



Carn Brea

DESIGN GUIDANCE
AND CODES

FINAL REPORT |
AUGUST 2023



Delivering a better world

Quality information

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Contents

01	1. Introduction	5	04	4. Character area study	33
	1.1 About this report	5		4.1 Defining the character areas	33
	1.2 Aims and objectives	5		4.2 SWOT Analysis	48
	1.3 Process and engagement	5			
	1.4 Document structure	6			
	1.5 Area of study	7			
02	2. Policy and evidence based review	10	05	5. Design guidance and codes	51
	2.1 Introduction	10		5.1 Introduction	51
				5.2 Design Quality	53
				5.3 Carn Brea NP Area Design Codes	58
03	3. NP Area context analysis	15	06	6. Delivery	86
	3.1 Introduction	15			
	3.2 Parish history	16			
	3.3 Heritage designations	19			
	3.4 Landscape designations	22			
	3.5 Movement and connectivity	25			
	3.6 Local open spaces and community assets	29			

Introduction

01



1. Introduction

1.1 About this report

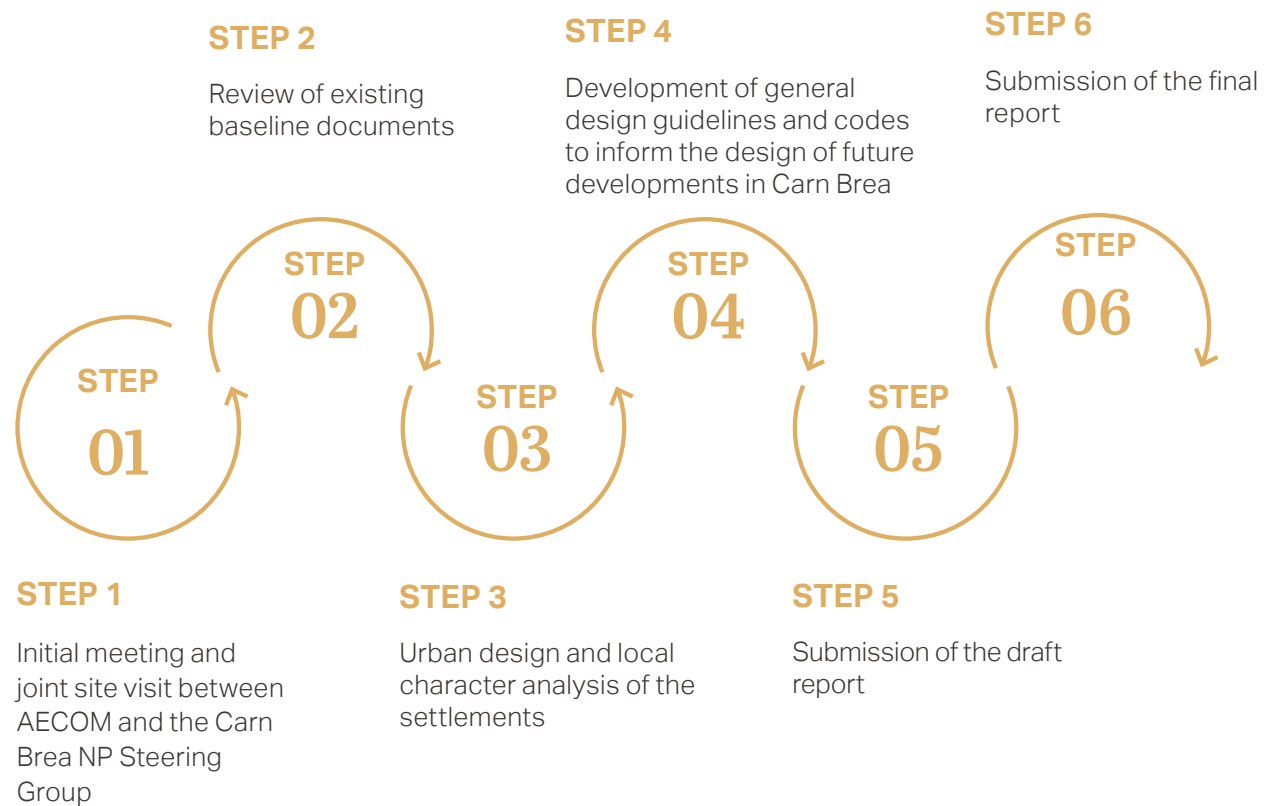
The Parish of Carn Brea have established a Neighbourhood Plan Steering Group (NPSG) in order to shape and influence development within the area. A draft Neighbourhood Plan was made in October 2022. The Design Guidance and Codes report is being prepared as part of that plan. Through Locality’s support programme, AECOM have been appointed to prepare this Design Guidance and Code document which will form part of the evidence base for their new Neighbourhood Plan on behalf of Carn Brea Parish Council.

1.2 Aims and objectives

This document aims to provide an appreciation of Carn Brea’s existing character in order to create a set of design codes applicable to any future housing development in the parish. This will ensure that any new development coming forward will respond to its context and enhances the quality of the parish’s existing character.

1.3 Process and engagement

Following an inception meeting, AECOM and the members of Carn Brea Parish Council carried out a high-level assessment of the village. The following steps were agreed with the group to produce this report:



F.1 **Figure 01:** Key steps involved in the development of the Carn Brea Design Codes and Guidance.

1.4 Document structure

01 INTRODUCTION - Outlining the background, purpose, process, study area and design code document structure.

02 POLICY REVIEW - Reviewing the planning policy context.

03 NEIGHBOURHOOD AREA CONTEXT ANALYSIS - Provides an appreciation of physical influences which will be used to help inform the design codes.

04 CHARACTER AREA ASSESSMENT - A focused understanding of the parishes' built and natural landscape character is provided by undertaking a photographic survey to analyse key characteristics.

05 DESIGN GUIDANCE AND CODES - The design guidelines and codes to be applied to future developments in the Neighbourhood Area are established.

06 CHECKLIST - This chapter provides a number of questions based on established good practice against which the design proposal should be evaluated.

07 NEXT STEPS - Next steps for the NPSG and potential future developers.



Figure 02: Remaining ruins of tin mine structures can be found across the rural areas of Carn Brea, Filtrick Lane (Source: Carn Brea NDPSPG) .

1.5 Area of study

The parish of Carn Brea includes the urban area of Pool and the villages of West Tolgus, Carn Brea, Four Lanes, Brea and Carnkie, and other small hamlets including Piece, Tregajorran and Treskillard. The parish lies between 2 towns: Camborne to the west and Redruth to the east. The A30 runs along the northern boundary of the parish, providing connections south west towards Penzance and north east towards Bodmin.

The Great Western railway line runs east west through the centre of the parish, though the closest railway stations are outside of the parish boundaries at Camborne or Redruth.

The parish lies south east of the Celtic Sea coastline and Portreath Beach is approximately 5.6km north of Pool.

The population of the parish was 8,013 according to the 2011 Census data and 9,037 according to the 2021 mid year population estimates from the ONS.



F.3



F.4



F.5

Figure 03: Terraces along Post Office Terrace, Carnkie village.

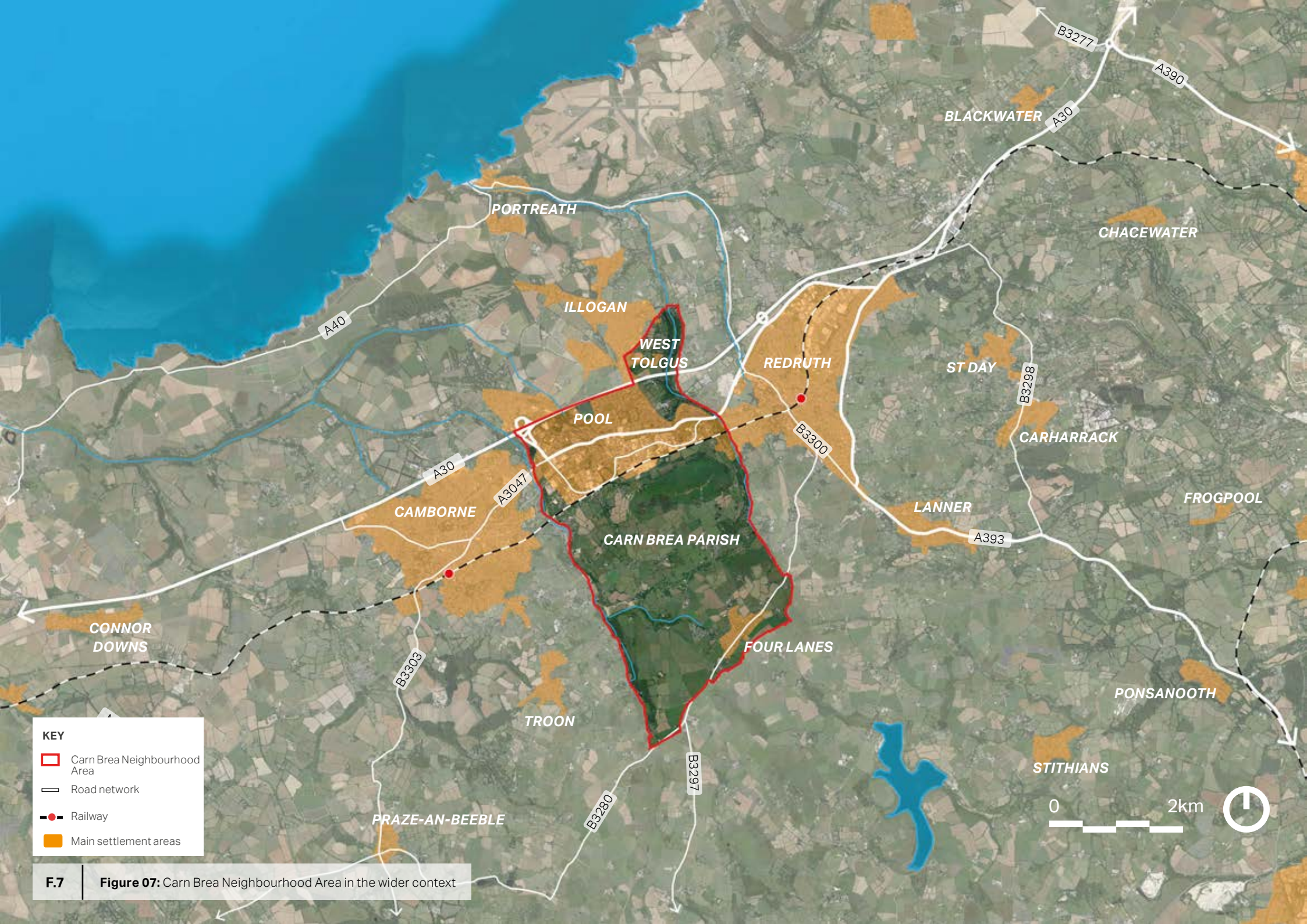
Figure 04: View of the settlements of Carn Brea from the distinctive Carn Brea hilltop.

Figure 05: Typical terraced housing along residential streets. Image of Trevithick Road, Pool.

Figure 06: East Pool mine engine house, Fore Street, Pool. (Source: Carn Brea NPSG)



F.6



KEY

- Carn Brea Neighbourhood Area
- Road network
- Railway
- Main settlement areas

F.7 | **Figure 07:** Carn Brea Neighbourhood Area in the wider context

**Policy and evidence
based review**

02



2. Policy and evidence based review

2.1 Introduction

This section summarises the relevant design policy, guidance and evidence base produced at national, county and local levels which have informed this design code. Any new development application should be familiar with those documents.

Acronyms:

NPPF - National Planning Policy Framework

NPPG - National Planning Policy Guidance

CLP - Cornwall Local Plan

CC - Cornwall Council

SADPD - Cornwall Local Plan Site Allocations Development Plan Document

NDP - Neighbourhood Development Plan

CEDPD - Cornwall Climate Emergency Development Plan Document

National Design Guidance

2021



National Planning Policy Framework - Department for Levelling Up, Housing and Communities (DLUHC)

Relevant national planning policy is contained within the National Planning Policy Framework (NPPF, July 2021). The NPPF was updated in July 2021 to include reference to the National Design Guide and National Model Design Code and the use of area, neighbourhood and site-specific design guides. Paragraph 126 states that: "the creation of high quality buildings and places is fundamental to what the planning and development process should achieve and outlines that good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities."

2021



National Design Guide - DLUHC

The National Design Guide sets out the government's ten priorities for well designed places and illustrates how well-designed places can be achieved in practice. The ten characteristics identified includes: context, identity, built form, movement, nature, public spaces, uses, homes and buildings, resources and lifespan. The Guide also reinforces the National Planning Policy Framework's objective in creating high quality buildings and places. The document forms part of the government planning practice guidance.

National Design Guidance

2021



National Model Design Code - DLUHC

The draft National Model Design Code provides guidance on the production of design codes, guides and policies to promote well-designed places. It sets out the key design parameters that need to be considered when producing design guides and recommends methodology for capturing and reflecting views of the local community.

2020



Building for a Healthy Life - Homes England

Building for a Healthy Life updates Homes England's key measure of design quality as the national housing accelerating body. The document sets out 12 considerations for creating integrated neighbourhoods distinctive places and streets for all. While it is not part of the national policy, it is recognised as best practice guidance and design tool in assessing the design quality of developments.

2007



Manual for Streets - Department for Transport

Development is expected to respond positively to the Manual for Streets, the Government's guidance on how to design, construct, adopt and maintain new and existing residential streets. It promotes streets and wider development that avoid car dominated layouts but that do place the needs of pedestrians and cyclists first.

County Design Guidance

2016



Cornwall Local Plan Strategic Policies 2010-2030 - Cornwall County Council

This document sets out the main planning approach and policies for Cornwall. The plan is intended to help deliver the vision and objectives of 'Future Cornwall'; the sustainable community strategy. The Policies set out how planning applications will be considered and set targets for growth and the broad distribution of development that reflects identified needs.

2019



Cornwall Site Allocations Development Plan Document - Cornwall County Council

This document sets out the strategy for the future growth of 10 towns / conurbations throughout Cornwall, including housing and economic targets for these locations. The document references Camborne-Pool-Illogan-Redruth (CPIR) of which Pool falls within the Parish of Carn Brea, setting out the visions, objectives and targets for the area which are further highlighted within the Pool Vision Document.

2021



Cornwall Design Guide - Cornwall County Council

This document aims to support the Cornwall Local Plan by providing a comprehensive guide to help inspire and guide the delivery of high quality places to live; in particular with reference to environmental growth and nature recovery, health and wellbeing, inclusivity and resilience to Climate Change. In addition to the guidance set out in this document, it also provides Design Codes for larger development projects.

2002



Cornwall Industrial Settlements Initiative (Pool) - Cornwall County Council

This document provided a settlement analysis for the Pool area and its character and historical significance as one of Cornwall's industrial settlements. Illogan Highway and Tuckingmill areas were highlighted for protection via designation of conservation areas with full appraisal and full list of locally significant buildings. Development should be controlled to prevent coalescence with nearby settlements and the countryside.

-



Cornwall and Isles of Scilly Landscape Character Study - Cornwall County Council

The Neighbourhood Plan Area falls within the following character areas:

- CA10 Carmenellis
- CA11 Redruth, Camborne and Gwennap



The Character studies set out a description of the areas and provide Planning and Land Management Guidelines to conserve and enhance the historic mining heritage of the area whilst ensuring that development continues and is well integrated into the landscape.

2017



Cornwall and West Devon Mining Landscape World Heritage Site - Cornwall County Council

This Supplementary Planning Document (SPD) sets out how the planning system will seek to protect, conserve, present and transmit to future generations this World Heritage Site (WHS). Carn Brea falls within the WHS Area A5 'The Camborne and Redruth Mining District with Wheal Peavor and Portreath Harbour'.

2021



Cornwall Planning for Biodiversity Guide - Cornwall County Council

This document helps supplement Local Plan Policies 22 and 23 and provides guidance on implementation of those policies. It is designed to assist people who are submitting and determining planning applications in Cornwall to understand how to ensure that biodiversity is protected, conserved and enhanced as a consequence of development.

2023



Climate Emergency Development Plan Document - Cornwall County Council

The Climate Emergency Development Plan Document (CEDPD) is one of a number of key actions identified in Cornwall's Climate Change Action Plan (CCAP). It forms part of the Cornwall Local Plan and provides further direction on planning for a sustainable future. The CEDPD and the Local Plan: Strategic Policies are designed to be read as a whole.

2019



Distinctively Cornish - Cornwall cultural distinctiveness guidance

This overview of recent work on assessing distinctiveness in the tangible heritage of Cornwall explores the numerous ways that distinctiveness can be recognised, valued and cared for.

2010

Tuckingmill & Roskear Conservation Area Character Appraisal & Management Strategy - Cornwall Council



The appraisal and management strategy sets out special interests within the conservation area to be preserved and provides recommendations for use in planning control across the area to ensure all structures are adequately protected. East Hill is the section of the conservation area that falls within Carn Brea parish. This part of the conservation area also falls within the World Heritage Site, further substantiating material considerations in spatial planning processes for the area.

2021

Pool Vision Project - Technical Document - Cornwall County Council



This document, adopted by Cornwall Council on the 28 November 2022, is the result of a masterplanning exercise undertaken for the Pool Regeneration Area in Cornwall in order to create an updated vision for the area's continued regeneration. The adopted Cornwall Local Plan and the Cornwall Site Allocations DPD should both be referred to for wider context. This Pool Vision Document is intended to set out a finer level of detail for the Pool area, so it can be used as guidance when preparing planning applications for the land in question and to inform placemaking and the decision-making process in the Pool area.

2022



Carn Brea Parish Neighbourhood Development Plan 2022-2030 - Carn Brea Parish

The Carn Brea Neighbourhood Development Plan ('NDP', 'Neighbourhood Plan' or 'Plan') builds on the views of the community and on research undertaken by local volunteers over the last 3 years. It presents a vision for Carn Brea Parish looking ahead to 2030. The Neighbourhood Development Plan is currently in preparation.

Relevant Policies to refer to:

Policy Document	Policy Code	Most Relevant Code Details
Local Plan	12, 13, 14, 16, 21, 23, 24	<ul style="list-style-type: none"> Policy 12 - Design Policy 13 - Development Standards
Climate Emergency DPD	C1, G1-3, TC1, TC2, TC4, T2, SEC1	<ul style="list-style-type: none"> Policy TC1 - Town Centre Development Principles Policy TC4 - Density of Development in Town Centres Policy T2 – Parking Policy SEC1 – Sustainable Energy and Construction

**NP Area context
analysis**

03



3. NP Area context analysis

3.1 Introduction

This chapter describes the local context and key characteristics of Carn Brea parish. It is important that all development proposals in Carn Brea, whether big or small are based on an understanding of the context of the settlement. Development proposals should clearly demonstrate an understanding of that context and how it has been addressed in the preparation of the design and any related planning submissions. Context refers to the current (and sometimes future) conditions within an area across a range of issues including village history and heritage, morphology, green space, movement and landscape setting. The following pages in this section consider these matters, in the context of Carn Brea, in more detail.

We have undertaken a parish-wide character assessment and our findings have a number of key features, which can be summarised as follows.



Figure 08: Tin mines in operation in Tolskithy Valley c.1890 (Source: Courtesy of Carn Brea Parish Council)

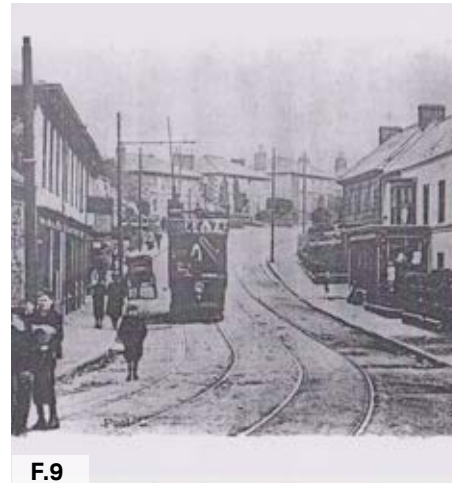


Figure 09: Pool village centre c.1800s (Source: Courtesy of Carn Brea Parish Council)



Figure 10: Carn Brea train station, c.1800s (Source: Courtesy of Carn Brea Parish Council)

3.2 Parish history

The earliest record of settlement in Carn Brea can be dated back to the Neolithic age, with the first settlement found on Carn Brea Hill, with Carn Brea Castle serving as a defensive stronghold. This was considered one of the earliest examples of human settlements in Cornwall. The surrounding landscape has since been cleared and used for agricultural purposes for medieval settlements, resulting in field patterns that remain evident today in rural Carn Brea.

By the early 18th century, copper mining became prevalent in Carn Brea, with Pool Mine being recorded as one of three principal copper extractors in Cornwall. The Red River served as a strategic water source for the area's thriving local mines, being stained red from surrounding copper mines. Failing to compete with the region's larger mines, some of these local mines fell into decline but entered a period of resurgence by the 1820-30s. Rapid increase in scale of copper mining in the area brought large populations of workers into Pool, creating areas of miners' cottages across the village built by mine owners, such as the Bassett Family. The Hayle Railway line also paved

way for Pool's thriving mines. Into the late 19th century, with major copper mines, such as South Crofty and East Pool mine, turning to tin mining in the 1860s - leading to a further population boom in Pool village and a series of community amenities such as churches and schools.

By early 20th century, mining industries in the area slowly declined and many tin mines had ceased operation in the Pool area.



F.11
Figure 11: Historic mapping of Pool

3.3 Heritage designations

There are many heritage designations within Carn Brea parish, with much of its historic landscape, buildings and structures related to its heritage from the mining industry.

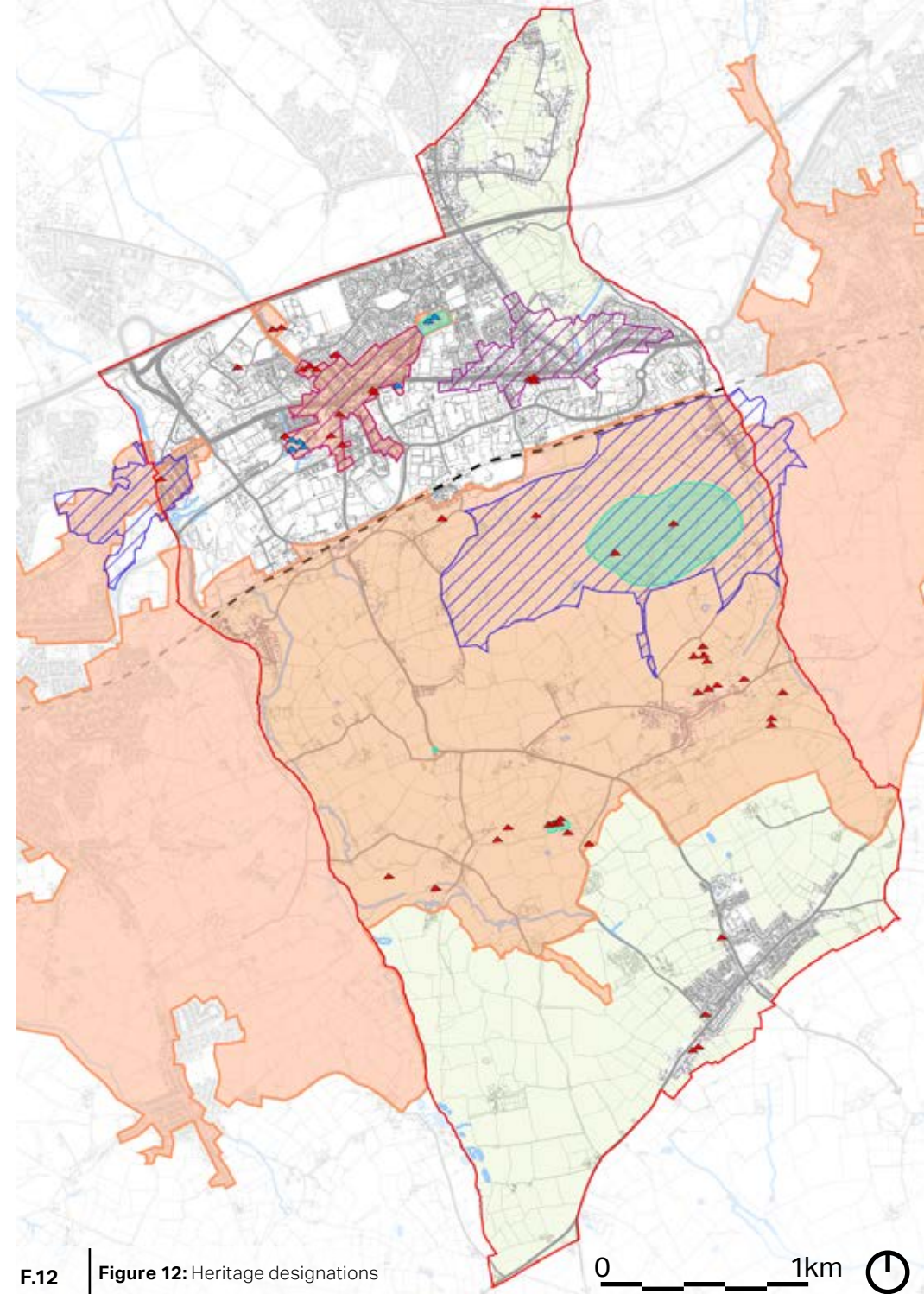
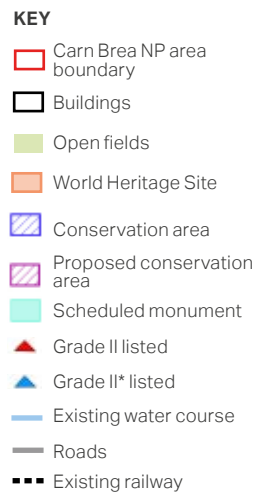
Conservation areas

- **Tuckingmill and Roskear conservation area** was designated in March 1995 and lies partly within Carn Brea parish and partly within neighbouring parish of Camborne.
- **Carn Brea conservation area** comprises of the rural mining landscape in the parish, including Carn Brea Hilltop.

Scheduled Monuments

There are 5 scheduled monuments in the parish¹. Of particular note is the neolithic hilltop enclosure of Carn Brea, an important archaeological site as well as a distinctive part of the landscape.

¹ [Historic England scheduled monuments listing for Carn Brea](#)



F.12 | **Figure 12:** Heritage designations

Pool Settlement

Proposed conservation areas²:

- **Pool** - a conservation area centred around Fore Street, 'Pool's spine' road, proposed to protect the historic and industrial character of the area.
- **East Pool/Illogan Highway** - a conservation area covering an area of East Pool/Illogan Highway has been proposed due to its historical and industrial significance. Particularly the two historic cores and topographical feature of building lines along the A3047.

Listed buildings

There are 76 listed buildings³ in Carn Brea parish, 6 of which are Grade II* and the remainder Grade II.

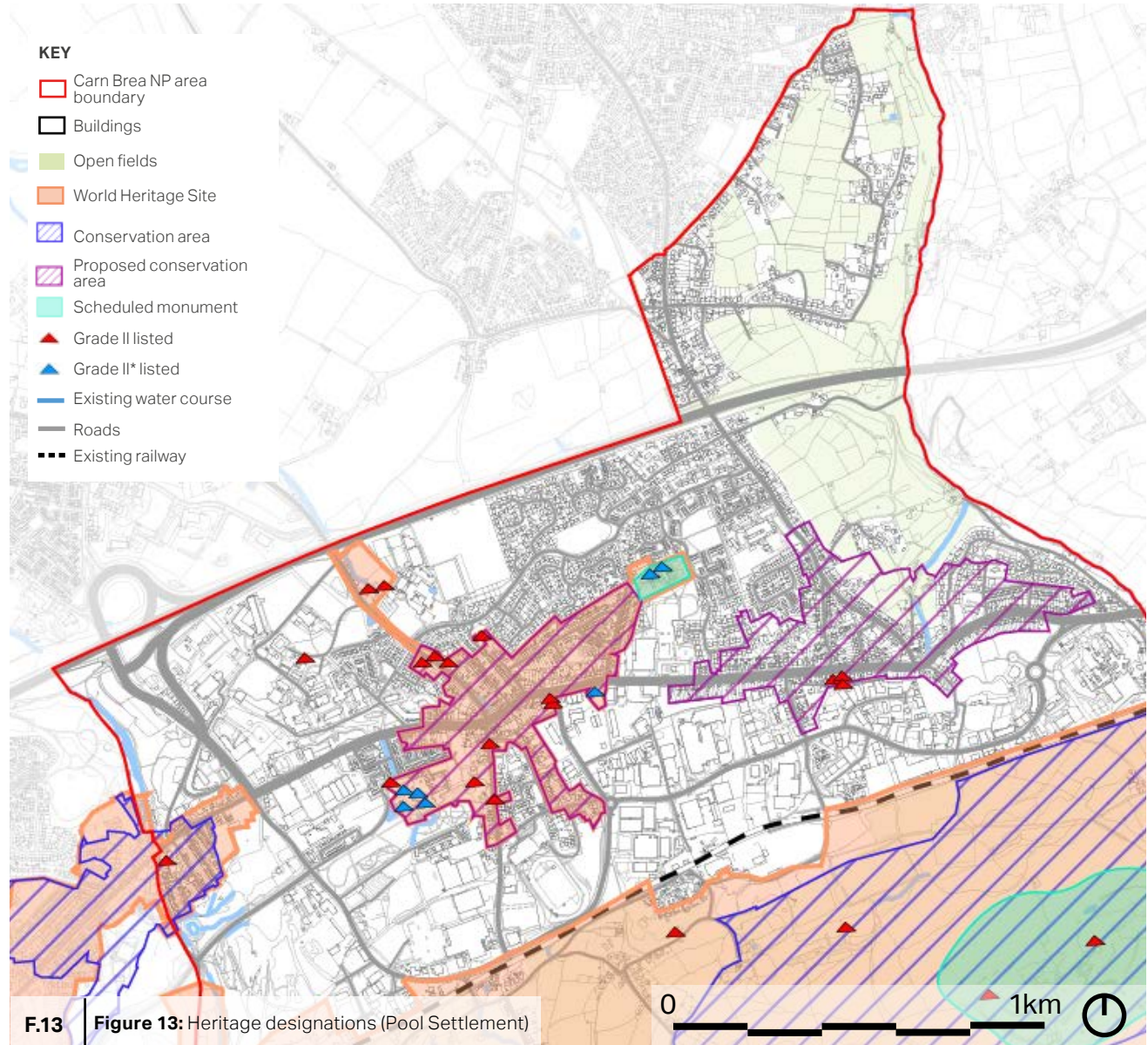
Non-Designated Heritage Assets

There are also a large number of non-designated heritage assets within the Parish.⁴

² Boundaries drawn from [Pool Vision](#) (2021), p.7

³ [Historic England listed buildings listing for Carn Brea](#)

⁴ <https://e.pcloud.link/publink/show?code=XZNyvhZN3FIYS210cpTsLKIKIoWRYb6VXL7> (p.39)



World Heritage Site

- The Cornwall and West Devon Mining Landscape designation covers a large part of the south of Carn Brea parish and is recognised as a World Heritage Site due to its international significance as a historic non-ferrous metal mining centre
- The site was added as a cultural site to the World Heritage List in July 2006. The site includes deep underground mines, engine houses, foundries, new towns, smallholdings, among others.
- The area thrived as pioneers in copper and tin mining in the 18th and early 19th centuries, attaining substantial prosperity to not only the local community but to the Industrial Revolution in the rest of Britain. The rich mining heritage of the site transformed the landscape as it stands today
- Any development within the site may be vulnerable to the possibility of incompatible development¹

¹ <https://historicengland.org.uk/listing/the-list/list-entry/1000105?section=official-list-entry>



Figure 14: Cornwall and West Devon Mining Landscape (Source: Carn Brea NDPDG)

Figure 15: Surviving features of the engine houses in rural Carn Brea (Source: Carn Brea NDPDG)

Figure 16: View towards Basset Monument (Source: Carn Brea NDPDG)



Figure 17: Grade II* listed buildings at South Crofty Mine in Pool village: left, Carpenters shop, workshops and forge and right, Boiler house.

Figure 18: Grade II listed Pump Engine House to Lyle's Shaft, Carnkie.

Figure 19: Grade II listed East Pool mine engine house, Fore Street, of East Pool mine which is a Scheduled Monument. (Source: Carn Brea NDPSPG)

Figure 20: Neolithic hilltop of Carn Brea, designated as a Scheduled Monument and the Grade II listed Dunstanville Memorial. (Source: Carn Brea NDPSPG)

Figure 21: Grade II listed Carn Brea castle which sits on the Neolithic hilltop. (Source: Carn Brea NDPSPG)



Cornish Distinctiveness

- The guidance provided in the document, 'Distinctively Cornish' is important to maintain the special character of Cornwall. Its distinct quality and sense of place has evolved through its political and industrial history, and are expressed through the colours and textures of its landscape and heritage. These qualities are an essential ingredient to its future development. *The erosion of this valued character, for example, by globalisation and 'standard' building types must be guarded against'* (Cornwall Local Plan 2016, para 1.15)
- Cornish Distinctiveness is key to maintain the historical, communal, aesthetic and evidential value of the area. The distinctiveness helps illustrate the unique heritage of Carn Brea and Cornwall.
- The guidance provides a framework for assessing 'place'.¹

¹ Distinctively Cornish | Cornwall Cultural Distinctiveness Guidance



Figure 22: Traditional building materials such as stone, slate cladding, cob or thatch, dormer windows. Refer to DC.05 for a detailed materials palette for Carn Brea.

Figure 23: Traditional building materials such as stone are typically used. (Source: Carn Brea NDPSG)

Figure 24: Off-white rendered facades paired with Cornish stone, typically used as traditional building materials. (Source: Carn Brea NDPSG)

3.4 Landscape designations

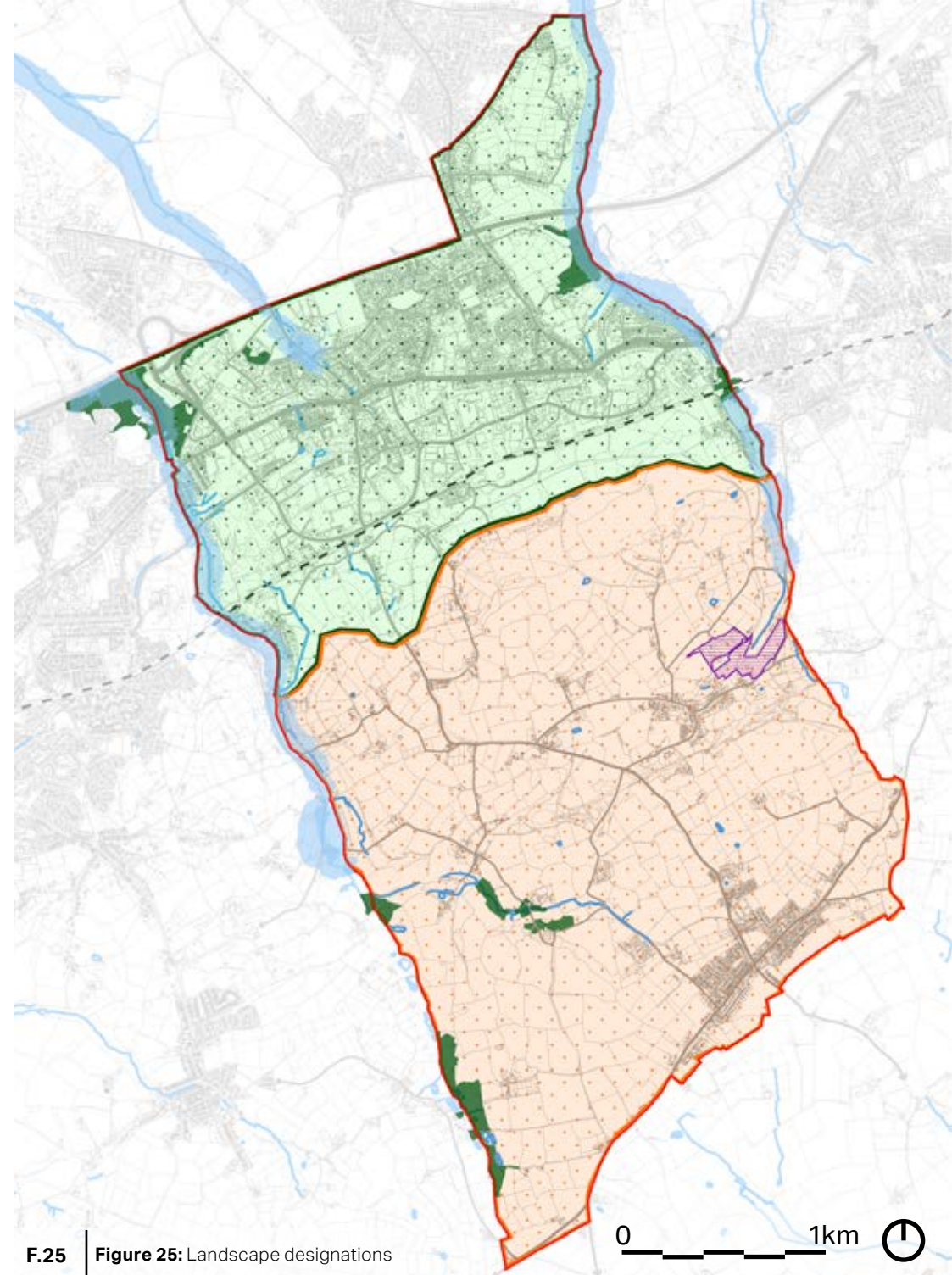
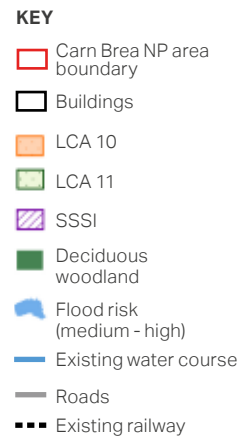
Landscape designations in the parish consist of Sites of Special Scientific Interest (SSSI) and areas of ancient woodland. The Cornwall and Isles of Scilly Landscape Character Study splits the parish into two character areas as described below .

Landscape Character areas

- **LCA 10 Carnmenellis.** This area is characterised by 'gently undulating open and exposed elevated granite plateau', 'significant remains of mining and quarrying industry', 'pasture and rough grazing' and cornish hedges¹.
- **LCA 11 Redruth, Camborne and Gwennap.** This area is characterised by 'rolling slate and siltstone landscape', 'post industrial mining landscape', 'extensive lowland heathland' and 'pastoral landscape'².

1 'Landscape Character Area Description, LCA-Carnmenellis', *Cornwall and Isles of Scilly Landscape Character Study*, 2008, <https://map.cornwall.gov.uk/reports_landscape_chr/areaCA10.pdf>

2 'Landscape Character Area Description, LCA-Redruth, Camborne and Gwennap', *Cornwall and Isles of Scilly Landscape Character Study*, 2008 <https://map.cornwall.gov.uk/reports_landscape_chr/areaCA11.pdf>.



F.25 | **Figure 25:** Landscape designations

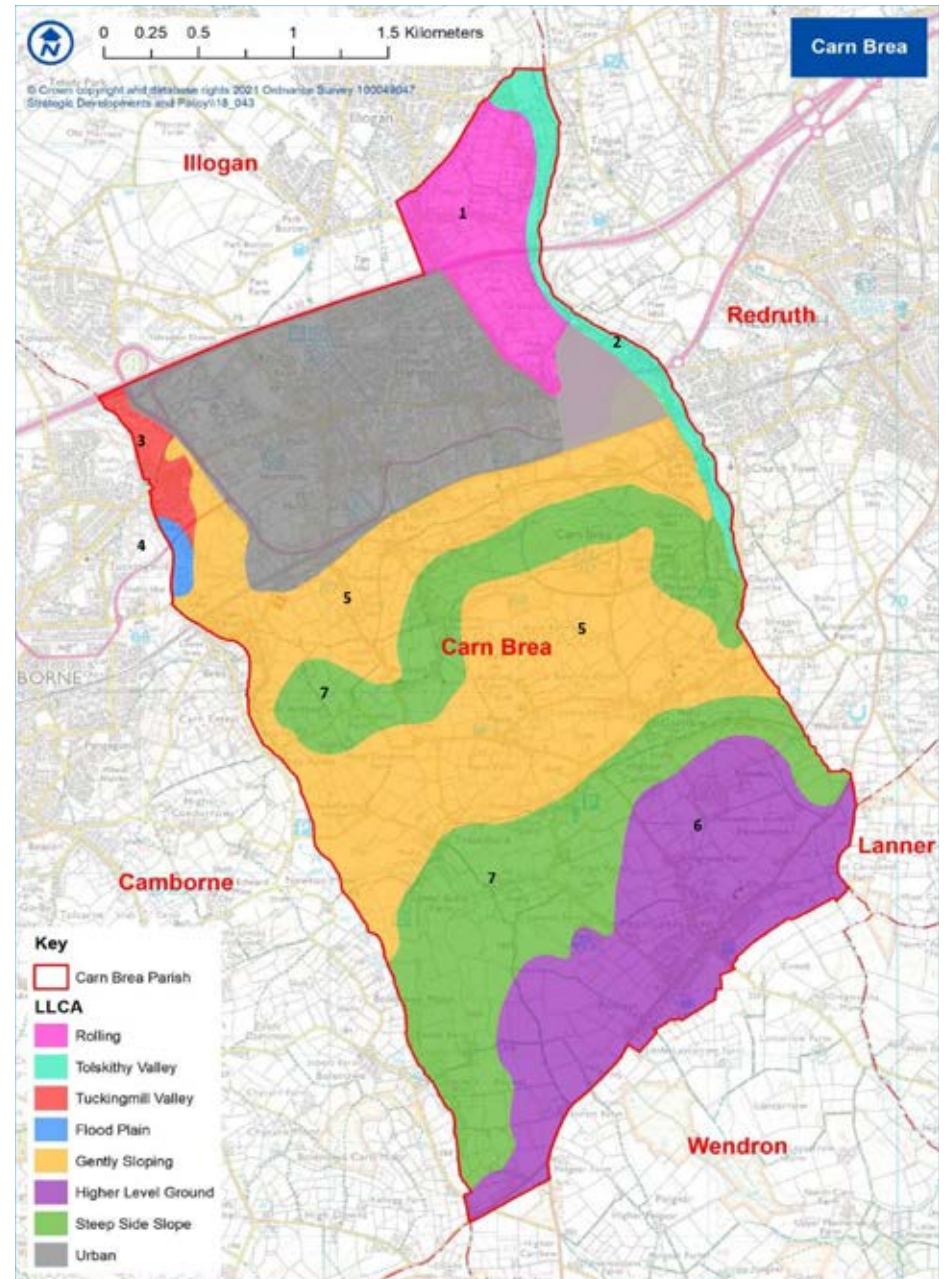
Landscape Character Areas

A team of volunteers have assessed the character of the land in the Carn Brea Parish area by and the study adopts landscape typologies by grouping landscape into areas with the same character. The Steering Group have identified seven typologies and a description for each has informed the policy within the Neighbourhood Plan and provided guidance for future planning and land management:

Each study character area is assessed based on up to 14 attributes including field and woodland pattern, building distribution, views, historic features, etc.

The map (Figure 26) highlights the landscape character areas identified within the Neighbourhood Development Plan Landscape Evidence Base Report¹.

¹ Neighbourhood Development Plan Landscape Evidence Base Report http://www.carnbreatparishcouncil.gov.uk/Local_Landscape_Character_Assessment_29198.aspx



F.26 | **Figure 26:** Carn Brea NDP Landscape Character Areas
(Source: Carn Brea NDP Landscape Evidence Base Report)

SSSI

The Sites of Special Scientific Interest (SSSI) in Carn Brea, located to the west of the parish, are part of a wider SSSI known as 'West Cornwall Bryophytes' which in particular is significant for the population of rare mosses and liverworts that grow on copper-rich substrates found in the area.

Deciduous woodland

There are limited small areas of deciduous woodland in the parish, though Cornish hedges surround fields and line road edges.

Water features and flood risk

There are areas of medium to high flood risk along both the western and eastern boundaries of the parish, as well as within the northern urban area of Pool village which relate to the water courses which flow into the parish from the coast. Red River is the largest of these and runs along much of the western parish boundary.



F.27



F.29

Figure 27: Red River flowing through the valley and view of housing along Chapel Road.

Figure 28: View across undulating landscape with field patterns clearly defined by hedges.

Figure 29: View of the rolling fields and small area of woodland in Brea..



F.28

3.5 Movement and connectivity

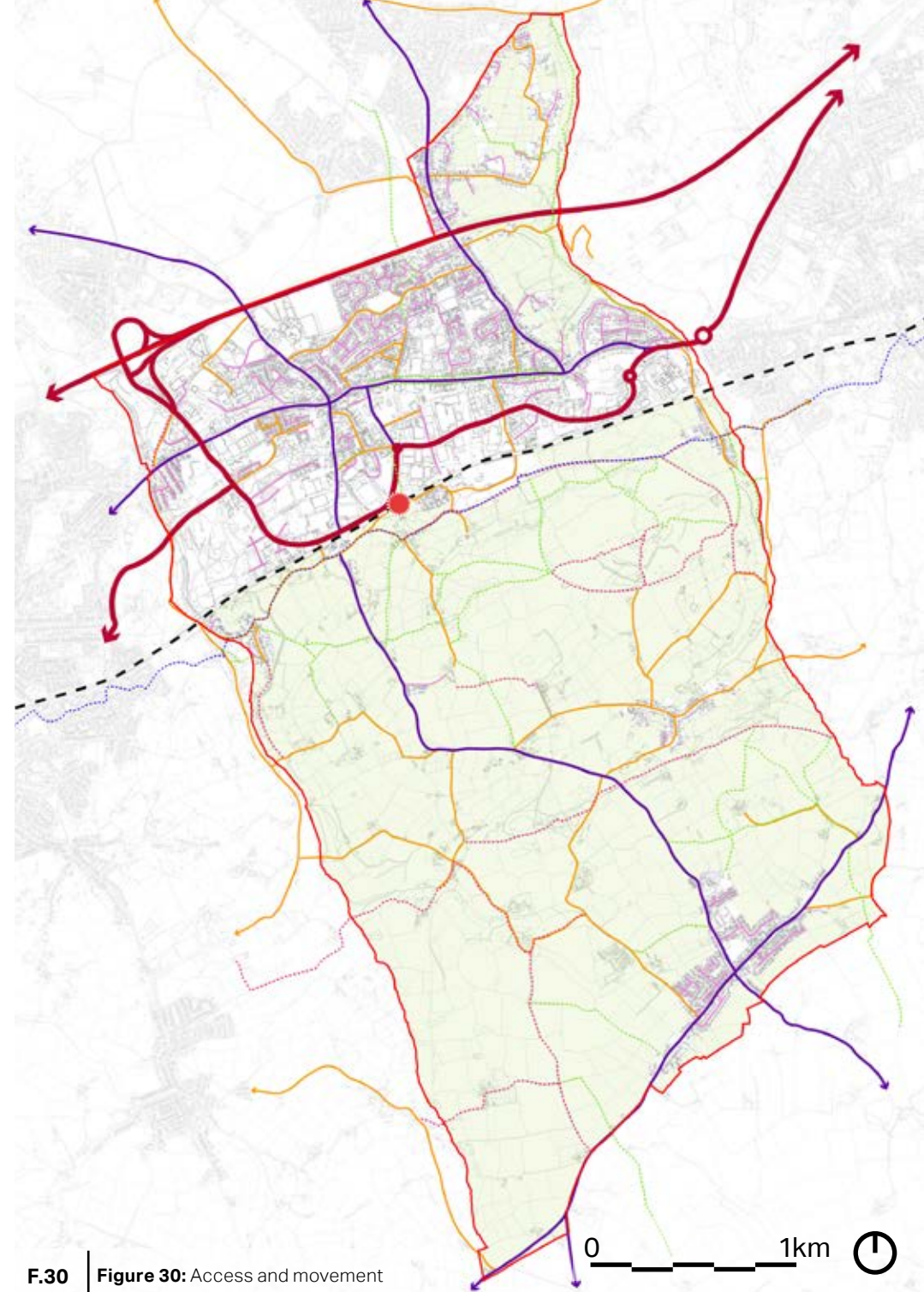
The parish is highly accessible by road via the A30; however there are concerns about traffic levels, road safety, parking and public transport provision.

Primary roads

The A30 (Camborne-Pool-Redruth Bypass) runs along the northern parish boundary, whilst the A3047 cuts east-west through the northern built-up area, forming the main roads of both Pool and Illogan Highway villages.

Secondary roads

Secondary roads form connections within the built-up area, as well as the main vehicular routes serving the southern rural area and the main road through Four Lanes village. These roads typically have 2 lanes with central road markings and within the rural landscape are lined on both sides with thick hedgerows. Within the built-up area to the north and Four Lanes village these roads have pavement provision.



- KEY**
- Carn Brea NP area boundary
 - Buildings
 - Open fields
 - Existing water course
 - Primary road
 - Secondary road
 - Tertiary road
 - Cul-de-sac
 - Footpath
 - Bridleway
 - Cyclepath (NCN Route 3)
 - Existing railway and proposed future Carn Brea Station

F.30 | **Figure 30:** Access and movement

Pool Settlement

Tertiary roads

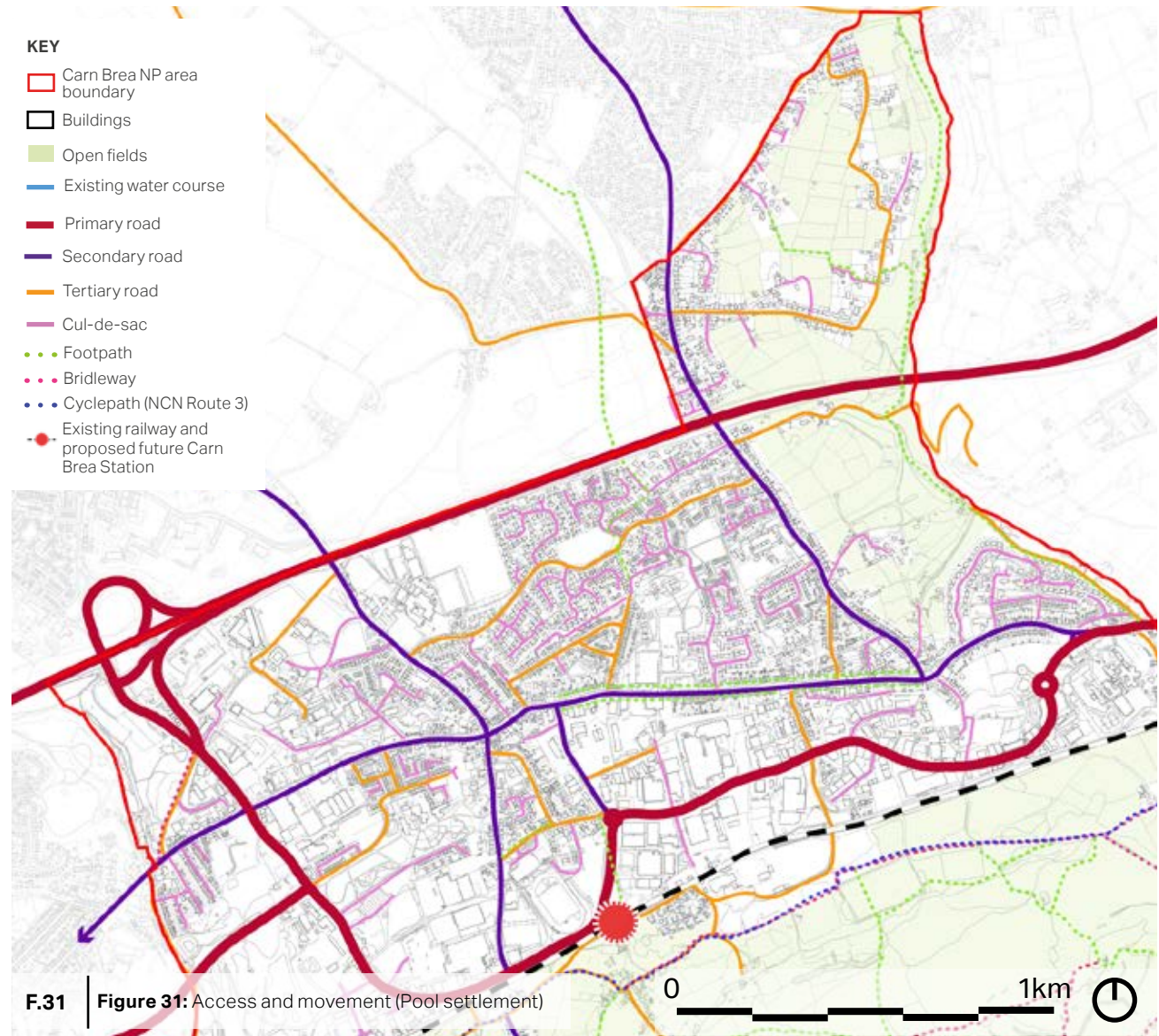
Within the built up area these roads are similar in character to secondary roads, though narrower and with a more residential character. In the southern part of the parish where these roads travel across the countryside they have a very rural character, often a single lane with little road markings and lined with vegetation and hedges. Cul-de-sac roads form much of the more recent residential development in the built-up areas. These have meandering layouts and pavement provision. In some cases clusters of cul-de-sacs are seen such as the development near the parish’s eastern boundary off the A3047, which can limit connectivity.

Public Rights of Way (PRoW)

There is a good network of footpaths and bridleways across the parish in the form of pedestrian alleys and rural routes through the countryside and to significant landscape and heritage features.

Cyclepath

National cycle network number 3 starts just outside Carn Brea village and runs east west to Brea village and beyond to Cambourne.



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Figure 32: Agar Road (A3047) through Pool village, comprising the NCN3 cycle route

Figure 33: Balkin Way, an example of a local road through the built up area of the parish

Figure 34: Footpath off Tincroft Road which leads from Higher Brea east towards rural countryside and neighbouring settlements.

Figure 35: Rural road through Carnkie

3.6 Local open spaces and community assets

There are a number of local open spaces, community assets and amenities in the parish. The majority are concentrated within the built up area to the north, though there are also some amenities in the villages and hamlets of the rural south area of the parish.

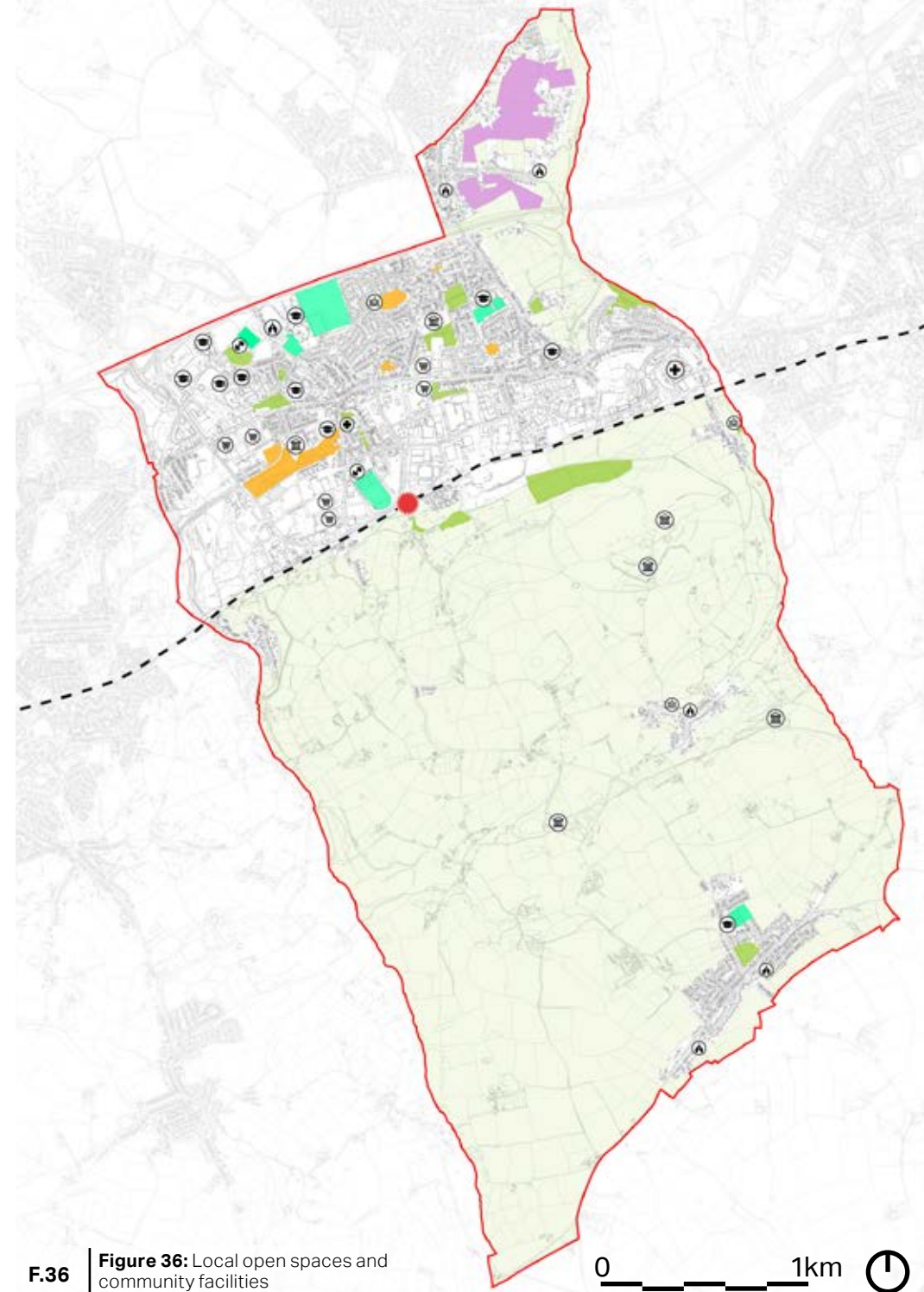
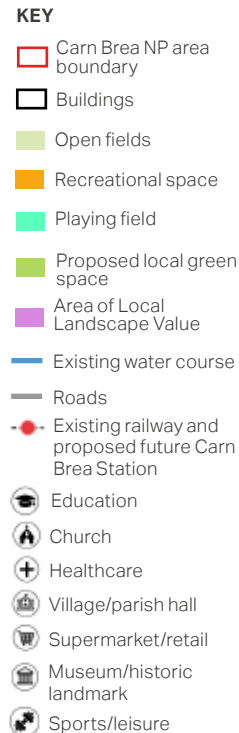
Pool settlement

Recreational space

There are five recreational spaces in the parish, all located in the built up area. One of the more significant spaces is at Heartlands which benefits from a large attractive parkland area with a children playground. Others include; a community green at Moorfield Road, small green area off Trevithick Lane, the green attached to Treloweth Community hall.

Playing fields

There are five playing fields located in the built up area of the parish, which are attached to either leisure centres or schools.



F.36

Figure 36: Local open spaces and community facilities



Proposed local green spaces and Area of Local Landscape Value

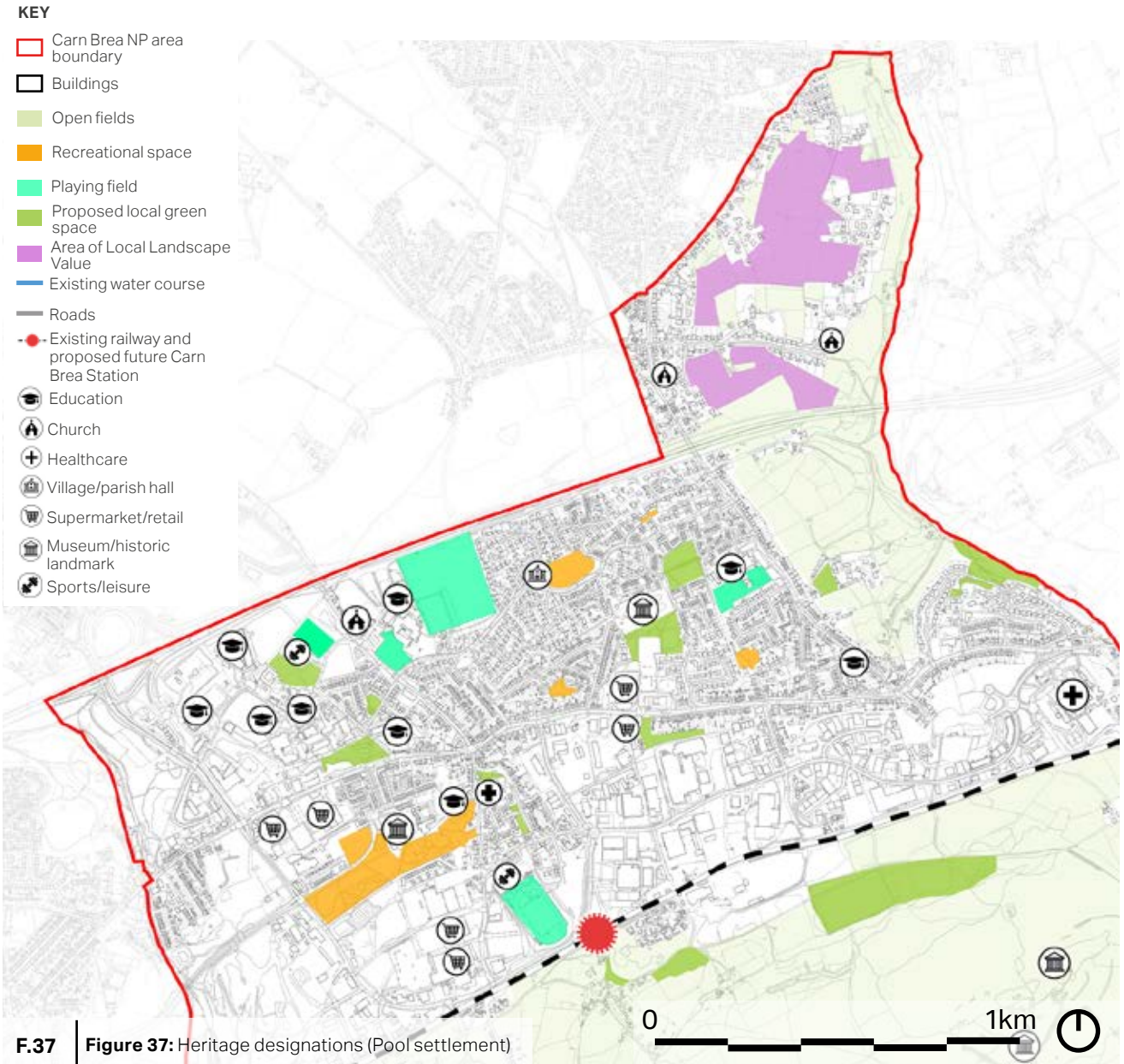
The NDP has designated a series of proposed local green spaces across the parish, many of these are located in Pool¹. Fields to the north-eastern part of the parish in West Tolgus are designated as an Area of Local Landscape Value. This is an important area for wildlife and links with the nearby habitat corridor along the Tolskithy River valley.

Community Assets

A range of amenities can be found in Pool. Educational facilities include Cornwall College, secondary, primary and nursery schools. There are two leisure centres and three religious buildings. Retail facilities are primarily located in the south western corner enclosed by Dundance Lane, Trevenson Road and Station Road, including Camborne Retail Park, Pool Market, a home and garden centre and Tesco supermarket. Heartlands museum is also located here on the site of the former Robinson’s Shaft mining complex. East Pool Mine on Cousin Jack Walk is a National Trust property comprising of the remains of the tin mine and two engine houses.

1 [Carn Brea Neighbourhood Development Plan 2022-2030 Local Green Space Report](#)

Pool Settlement



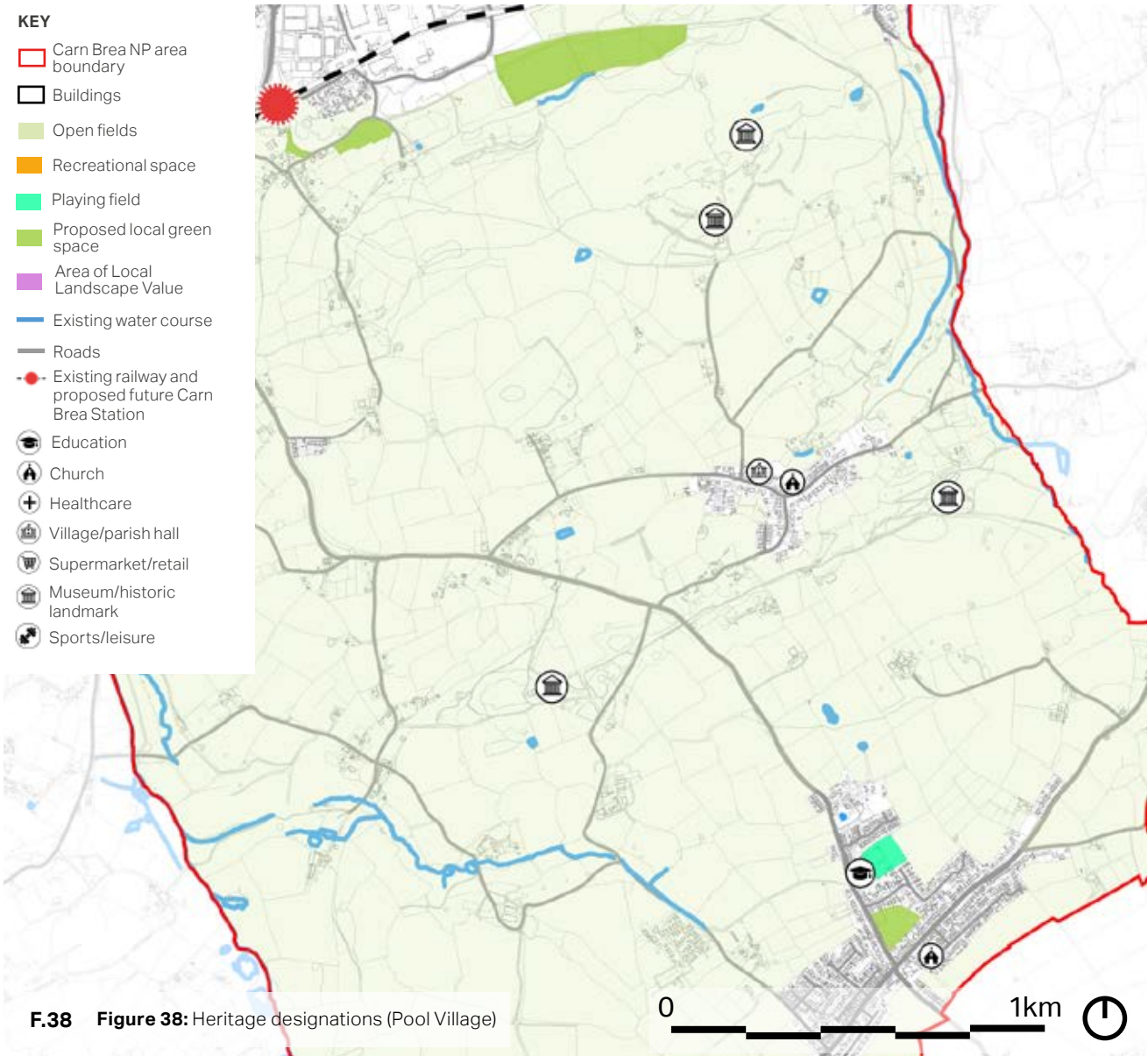
Rural Carn Brea

The majority of rural Carn Brea is open fields. There are three areas of designated open space. The largest in the north is the base of Carn Brea, formerly industrial land and now grazing fields. In Four Lanes village there is an open space, the village green with a children’s play area, as well as a playing field for Pencoys Primary School.

Community Assets

Within the two villages of Carnkie and Four Lanes community assets include Carnkie community institute, Carnkie Methodist Church and, in Four Lanes, Pencoys Primary School, United Methodist Church and St Andrews Church. Across the parish there are museums and landmarks including Carn Brea monument, Carn Brea castle, Wheal Basset and The Great Flat Lode.

Rural Carn Brea



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Character area
study

04



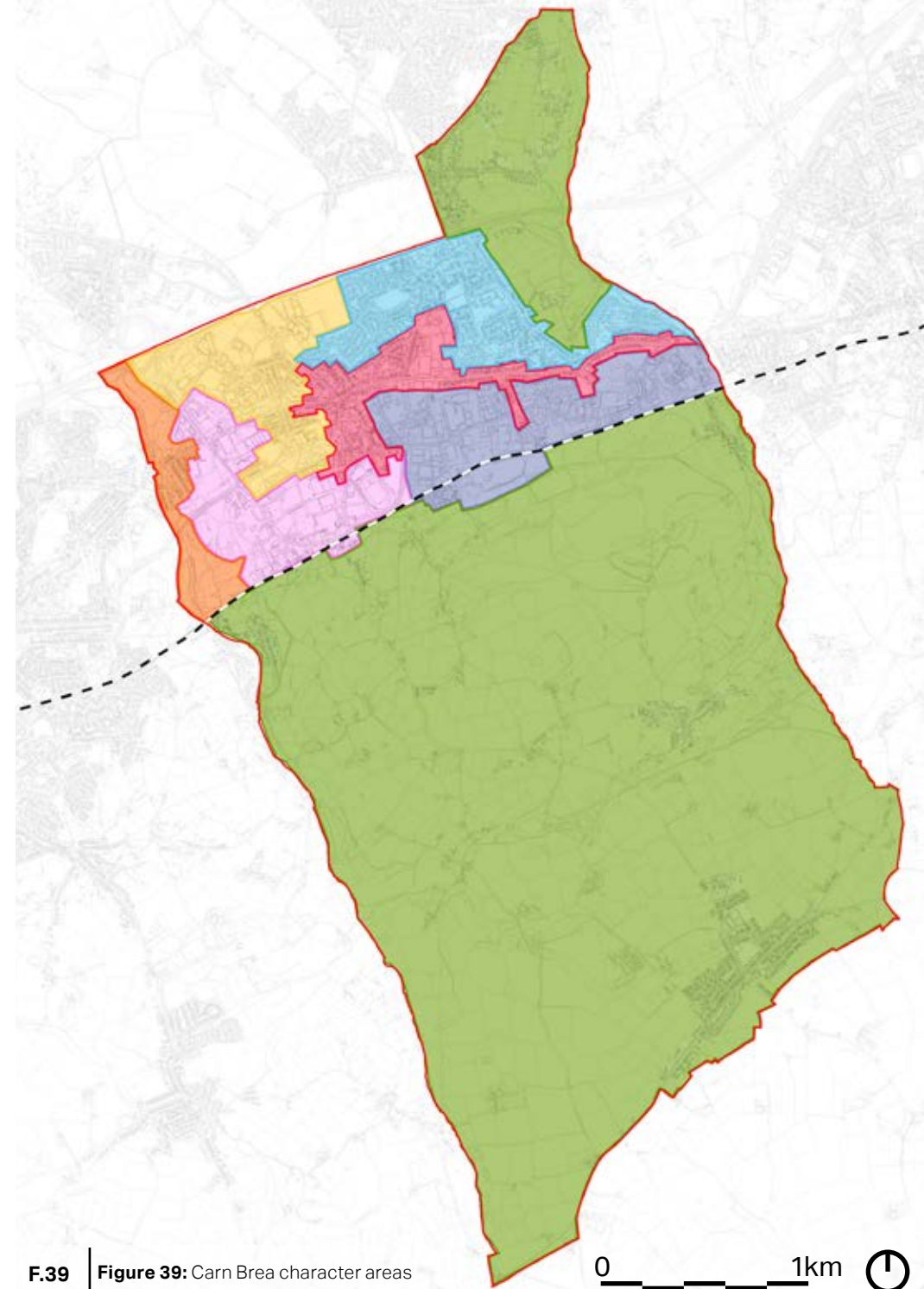
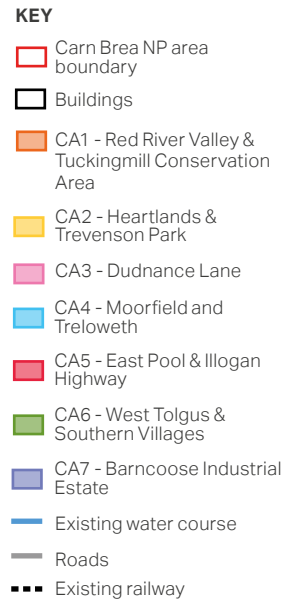
4. Character area study

4.1 Defining the character areas

Following on from the analysis set out above, this part of the report focuses on the different character areas within Carn Brea. The different areas are characterised by variations in movement, views and landmarks, landscape and public realm, streetscape, built form and architectural details.

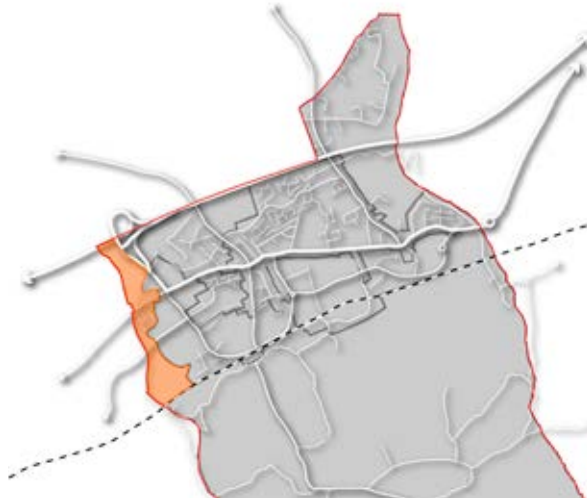
Carn Brea Parish broadly comprises 7 character areas (See Figure 32). The following pages provide an overview for each of these areas.

- CA1- Red River Valley & Tuckingmill Conservation Area
- CA2- Dudnance Lane
- CA3- Heartlands & Trevenson Park
- CA4- Moorfield and Treloweth
- CA5- East Pool & Illogan Highway
- CA6- West Tolgus & Southern Villages
- CA7 - Barncoose Industrial Estates



F.39 | **Figure 39:** Carn Brea character areas

1 CA1- Red River Valley & Tuckingmill Conservation Area



This character area comprises a part of the Tuckingmill and Roskear conservation area extending from Cambourne parish to the west, characterised by traditional Cornish stone miners cottages set on long narrow plots. To the north and south of the conservation area is the open landscape of the Red River valley, with Tuckingmill Valley Park located to the north of East Hill - serving as an important green wedge between Pool Village and Cambourne. The landscape setting to the south of the character area provides a gradual transition towards the countryside and villages of rural Carn Brea.

<p>Land Use</p>	<p>Land use is mainly residential stone cottages with some local businesses. The Grade II Tuckingmill Chapel built with local stone can also be found within the conservation area. Open landscape of the Red River Valley surrounds the area, including Tuckingmill Valley Park to the north, woodlands, trees and pathways along the River Red leading south towards rural Carn Brea. The Cornwall and West Devon Mining Landscape World Heritage Site is also located in this region.</p>
<p>Pattern Of Development</p>	<p>The villas and houses along East Hill represent a spread of settlement up the valley from Tuckingmill, with majority of the housing developed by The Basset family (tin mine owners). The difference in land ownerships led to different development patterns either side of the River Red. On the Basset lands the rows of buildings were built on old mine waste rather than the farmland on the west of the river. There is a direct physical and visual link with the rest of the conservation area. Terraced houses is the predominant housing typology.</p>
<p>Building Line/Plot Arrangement</p>	<p>In the conservation area the residences are mainly terraced cottages with generous front south-west facing gardens and small rear gardens. Access roads to the properties allow pedestrian, and vehicular access and vehicles are parked in front gardens. Some also have garages at the front. There is one exception on Chapel Road where houses benefit from generous front and rear gardens and parking on the street and in garages to the rear of properties. The plot arrangement is unusual as they are mostly front to back.</p>
<p>Boundary Treatment</p>	<p>Many houses have low traditional Cornish stone walls, but some are missing to occupy on street parking while others have been added to create garages. Those with boundary walls are complemented with well kept front gardens. Wooden fences and metal railing also feature in some properties.</p>
<p>Heights & Roofline</p>	<p>Mainly 2 storeys with pitched slate roofs. Tuckingmill Chapel is 3 storeys.</p>
<p>Public Realm</p>	<p>The public realm across the residential streets is quite stark - tarmacked footpaths and no street trees however the boundary stone walls front gardens and stone cottages offer a good backdrop. Tuckingmill Valley Park offers a completely different experience of wild green landscape with paths and views leading off into woodlands. Distant views are curtailed both north and south by engineered embankments. In East Hill, the openness and spaciousness of the Park offer important views from within the conservation area.</p>



Figure 40: View of Red River looking north towards the conservation area, East Hill.

Figure 41: Example of cottages with small rear gardens, some are infilled to lower level accommodation where street level is higher at the rear of the property than the front, Mains Row.

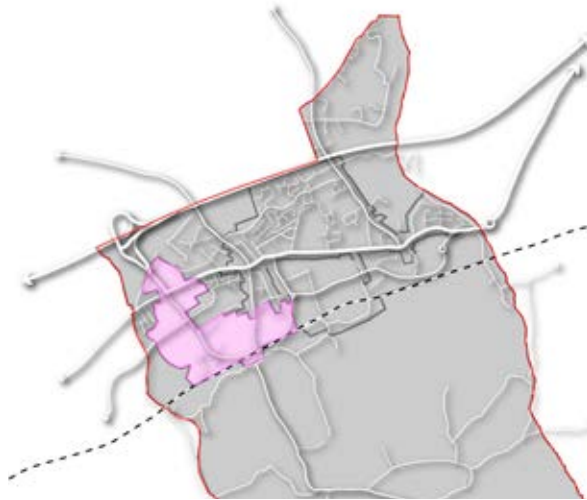
Figure 42: Example of properties where the removal of traditional stone walls and grassed front gardens are replaced with wood fences, tarmac and garages which detract from the character of the conservation area, Mains Row.

Figure 43: Example with a low stone wall as typical boundary treatment, often paired with natural vegetation to soften its hardscaped effect, Chapel Road.

Figure 44: Typical 2 storey stone cottage. The frontage includes a generous garden and existing stone boundary walls. More recent railing have been added. Windows and doors have been replaced with more contemporary uPVC which diminishes the original character, East Hill.



2 CA2- Dudnance Lane



This character area is defined by Dudnance Lane, which serves as a spine with developments branching out from it. There is a strong industrial character in the area, with warehouses arranged against the backdrop of rural Carn Brea. The railway running along the south of the character area forms a definitive edge for the character area, containing development from overspilling into the open countryside to the south.

<p>Land Use</p>	<p>Predominant land use in the area is light industrial warehouses, office uses, big box retailers and fast food restaurants in Camborne Retail Park. To the east is Carn Brea Leisure Centre, consisting of an indoor swimming pool, sports pitches and athletics track. South Crofty mine, located to the south-west of the character area on Kerrier Way, is one of the allocated sites (CPIR-E5) in the parish and is anticipating modernisation and improvements for it to be brought back into operation. A mix of employment uses is envisaged for the rest of the site. The recently restored Cooks Kitchen Headgear on the site acts as a landmark to the character area. Another allocated site (CPIR-E7) in the area is located on Station Road behind Heartlands, also allocated for a mix of employment uses.</p>
<p>Pattern Of Development</p>	<p>Most buildings front onto Dudnance Lane and Station Road. Buildings footprint tend to be large, most have large parking courtyards at the front. Link roads connected to Dudnance Lane and Station Road provide access to these buildings. Additionally, planning permission for 99 residential units has been granted on the site of the former South Crofty mine, to the west of Dudnance Lane and north of Kerrier Way.</p>
<p>Building Line/Plot Arrangement</p>	<p>Building plots tend to be large and building lines are irregular with warehouses arranged in clusters. Most of the buildings have large setback from the road, creating a weaker sense of enclosure compared to other parts of Pool. Most of the frontages along the main roads are inactive or blank facades, reducing natural surveillance for the area.</p>
<p>Boundary Treatment</p>	<p>Many industrial warehouses are screened by landscape buffers comprising long hedgerows, trees and grass verges. Hardscaped solutions, such as metal fencing and tall concrete walls, are also commonly used - these tend to detract from the quality of the streetscape by creating more inactive frontages.</p>
<p>Heights & Roofline</p>	<p>Building heights range between 1-3 storeys. Most of the industrial warehouses have high pitched roofs, whilst others have flat roofs. Predominant roofing material include corrugated roofs for warehouses, and some office buildings with grey slate roofs.</p>
<p>Public Realm</p>	<p>Landscape buffers east of Dudnance Lane form the only open spaces in the area. The area is also defined by long views towards Carn Brea Hills visible to the south of Dudnance Lane.</p>



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Figure 45: Fast food restaurants located at the intersection of Dudnace Lane and Trevenson Road. (Source: Carn Brea NDPSG)

Figure 46: 3-storey office building setback from Tolvaddon Road (A3047), boundary with the pavement is defined by grass verges.

Figure 47: Buildings typically have large setback from the road and have large footprints, streets are wide with high traffic speed, Dudnace Lane. (Source: Carn Brea NDPSG)

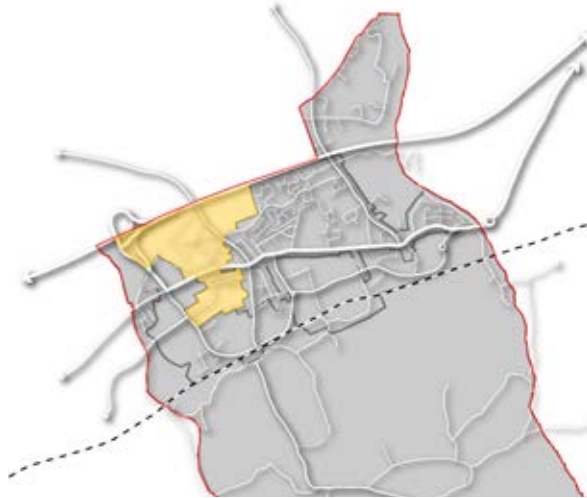
Figure 48: Blank facades of many of the big box retails result in streets being addressed by inactive frontages, significantly reducing passive surveillance and in turn undermines pedestrian safety, Trevenson road.

Figure 49: Long views towards the open countryside of Carn Brea defines the character of the area, Dudnace Lane. (Source: Carn Brea NPSG)



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3 CA3- Heartlands & Treveson Park



Heartlands & Treveson Park is a largely mixed use area characterised by its heritage assets, distinct contemporary architecture and significant areas of public realm and green space. Central to the area is the regeneration around the Heartlands Mining Museum, which now serves as a distinctive local landmark and symbol for Carn Brea’s mining legacy.

<p>Land Use</p>	<p>Heartlands & Treveson Park features a wide range of uses. A significant area to the north of the character area is dedicated to educational use associated with Cornwall College, and a small cluster of residential units fronting onto Treveson Road. Treveson Park consists of recently built residential developments. To the south of the character area, along Robinson Avenue, Bruton Road and Fordh an Bal, is a mix of contemporary residential, community and commercial uses, including the Heartlands Mining Museum and Wheal Play.</p>
<p>Pattern Of Development</p>	<p>Treveson Road is a key access route to the area, which branches out to residential streets. Educational buildings along Treveson Lane have large building footprints and are set on large plots, interspersed with surface parking and playing fields. Housing in Treveson Park are typically terraces or semi-detached, arranged around a central linear park. Whilst housing to the south of Treveson Road are made up of rows of terraces form configured around tertiary roads and cul-de-sacs. The Heartlands Mining Museum is also set within a large open plot, surrounded by green space and other public realm interventions.</p>
<p>Building Line/Plot Arrangement</p>	<p>Educational buildings are in small clusters that are lacking a discernible building line within larger, secluded plots. Whilst residential properties in the area follow a consistent building line. Those in Treveson Park are set on moderate plots whilst houses in the Heartlands development tend to have narrow plots. The Heartlands Mining Museum retains its original layout set with a large courtyard, bounded by recently built linear blocks.</p>
<p>Boundary Treatment</p>	<p>A variety of boundary treatments are present. Educational buildings to the north feature grass verges, light vegetation and woodland for effective screening from Treveson Road to the south and A30 to the north. Houses have a mix of low stone walls, hedges and grass verges to delineate boundaries.</p>
<p>Heights & Roofline</p>	<p>Much of the development around Heartlands & Treveson Park is a mix of two to three storeys. The mineshaft and chimney stack within the Heartlands Mining Museum stand out as prominent landmarks, visible from Treveson Road and Dudnace Lane. The roofline is varied, with a mix of pitched, gable, and flat roof typologies.</p>
<p>Public Realm</p>	<p>The public spaces around the Heartlands Mining Museum is a defining feature of the character area, creating a network of large open green spaces with playground and more secluded areas such as a small amphitheater. Linear parks to the south of Heartlands are defined by high quality landscaping.</p>



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Figure 50: Contemporary residential area north of Trevenson Road at Trevenson Park. Homes utilise traditional material palettes and are sensitive to the historic character of Carn Brea. (Source: Carn Brea NDPSG)

Figure 51: Chimney stack and mine shaft at the Heartlands Mining museum is a distinct local landmark and focal point for development and public space in the Heartlands area. (Source: Carn Brea NDPSG)

Figure 52: Contemporary residential housing surrounding Heartlands. These developments are more distinct architectural style which work well within the surrounding regeneration of the area. (Source: Carn Brea NDPSG)

Figure 53: Trevenson House, a Grade II listed building restored for use as a conference venue set among the grounds of the Ace Schools Academy. (Source: Carn Brea NDPSG)

Figure 54: Well-maintained park and garden at the rear of Heartlands Museum.

4 CA4- Moorfield and Treloweth



Moorfield and Treloweth is made up of modern development that is of mid-density, primarily along Moorfield Road and Balkin Way. The area is characterised by post-war cul-de-sac developments with largely uniform styles, many of these housing estates remain as council housing to date. The area is bounded by Church Road to the west and Higher Broad Lane to the east. The northern edge of the character area back onto the A30.

Land Use	Moorfield and Treloweth is primarily a residential area with some community, and educational uses - such as Treloweth School, nursery and preschool, The Learning Tree. There is a Co-op corner shop on Higher Broad Lane and a petrol station on Barncoose Terrace. Carn Brea parish council offices and hall is located on Moorfield Road.
Pattern Of Development	Much of the development to the north is made up of post-war housing built in the 1960s-70s, set along gently meandering residential roads such as Balkin Way and Moorfield Road, as well as cul-de-sacs such as Treloweth Way, Merrits Way and Wheal Agar. Dominating housing typologies include, semi-detached, bungalows and flats.
Building Line/Plot Arrangement	Building lines of houses within the area follow gently meandering streets, resulting in dynamic streetscapes. Plot sizes in the area are larger than those in other parts of Pool village, resulting in generously sized front and back gardens for most properties. Properties are arranged in clusters on smaller plots on cul-de-sacs.
Boundary Treatment	Boundary treatments are fairly consistent across most properties. Much of the post-war developments to the north features lawns and private gardens with landscaping and trees, low stone or brick walls also feature on some properties. Grass verges are also common to buffer between housing estates and pavements.
Heights & Roofline	Buildings are 1-2 storeys high, with some blocks of flats reaching 3 storeys on Balkin Way. Hip and pitched roofs feature on most houses, some with dormers which serve as extensions. Rooflines are consistent throughout most of the residential streets of the character area.
Public Realm	A number of local green spaces can be accessed in this character area, including the Carn Brea Recreation Ground, playing fields and playground on East Pool Park and smaller pockets among residential areas such as, Wheal Fortune Park and the community garden at the Guinness Estate on Balkin Way. Large grass verges buffering between housing estates and streets help to soften the public realm of residential streets.



Figure 55: Residential properties along Moorfield Road with low boundary walls paired with wooden fencing and vegetation.

Figure 56: Post-war flats around Balkin Way is three storeys and of higher density. A mix of concrete and sandstone brick is used with blocks surrounded by grass verges and shrubbery.

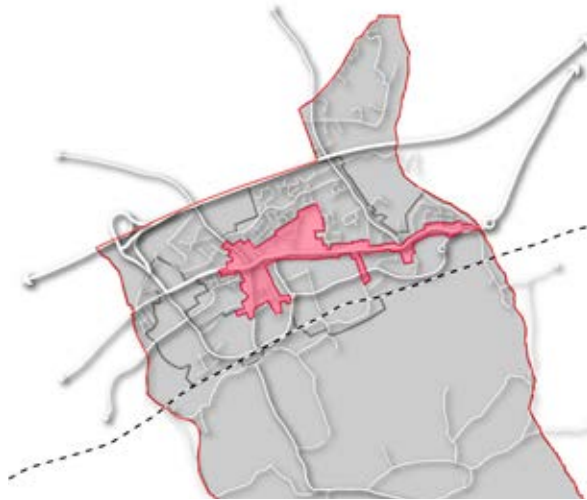
Figure 57: Carn Brea parish council and hall, Moorfield Road.

Figure 58: Carn Brea Recreation ground on Moorfield Road, at the rear of the parish council.

Figure 59: Guinness Estate Community Garden on Balkin Way.



5 CA5- East Pool & Illogan Highway



East Pool & Illogan highway is made up of Victorian and Edwardian development, running West-East along Agar Road from Pool via Illogan Highway to Barncoose and Blowinghouse. Historic, granite stone buildings are a common feature, particularly along Agar Road - typical of the local Cornish vernacular. East Pool Mine to the north of Agar Road is a notable landmark in the character area. Housing style across the rest of the area are mostly terraces of a similar style, creating a mid-density residential area.

<p>Land Use</p>	<p>This character area is primarily a residential area, with a few takeaways and a pub to the east along Fore Street, and a couple of grocery stores as well as light industrial warehouses along Agar Road. The intersection of Fore Street, Church Road and Station Road was historically known as the centre of Pool. The East Pool Mine to the north of Agar Road is a key heritage asset and there is a large green space to its south, serving as landscape buffer with the local supermarket and surrounding housing estates. Most properties of the area fall within the WHS.</p>
<p>Pattern Of Development</p>	<p>Much of the properties in this character can be dated back to the Victorian and Edwardian era, and many of these were developed as rows of terraced miners stone cottages typically found in Cornwall - such as those on Lower Pumpfield Row, Higher Pumpfield Row and Church Road. The configuration of terraced miners houses on Lower and Higher Pumpfield Row resemble similar spatial qualities to those in the Tuckingmill Conservation Area. Victorian and Edwardian ribbon developments can be found along Agar Road, consisting of mostly detached and semi-detached houses of a similar style.</p>
<p>Building Line/Plot Arrangement</p>	<p>Most properties are arranged back to back with moderate plot sizes, resulting in well-sized back gardens but smaller front gardens for most properties. On-plot parking is present for most properties. Traditional long burgage plot patterns are retained for properties along Agar Road and Lower Plumfield Row. Building lines are largely consistent and mostly in a linear pattern.</p>
<p>Boundary Treatment</p>	<p>Boundary treatments mostly consist of traditional Cornish low stone walls, paired with vegetation and wooden fencing. There is a significant landscape buffer, formed of thick hedgerows, created between East Pool Mine and residential streets to its east and west. However, more recent residential developments, such as those along Cousin Jack Walk, are dominated by hardscape surfaces with little boundary treatments nor landscaping between properties and the street.</p>
<p>Heights & Roofline</p>	<p>Buildings are 1-2 storeys high. Pitched roofs feature on most houses, some with dormers which serve as extensions which are not considered typical of the local vernacular. Rooflines are consistent throughout most of the character area due to the dominating terraced typology.</p>
<p>Public Realm</p>	<p>The open space attached to East Pool Mine is a key local open space in the character area. There are very few street trees in this area, resulting in a predominantly hardscaped public realm.</p>



Figure 60: Residential properties along Agar Road with low brick walls and shrubs, setback from the main road.

Figure 61: East Pool Mine - a prominent landmark for the area with a museum showcasing Pool and Carn Brea's mining heritage. (Source: Carn Brea NPSG)

Figure 62: Recent development on Cousin Jack Walk, built with material that fail to resemble the quality of local vernacular, and consists mostly of a hardscaped environment due to a lack of vegetation.

Figure 63: Terrace housing along Trevethick with low brick walls and small set backs. A larger variety of material and treatments add distinctiveness.

Figure 64: Morrisons and Lidl - 2 large local supermarkets located along Agar Road.



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6 CA6- West Tolgus & Southern Villages



West Tolgus & Southern villages is predominantly rural countryside with a few distinctive clusters of development. Many of these are historic settlements, such as Carnkie, Four Lanes and Carn Brea village, built in association with the mining industry which peaked in the area at the end of the 19th century. The residential areas in this character area feature architectural detailing and building typologies which is typical of the wider Cornish mining vernacular.

<p>Land Use</p>	<p>The southern villages surrounding Carn Brea Hill are primarily residential with pockets of light industrial and agricultural uses. Local services, such as corner shops, pubs, cafes and schools are located along main routes, such as Loscombe Road and the B3297/Church Road. Ruins of mining machine houses are dispersed across the rural fields and hills of this character area, such as those along Filtrick Lane.</p>
<p>Pattern Of Development</p>	<p>Larger settlements such as Carnkie, West Tolgus and Four Lanes are primarily ribbon developments associated with the area’s mining legacy. These consists of rows of miners cottages and churches along B3297, Loscombe Road, Chapel Hill and Tolgus Lane, with cul-de-sacs branching out from these routes. There are many secluded plots with agricultural buildings set along private rural lanes - reinforcing the area’s rural setting. Some recent cul-de-sac developments to the east of Tolgus Lane are gradually encroaching onto the designated open space between Tolgus Lane and Merrits Hill, which can result in coalescence with Illogan to the west if this continues and would detract from the area’s rural character.</p>
<p>Building Line/Plot Arrangement</p>	<p>Residential developments were built in late C20, featuring terraces, semi-detached and bungalows. Plots are more regimented with consistent building line along main routes or cul-de-sacs. Most are setback from the road with driveways and front gardens. Traditional miners’ terraces and suburban housing follow a consistent plot arrangement and building line. However, more dispersed farmstead properties are set on larger plots which do not front onto key routes. Building lines tend to be fragmented and inconsistent.</p>
<p>Boundary Treatment</p>	<p>Low stone walls are common as boundary treatments, especially for historic miners terraces. However, more recent developments feature a mix of lawns, fencing, low brick walls, hedges and vegetation.</p>
<p>Heights & Roofline</p>	<p>Building heights are 1-2 storeys with a range of typologies creating a varied roofline. Traditional miners cottages have pitched roofs on terraces and hipped roofs for detached residential units, with grey slate tiles. More recent developments include gabled fronts and dormers with red clay tiles, which are all deemed out of character with Carn Brea’s local vernacular.</p>
<p>Public Realm</p>	<p>Villages are surrounded by the open countryside of Carn Brea Hill and key heritage landmarks such as the Bassett Monument and Carn Brea Castle. At intersections of rural lanes and residential routes, street furniture are added to add interest to the streetscape. Some designated open spaces include Four Lanes Recreation Ground and play area by Carn Brea Village Hall.</p>



Figure 65: Detached house with architectural detailing typical of the area, featuring granite stone and pitched stone roof. Near Loscombe Road, Carnkie.



Figure 66: Multiple heritage mining assets around Carn Brea. Chimney stacks dot the landscape and are accessed via rural countryside lanes and rights of way. Flitrick Lane.

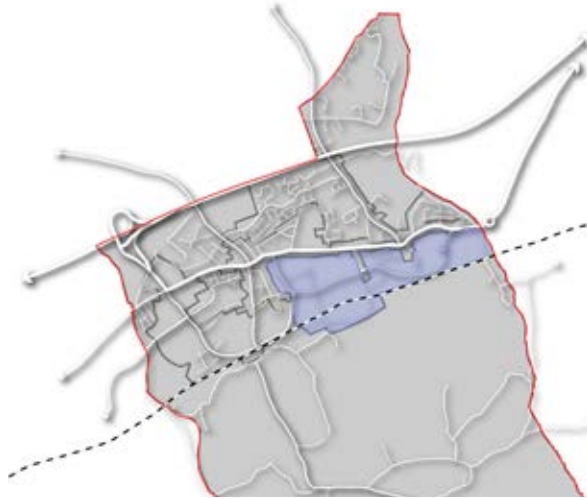
Figure 67: Terrace miners cottages a common residential housing typology and heritage asset within the character area. Post Office Lane, Carnkie.

Figure 68: Semi-detached, post war development a common typology with detailing such as pebble-dash which is less in keeping with the area's historic character. Inappropriate on-street parking results in a cluttered streetscape. Trevarren Avenue, Four Lanes.

Figure 69: Contemporary developments sensitive to the area's character, featuring granite stone, slate roofs and lime wash render.



7 CA7- Barncoose Industrial Estates



Barncoose Industrial Estates consists of various warehouses and wholesalers for construction materials, and is the largest industrial estates in Pool. It serves as an important employment hub for Pool, continuing the area’s industrial legacy.

Wilson Way is a key spine road that defines the character area, with the railway to the south which forms a hard edge for most parts of the character area and the surrounding countryside.

<p>Land Use</p>	<p>This character area solely comprises purpose built industrial warehouses of various scales and types, with a majority of these being wholesalers for construction materials, hardware and vehicle repair supplies and garages. A NHS learning disability support centre (Kernow Building) is also located on Wilson Way.</p>
<p>Pattern Of Development</p>	<p>Industrial estates in the character area are arranged along Wilson Way and Druids Road. Smaller link roads provide direct access to individual estates from the two main roads. Druids Road also provide access towards a part of an aggregates factory to the south of the railway. Many of the estates have large carparks and loading courtyards located on site. The site of Barncoose Industrial Estate (CPIR-E2) is an allocated site in Cornwall’s Local Plan, which recognises its strategic importance as an employment hub for Pool and that new development should continue to provide employment uses.</p>
<p>Building Line/Plot Arrangement</p>	<p>Building footprints tend to be large and are significantly setback from the main road of Wilson Way. There is an irregular arrangement of buildings on large plots that provide room for loading, the maneuvering of lorries and parking. The large setback of buildings, together with low building heights, meant that the streets in the area are lacking in a sense enclosure.</p>
<p>Boundary Treatment</p>	<p>Hardscaped boundary treatment features predominate the character area, such as low stone walls, metal fencing and gates. Natural boundary treatments, such as grass verges and trees can also be found. This is particularly evident towards the north of the character area, where landscape buffers comprising of a grass lawn and thick hedgerows are used to screen between houses on Agar road that back onto the industrial estates.</p>
<p>Heights & Roofline</p>	<p>Building heights range from 1-3 storeys. There is a range of roof typologies, including flat and pitched corrugated roofs, curved roofs and some clay tile or slate pitched roofs.</p>
<p>Public Realm</p>	<p>The predominantly hardscaped environment of the industrial estates create a less attractive streetscape. However, the area benefits from long expansive views towards Carn Brea Hill, Basset Monument and surrounding countryside to the south, given rise from low building heights and large gaps between buildings. Unauthorised advertisement signs also create clutter to the public realm and streetscape of the area.</p>



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Figure 70: Industrial estate with curved roof and corrugated sheet panelling facade, Wilson Way.

Figure 71: Barbed wire fencing is a typical boundary treatment material used across the character area to delineate between plots, Wilson Way.

Figure 72: Krenow Building - a NHS learning disability centre on Wilson Way, the Bassett Monument set on Carn Brea Hilltop is visible in its backdrop.

Figure 73: Construction material wholesaler, with parking courtyard at the front of the estate.

Figure 74: Printing works occupying a building with corrugated sheet panel facade and a flat roof, with large loading area and parking available at its front entrance, Wilson Way.

4.2 SWOT analysis

A SWOT analysis is set out in this section to summarise key findings informed by the context analysis and more detailed character area analysis. These findings will help to shape the design codes and guidance in the following chapter.

Points of strengths and opportunities will be harnessed and further reinforced by the design codes and guidance. Whilst any weaknesses and potential threats identified will be targeted and mitigated against through suggestions of good urban design practices and principles.

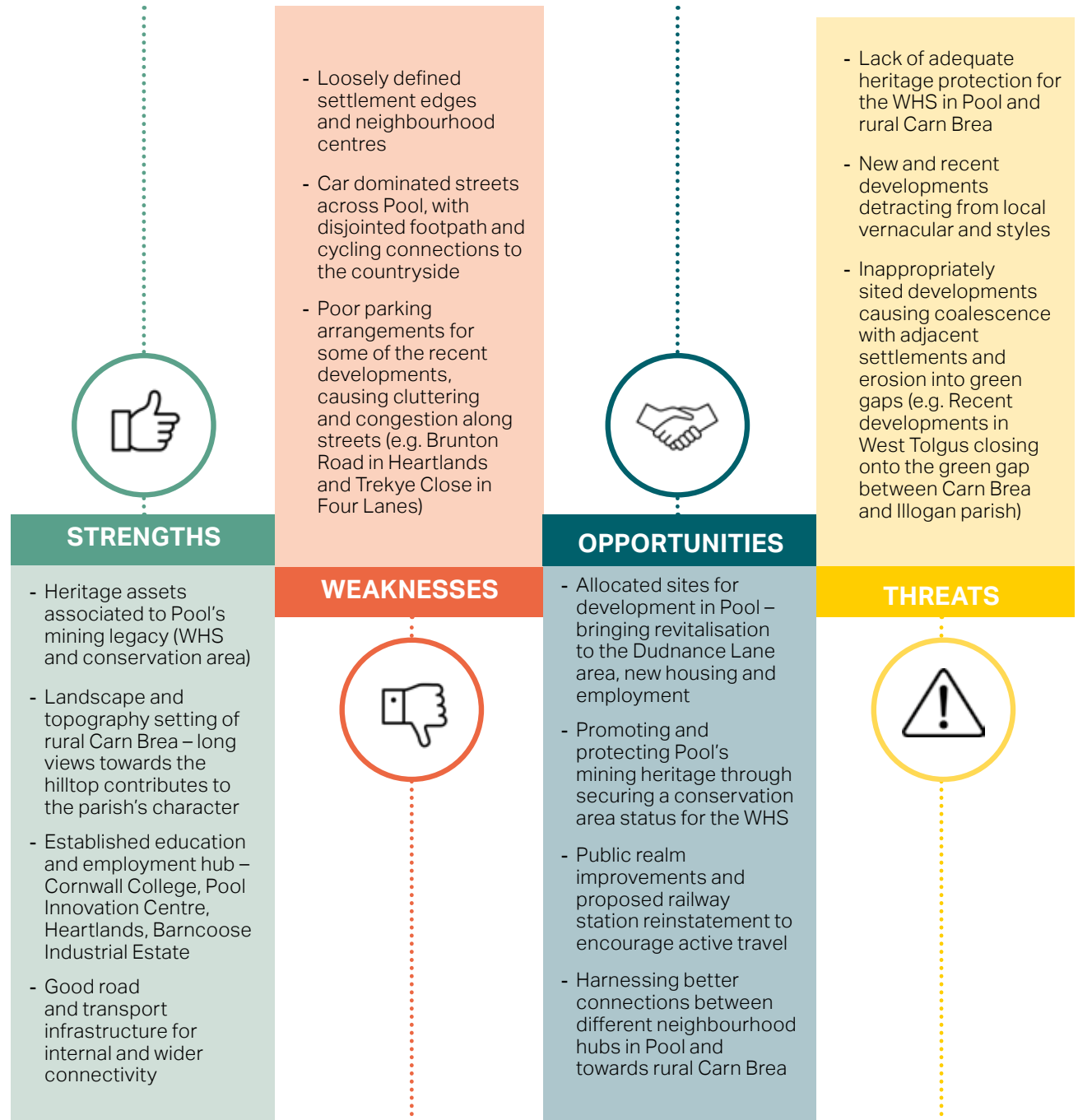




Figure 75: Carn Brea's landscape setting and remnants of its mining legacy brings significant value to the parish's character (Source: Carn Brea NDPSPG)



Figure 77: Public realm improvement opportunities along key routes, such as Agar Road, that serve as main movement corridors for local residents between key activity hubs across Pool.



Figure 79: Pool is characterised by a car dominated built environment, there is currently little cycling infrastructure and a disjointed connections that links towards the countryside.



Figure 76: Education and employment hubs, such as the Pool Innovation Centre and Cornwall College, are key economic assets and drivers for Carn Brea.



Figure 78: New mixed use development on the Dudnace Lane allocated site is anticipated to bring further employment opportunities and revitalisation for this part of Pool.



Figure 80: Recent development that is insensitively sited on an exposed site in rural Carn Brea and does not adhere to the local vernacular styles of Carn Brea.

**Design guidance
and codes**

05



5. Design guidance and codes

5.1 Introduction

This section sets out some key design considerations and aims to encourage readers, developers and their appointed teams to underpin their approach using good practice and a robust process that will clearly communicate their design intentions, be collaborative, and ensure the delivery of a high-quality product that is appropriate and responsive to its sensitive context.

Good places can be delivered from a better understanding of the existing and do not need to rely on inappropriate examples from elsewhere. The Parish comprises a lot of rich history and character, most of this delivered without the influence of the motorcar. The challenge for the future is how we create good movement infrastructure that connects people and places, one that prioritises the movement of pedestrian and cyclists and integrates a strong green infrastructure.

The focus for the design codes is primarily on built form within new development, although broader placemaking principles related to the natural environment are also discussed, covering aspects such as green infrastructure, biodiversity and water management. These codes will aim to guide any changes or development within the Parish to ensure the local character is respected whilst allowing space for innovation within the built environment.

This is not a step-by-step guide for all interventions of any scale, therefore all involved in urban design and built form must work to understand 'place' and consequently, how these and other key principles should be applied.



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Figure 81: The 10 characteristics of well-designed places. (Source: National Design Guide, page 8).

The guidance provided in Section 5.2.1 sets out 14 key requirements that developers and their respective teams should comply with. A series of further questions in Section 5.2.2 should help to assess 8 key points of design considerations, including, e.g. views, green space, materiality of developments. However the assessment and guidance provided in this document should be considered in line with relevant national and local planning policy.

A set of design guidance and codes form the second and main part of this document. These codes set out the expectations that are specific to the context of Carn Brea Neighbourhood Area. All design principles apply to the entire NP Area. The use of photographs and diagrams help to reflect good precedents, demonstrate design issues for consideration and further highlight the application of each design.

The guidance advocates for character-led design which responds to and enhances the landscape and village-scape character. It is important that new development responds to local context and enhances the “sense

of place” whilst meeting the aspirations of residents.

The 10 design codes applicable across Carn Brea NP Area are as follows:

- DC01.** Heritage, views and landmarks
- DC02.** People-friendly streets and neighbourhoods
- DC03.** Pattern and layout of development
- DC04.** Infill, extension and modification
- DC05.** Preserving and promoting local vernacular
- DC06.** Set in rural landscape and settlement edge
- DC07.** Green infrastructure and biodiversity
- DC08.** Eco-design
- DC09.** Water management
- DC10.** Industrial estate principles



5.2 General quality

The scope of the design code is not limited to large interventions within the main settlement area but also within the wider rural setting as well as individual small-scale developments. Creating good places demand a focus on achieving quality and this needs to be embedded in the heart of the process. Also, quality does not necessarily equate to higher costs.

Through partnership and collaboration, developers should aim to aim to deliver places that comprise these qualities.

5.2.1 General design requirements

This section sets out a series of general design requirements followed by questions against which the development proposals should be evaluated. As an initial appraisal, there should be evidence that development proposals have considered and applied the following general design principles:

- 1 Development should demonstrate synergy with, and be complimentary to, existing settlement in terms of physical form, movement/access and land use type;
- 2 Development should relate sensitively to local heritage buildings, topography/landscape features, countryside setting and long-distance views;
- 3 Development should reinforce or enhance the established character of the settlement;
- 4 Development should integrate with existing access; public rights of way (PRoW), streets, circulation networks and understand use;
- 5 Development should explore opportunities for new development to enhance access to public green space, to reflect settlement needs;
- 6 Development should reflect, respect and reinforce local architecture and historic distinctiveness, avoiding pastiche replication;
- 7 Redevelopment of heritage buildings including farms should aim to conserve as many vernacular features as is practicable;

8 Development should retain and incorporate important existing landscape and built-form features into the development which add richness;

9 Building performance in terms of 'conservation of heat and fuel' over-and-above building regulations, should be a key design driver for new development;

10 Development should respect surrounding buildings in terms of scale, height, form and massing;

11 Development should adopt contextually appropriate materials and construction details. Embodied carbon toolkits should be used to guide material specification;

12 Development should ensure all components e.g. buildings, landscapes, access and parking relate well to each other; to provide safe, connected and attractive spaces;

13 Net Zero aims should be integrated and development should adopt low energy and energy generative technologies within the development at the start of the design process; and

14 Development should use nature-based water management solutions/ SuDS to manage on-site water and boost biodiversity habitat.

5.2.2 Key points to consider when assessing design proposals

The aim is to assess all proposals by objectively answering the questions below. Not all the questions will apply to every development. The relevant ones, however, should demonstrate evidence to show how the design proposal or masterplan has responded to the context and provided an adequate design proposal.

The following fundamental questions should be used to evaluate the quality and appropriateness of development proposals within the Carn Brea Neighbourhood Area:

Pattern and layout of buildings

- What are the essential spatial characteristics of the existing development area and street pattern; are these reflected in the new proposed development?
- Are building densities appropriate for the development area?
- Is the plot to development ratio in-keeping/appropriate for the location?

- How will the new design or extension integrate with the existing street arrangement?
- Does the proposal respect, incorporate and enhance local landscape features including topographic features and hydrology?
- How does the proposal relate to its setting? Have important physical and visual assets been identified and does the design respect these assets?
- If the design is within or adjacent to a heritage/designated landscape asset, have all elements which contribute to their significance been considered and respected in the new proposal? And does the new proposal preserve or enhance the setting of the asset? (Heritage assets include listed buildings and designated landscape assets include Ancient Woodland and SSSI etc).

Access

- Does it favour accessibility, permeability and connectivity over cul-de-sac layouts? If not, why not?

- Does the development promote active travel opportunities via building layouts, links/routes and practical equipment/spatial requirements?
- Are new points of access appropriate in terms of visibility, patterns of movement, desire lines and road speed?
- Do the new points of access and street layout pay regard to all users of the development; pedestrians, cyclists and those with disabilities?
- Does the layout of the site and the design of buildings demonstrably take into account the relevant needs of groups with special characteristics as set out in the Equalities Act 2010? This may include example of disability, those with pushchairs, the elderly and people in rural isolation.

Building heights and roofline

- Is the proposed new development building height appropriate for the location? Does it reflect the proximate scale of development and respect local area assets, existing development and views?

- Does the proposed development height compromise the amenity/privacy of adjoining properties? Does the proposal overlook any adjacent properties or gardens?
- Does the height, form and massing of new buildings respond to contextual visual sensitivities, meaning views towards development from receptor areas?
- If the proposal is an extension, is it subordinate to the existing property?

Building line and boundary treatment

- Does the proposal respect the existing building line/enclosure character and harmonise with the adjacent properties?
- Has the appropriateness of the boundary treatments been considered in the context of the site? Have traditional Cornish hedges been incorporated where possible?

Green spaces and street scape

- Has the biodiversity mitigation hierarchy been used to protect existing green infrastructure from development?
- Have adequate protection measures been put in place to protect existing green infrastructure during construction?
- Providing continuous green infrastructure linkages is vital for biodiversity. Do proposals enhance existing green corridors and biodiversity habitat networks?
- Have the Biodiversity Net Gain and canopy cover requirements of the scheme been considered in accordance with emerging Cornwall Policy for Climate Emergency DPD (Policy G2 & G3)?
- In rural and edge of settlement locations does the development negatively impact visual character or interrupt existing tranquility and has this been fully considered with sufficient mitigation included?

- Is there adequate private/ communal amenity space for the development?
- Will any communal amenity space be created? If so, has usage been considered? and are measures incorporated to successfully fund landscape maintenance work?
- Have aspects of active and passive security been fully considered and integrated with development?
- Is active travel promoted at street level, and does this connect to existing networks?

Views and landmarks

- What are the existing key views and visual landmarks in the area and have these been retained, incorporated or enhanced by the development proposal?
- Does the development fall within any areas of key settlement views? How are these respected in the design?
- Are new views of the existing settlement and surrounding area incorporated into the proposal?

Architectural details and materials

- Has the local geology and architectural character been reflected in contemporary or traditional design proposals?
- Do the proposed materials harmonise with the local vernacular and geology? Are the construction details and materials of sufficient high quality?
- Can local materials be specified to support local industry?
- Has material specification considered user maintenance? Have appropriate materials been considered which provide longevity and robustness? Have developments in areas at risk of render staining considered appropriate alternative material finishes?
- Does new development demonstrate strong design rationale, quality material specification and good detailing appropriate for the local climatic conditions?

- Is building performance a priority, relating to sustainability, running costs and user enjoyment? Do proposals align with emerging Cornwall Policy for Climate Emergency DPD (Policy SEC1)?
- Has a fabric first approach to energy efficiency been integrated as a primary design driver? Are there opportunities to improve the thermal performance of the building fabric and future proof development?
- Have window, door, eave, verge and roof details been refined and considered in response to microclimates?

Parking and utilities

- Has adequate provision been made for car and cycle parking?
- Has a combination of well-integrated on-street parking and on-plot parking been integrated in line with emerging Policy for Climate Emergency DPD (Policy T2)?
- For appropriate housing typologies, are there opportunities to accommodate mobility vehicle storage areas?

- Does new development include fast internet speeds and space to work from home?
- Has adequate provision been made for bin storage, including areas for waste separation, holding and recycling?
- Is the location of bin storage facilities appropriate in relation to the travel distance from the collection vehicle?
- Has the design of bin storage facilities been fully considered; including the quality of materials and location?
- Does the installation of utilities include appropriate access for maintenance/ servicing?
- Is the use of renewable energy and energy saving/efficient technologies encouraged and maximised? Are these technologies well integrated?
- Does the lighting strategy reflect the strategy of the settlement for both private and public lighting applications?

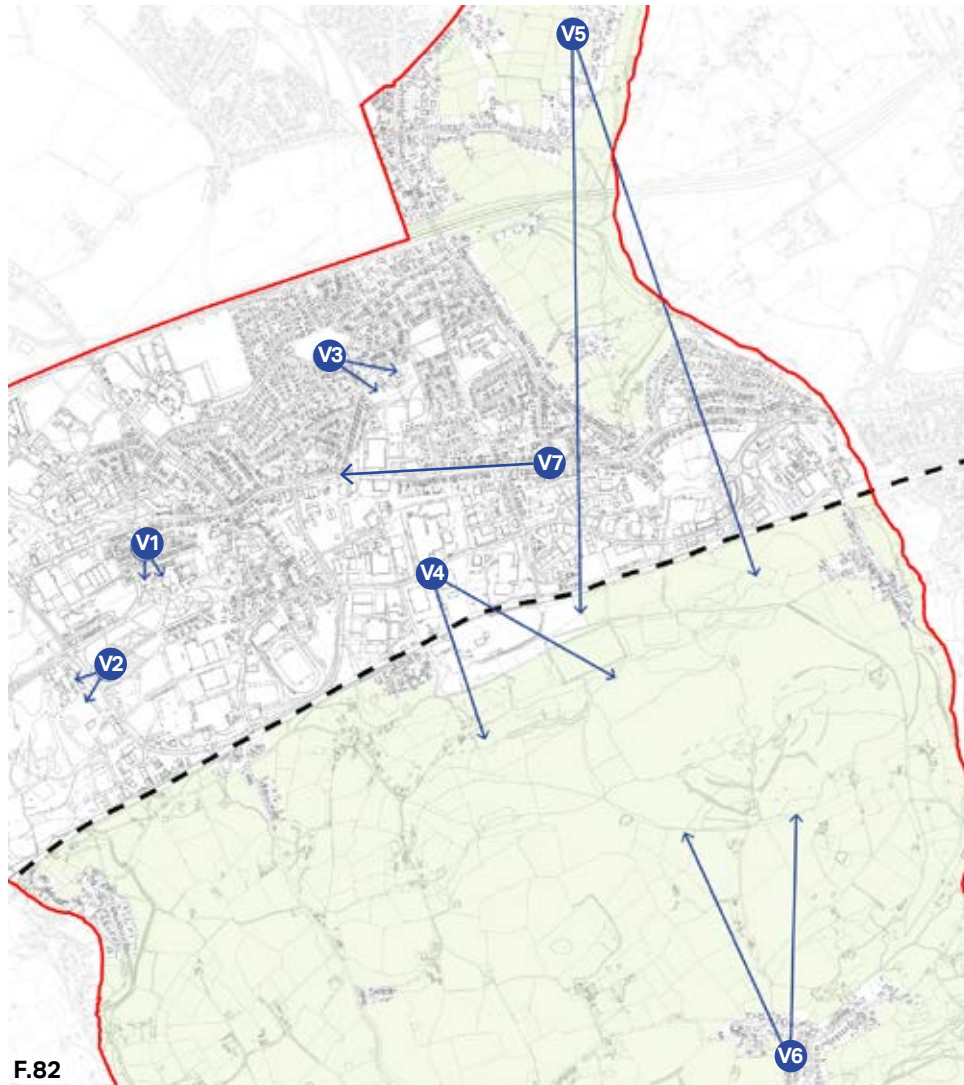
5.3 Carn Brea NP Area Design Codes

DC 01. Heritage, views and landmarks

As a historically thriving mining centre in Cornwall, Carn Brea's built heritage underpins the character of its built form as part of the West Cornwall and Devon Mining Landscape WHS. Many of the listed engine houses and mining headgears now serve as key landmarks across Pool and rural Carn Brea, alongside other officially listed and locally listed buildings that are considered key assets to the local vernacular of Carn Brea. The scheduled monuments of Basset Monument and Carn Brea Castle on Carn Brea Hilltop form a unique backdrop for Pool and villages to the south - such as Carnkie and Four Lanes.

It is pertinent that future developments are sympathetic to the design and historical significance of these structures, and that any important views are protected. Some design guidelines are:

1. Any listed buildings (see Figure 12) and locally listed buildings should be protected and adequately maintained, as they can act as effective landmarks for navigation whilst adding to the quality of the built environment;
2. Important views and vistas towards historic assets, landmarks and historically important streets should be respected by new and infill developments. Long-distance views from historic assets towards the open countryside should also be protected. A map of the main settlement area of Pool on [p.59](#) explores some of the important views towards key heritage landmarks in Carn Brea that should be protected;
3. The proposed expansion of the Tuckingmill and Roskear Conservation Area, and the designation of the NDP Historic Cores at Pool and Illogan Highway, should be reflected in designs. The Local Planning Authority should expedite these measures in order to offer better protection for Carn Brea's built heritage, especially those within the WHS;
4. Clear signage towards important local destinations, historic landmarks and amenities should be appropriately provided in any new development;
5. New development within the setting of a heritage asset (especially those within the conservation areas and WHS) must respect its significance and demonstrate how local distinctiveness is reinforced - e.g. allowing for generous setback from the asset and be of a massing and scale that is sensible to the neighbouring structure;
6. New developments, building extension or modification of existing properties close to heritage assets should make positive contributions to the character or distinctiveness of the conservation area and historic cores. Any views towards important built landmarks and long distance views should not be blocked or impacted on; and
7. New developments within conservation areas and the WHS should propose architectural details, materials and boundary treatments that are in harmony with surrounding heritage assets to respect local vernacular.



F.82

Figure 82: Map showing indicative views towards important heritage landmarks in Carn Brea that should be protected and respected by future developments.



V1

F.83

Figure 83: Vista towards Heartlands Museum framed by terraced houses along Robinson Avenue (Source: Carn Brea NDPSPG)



V2

F.84

Figure 84: View towards South Crofty mine headgear on Dudnance Lane (Source: Carn Brea NDPSPG)



Figure 85: View towards the chimney stack of East Pool Mine from Moorfield Road, variation in building heights help to maintain a clear view towards the landmark.

Figure 86: View of the Basset Monument on Carn Brea Hilltop from Barncoose Industrial Estate on Wilson Way, roof pitches kept low to avoid obstruction of views towards the hilltop.

Figure 87: Distant views towards Carn Brea Hilltop from the raised topography of a new development site in West Tolgus, new developments should avoid obstructing this long distance view. (Source: Carn Brea NPSG)

Figure 88: Open views towards Carn Brea Hilltop and Basset Monument from Carnkie village, levelling of properties adapted effectively to the existing topography to preserve this important view.

Figure 89: View down Agar Road - a major thoroughfare in the heart of Pool, framed by a rows of terrace and semi-detached houses, light industrial warehouses and a former engine house.

DC 02. People-friendly streets and neighbourhoods

A high level of car ownership and infrequent public transport services resulted in a car dominated built environment in Carn Brea plagued with traffic congestion during peak hours. Therefore, it remains a priority for the parish to facilitate for more active travel modes as a means to create well-connected, accessible and people-friendly neighbourhoods across the parish. Children friendly places and the integration of play features along key routes from to school and/or other destinations should be considered. Some design guidelines for future developments are:

1. New developments should be designed with a clear street hierarchy and facilitate multiple modes of transit (see [DC03](#) for more details on residential street designs). If the design proposal calls for a new street or cycle/pedestrian link, it must connect destinations and origins providing multiple access points where possible;
2. Any proposed developments should provide easy access to existing public transport corridors in the parish, including bus services and the proposed rail halt;
3. Opportunities to connect new developments to existing PRoW or local country trails (e.g. The Great Flat Lode and other Mineral Tramways in the area) should be explored to maximise active travel options for residents, these routes should also be clearly signposted. This is especially important for new developments in villages in rural Carn Brea - e.g. Four Lanes, Carnkie and West Tolgus;
4. Traditional street networks and estate layouts that are highly permeable (especially those within the Tuckingmill and Roskear conservation area and the WHS) should be retained, and new developments should create high quality connections onto these existing networks;
5. Streets and junctions should not be built to maximise vehicle speed or capacity, instead they should be designed to prioritise pedestrian, cyclists, and with the safety and accessibility of vulnerable groups in mind - including children and wheelchair users. Traffic calming measures should be applied where appropriate in new developments (see p.59 for more details). They should also be considered along main connector routes between key activity hubs across Pool, such as Trevenson Road, Dudnance Lane and Agar Road (Figure 82);
6. Figure 82 shows a range of activity hubs across Pool are located within a 10-20 mins walking distance to most residential neighbourhoods. Accessibility between these hubs should be further strengthened through public realm improvements (see p.60 for more details) to create an attractive environment for pedestrians along key routes connecting between them - such as Trevenson Road, Kerrier Way and Wilson Way; and
7. New developments, especially on allocated sites along Dudnance Lane/ Kerrier Way, should seek to create spatially outward ground floor facilities that address key routes with active frontages.

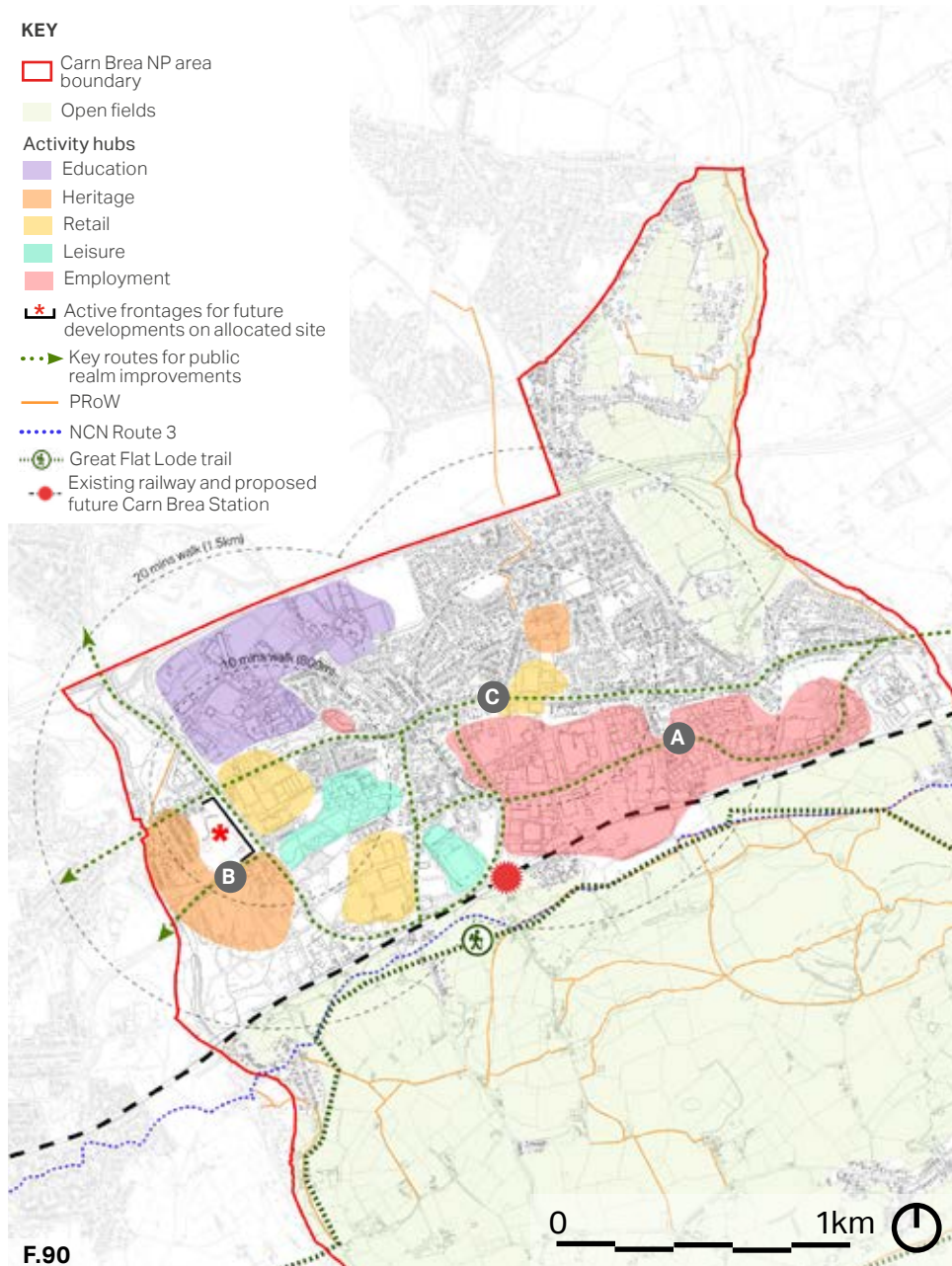


Figure 90: Map showing opportunities to create a more people-friendly streets and neighbourhoods across Carn Brea.



Figure 91: Fast and heavy HGV traffic, together with a hardscaped environment, create an unpleasant walking environment throughout the Barncoose Industrial Estate at Wilson Way (Source: Carn Brea NDPSG)



Figure 92: Inactive frontages and large set backs from streets meant that there is a lack of passive surveillance along Kerrier Way, resulting in undermined pedestrian safety (Source: Carn Brea NDPSG)



Figure 93: There is a lack of quality pavements and street trees along Agar Road, high traffic speeds and inappropriate on-street parking further detracts from safety and quality of the public realm.

Traffic calming measures

Traffic calming measures can be introduced to existing streets to shift the hierarchy of movement from motor vehicles to prioritise pedestrians and cyclists. The following measures can be used independently or in a combination, however the effect on the surrounding streets should be considered as well as the effect on the street itself.

- **Junction design** - junction designs should use the minimum possible radii to contribute to traffic calming. This should be applied to existing junctions especially within residential areas, as well as in new developments.
- **Raised junctions and entry** - flat sections of carriageway that are raised to be closer in height to the neighbouring footways, usually placed at pedestrian crossings, a street entrance or at a junction. A 20mph speed limit is often required, which becomes self-enforcing as vehicles have to approach at a lower speed.

- **Continuous footpaths** - these visually emphasise pedestrian priority by continuing the pavement material across a junction or street entrance to encourage drivers to slow down.



F.94

Figure 94: Example of a raised junction at the entrance to a residential street as a way to slow traffic entering onto a residential street.



F.95

Figure 95: Kerb build out with street greening and SuDS installation, double kerb to prevent vehicle overrun.



F.96

Figure 96: Example of Street planters that can be used as cycle parking.

Public realm enhancement measures

High-quality, well-connected public spaces are essential for towns and villages. They create informal meeting places, offer a place to rest and can even provide shelter. The public realm should be coordinated and strengthen local distinctiveness making it a more legible and user friendly environment. This can be done via:

- **Street furniture** - these should be added in appropriate locations to provide people with places to stop and linger, distinctive street furniture can improve legibility and wayfinding whilst enhancing character of a place. Choice of materials should be of high quality that compliments the surrounding.
- **Public art and installations** - public art could also be used to assist wayfinding potentially a new landmark sign/ sculpture to mark the gateway into Pool or other villages.
- **Children friendly places** - public realms should be designed with children friendly interventions, aligned with key routes that connect schools and residential neighbourhoods.



F.97
Figure 97: Example of street furniture integrated with wayfinding signage.



F.98
Figure 98: Landscaping and large tin sculpture marks the gateway into the heart of Pool village at the intersection of Station Road and Fore Street, whilst honouring Pool's tin mining legacy (Source: Carn Brea NDPDG)



F.99
Figure 99: Local example of a re-purposed mining tram carriage used as a planter in the centre of Carnkie village.



F.100
Figure 100: Rainbow pedestrian crossing, Somerset.

DC 03. Pattern and layout of developments

Analysis on patterns and layout of developments across different parts of Carn Brea parish has been highlighted in the earlier character area study in [Section 4](#). As a result of different street layouts, building heights, housing typologies and parking arrangements, contrasting characters are created across different parts of the parish. As increasing numbers of infill and larger scale developments are anticipated in Pool and the rural villages of Carn Brea, it is important that these are sensitively sited and designed so that they do not detract from the character and streetscape of their setting. Some design guidelines are:

1. New developments must demonstrate an understanding of the scale, building orientation, enclosure and rhythm of the surrounding built environment;
2. Buildings should front onto the streets to maintain active frontages and avoid having blank façades that hinder activity and movement;
3. Building setbacks in new or infill developments should be of an appropriate ratio between the width of the street and the building height, to achieve an appropriate sense of enclosure for its setting. Trees, hedges, and other landscaping features can help create a more enclosed streetscape in addition to providing shading and weather protection;
4. Infill development should complement the street scene, they do not need to completely mimic existing styles but its scale, massing and layout should reflect the locality within which it sits (this is particularly important to areas that fall within the WHS and Tuckingmill and Roskear conservation area)
5. The building line of new development should be in conformity with the existing. Very often, with terraced or dense groupings, the building line will be exactly the same (e.g. in the conservation area), but in other cases it might be acceptable that it closely aligns with the existing arrangement of buildings where there is an irregular, meandering building line (see Figure 93 - 100 for typical building lines across different character areas that infill or new developments should reference);
6. The density of any infill development should reflect the character of the immediate area and location within the village. The optimum density will respond to surrounding densities, whilst making efficient use of land;
7. The form and layout of new streets should align with historic ones where possible, and be delivered in the form of simple grid plan where feasible. Cul-de-sacs must be relatively short and provide overlooked pedestrian and cycle links; and
8. Adequate parking solutions must be integrated into new developments in line with Cornwall Council parking requirements to avoid cluttering and traffic congestion as a result of inappropriate on-street parking (more details on p.64-5).

Pattern of development and building lines

CA1 - Red River Valley & Tuckingmill Conservation Area



Figure 101: Building lines in the conservation area are continuous and regular, as a result of the traditional terrace typology - creating a strong sense of enclosure. Properties are characterised by long front gardens, and are uniquely facing onto the back of other rows of terraces, Main's Row.

CA2 - Dudnance Lane



Figure 102: Dudnance Lane is characterised by warehouse buildings with large footprints paired with large degrees of setback from roads. Together with a lack of continuity in frontages, there is a generally a weak sense of enclosure across the character area. (Source: Carn Brea NDPSG)

CA3 - Heartlands and Trevenson Park



Figure 103: Building lines and rooflines are consistent across Heartlands due to the prevailing terraced typology. There is little setback and properties have small front gardens, leading to a heightened sense of enclosure across the area, Robinson Avenue. (Source: Carn Brea NDPSG)

CA4 - Moorfield and Treloweth



Figure 104: Building lines are consistent but follow gently meandering roads and cul-de-sacs, with subtle variations in building setbacks and orientation, Treloweth Way.

Pattern of development and building lines (cont.)

CA5 - East Pool and Illogan Highway



F.105

Figure 105: Consistent building lines formed by rows of terrace and semi-detached properties with similar levels of setback, frontages are present along both sides of the road to give a strong sense of enclosure, Agar Road.

CA6 - West Tolgus and Southern Villages



F.106

Figure 106: Carnkie displays linear patterns of development where properties are formed by regular building lines that are made up of terrace and semi-detached properties, such as those along Post Office Terrace.



F.107

Figure 107: Cul-de-sacs are more common in Four Lanes, building lines are largely consistent with subtle changes in setback, but are sometimes broken up by inappropriately sited garages as a result of poor parking arrangements, Trekye Close.

CA7 - Barncoose Industrial Estate



F.108

Figure 108: Industrial warehouses front onto Wilson Way with large levels of setback, building lines are more irregular due to inconsistent frontages (Source: Carn Brea NDPSG).

Parking solutions

As reflected during community engagements of the Neighbourhood Plan, inappropriate on-street parking has often resulted in heavy traffic and parking dominated public realm within Pool and some of the rural villages - such as Four Lanes. There is a general public consensus for the need of better off-street parking solutions for new developments in the parish. This section provides some design principles and guidelines for on-plot and on-street parking solutions that any new development should adhere to, alongside guidance set out by the Cornwall Design Guide and Policy RT1 of the Carn Brea NDP¹:

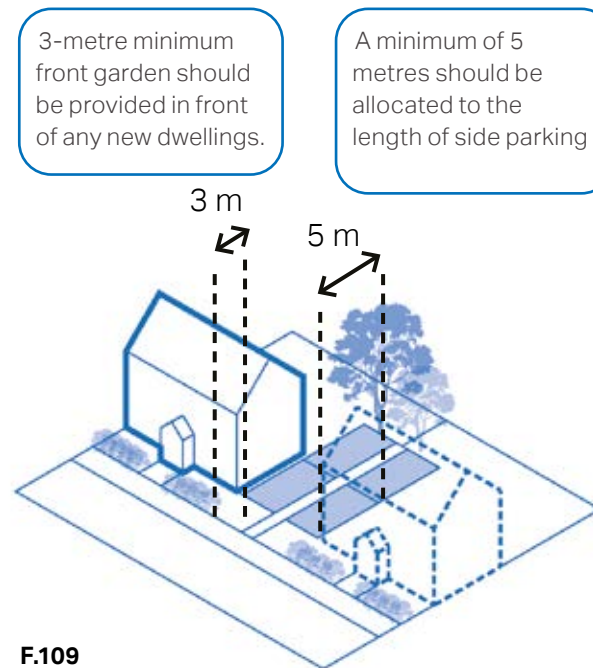
On-plot car parking

- Parking being provided on a driveway to the side of a dwelling should be of sufficient length (generally 5m minimum) so that a car can park behind the frontage line of the dwelling. This will reduce the visual impact that cars will

¹ Carn Brea Parish Neighbourhood Development Plan 2023-2030, p.86-87

have on the street scene. When parking is provided to the side of a dwelling a minimum front garden depth of 3m in general should be provided;

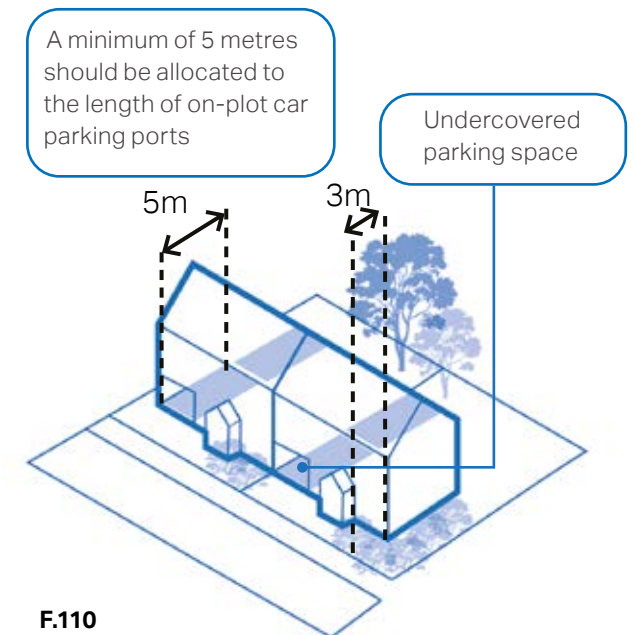
- The use of on-plot car parking ports is recommended for terraces as a space efficient car parking typology; and



F.109

Figure 109: Illustrative diagram showing the indicative layout of and minimum dimensions of on-plot side parking, parking bays should be set slightly behind main building frontage to minimise visual impact on streetscapes.

- Where possible, electric vehicle charging points should be incorporated into on-plot parking in new developments to promote more sustainable modes of transport.

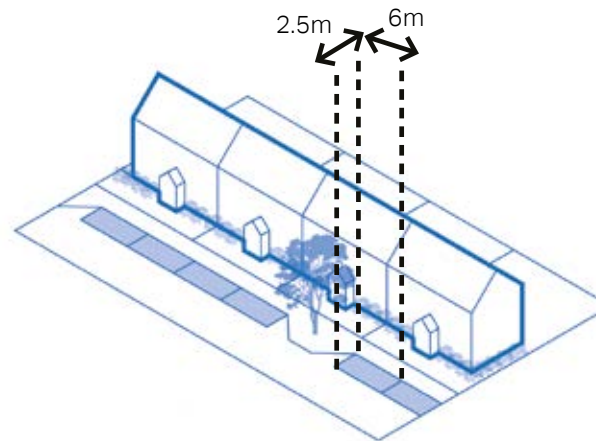


F.110

Figure 110: Illustrative diagram showing an indicative layout and minimum dimensions of on-plot car parking ports, with an undercover parking space at the front and a second space extending to the back of the property.

On street parking

- New developments should provide safe and conveniently located off-plot car parking options for residents and visitors;
- On-street parking must be designed to avoid impeding the flow of pedestrians, cyclists, and other vehicles, and can serve as traffic calming;
- On low-traffic residential streets or lanes that are shared between vehicles and pedestrians, parking bays can be clearly marked using changes in paving materials instead of road markings; and
- Given the move towards electric vehicles, every opportunity must be taken to integrate charging technologies into the fabric of road and street furniture in the public and private realm.



F.111

Figure 111: Illustrative diagram showing an indicative layout of on-street parking



F.112

Figure 112: Example of on-street electric vehicle charging points.

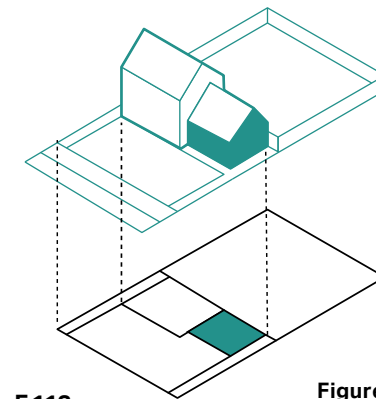
DC 04. Extensions and modification

A well-designed extension, and/or appropriately delivered conversion can revitalise an older building and enhance the appearance of its street, whereas an unsympathetic extension can have a harmful impact, create problems for neighbouring residents and affect the overall character of the area. Some design guidelines are:

1. Modifications to existing buildings should preserve and if possible, enhance the existing building's architectural style;
2. Extensions must be appropriate to the scale, massing and design of the main building, and should complement both the streetscape and the rural setting. The general size, height and width of the extension should normally be less than the original building, ensuring that it remains similar or subordinate to the original building in terms of scale and form;
3. The original building should remain as the dominant element of the property regardless of the number of extensions;
4. Consider the appropriate building methods, colours and architectural styles for the extension. These can be traditional or contemporary as long as they complement the original building and local character;
5. It may be most appropriate for extensions on significant or notable buildings to be clearly different from the original building. This can allow the merits of the original building to stand out. However such a decision should always be based on an understanding of the building's character;
6. Sheds, garages and other outbuildings should not compete, in terms of scale, decoration and design, with the original buildings they serve. They should be designed and sited to relate to, not dominate, the original building. Use of more subdued colours and simple designs will allow them to be less obtrusive.

Side Extensions

- Single-storey and double-storey side extensions should be set back from the main building line to the front of the dwelling and complement the materials and detailing of the original building, particularly along the street elevation.
- The roof of the extension should harmonise with that of the original building.
- Side windows should also be avoided unless it can be demonstrated that they would not result in overlooking of neighbouring properties.



F.113

Figure 113: Drawing showing side extension

Rear Extensions

- The extension should be set below any first-floor windows and designed to minimise any effects on neighbouring properties, such as blocking day light. A flat roof is generally acceptable for a single storey rear extension;
- Double-storey rear extensions are not common as they usually affect neighbours' access to light and privacy, however, sometimes the size and style of the property allows for a two-storey extension. In these cases, the roof form and pitch should reflect the original building and sit slightly lower than the main ridge of the building.

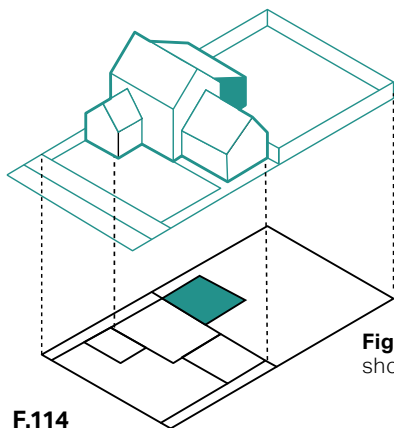


Figure 114: Drawing showing rear extension

F.114

Front Extensions

- Front extensions are generally not acceptable. If proposed, in all cases front extensions should take the form of the existing building, mirroring the roof pitch, replicate or have lower cornice height and their ridge should be below the existing ridge height;
- The extension can project maximum 2 metres beyond the front facade and will not cover more than 50% of the front elevation.

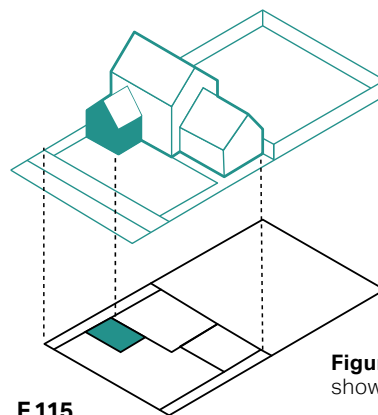


Figure 115: Drawing showing front extension

F.115

Loft conversion

As an enclosed space the main challenge of loft conversions is the introduction of roof lights or dormer windows for natural light and ventilation. However, roof lofts and dormers should be avoided for any heritage buildings within conservation areas and the WHS. Some examples of what is and isn't acceptable is shown on the diagrams below.



Loft conversion incorporating skylights.



Loft conversion incorporating gable dormers.



Loft conversion incorporating long shed dormers should be avoided



Original roofline of an existing building

F.116



Loft conversion incorporating gable dormers.



Loft conversion incorporating gable dormers which are out of scale.

Figure 116: Examples of loft conversions

Positive local examples of building modification extension and conversion:



Well-proportioned extension with fenestration that matches the main property



Use of vegetation at boundary to minimise visual impact of conservatory extension



Front extension with adequately proportioned, pitch of roof matches the original property



Sympathetic use of material on extension that matches the primary frontage



Garage conversion with material that is in-keeping with the main property

Negative local examples of building modification extension and conversion:



Extension overly dominates the front elevation of the property



Extension is out of proportion in terms of scale and style of window



Unsympathetic use of timber on extension that is out of character



Front porch extensions are out of scale and dominate the front elevation of properties

DC 05. Preserving and promoting local vernacular

New developments should be respectful of architectural styles and use of materials of surrounding housing, whilst ensuring that a mix of styles are provided that is in keeping with the Carn Brea style and character. Modern interpretations and tasteful adaptations of the Cornish style are welcomed in new developments as long as they remain sympathetic to their surrounding contexts. Some design guidelines for new developments are:

1. Architectural design in new developments shall reflect the high quality local design references in both the natural and built environment and make a valuable contribution to the character of its surroundings;
2. Any new fenestration should be positioned carefully to maintain the character and balance of the building and reflect the existing design through use of complementary materials and finishes;
3. The scale of roofs should always be in proportion to the dimensions of the building itself; flat roofs for buildings,

extensions, garages and dormer windows should be avoided; and chimney type and height should be congruent with the typical examples in Carn Brea;

4. Natural boundary treatments should reinforce the sense of continuity of the building line and help define the street, appropriate to the character of Carn Brea. These should typically be mainly continuous Cornish hedges and low stone walls.
5. Traditional, natural and preferably locally sourced materials should be used and man-made synthetic, pre-coloured materials should be avoided. A set of locally distinctive materials are provided in this section that should serve as a reference for new developments; and
6. Existing local vernacular and architectural detailing can be interpreted using contemporary methods, however, creating pretentious pastiche look must be avoided.

Facade



Local Cornish stone



Painted white stone paired with local stone



White render



Roughcast paired with stone



Local stone paired with white render



Local stone with white render, timber boards and iron panelling

Boundary treatments



Traditional Cornish stone boundary wall



White painted stone wall



Traditional Cornish hedgerow



Stone wall paired with low wooden fencing

Fenestration



Wooden casement window with decorative stone quins



Timber sash window



Bay window

Roofing



Grey slate gabled roof



Grey slate hipped roof with red clay ridges and gabled dormers



Cross-gabled grey slate roof



Corrugated iron pitched roof



Mixture of gabled and flat grey slate roof



Grey slate roof with solar panels



F.117

Figure 117: Tasteful adaptation and incorporation of traditional materials and styles in recent developments in Heartlands, Robinson Avenue (Source: Carn Brea NDPSPG)



F.118

Figure 118: Incorporation of Cornish stones and white rendered facades with grey slate roofs in a recent development in Trevenson Park (Source: Carn Brea NDPSPG).



F.119

Figure 119: An example of a new development in rural Carn Brea with unsympathetic use of red clay tiles as roofing material which is not considered part of Carn Brea's vernacular, Tin Croft Road.

DC 06. Set in rural landscape and settlement edges

Much of the rural parts of Carn Brea Parish is set within an open rural landscape with a rolling topography. Existing vegetation that forms boundaries between settlements and the landscape should not be undermined by any new development. In particular, any new development set on the edges of village settlement boundaries needs to respect the existing natural setting and aim to enhance it. Some design guidelines on how new development should treat rural development edges are:

1. Edge of settlement development should gradually transition to the surrounding landscape context, with a soft, low density edge. Building elevations along the existing settlement edge should connect into it and should provide an attractive and positive frontage;
2. Abrupt edges to development with little vegetation or landscape on the edge of the settlement should be avoided and, instead, a comprehensive, layered landscape buffering should be encouraged;

3. Any green gaps and wedges between settlements should be preserved to avoid coalescence with adjacent settlements (e.g. green gaps between West Tolgus and Illogan parish);
4. New development should conserve existing native trees, shrubs and hedgerows in the parish, and incorporate any green asset within design - avoiding any unnecessary loss of flora;
5. Any new development within the parish must demonstrate adaptations with the topography to remain sensitive to their landscape context and avoid obstructing

any key views (this is especially important for new developments in CA7 - West Tolgus & Southern Villages); and

6. Development adjoining to public open spaces, open fields and the countryside should face onto them with appropriate setback to improve natural surveillance for public spaces and celebrate the Carn Brea's landscape setting. One way to achieve this is to encourage new developments to incorporate edge lanes and green corridors into street designs, which can also provide active travel options - more details provided overleaf.



Figure 120: Positive local example of an infill development with bungalows at the edge of Carnkie Village, responsively designed to adapt to the topographical context of the site, maximising views towards Carn Brea Hilltop with a generous landscape buffer on edges to minimise impact on the landscape.



Figure 121: Recent development in West Tolgus that is encroaching on green gaps between Carn Brea and Illogan parish to the west, Merrits Hill.

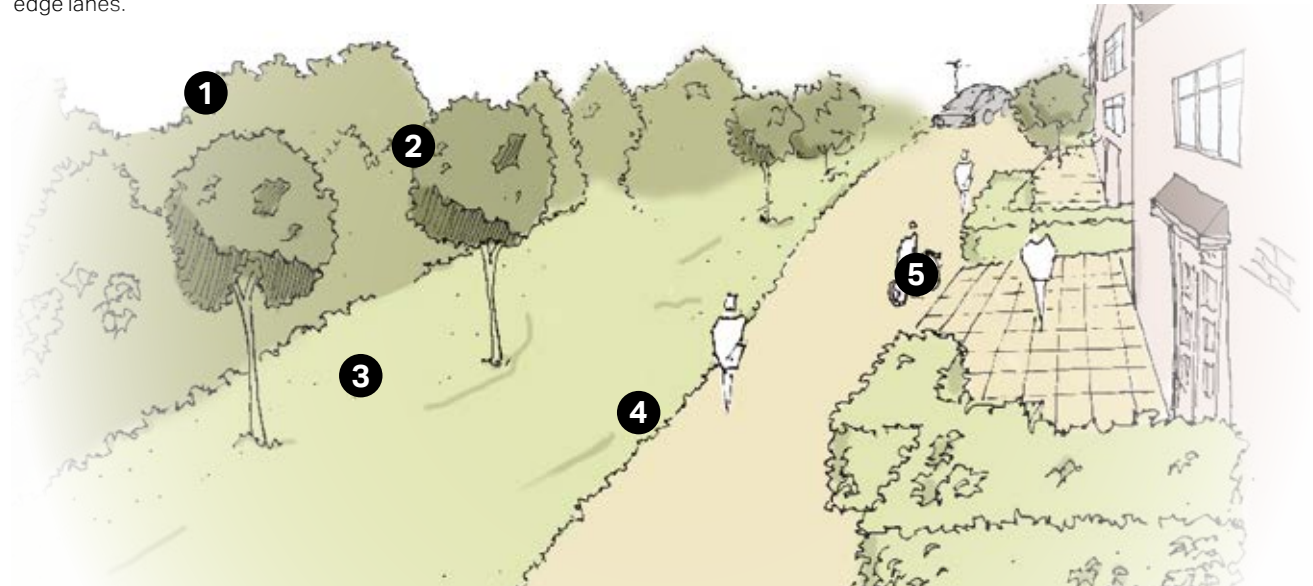
Edge lanes

- Edge lanes are low-speed streets that front houses with gardens on one side and a green space on the other. Carriageways typically consist of a single lane of traffic in either direction, and are shared with cyclists;
- Variations in paving materials and textures can be used instead of kerbs or road markings; and
- Width of edge lanes are recommended to be 3.7-6.5m.



F.122
Figure 122: Cross-section to illustrate some dimensions for edge lanes.

1. Existing properties should be buffered with rich vegetation to mitigate any visual impact towards the open countryside.
2. Retain any green asset and incorporate it into the new design.
3. New green verge with trees and vegetation to serve as an additional buffer (width varies).
4. New private drive or edge lane should be used by pedestrians, cyclists and vehicles.
5. New residential frontage with boundary hedges and front gardens to enhance the rural character.



F.123
Figure 123: Sketch to illustrate design guidelines on how new development can treat the rural edges by facing onto them improving natural surveillance and allowing for open views to the countryside.

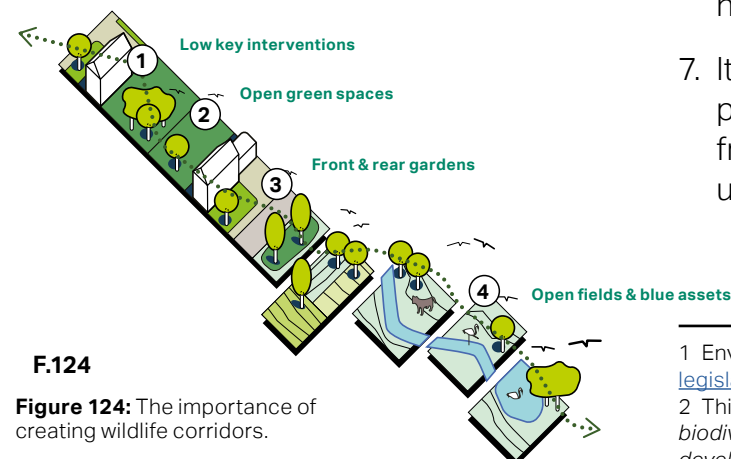
DC 07. Green infrastructure and biodiversity

As highlighted in Section 3.4, Carn Brea's landscape setting underpins much of its character and offers impressive views for settlements within the parish. Within Pool and other villages are a range of local green spaces tailored to different recreational purposes. Not only do these accommodate for leisure purposes, they also contribute significantly to the parish's biodiversity and local wildlife.

Future developments should seek to protect and enhance the natural environment of Carn Brea by adhering to guidelines set out in the Climate Emergency DPD and the following guidance:

1. New development should gain a good understanding of the landscape context and character of the parish and propose design that does not undermine the existing qualities of the area, especially its setting within the WHS in rural Carn Brea as well as sensitive areas within the SSSI and areas of ancient woodland;

2. Existing locally designated open spaces (see [Section 3.6](#)) should be protected and new developments should seek to provide aligned connections to these open spaces to improve access;
3. New developments should provide access to a wide range of multifunctional, semi natural green open spaces (e.g. parks and allotments) for the benefit to people and wildlife;
4. New developments should provide walking and cycling connections that link up with the parish's existing PRow network, green corridors and nature



F.124

Figure 124: The importance of creating wildlife corridors.

trails (e.g. the Great Flat Lode) to improve access to the countryside and offering more opportunities for active travel;

5. New developments should prioritise tree planting, identify existing biodiversity corridors and contribute to their preservation and enhancement. They must also demonstrate a 10% increase in biodiversity¹ on or near development sites in alignment with national legislation on Biodiversity Net Gain²;
6. Native trees, Cornish hedges and hedgerows should be retained and sympathetically incorporated into any new developments; and
7. It is important that dark skies in the rural parts of Carn Brea parish are protected from inadequate positioned and unshielded street lighting.

¹ Environment Act 2021, Schedule 7A Part 1: <https://www.legislation.gov.uk/ukpga/2021/30/schedule/14/enacted>

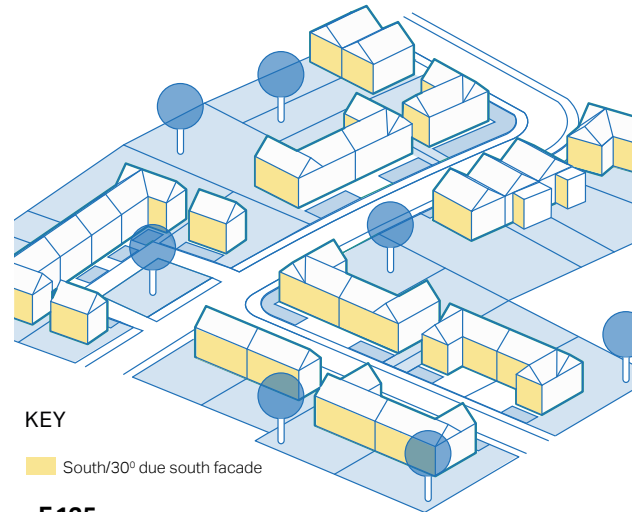
² This refers to "the delivery of measurable improvements for biodiversity by creating or enhancing habitats in association with development" (National Design Guide, p.28)

DC 08. Eco-design

Building orientation, solar gain and solar shading

Buildings should be orientated to incorporate passive solar design principles.

1. One of the main glazed elevations should be within 30° due south to benefit from solar heat gain. Any north-facing facades might have a similar proportion of window to wall area to minimise heat loss on this cooler side;
2. If houses are not aligned east-west, rear elevations could be included so that some of the property benefits from solar passive gain;
3. Homes should be designed to avoid overheating through optimisation of glazed areas, natural ventilation strategies including openings, longer roof overhangs, deep window reveals and external louvres/ shutters to provide shading in hotter summer months; and
4. North facing single aspect units should be avoided or mitigated with the use of reflective light or roof windows.

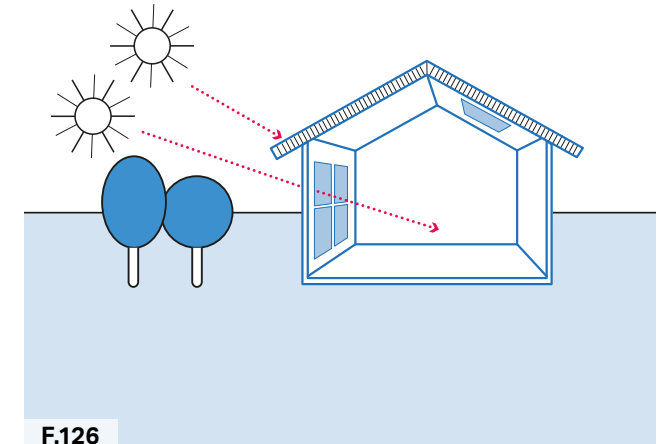


KEY

South/30° due south facade

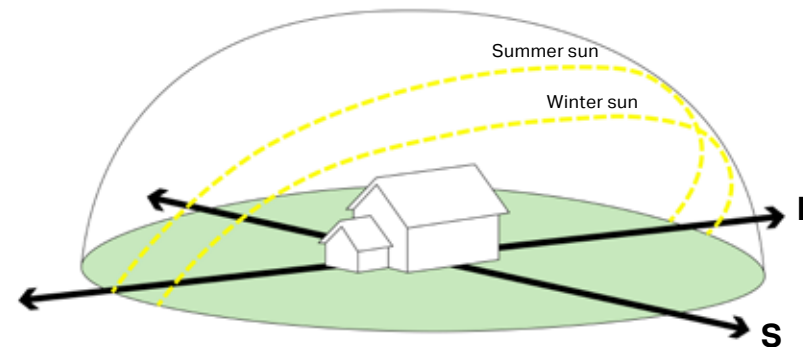
F.125

Figure 125: Elevations that would benefit from passive solar gain



F.126

Figure 126: The use of roof window, pitch roof, location and size of windows in favour of maximising solar gain

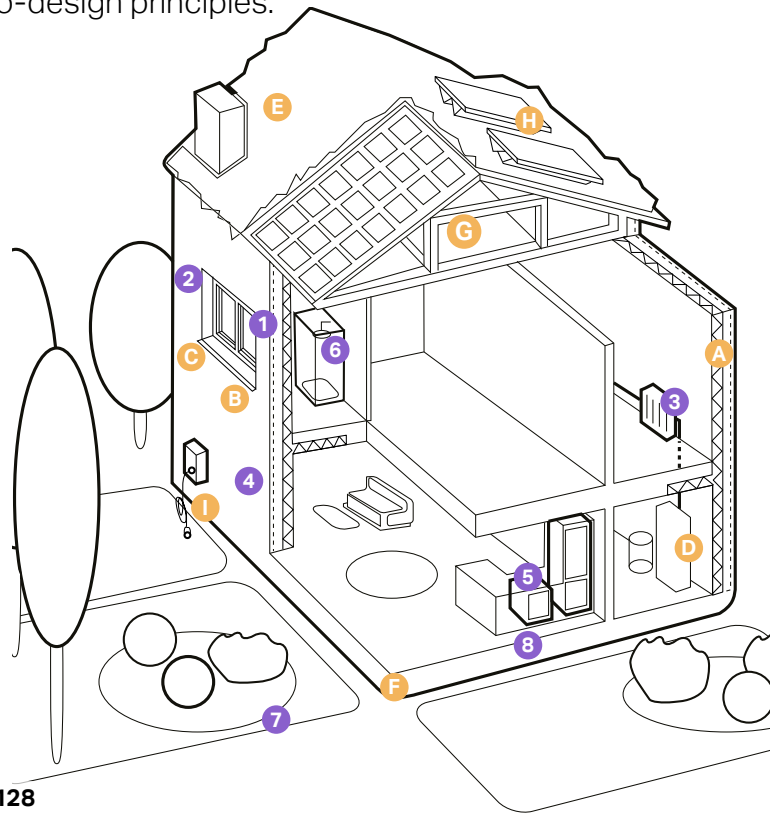


F.127

Figure 127: Illustration to show the appropriate building orientation so as to maximise solar gains. Windows should be placed mainly on the southern side whilst fewer openings should be located on the northern. A deep roof overhang can offer some shading. This can also be improved with some trees and vegetation around the house.







Implementing eco-design principles into homes

The following guidelines and suggestions focus on improving the energy efficiency of properties through the implementation of eco-design principles:












F.128
Figure 128: Diagram showing low-carbon homes in both existing and new build conditions.

Existing homes

- 1  **Insulation**
in lofts and walls (cavity and solid)
- 2  **Double or triple glazing with shading**
(e.g. tinted window film, blinds, curtains and trees outside)
- 3  **Low-carbon heating**
with heat pumps or connections to district heat network
- 4  **Draught proofing**
of floors, windows and doors
- 5  **Highly energy-efficient appliances**
(e.g. A++ and A+++ rating)
- 6  **Highly waste-efficient devices**
with low-flow showers and taps, insulated tanks and hot water thermostats
- 7  **Green space (e.g. gardens and trees)**
to help reduce the risks and impacts of flooding and overheating
- 8  **Flood resilience and resistance**
with removable air back covers, relocated appliances (e.g. installing washing machines upstairs), treated wooden floors

Additional features for new build homes

- A  **High levels of airtightness**
- B  **Triple glazed windows and external shading**
especially on south and west faces
- C  **Low-carbon heating**
and no new homes on the gas grid by 2025 at the latest
- D  **More fresh air**
with mechanical ventilation and heat recovery, and passive cooling
- E  **Water management and cooling**
more ambitious water efficiency standards, green roofs, rainwater harvesting and reflective walls
- F  **Flood resilience and resistance**
e.g. raised electrical, concrete floors and greening your garden
- G  **Construction and site planning**
timber frames, sustainable transport options (such as cycling)
- H  **Solar panel**
- I  **Electric car charging point**

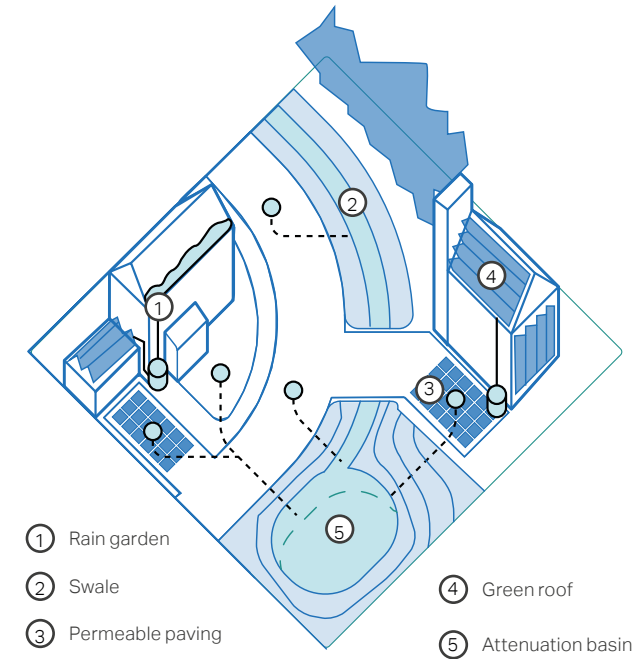
DC 09. Water management

Sustainable drainage solutions (SuDS)

The most effective type or design of SuDS would depend on site-specific conditions such as underlying ground conditions, infiltration rate, slope, or presence of ground contamination - which is a particular concern for Carn Brea set within a post-mining landscape. However, a number of overarching principles that could be applied in new development are:

1. Manage surface water as close to where it originates as possible;
2. Reduce runoff rates by facilitating infiltration into the ground or by providing attenuation that stores water to help slow its flow down, so that it does not overwhelm water courses or the sewer network;
3. Improve water quality by filtering pollutants to help avoid environmental contamination;
4. Integrate into development and improve amenity through early consideration in the development process and good design practices;
5. SuDS are often also important in areas that are not directly in an area of flood risk themselves, as they can help reduce downstream flood risk by storing water upstream;
6. Some of the most effective SuDS are vegetated, using natural processes to slow and clean the water, whilst increasing the biodiversity value of the area;
7. Best practice SuDS schemes link the water cycle to make the most efficient use of water resources by reusing surface water; and
8. SuDS should be designed sensitively to augment the landscape and provide biodiversity and amenity benefits.

NOTE: The whole of the Carn Brea Parish is within the CPIR Surface Water Management Plan Area, whilst Pool is in a Critical Drainage Area [CDA]. Infiltration drainage should be avoided in the CDA because of mine workings in accordance with current CPIR Critical Drainage Area Guidance. If it is proven to be unviable to drain to a watercourse or surface water sewer, draining surface water by infiltration may be permitted, subject to assessment and the inclusion of wildlife-friendly natural SuDS drainage methods and maintenance. See Carn Brea NDP Policy CC2.



F.129

Figure 129: Diagram showing the best use of harvesting water systems rain garden, swales, permeable paving, green roofs

Permeable paving

Most built-up areas, including roads and driveways, increase impervious surfaces and reduce the capacity of the ground to absorb runoff water. This in turn increases the risks of surface water flooding.

Permeable paving offers a solution to maintain soil permeability while performing the function of conventional paving. Therefore, some design guidelines for new development are:

- The choice of permeable paving units must be made depending on the local context; the units may take the form of unbound gravel, clay pavers, or stone setts; and
- Permeable paving can be used where appropriate on footpaths, private access roads, driveways, car parking spaces (including on-street parking) and private areas within the individual development boundaries.
- Regulations, standards, and guidelines relevant to permeable paving and

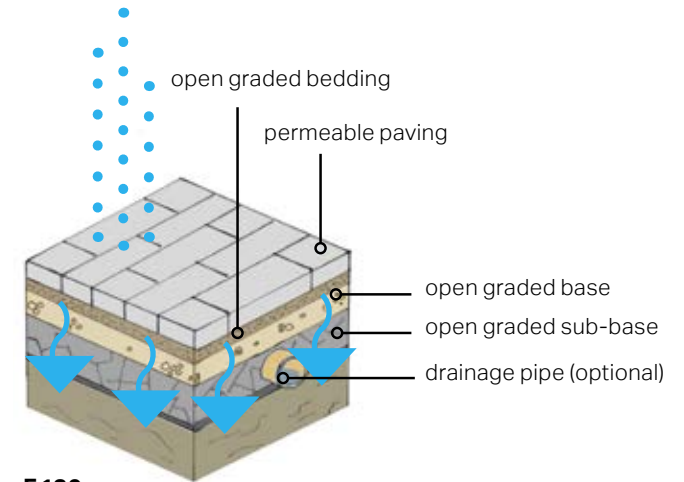
sustainable drainage are listed below:

- Sustainable Drainage Systems - non-statutory technical standards for sustainable drainage systems¹.
- The SuDS Manual (C753)².
- Guidance on the Permeable Surfacing of Front Gardens³.

1. Great Britain. Department for Environment, Food and Rural Affairs (2015). Sustainable drainage systems – non-statutory technical standards for sustainable drainage systems. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/415773/sustainable-drainage-technical-standards.pdf

2. CIRIA (2015). The SuDS Manual (C753).

3. Great Britain. Ministry of Housing, Communities & Local Government (2008). Guidance on the Permeable Surfacing of Front Gardens. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7728/pavingfrontgardens.pdf



F.130

Figure 130: Diagram illustrating the function of a soak away.



F.131

Figure 131: Example of a permeable paving that could be used for driveways.

Storage and slow release

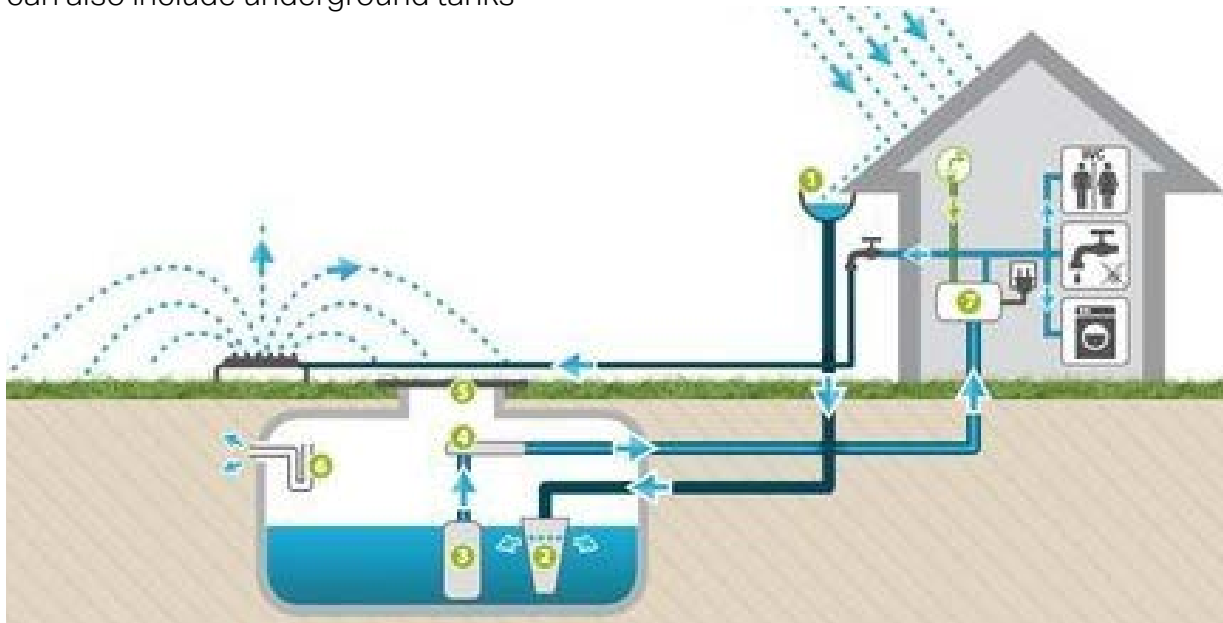
Rainwater harvesting refers to the systems allowing the capture and storage of rainwater as well as those enabling the reuse in-site of grey water.

Simple storage solutions, such as water butts, can help provide significant attenuation. However, other solutions can also include underground tanks

or alternatively overground gravity fed rainwater systems that can have multiple application areas like toilets, washing, irrigation. In general, some design guidelines to well integrate water storage systems are:

- Consider any solution prior to design to appropriately integrate them into the vision;

- Conceal tanks by cladding them in complementary materials;
- Use attractive materials or finishing for pipes; and
- Combine landscape/planters with water capture systems.



F.132
Figure 132: Diagram illustrating rainwater harvesting systems that could be integrated into open space and residential developments.



F.133
Figure 133: Example of a gravity fed rainwater system for flushing a downstairs toilet or for irrigation.

DC 10. Industrial estate principles

Barncoose Industrial Estate is a key employment hub within Carn Brea, characterised by groupings of large industrial warehouses set against the backdrop of Carn Brea Hilltop. The area is anticipating further growth as an allocated site within the parish safeguarded as a key employment hub. It is important that any future development in the area are sensitively designed with considerations of their surrounding context. The following guidelines aim to guide any potential development within and in close proximity to the industrial estate.

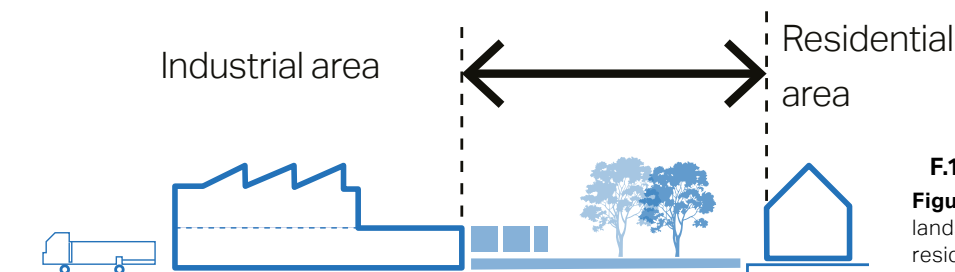
Layout and building appearance

1. Any new road networks should be laid out to facilitate the circulation within the industrial estate;
2. Proposals for new industrial developments should avoid the creation of access conflicts with the surrounding residential areas, or adding significant traffic pressures to the existing road capacities;

3. Building height and mass should not create abrupt changes in proximity to existing residential areas, but should be integrated within the surrounding context;
4. The design of new buildings should be consistent in scale with nearby industrial buildings, using high quality contemporary building forms and materials; and
5. Parking should be screened by vegetation and mature trees and, where possible, be located to the rear of buildings.

Views and connections with the countryside

6. Landscape buffer zones should be provided between the residential and the industrial area to soften the visual impact of the new developments;
7. Views towards the open countryside, particularly towards Carn Brea Hilltop should not be obstructed by new industrial buildings; and
8. Landscape screening and building orientation should be used to minimize the visual impact of new development over the surrounding settlements and countryside.



F.134

Figure 134: Use ancillary uses and landscaping to provide a buffer between residential and industrial uses

Boundary treatments

9. Buildings should be well set back from main roads to provide opportunity for landscape planting to improve the visual quality of the streetscape;
10. Boundary treatment for new developments should be designed to frame the building and improve the overall streetscape; and
11. Plot boundaries should be screened with native vegetation, such as Cornish hedges, or other landscape design solutions.

Materials

12. A common material palette should be adopted and used throughout the area to provide a unified and identifiable image of the industrial area; and
13. Light and/or neutral colours should be used on industrial buildings to help reduce their perceived size into the surrounding landscape.



Figure 135: Positive example of buildings with low pitched roofs sensitive to views towards Carn Brea Hilltop and the Basset monument, Wilson Way.



Figure 137: Positive example of industrial warehouses opting for muted green corrugated panelling to help minimising visual impact on the surrounding landscape setting, Wilson Way. (Source: Carn brea NDPSG)



Figure 136: An example of a warehouse with little vegetation or landscape buffer to soften the visual impact of the building on the streetscape, Barncoose Lane (Source: Carn Brea NDPSG).



Figure 138: Industrial estate with little setback from the pavement or landscape screening, resulting in an unpleasant impact on the streetscape, Wilson Way (Source: Carn Brea NDPSG).

Delivery

06



6. Delivery

This document has set out an evidence base for the Carn Brea Neighbourhood Plan.

Should any development sites come forward in the Parish through a site selection and allocation process, these could be reviewed through a Site Assessment package that AECOM can offer, the NPSG may also want to consider developing a masterplan. This will capture and reflect local opinion on appropriate housing densities and layouts, as well as provide more certainty for preferred development sites within the Neighbourhood Area.

As well as providing certainty to the local community, the design codes in this document should give more certainty to developers, as they will be able to design a scheme that is reflective of community aspirations, potentially speeding up the planning application process.

In addition to the guidance set out in this document, future developers should also make sure that they have observed the guidance in the Ministry of Housing, Communities & Local Government's National Design Guide. Developers should also note that housing developments of any size should strive to achieve carbon neutrality in line with the Government's forthcoming Future Homes Standard.

Further standards on residential developments should also be obtained from Building for a Healthy Life, a government-endorsed industry standard for well-designed homes and neighbourhoods.

Actors	How They Will Use the Design Guidelines
Applicants, developers, and landowners	As a guide to community and Local Planning Authority expectations on design, allowing a degree of certainty – they will be expected to follow the Guidelines as planning consent is sought.
Local Planning Authority	<p>As a reference point, embedded in policy, against which to assess planning applications.</p> <p>The Design Guidance and Codes should be discussed with applicants during any pre-application discussions.</p> <p>Local authority should consider expediting the expansion of the Tuckingmill and Roskear Conservation Area to offer wider protection to Carn Brea’s built heritage, as outlined in this design code and as an aspiration of the NDP</p>
Parish Council	As a guide when commenting on planning applications, ensuring that the Design Guidance and Codes are complied with.
Community organisations	As a tool to promote community-backed development and to inform comments on planning applications.
Statutory consultees	As a reference point when commenting on planning applications.

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