Hill Street car park

Newport, NP20 4EN

Design & Access Statement

5 May 2021

www.zedpods.com
@ZEDPods
ZED Pods Limited

CIAT CHARTERED PRACTICE

©2021 ZED PODS Ltd. All rights reserved.

Contents

Section 1.0
Summary

Introduction 3
Summary of the proposal 4
The Brief and Vision 5
Key Innovation 6

Section 2.0
Site & Context Analysis

Site Location 7
Site Assessment 8
Site Analysis 9
Figure Ground, Listed Buildings and Local Positive Contributors 10
Site Surroundings 11
The Site (existing site photos) 12
Street Elevation 13
Protected Views Across the Conservation Area 14
Local Architectural Precedents 15

Section 3.0
Design Development

Design Development 16
The Proposal 17
Block plans 18
Character 19
Site long section 20
Community Safety 21
Access & waste management 22
Landscape Strategy 23
Interior 24
External Finishes 25
Aerial view from South-west 26
Aerial view from North-east 27
Street view from Hill Street 28
Street view from Park Square 29

Section 4.0
Sustainable Construction

Environmental Sustainability 30
Production Capacity 31
Locally Sourced Materials 32
Quality Assurance & Warranty Scheme 33

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
1.0

Introduction

This document covers the design and access components for a pre-planning application for residential development over the Hill Street car park, Newport.

ZED PODs are factory built volumetric homes. The high-quality ZED POD homes are built to higher standards than conventional houses, are super insulated, triple-glazed, with heat recovery ventilation and lots of daylight. The solar panels on the roof and the fabric efficiency is designed to create ultra-low to net-zero carbon homes with the lowest running costs possible. Impact on air quality of the development both during construction and operation is neutral.

The document covers the site assessment, Site Development, Layout, Appearance and Landscaping, Access, Sustainable Construction details, Summary & Scheme benefits.

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
1.1

Summary of the proposal

The proposed development consists of a two storey terraced row of 12 NDSS complaint individually self-contained housing units designed for single tenant occupation. The scheme is designed to achieve Secured-by-Design standards and provide private amenity spaces.

All units are designed to achieve highest standard of building energy efficiency

The mass of the building is located towards the Eastern side of the site retaining 28 of the existing car parking spaces and adding one addtional space to the West.

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
1.2 | # The Brief and Vision

Every person has the right to an ordinary life and a home is a key factor in providing stability and wellbeing. We believe we need to build accommodation that gives residents their own home, a place where they are safe and secure and where they decide who they live with.

There is high demand for housing of all tenures in Newport. This situation has been exacerbated by lockdown which saw letting activities by both social and private landlords stop. There is now a significant backlog of unmet need.

This is an area where Newport City Council would welcome more affordable housing. They have identified that currently just 3% of the housing stock is managed by an RSL. When properties become available for let they are very popular.

Over the last year properties advertised in this area through the housing register attracted an average of 215 bids per property. There are also very few flats — the majority of the stock in this area is terraced housing with flats making up 1% of the existing housing stock.

There are currently 4,208 households registered for single person accommodation on the common housing register Social housing allocations for 1 bedroom accommodation during 2019/2020 amounted to 293 tenancies Newport currently have 247 single people & couples in temporary accommodation with limited move on options 143 people waiting for supported accommodation are classed as homeless. There is very limited accommodation available in Newport for people with mobility issues on the homeless list.

Newport Council has identified that several sites will be needed across the city to accommodate providing both a short and long term basis depending upon the needs of the individual and to cater for cohorts and support models specific to need. This will also allow for people to be placed away from areas that are not able to reside in or where they have encountered difficulties in the past.

The proposed development delivers 12 affordable homes which meet a range of needs with the intention to create a balanced community. It delivers accommodation for single people, couples for Newport residents. The delivery of self-contained single person accommodation is key as research demonstrates the impact that living in shared HMO accommodation has on a person's mental and emotional health as it leads to increased stress, anxiety and depression. We are seeking to deliver social rent self-contained flats for single persons giving each person their own front door.

The scheme will meet Priority 1 of the Homelessness Strategy by increasing the supply of suitable accommodation through the strategic objective of co working between RSL partner and Newport Council.

"We feel that a development in this area could make a significant impact in terms of meeting housing need, especially if MMC were utilised, that would allow properties to become available much more quickly than with traditional building methods.

Michelle Aspey
Housing Strategy Manager

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
1.3

Key Innovation

As detailed, the proposal will meet all the 'Must' and all the 'Should' criteria, and our focused 'WILL Goals'.
ZED Pods key innovation criteria's to include Well-being of **Future Generations (Wales) Act 2015**

The scheme will offer something truly innovative, a first for the city. It brings forward an affordable housing development on a car park to provide innovative flood resilient, beautiful and energy efficient modular housing. Our scheme focuses on innovations in MMC, delivery, low embodied energy, circular economy, zero carbon emissions, youth homelessness & resilience in design.

The scheme has the 7 WFGA Goals at its heart with our focus on CO_2, capital and energy as our WILL goals. We are fully committed to the MUST criteria.

The scheme is aimed at providing 100% affordable housing using measures to reduce both regulated and unregulated CO_2 emissions over the Building Regulations baseline to achieve 'A' ratings. This establishes the development as one of the highest levels of energy performances in social housing in the UK, in line with Welsh Government Decarbonisation Programme — Net zero-carbon / Built to EPC Rating A, it will be an exemplar of sustainable design and construction.

- ☑ Innovating in **Housing Delivery**: 100% affordable, inclusive and low carbon living (WILL Goal: Capital)
- ☑ Innovating in **Design & Layout**: Re-establishing link to encourage active lifestyles (WILL Goal: CO_2/ Energy)
- ☑ Innovating in **MMC**: Off-site volumetric housing (WILL Goal: Capital/CO_2/ Energy)
- ☑ Innovating in **Land Development**: Using a unique approach to bring car park into use for residential development (WILL Goal: Capital/CO_2/ Energy)
- ☑ Innovating in **Sustainability**: High-quality, net zero-carbon, car free development (WILL Goal: Capital / CO_2/ Energy)
- ☑ Innovating in **Regeneration**: Maximising the site value by turning an existing car park into a secured residential development with prescribed amenity spaces and services. (WILL Goal: Capital/CO_2/ Energy)
- ☑ Innovating in **Health & Wellbeing**: Maximising opportunities for cycling, walking and sustainable transport including electric vehicle infrastructure (WILL Goal: Capital/CO_2/ Energy)
- ☑ Innovating in **Architectural Feature**: Upbringing local character and reinforcing safety and security for wider community. (WILL Goal: Capital/CO_2/ Energy)

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
2.0 | Site Location

The location of the application site with distances of key local services and transportation links is shown in the map below.

The site is situated within the outermost boundary of the CE17 St Woolos Conservation area. This area has been designated as 'an area of special architectural or historic interest the character of which it is desirable to preserve or enhance.'

The application site is close to a wide range of shops, services and local amenities, which will minimise the need for residents of the proposed sheltered housing development to own a car, or require the use of a car to reach essential services. Additionally the list is located only 12 minutes walk from Newport train station providing regional public transport links.

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

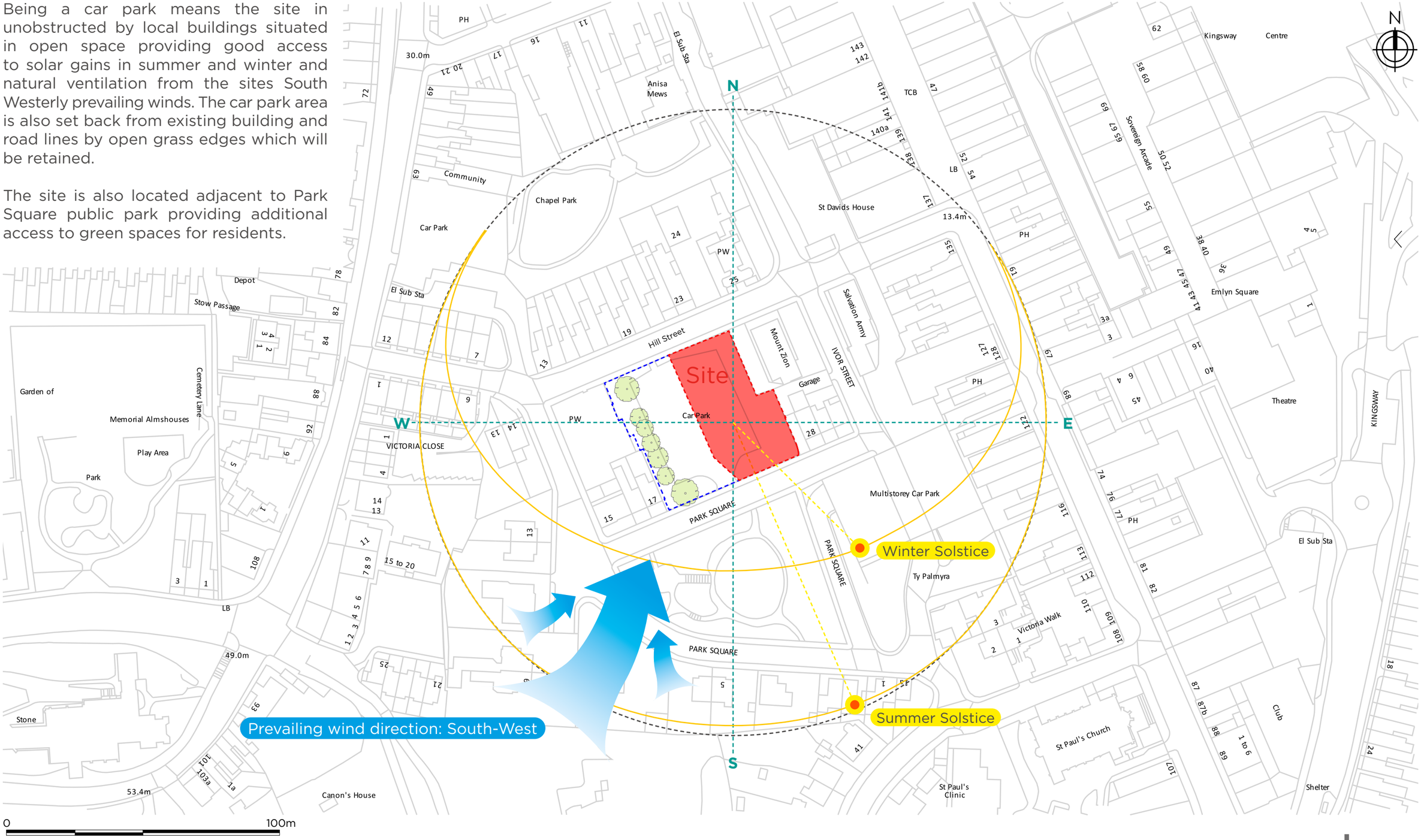
Section
2.1 | **Site Assessment**

Hill street car park is an active public pay and display car park which is owned and operated by Newport City Council.

Being a car park means the site in unobstructed by local buildings situated in open space providing good access to solar gains in summer and winter and natural ventilation from the sites South Westerly prevailing winds. The car park area is also set back from existing building and road lines by open grass edges which will be retained.

The site is also located adjacent to Park Square public park providing additional access to green spaces for residents.

Approx. Site Area
1,424 m²



©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
2.2 | **Site Analysis**

The site is within Rogerstone and Newport West Catchment Area to provide 30% Affordable Housing.

The site is outside Flood Risk Area TAN 15 Zones.

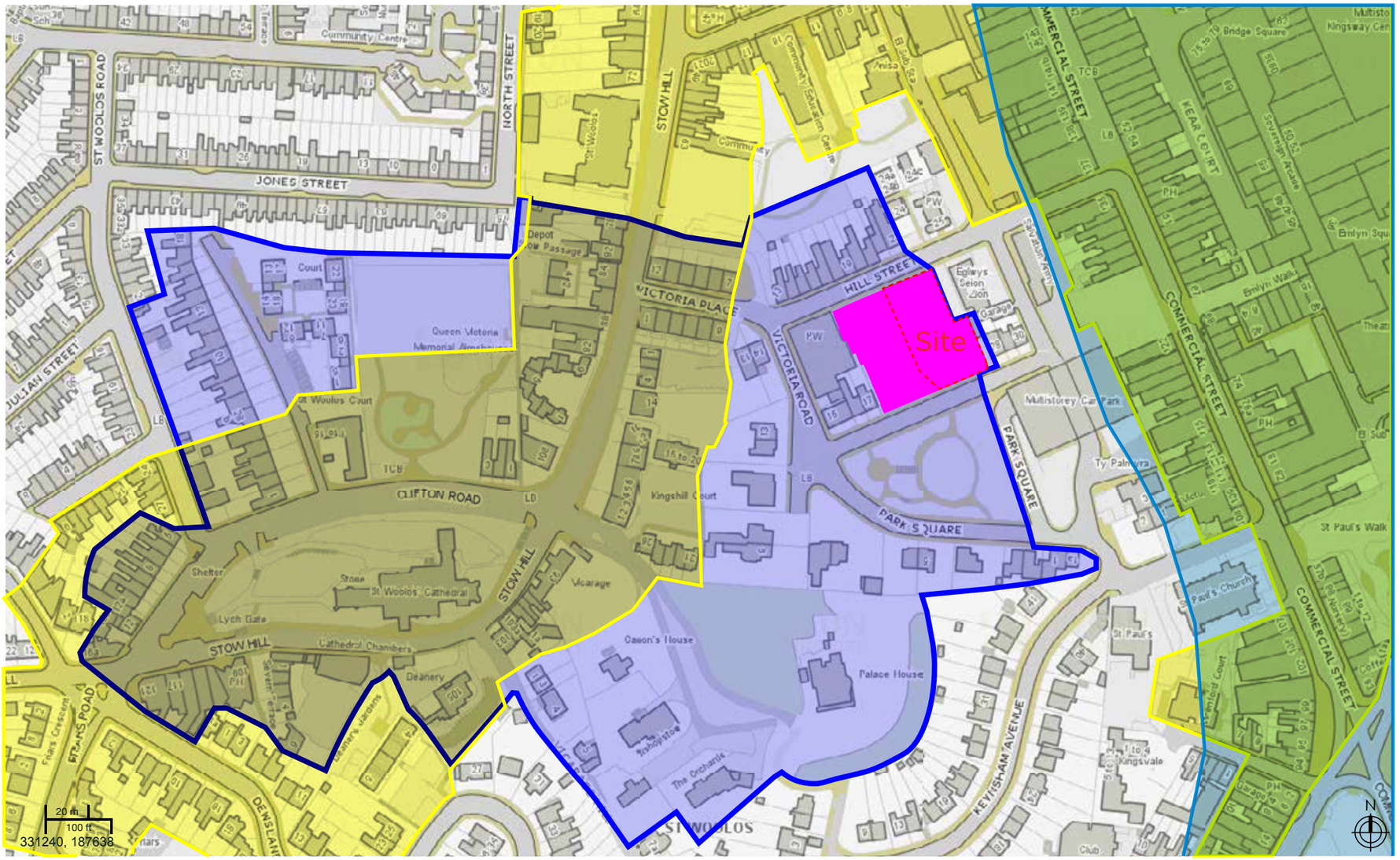
The site is located on the edge of the CE7 St Woolos designated Conservation Area 2020, towards The town centre and is accessible by vehicle from Park Square and on foot from Hill Street.

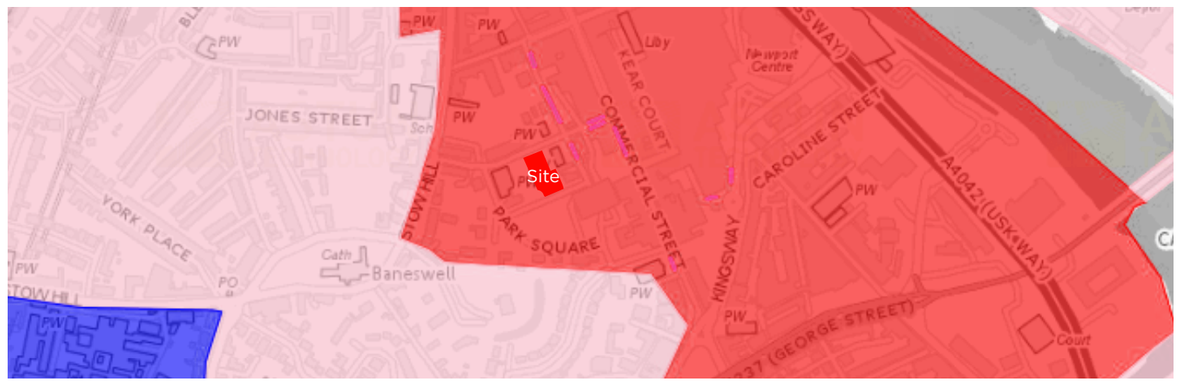
The proposed development will consider all the requirements set out in local planning policy and respect the nature and character of St Woolos.

- It has been designed to preserve or enhance the character of appearance of the Conservation Area, having regard to the Conservation Area appraisal where appropriate.
- Preservation of historical features
- Using materials that are appropriate to the local context.
- Reflecting the architectural qualities of nearby buildings which make a positive contribution to the character of the area.
- The proposed development has been setting with extra attention to avoid the loss of open spaces and impact on significant views towards or outwards from the Conservation Area.

In a 2018 review of the conservation area, the council designated the site as tone suitable for development.

CE7 St Woolos Conservation Area
Flood Risk Area TAN 15 Zone B
Archaeologically Sensitive Area
2018 council site designated for development





Site is located in **Parking Zone 1** (City Core) with good availability of wide range of pubic transport services.

The proposed development is aimed to be a car free development, with secured cycle parking spaces to all residents.

Parking Zone 1
Parking Zone 2

©Crown Copyright. Unauthorised reproduction infringes Crown Copyright. Newport City Council 10024210 (2021)

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
2.3

Figure Ground, Listed Buildings and Local Positive Contributors

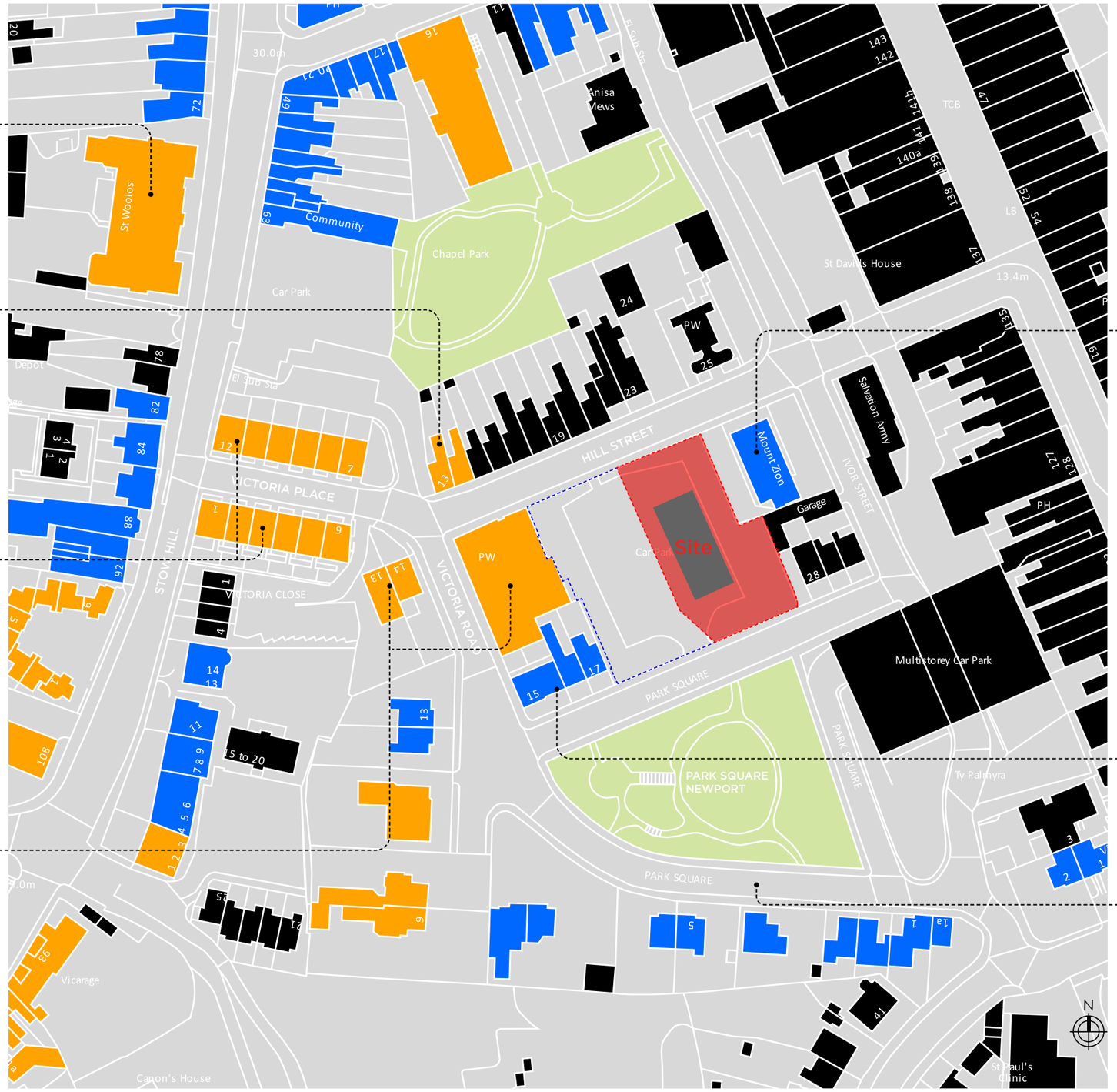
Listed Buildings | Important Green Space | Positive Contributor / Locally Important Buildings | Proposed building footprint

St Woolos Primary School, Stow Hill

13 – 14 Hill Street

Victoria Place: Strongly classical mirrored terraces with stuccoed elevations, ornamental railings and first floor balconies.

Victoria Road: Dominated by the Islamic Centre for Wales, with a pair of polite, semi-detached buildings opposite, with stuccoed elevations and boundary wall with railings.



Hill Street: More modest polite terraced buildings fronting directly onto the north side of the street, with little ornamentation and prominent gable-end chimney stacks

Former Mount Zion Chapel

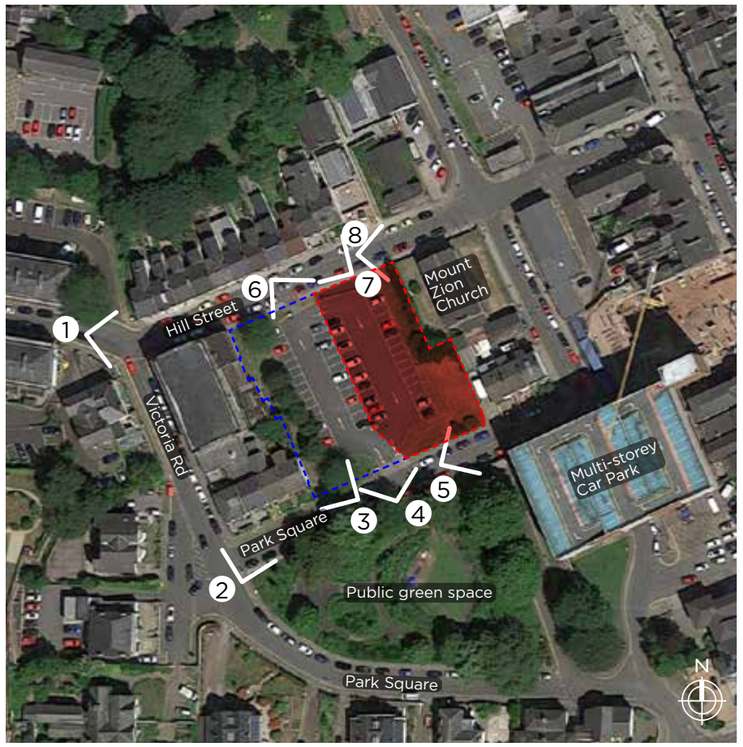
15-17 Park Square

Park Square: Individual or paired villas set within fairly generous plots with front boundary walls, concentrated on the south and west sides, with more modest terraced houses on the north side with ground floor bay windows.

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
2.4 | # Site Surroundings



View at the junction of Victoria Road and Hill Street (above)

View of 15-17 terraced house at Park Square (above)

View of the 17 Park Square showing no window at the gable end (above)

View of existing vehicle entrance at Park Square (above)

View from Park Square towards East (above)

View of existing pedestrian entrance at Hill Street (above)

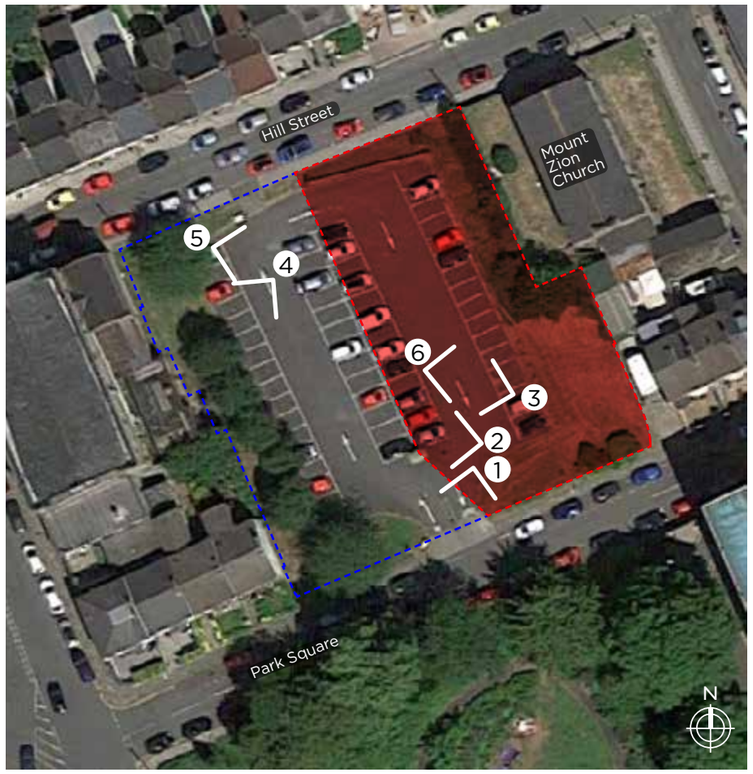
View of 13-23 terraced house at Hill Street (above)

View from Hill Street towards East (above)

E projects@zedpods.com **T** +44 (0) 20 3983 3114

©2021 ZED PODS Ltd. All rights reserved.

Section
2.5 | # The Site (existing site photos)



Existing Car Parking Schedule	
Car parking spaces	62
Incl. Electric car charging bays	6

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
2.6 | Street Elevation

Victoria Place leads onwards into Hill Street and also branches south into Victoria Road and then Park Square. The Hill Street from Victoria Road descends to terminate at a junction with Commercial Street.

Hill Street and Park Square area has a very distinctive topography characterised by the steep incline up from Commercial Street towards the St Woolos Cathedral at its apex.

Steep slope along Hill Street and Park Square offers valuable long views towards River Usk and beyond. Two storey terraced Houses on Hill Street step down in a regular pattern to create an interesting streetscape featuring large windows on the southern facade.

Existing figure ground plan (above)

Listed Buildings 1 2

On the north side of Hill Street is a terrace of mostly two storey mid 19th century houses some of which are listed grade II.

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3993 3114

Section
2.7

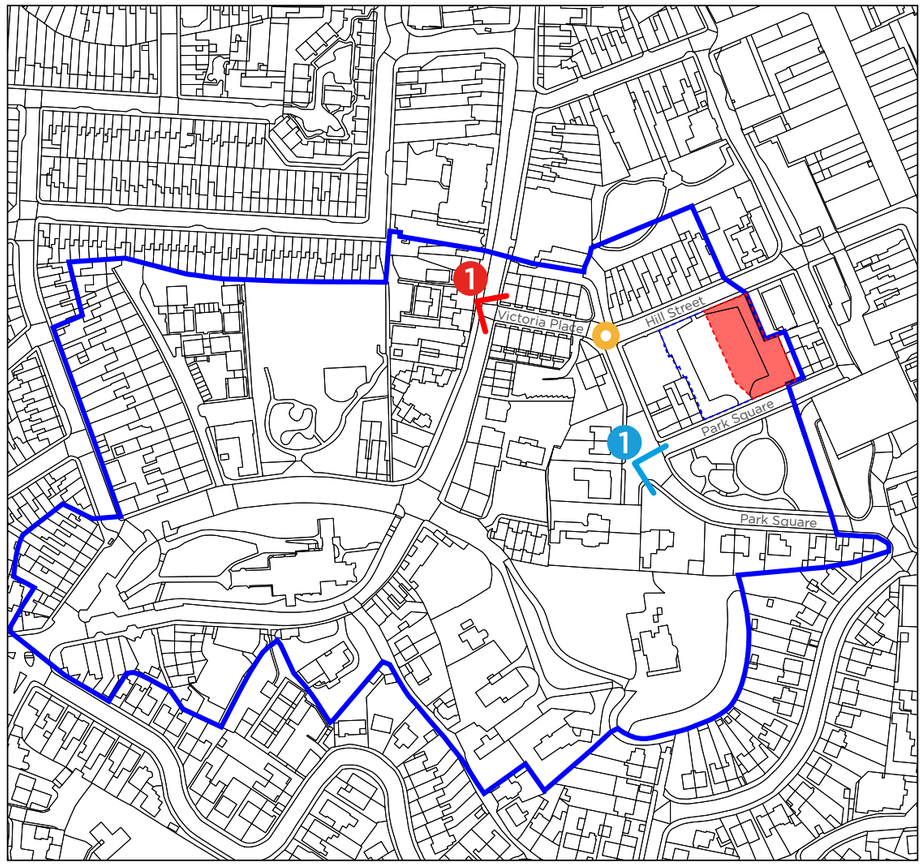
Protected Views Across the Conservation Area

The distinctive topographic across the Conservation Area makes a significant contribution to the views into, across and out from St Woolos, many of which terminate at or incorporate landmarks across the City.

The varied street and pavement level offer multiple locally valuable views, especially those looking across Stow Hill from its elevated walkways and views along local streetscapes. The views through Victoria Place towards the former United Reformed Church (now Islamic Society of Wales Mosque) is especially notable. 1

Proposed development has no impact on existing landscape features nor affecting any views of historical significance.

The proposed development does not obstruct any of such protected views or that of locally important historical landmarks. This is achieved by setting back the buildings mass from the street line.



St Woolos Conservation Area

Significant local views

Major long range view

Significant views around the project site:

1 Looking east down Park Square

1 Looking through Victoria Place to the chapel at the corner with Victoria Road, from the elevation west pavement on Stow Hill.

Important 360° viewpoint

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
2.8

Local Architectural Precedents

Due to the sites important statues within the conservation area. As part of our design strategy we have selected local architectural precedents to incorporate some of the key elements that define the style and character of the area to inform our proposal.

Façades

The terraced housing of Victoria place features two distinct cladding treatments (render and painted horizontal stonework) and subtle colour variations on each level. Lightweight balconies span between each window pair

Valued as one of Wales most important religious buildings the golden stonework texture creates a sense of richness and permanence to the street. Horizontal stone bands define the lower level with angled lines transitioning from linear bands to semi circular lintels.

The terraced housing adjacent to our development along Hill Street separates each house by using a different facade texture and colour subtly creating an interesting street scape.

A typical terraced house frontage in the area. Featuring smooth rendered surfaces and often subtle neutral toned colour palettes. Sometimes with two toned accented features.

Painted pebble dash or stone rendered façades are also common to the area particularly in smaller two storey housing. This example features bolted on window planters to add visual elements to the streetscape.

On the corner of Commercial street this light masonry building uses protruding columns on the facade to divide the mass of the building and frame it's vertical proportions. The ground floor is capped by a light stonework band

Walls & Railings

Down Stow Hill there are many examples of different walls and railings separating public access ways from private residential spaces. Thing and lightweight metal railings capped with golden or matching coloured details are often used to used.

Masonry walls are also a common feature capped with metal railing or using well maintained hedging to create a natural barrier to road noise and pollution whilst providing ecological support.

The area features a wide variety of stonework walls of different proportions and make-ups such as those bordering Mount Zion Church adjacent to our proposal.

Balconies

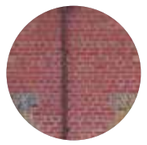
Perhaps the best example of local balconies are those found on Victoria Place which continue from the façades lower floor band and create a lightweight deck spanning between two windows with black metal balustrades.

There isn't much precedent for more modern balconies but this uses a semi circular metal railing to create a small Juliet balcony space with small double doors build into the glazing of the facade.

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Local Residential Facades



©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
3.0 | # Design Development

Our proposed development consists of a two storey terraced row of 12 NDSS complaint individually contained housing units designed for single tenant occupation. The mass of the building is located towards the Eastern side of the site retaining 29 of the existing car parking spaces and adding one addtional space to the West.

The existing vehicle and pedestrian access points have been retained.

A new stone and metal railed boundary is proposed with gated access creating a secure community for residents which contains a communal green space, bike storage space and access walkways.

The assessment has found that the proposed reintroduction of terraced housing into the site, with its design influenced by the architecture and tone of historic buildings within the Conservation Area, would not harm the character of the area. The proposed building would conform to the alignment and form pf historic chapel buildings which still stand to either side of the proposed development site and thereby enhance the appearance of the locality.

Site Area Leased

Total Council Site Area

Existing car park plan (above)

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
3.1 | **The Proposal**

Accommodation Schedule	
Unit Type (One-storey)	GIFA/unit (m^2)
1 Bed 1 Person	38.13
Total Proposed Units	12
Total GIFA (m^2)	457.56

Proposed Parking Schedule	
Total Parking Spaces	29 including 2 disabled parking spaces
Secured Cycle Spaces	6

Site Area Leased

Total Council Site Area

Pedestrian access for residents

Enclosed under stair services

Secured cycle boxes with no. 6 spaces

Permeable pavers

Disabled Parking Bay (Relocated)

Proposed trees

Secure Bin Store
1 x 660L Card / Paper
1 x 660L Plastic / Cans
1 x 240L Glass
1 x 240L Food
4 x 360L General Waste

Proposed site ground floor plan (above)

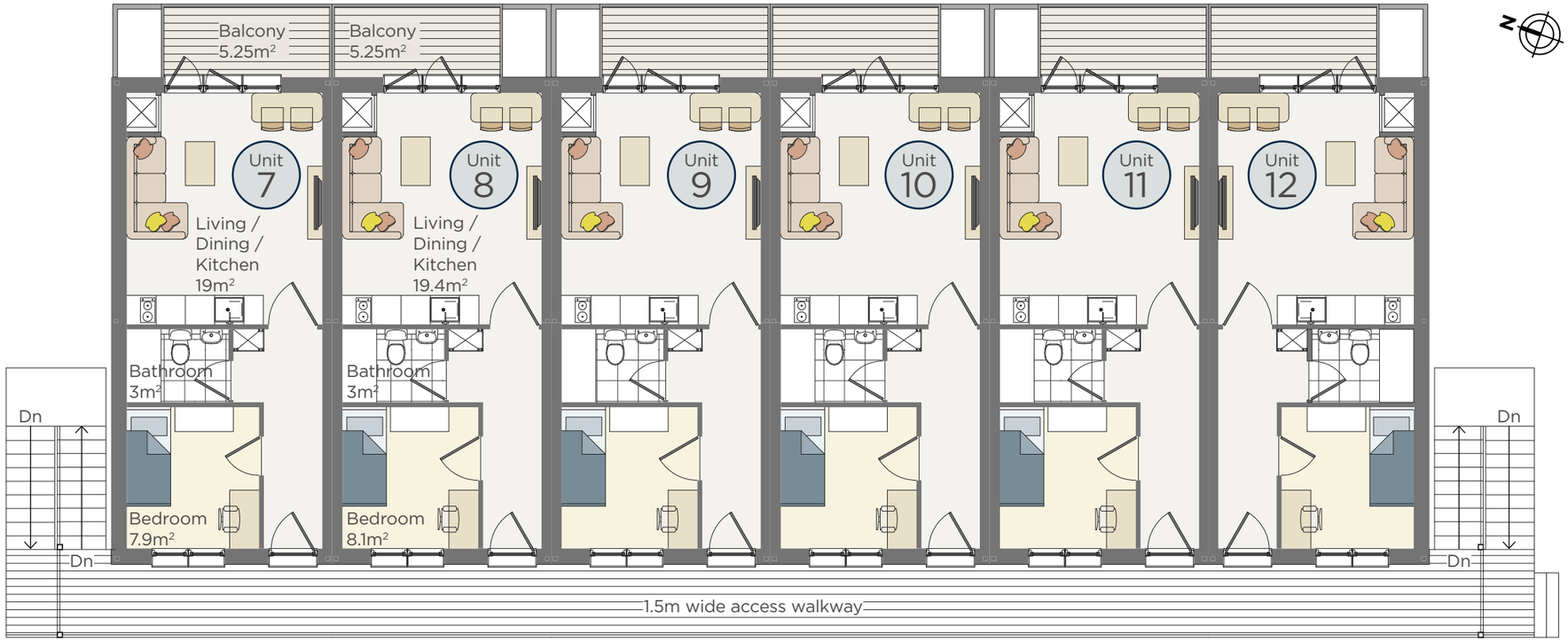
©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

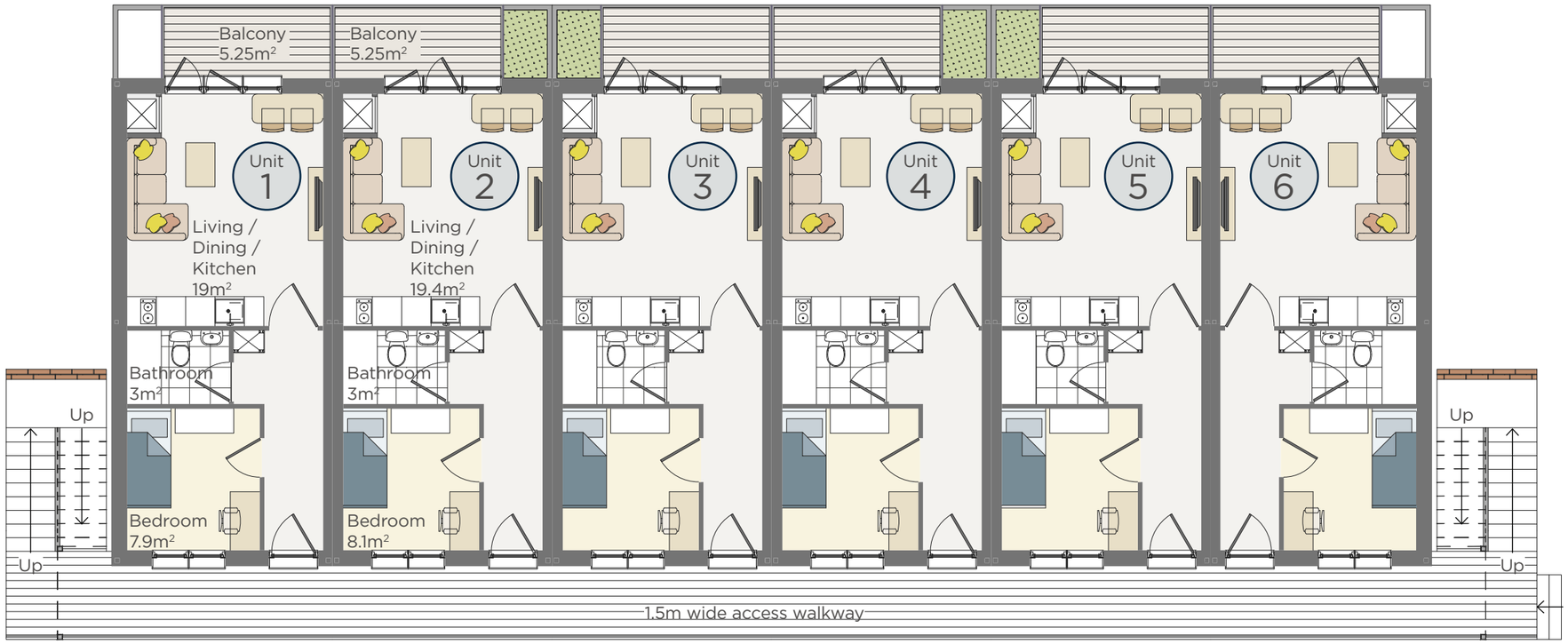
Section
3.2

Block plans

Accommodation Schedule	
Unit Type (One-storey)	GIFA/unit (m²)
1 Bed 1 Person	38.13
Total Proposed Units	12
Total GIFA (m²)	457.56



First floor plan (above)



Ground floor plan (above)

Services Cutout / Riser

2 Ring Hob

Hot Water Cylinder

Rain gardens

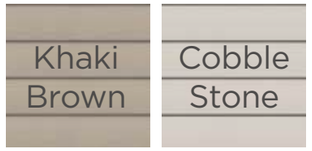
©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
3.3 | **Character**

Facade colours
We selected a colour palette designed to complement the neutral tones of the existing nearby buildings.

Cladding options



Hardie Plank weatherboarding

Roofing

Module joins / finsihes

Cement board

Railings

Black round metal

Wall

Locally sourced stone

Above: West Elevation

Above: East Elevation

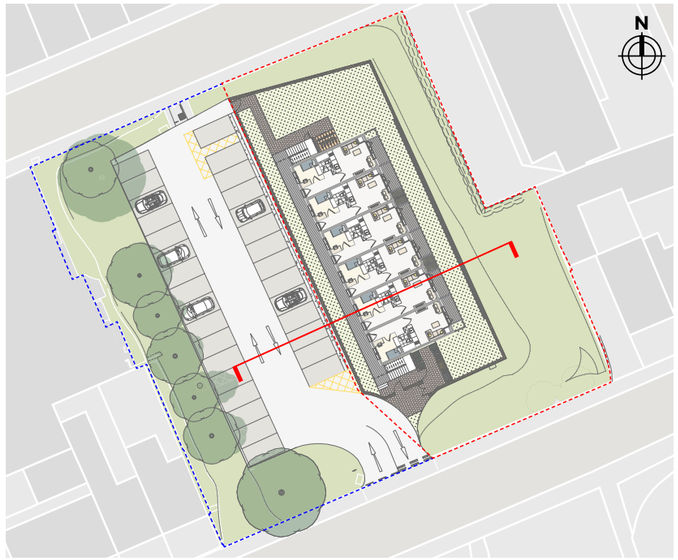
Above: North Elevation

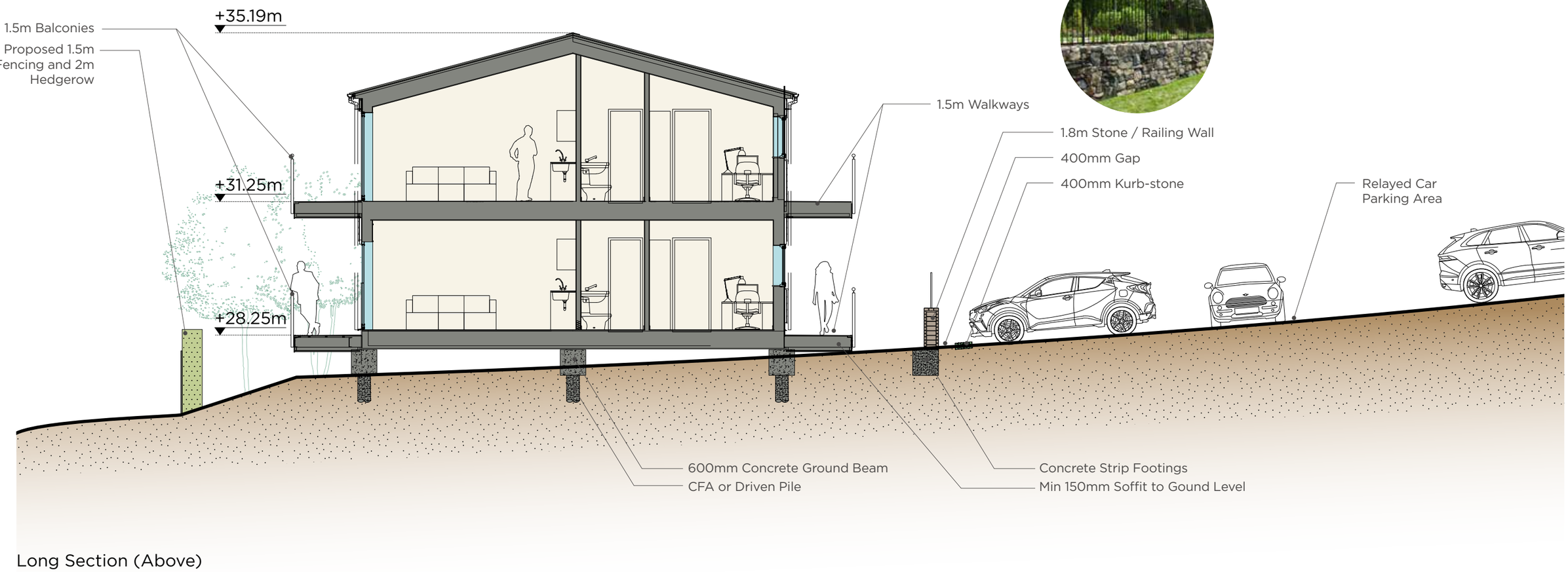
Above: South Elevation

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
3.4 | **Site long section**





Long Section (Above)

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
3.5 | **Community Safety**

The proposed scheme will be of great long-term benefits to local community and the proposed residents, individuals looking for affordable methods of housing within commutable distances of greater opportunities for work.

The scheme presents a way to increase the territorial security, natural surveillance and defensible space of the site. We have specified SBD approved windows and doors through out with access control to separate private and public realms.

Improved lighting levels, wider pathways and CCTV improve both the existing and proposed elements of the public amenity. This will significantly improve the safety of the site and area, especially during the hours of darkness. Safe and secure access to the site, secure bin stores and SBD approved cycle storage all add to the secured by design benefits.

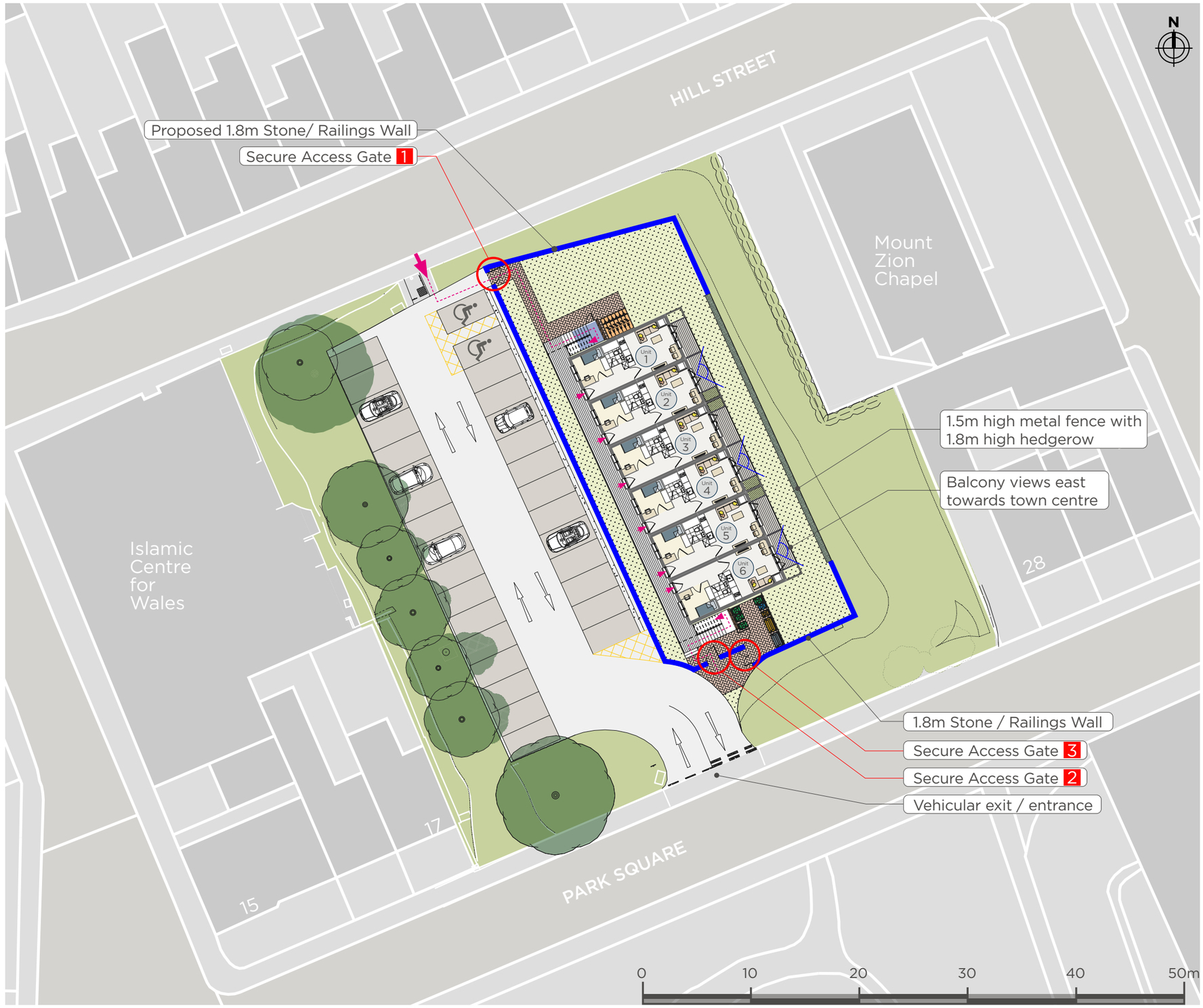
We have taken all possible opportunities to eliminate dark spaces, options for antisocial behaviour and improve local amenity. The massing and landscaping aid the natural surveillance of the site and improve security.

1 2 3 **PAS 24 Security Door**
Fitted as per Secured by Design guidelines

Proposed 1.8m Stone/ Railings Wall (Secured Boundary)

Enclosed under stair services

Secured cycle boxes with no. 6 spaces

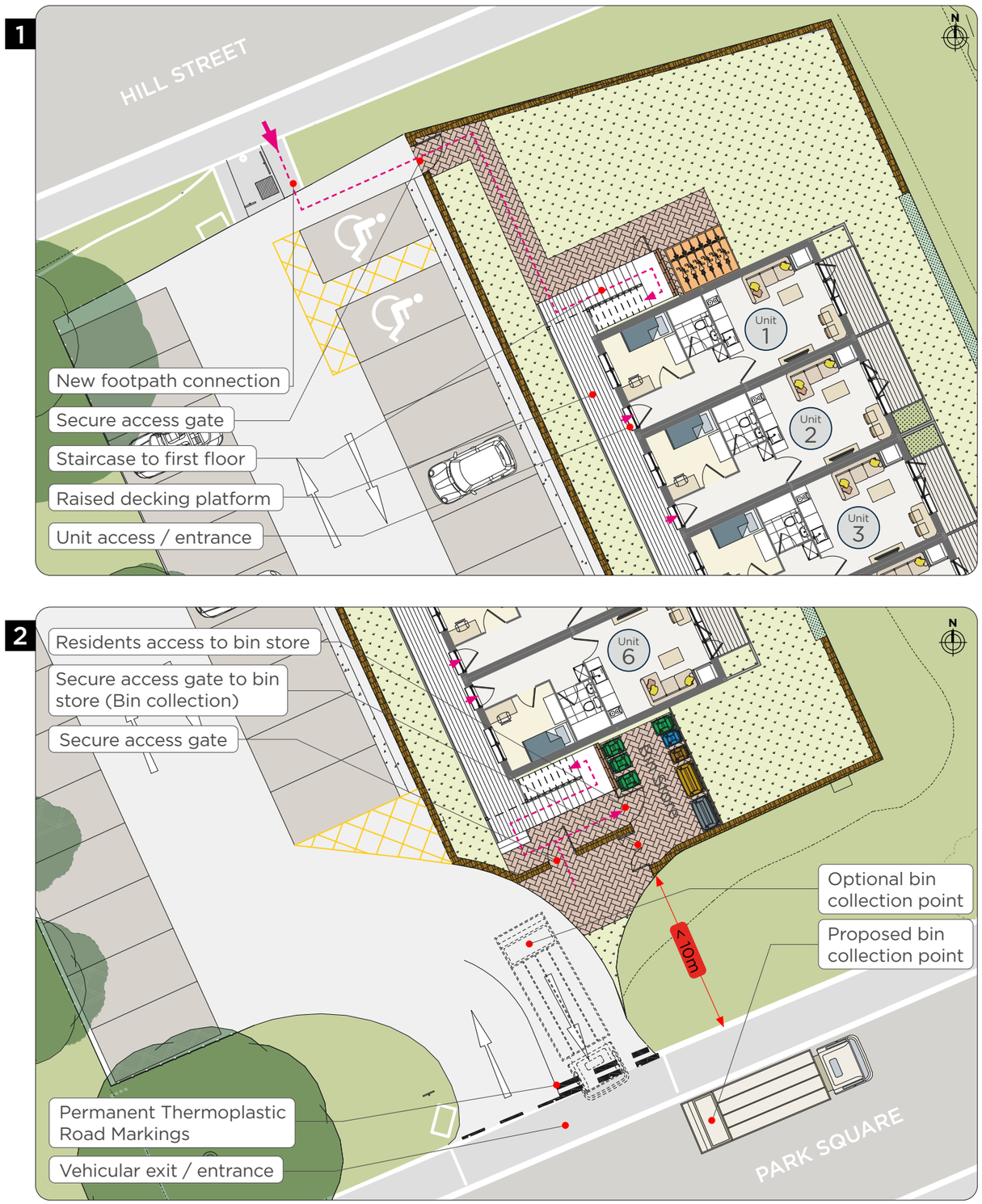


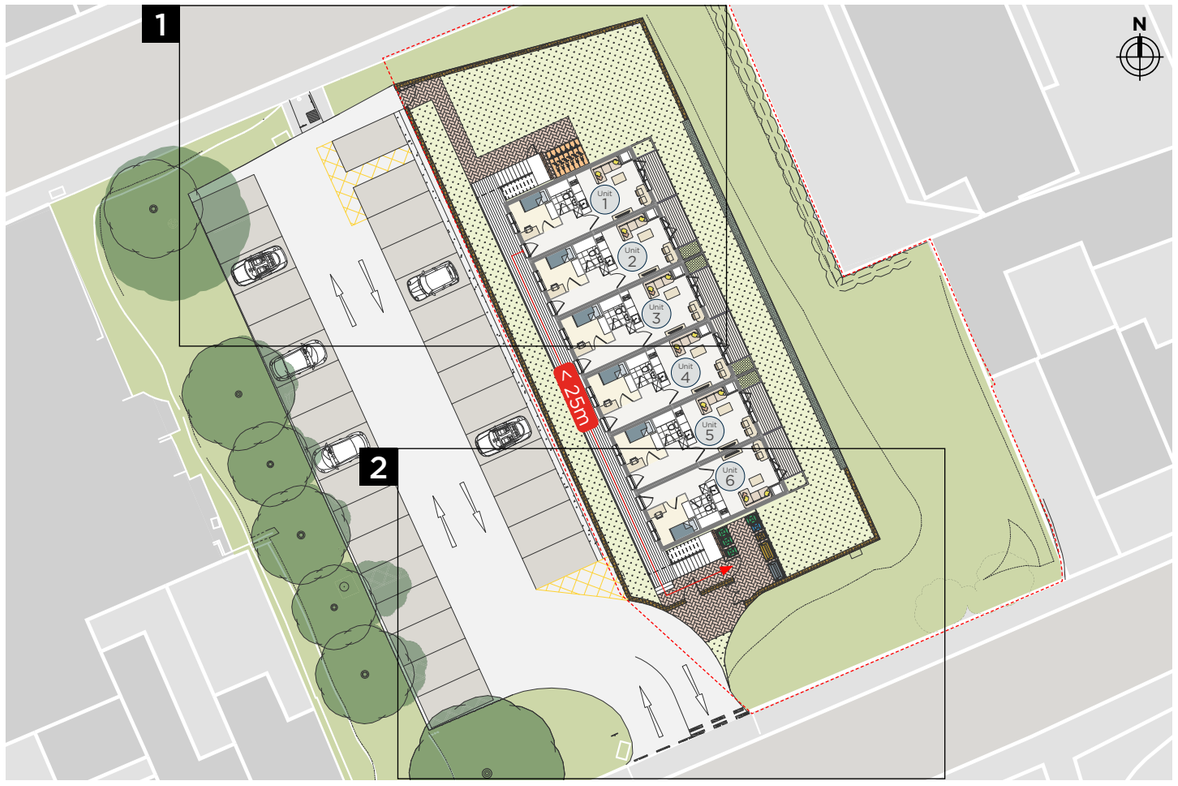
Proposed site ground floor plan (above)

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

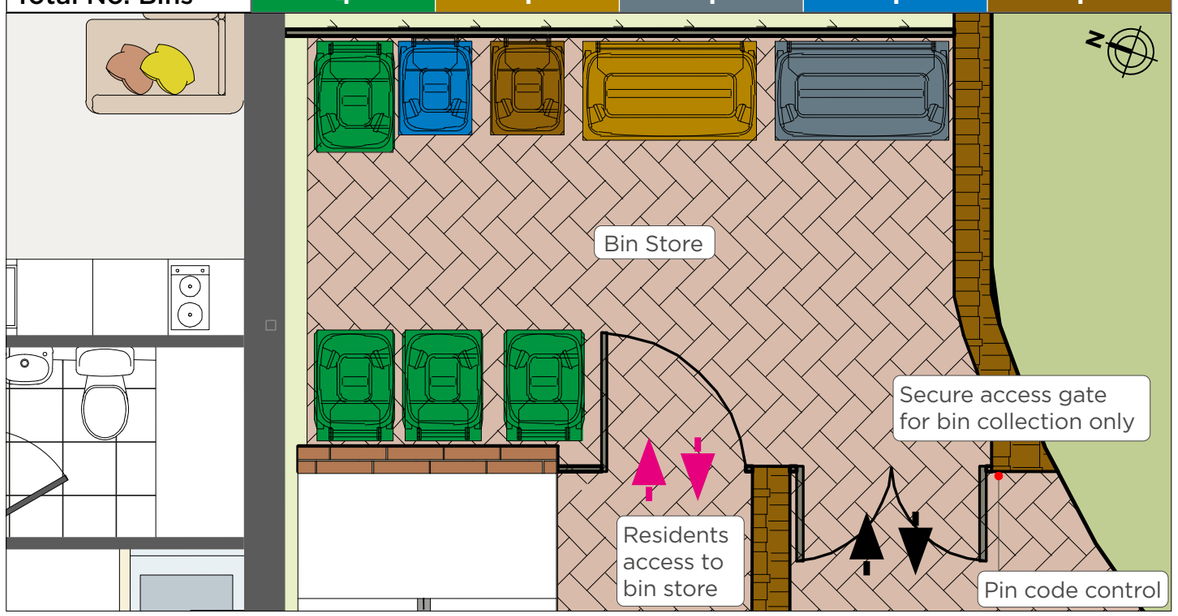
Access & waste management





Bin Storage Schedule

	General Waste	Card / Paper	Plastic / Cans	Glass	Food Recycling
Bin Size (Ltr)	360	660	660	240	240
Total No. Bins	4	1	1	1	1



©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
3.7

Landscape Strategy

Landscape proposals provide a mix of ornamental evergreen and deciduous species to benefit biodiversity and amenity.

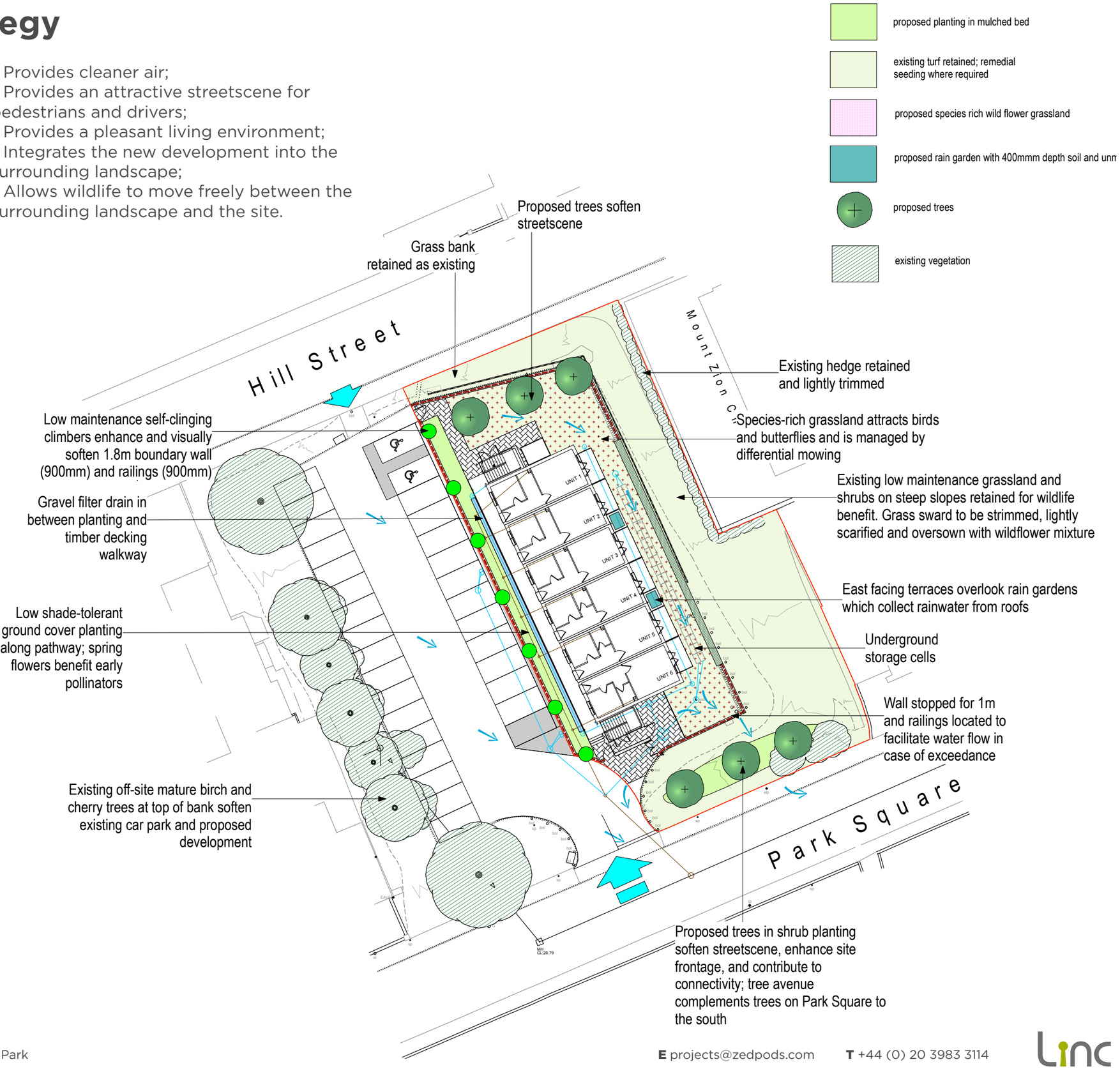
The existing off-site trees provide landscape infrastructure to the site, enhancing the character of the site and retaining wildlife value. These are supplemented with new tree planting to the site boundary, which will further benefit wildlife and visually soften the new development. A partial tree avenue along Park Square provides a vertical element to balance the height of the houses and soften the built form.

Planting consists of tough ornamentals selected for their suitability to the Newport climate and site aspect. Alongside species-rich grassland, the planting provides biodiversity gains, supplying food for pollinators and bird nesting opportunity. All species are relatively low maintenance.

Stormwater management will use a combination of
- 2 no. Rain Gardens;
- Gravel filter drainage channel; and
- Storage baskets underneath grassland.

Together, these drainage elements will be used to catch rainwater, slow down the rate of flow, trap sediment and pollutants and reduce total run-off from sudden storms.

Rain garden planting species will be capable of surviving the challenging environment of both dry and waterlogged conditions and early sunshine/shade conditions. Planting will be instrumental in cleaning surface water and filtering contaminants before gradual attenuation. Shrub planting will overlooked by users of the adjacent terraces.
As well as removing water from hard surfaces, rain gardens provide a green infrastructure which has many other benefits:
- Is low maintenance;
- Creates more biodiverse wildlife habitat including pollinator plants;
- Provides cleaner air;
- Provides an attractive streetscene for pedestrians and drivers;
- Provides a pleasant living environment;
- Integrates the new development into the surrounding landscape;
- Allows wildlife to move freely between the surrounding landscape and the site.



©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Exceptional Quality
Precision-engineered, using best in class materials;
super-inslulated, air-tight homes;
minimum 60-minute fire ratings

Customising Interiors
All homes have standard interior specifications with options to upgrade. The apartments are delivered fully furnished, including floor finishes, A-rated appliances fixtures and all fittings.

Open plan living
& Sunshine filled rooms
Promote excellent daylighting for healthy living, healthy sleep patterns, minimise artificial daylight.

Smart & healthy living
Smart heating / cooling / lighting system; exception acoustic attenuation; dual aspect dwellings for cross ventilation.

Superior Energy Efficiency
- Smart mechanical ventilation
- Water saving tap & shower
- Ultra-low energy consumption

Building Low-carbon Future
- Solar panels generating renewable electricity in the day
- The quiet running thermodynamic Solar Assisted Heat Pump for affordable, low-energy water / space heating systems.

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

External Finishes

The external appearance of the ZED PODS is proposed to include a mix of cladding colours. A range of colour options are available.

Cladding options

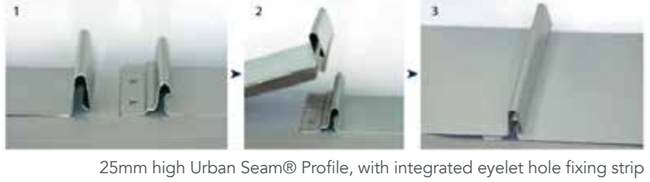
Brick Cladding

James Hardie HardiePlank® Rainscreen Cladding

- Life expectancy of over 60 years and come with a 15 year warranty
- Fire resistant — non-combustible, achieving the highest rating possible (Class A2, s1-d0)
- BBA certification
- Can be installed both vertically & horizontally

TATA Steel — Colorcoat Urban® Standing Seam steel roof

- Can be installed on a roof with a pitch as low as 5 degrees
- Robust Confidex® Home Guarantee for 25 years
- Low maintenance
- BRE Green Guide A+ rated product, and 100% recyclable
- Meets Class 0 ‘low risk’ fire classification requirements
- Backed by independent testing and BBA certification

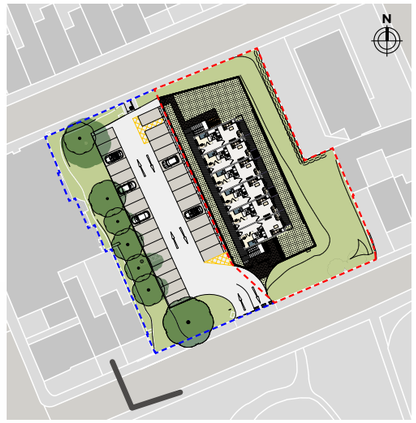


25mm high Urban Seam® Profile, with integrated eyelet hole fixing strip

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Aerial view from South-west

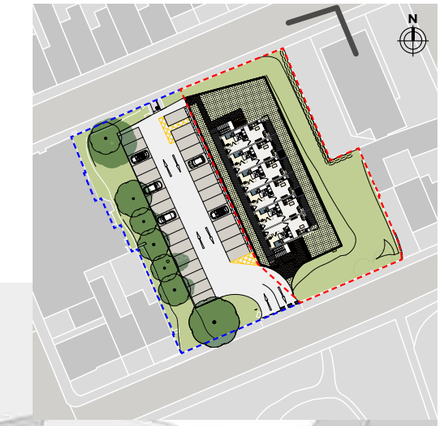


©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
3.9

Aerial view from North-east

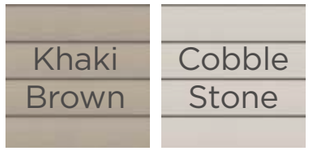


©2021 ZED PODS Ltd. All rights reserved.

Section
3.9

Street view from Hill Street

Cladding options



Hardie Plank weatherboarding

Roofing

Module joins/finsihes

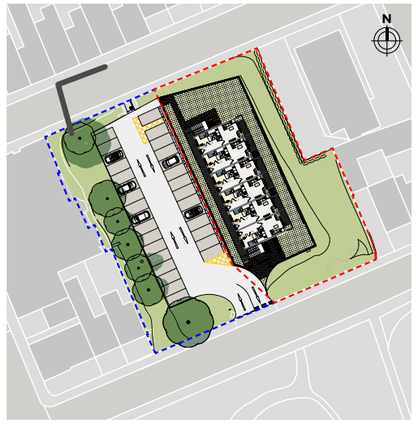
Cement board

Railings

Black round metal

Wall

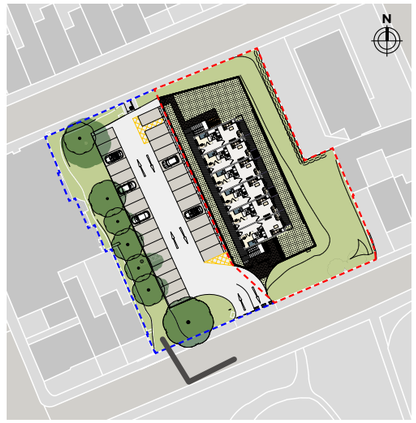
Locally sourced stone



©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Street view from Park Square



©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
4.0 | # Environmental Sustainability

At the heart of the document is a presumption in favour of sustainable development.

Specification: No toxic materials, no Urea based insulation systems, low VOC paints and adhesives, vapour permeable, breathing wall construction.

External Envelope

- 0.12 U-value Roof: Using vapour permeable, non-combustible stone wool insulation materials
- 0.15 U-value Walls: Using vapour permeable, non-combustible stone wool insulation materials
- 0.12 U-value Floor: Using vapour permeable, non-combustible stone wool insulation materials
- Airtightness: Target of $2m^3/m^2$-hr @ 50 Pa test pressure
- Mechanical ventilation heat recovery to provide fresh air with heat recovery without opening windows
- Triple-glazed low 'E' Rationel alu-clad windows and doors 0.91 U-value with low maintenance aluminium cills and flashings and good acoustic attenuation.
- Integrated kitchen and LED lighting throughout
- Solar electric roof — BRE MCS Approved
- 50 year + design life cement board cladding
- Party walls: Robust details with no structural connection between homes and noncombustible stone wool insulated acoustic and vibration isolation cavity. Fire proof cement board soffit finish above parking bays

M&E

- PV: grid connected solar electric system, this will be modelled in the development.
- LED lights throughout
- Space heating and hot water: Supplied by air source heat pump.

1. Two Building Systems: CLT / Steel frame

2. Highly Efficient Buildings: Super-insulated, air tight homes with minimal energy demands (ENE1 9 or 10 credits in SAP) and lowest running costs

3. Fire safety is at the heart of our designs with minimum 60 minute fire ratings and non-toxic materials

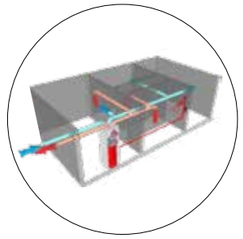
4. Renewable energy options include solar panels and battery storage

5. Acoustic rated insulation materials, high performance glazing and enhanced party wall details create exception acoustic attenuation

Triple-glazed low-e windows & doors

Stone wool insulation

Achieves a reaction to fire classification of A1 as defined in EN 13501-1.



MVHR & ASHP strategy

MVHR unit

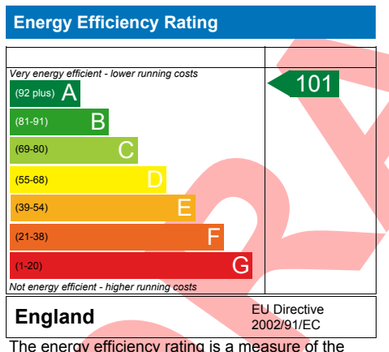
For units GIFA under 40sqm

Nilan unit

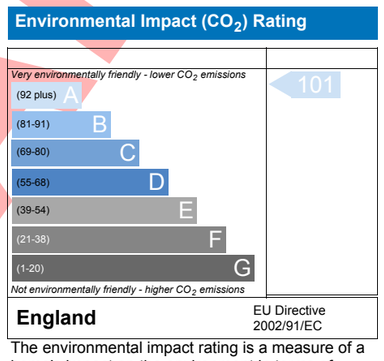
For units GIFA over 40sqm

Thermodynamic Solar Assisted Heat Pump

Standard Assessment Procedure (SAP)



The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.



The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO_2) emissions. The higher the rating the less impact it has on the environment.

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
4.1

Production Capacity

- Manufactured in UK-based factory
- 10,000 sqm purpose-built manufacturing facilities in Yorkshire across five factories on a 22-acre site
- Capacity to build over 3,300 homes per year
- BOPAS accredited production facility with ISO9001 / 14001

©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
4.2 | Locally Sourced Materials

Approx. 75% of materials for this project will be procured in Wales.

Mineral wool Knauf Insulation, produced and sourced from Wales, in used throughout;

Structural steel sourced from Port talbot;

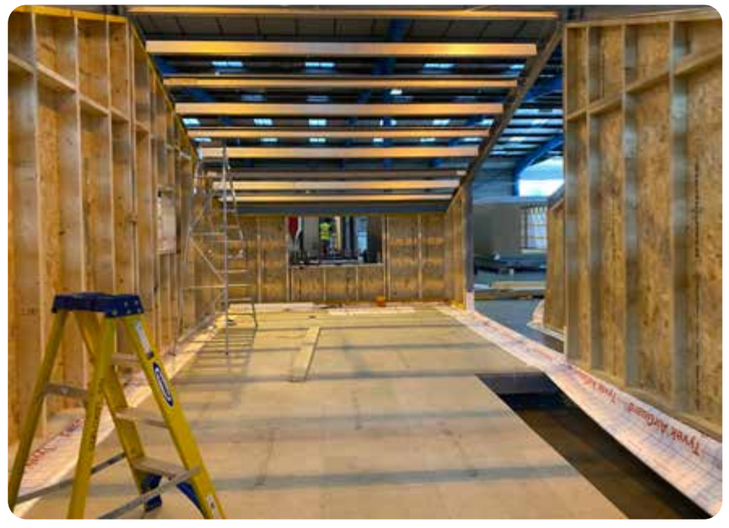
Windows and doors sourced from welsh distributor;

Technical & Planning consultants from Wales;

Kitchens and bathroom sourced from welsh supplier;

Local ground workers and landscapers

The volumetric units will be factory built to stringent specifications with low carbon footprint in the manufacturing, delivery and in operation. This will reduce onsite works by 90% and minimise in situ construction risks. The modules are designed for easy unloading, commissioning and minimise the installation, reducing disruption to the local community including low noise, least pollution and minimum construction traffic. The scheme offset all operational carbon emissions.

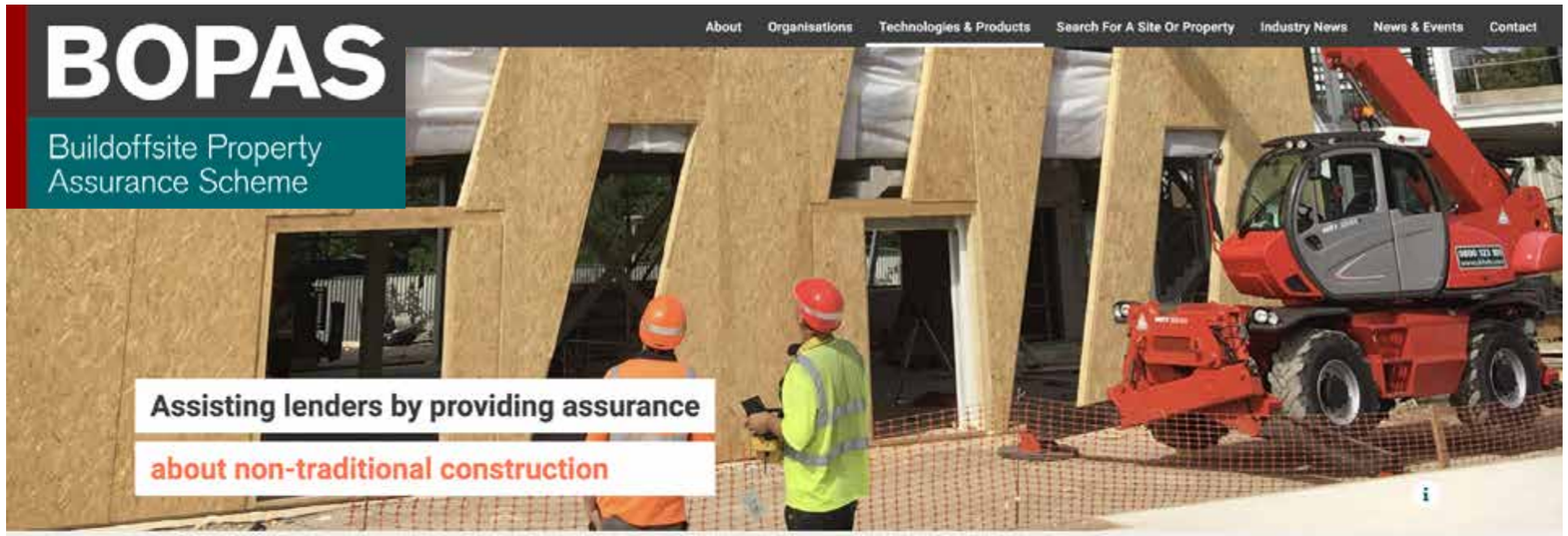


©2021 ZED PODS Ltd. All rights reserved.

E projects@zedpods.com **T** +44 (0) 20 3983 3114

Section
4.3 | **Quality Assurance & Warranty Scheme**

- The units meet the government's "Nationally Described Space Standards" and complies with BOPAS warranty scheme
- They also come with 'Q Assure' mortgageable warranty when permanently fixed to the ground.
- Other providers like pro-tek, Checkmate, CRL will also be acceptable.



BOPAS Approved Technologies & Products

The technologies and products involved in offsite manufactured systems and innovative construction techniques will change the construction landscape and BOPAS will ensure that they meet stringent quality criteria.

Technology or Product name	Approval status
ZedPod	Approved
Zed Pod steel system	Approved

checkmate.uk.com

E projects@zedpods.com **T** +44 (0) 20 3983 3114

©2021 ZED PODS Ltd. All rights reserved.

This document is copyright and may not be reproduced without the permission of ZED PODS Ltd. The purpose of this document is to be used as a discussion document only to develop the outline business case and consultation documents.

This document is not to be used for further marketing of the site, developing further design proposals, Pre-Planning or Planning Application or for construction.

Debansu Das
Business Development Director
debansu@zedpods.com
07970 249349

Dr. Rehan Khodabuccus
Operations Director
rehan@zedpods.com
07773 000639

6-8 Bonhill St, Shoreditch, London EC2A 4BX

www.zedpods.com
@ZEDPods
ZED Pods Limited

©2021 ZED PODS Ltd. All rights reserved.