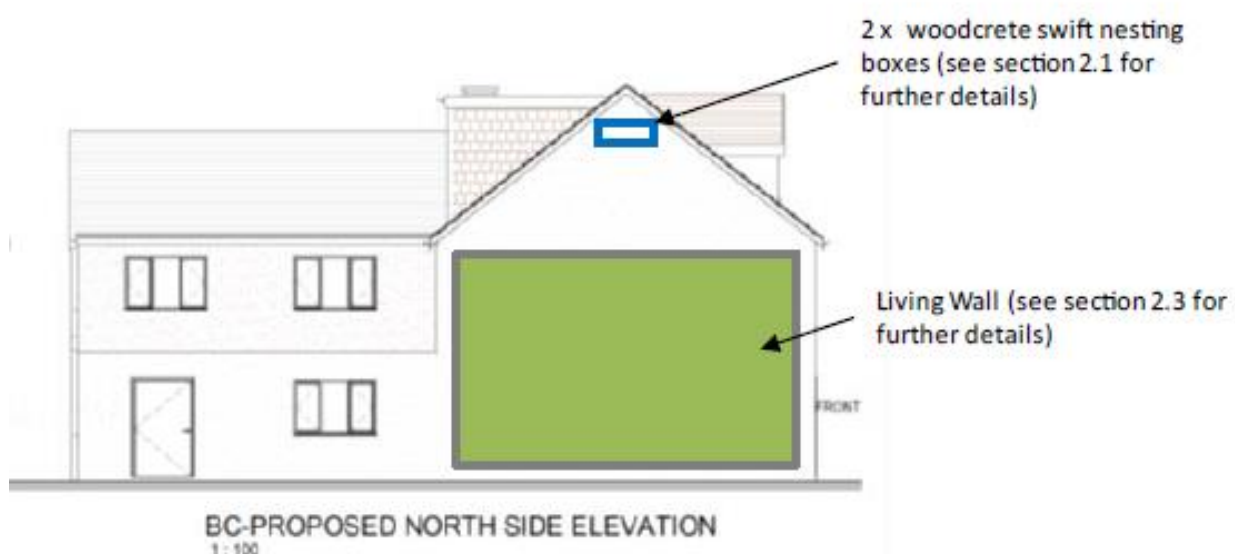
## IDENTIFIED GREEN INFRASTRUCTURE ASSETS (EXISTING)

The proposed site consists of a three-story mixed-use site with a former shop situated facing the main road with no amenity space. A rear ground floor living accommodation (bedsit) and an upper floor flat that one was multi tenanted with no amenity space. The shop had a busy car park that was used for deliveries and retail customers. This was also shared by the live in shop owner and the tenanted flat on the above floor. As a result of the car park, the building contains no soft landscaped areas or other forms of vegetation, and the site is therefore currently devoid of any green infrastructure.

## PROPOSED NEW GREEN INFRASTRUCTURE ASSETS

The proposed application includes provisions for a large green living wall and a bird and bat box to not only enhance the overall appearance of the site but too enhance and the biodiversity with the benefit of capturing carbon and toxic carcinogens from the main road and turning them into clean organic matter. The energy diversity of the building has been enhanced with focusing on using green methods to sustainable energy generation by adding a large PV array to the building and charging solid state heaters. This will reduce the carbon footprint to the building and will allow the storage of generated electricity to solid state heating systems that can be turned and used any time of the day or evening without burning fossil fuels to heat the premises.

The locations of these proposed assets will be visible from the road side when approaching south of the development. In particular the living green wall as figured here



The Bird boxes will be located above the gable end highlighted in blue above the green wall. The assets will be x2 woodcrete swift nesting boxes and will enhance the diverse species in the area.

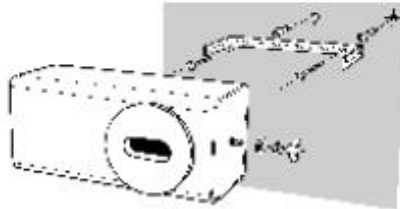


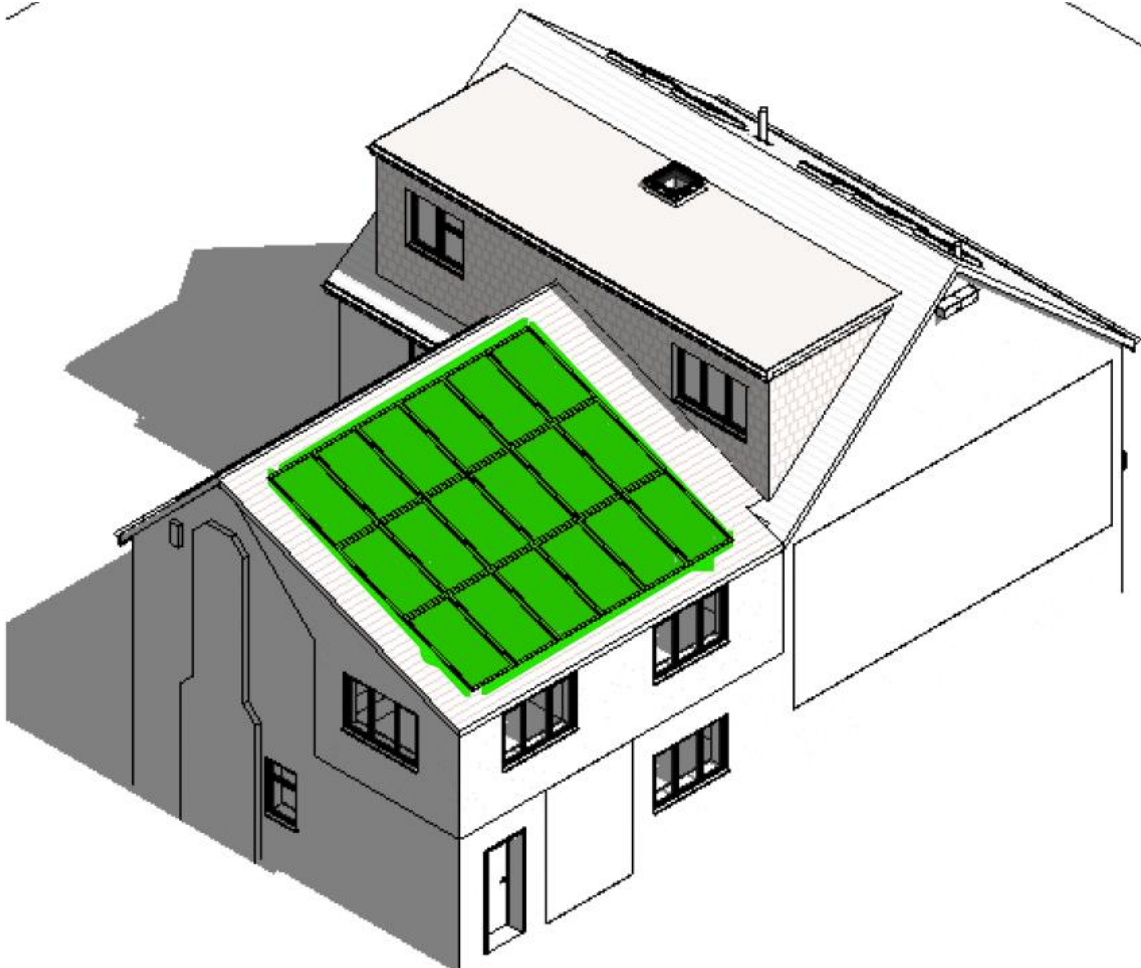
Fig 1 Swift nesting box

The rear assets will include a Crevic roost bat box that will protect bat species and promote nesting and enhance the diversity of the development.





Fig 2



The figure above (highlighted in green) shows the location of the PV array in relation to the new green asset to the development.

## **GREEN INFRASTRUCTURE ASSESSMENT OF THE PROPOSED DEVELOPMENT**

The said application has avoided the loss of any green infrastructure assets and actively promotes the objectives set out in the policies and thus on balance will increase the current level of green infrastructure on site and will inspire others to do the same.

The said set proposal will enhance the developments ecology and biodiversity in line with local policy EN6, SP15 and the technical advice note 5 (Nature conservation and planning 2009). This recommendation will enhance the ecological networks and green infrastructure in the area and will encourage others to do the same. The benefits of recommended enhancements to the biodiversity and the resilience of the ecosystems and protected species habitats. This will create a local environment for local species and promote pollination by a nature-based approach in line with the national planning policy 9 (Resilient Ecological Networks and green infrastructure).

The benefits and presence of the green living wall will create clean oxygen in an urban environment as plants are scarce within and out of the development area, as green walls improve the air quality as the busy road generates a by-product of toxins being proven co-carcinogens from vehicle engines passing on the A474, this natural solution will filter the toxins in the air and convert the carbon dioxide to oxygen. This proposed green infrastructure will improve the air quality as the plants will capture toxins, gases and aerosols and particle matter. This also includes dust particles, improving air around the development and the busy road as just 1m<sup>2</sup> of a living wall extracts 2.3kg of CO<sub>2</sub> per annum from the air and produces 1.7kg of oxygen, while studies have shown that plants and microbes found in their soil absorb harmful VOC's and convert them into compounds which plants feed on. This aligns with the benefits of Policy SP1 climate change, SP2 Health, SP21 built environment and historic heritage, N7 important natural features.

On balance with the rest of the development, the inactive design and use of PV array (Solar panels) to maximise the use of sustainable energy has the potential to zero out the buildings emissions and carbon footprint and enhance the local commitments to climate change in line with Policy SP1 climate change, BE1 Design, EN7 important natural features SP3 Sustainable communities.