

TYWARDREATH AND PAR PARISH Neighbourhood Development Plan 2020 –2030



APPENDIX January 2021

This document is to be read in conjunction with:

- the Neighbourhood Development Plan
- the Evidence Summary
- the Sustainability Check (full version)

Contents

Appendix A: Landscape Character Assessment.....	4
Figure 1, Par Estuary Map c.1500.....	5
http://www.luxulyanvalley.co.uk/Luxulyan_Valley_archaeological_survey_1988.pdf	5
Figure 2, Land Use Classification Map.....	8
Figure 3, Dawson's Map 1804.....	11
https://www.bl.uk/onlinegallery/onlineex/ordsurvdraw/f/0020sd000000005u00321000.html	11
Figure 4, Flood Water Map.....	13
Figure 5, Green Spaces-Overview Map	16
Appendix B: Land Use Classification.....	23
Figure 6, Land Use Classification Map.....	24
Figure 7, Green Spaces - Overview Map	30
Appendix C: Drainage and Drainage Basins	36
Figure 8, Catchment Basins Map	38
Appendix D: a low carbon, sustainable home (Housing Fit for the Future, 2019)	39
Appendix E: Rural Housing for an Ageing Population, extract from HAPPI 4	40
Appendix F: policy CHW 4 Community Facilities: Accessibility Table	41
Appendix G: Community Facilities: Blue Green Health and Wellbeing Table	42
Appendix H: policy E2 Tranquil Areas: Criteria for Selection and Definitions	45
Appendix I: Mining in Tywardreath and Par Parish.....	48
Figure 9, Industrial Assets Map.....	50
Figure 10, Fowey Consols Mine Map.....	51
Figure 11, Transverse Sections of Fowey Consols Mine	52
Appendix J: Tywardreath and Par Parish Historical Background	53
Appendix K: Sustainability Check Results Summary.....	55
Appendix L: The Energy Hierarchy	56
Appendix M: Flood information, key quotes and maps	57
Figure 12, Shoreline Management Map	57
Figure 13, Map showing projected coastal erosion at Par Sands.....	58
Appendix N E1 Supplementary Photos	62
Appendix O E3 Views, Panoramas and Vistas.....	63
Appendix P Potential Contaminated Land and Radon.....	70
Appendix Q Views of Civil War Battlefield 1644 Map and Photos	76

Notes:

1. The NDP for Tywardreath and Par Parish, the associated Evidence Summary and the Basic Conditions Statement along with other documentation is to be found on the Tywardreath and Par Parish Council website in the NDP section:
<https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplan.php>
2. This Appendix includes the Landscape Character Assessment and other documents which include contextual information for understanding the NDP.
3. Maps in the main NDP can be viewed more easily using the zoom function on the Tywardreath and Par Parish Council website in the NDP section:
<https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>
4. Given the importance of Blue space within the parish e.g. the sea, river, wetlands, the term Blue Green (space) is used instead of Green Infrastructure.



Appendix A: Landscape Character Assessment

Notes: All the maps referred to in this document are available on Tywardreath and Par Parish website under Maps, NDP Section.

<https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

Having consulted the Cornwall Isles of Scilly Landscape Character Assessment, it was decided to include a more detailed local character assessment and land use survey as supporting evidence for the policies developed.

Cornwall Isles of Scilly Landscape Character Assessment, CA39, (2007),

<https://www.cornwall.gov.uk/environment-and-planning/cornwalls-landscape/landscape-character-assessment-2007/>

Section 1: Background

The parish¹ is bounded to the west by the valley of the Par River and to the east by the watershed of the Fowey River. Par Beach forms the western part of the southern boundary, the eastern part being the valley of the Polmear stream. The northern boundary is defined by the Caruggatt stream and the headwaters of the Treesmill stream. It rises from close to sea level on the west to over 110 m on the east.

a) Geology and Geomorphology

The whole of the parish is underlain by the Devonian Meadfoot Beds, a thick sequence of dark shales and siltstones with sporadic grey-brown sandstones and beds of decalcified shell debris of Devonian age. This was subjected to significant faulting during the emplacement of the Hensbarrow (St Austell) granite, predominantly north-south but with a secondary east north east – west south west pattern. There was significant mineralisation of these faults, mainly quartz and copper minerals, which gave rise to the important historic mining area in the north-west of the parish.

Sea level changes in the Quaternary cut a series of terraces backed by degraded cliff lines, the most significant being at approx. 110 m, 90 m and 50 m (there are further terraces buried below the sediments of the Par River down to at least 20 m below present sea level). The present drainage pattern probably developed during the various ice-ages as water from melting ice and snow to the north cut down, preferentially along major fault-lines to a sea-level well below the present. These valleys are characterised by “youthful” profiles, with steep valley sides.

As sea levels rose at the end of the ice-age, the valley of the Par River flooded to become a ria², like the Fowey to the east, probably as far north as Ponto Mill, just west of the northern boundary of the parish, and remained in this state well into historic times. Indeed, it was not until the C16th that a bridge was built where the A390 crosses the river and another across the Treesmill stream at St Andrew's Road (to replace a “dangerous” tidal ford); c.f. Par Estuary Map c.1500, Figure 1 on the following page.

¹ c.f. Tywardreath and Par Parish Map, in NDP or in Maps, NP Section, Parish Council website, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

² A ria is the lower part of a river valley which has been “drowned” due to sea-level change to form an often sinuous estuary similar to those of the Fowey or Dart.



Figure 1, Par Estuary Map c.1500

http://www.luxulyanvalley.co.uk/Luxulyan_Valley_archaeological_survey_1988.pdf

Downstream of this, the first bridge built was that of the Cornwall Railway in the mid C19th. From the latter part of the C18th the ria started silting up, largely due to fine mineral waste from metalliferous mining and subsequently from clay-working in its catchment. By the end of the C19th the entire estuary north of the Par-Fowey branch-line (now a haul-road) was infilled by salt-marsh.

The geology/geomorphology of the parish has had a profound effect on its landscape character, affecting not only land-use but also communications and social development. There is still a strong sense amongst residents of “difference” between those on the east and west sides of the old Par River “estuary”.

b) Settlement & Communications

Settlement patterns closely reflect the landforms described above. The parish is essentially rural in character with well over 90% of dwellings lying within 500m of the historic limits of the ria. This applies to both C19th and post 1900 homes. The upland areas have a dispersed settlement pattern with fewer than 60 homes spread over 90% of the area. Most of the population live in Tywardreath village, located above one of the “creeks” on the east bank of the ancient estuary or in Par, developed on the salt marsh after the coming of the railway.

Communications routes are also controlled by the landscape. The present A390 runs NE-SW along the northern boundary of the parish and represents the ancient highway traversing the south of Cornwall and crossing the Par River at its then lowest bridging point. Another ancient ridgeway (now the B3269) forms an eastern boundary, linking the port of Fowey with the spinal road. A secondary old road originally linked Fowey, via tidal fords at Polmear and Tywardreath with St Blazey (now re-routed via Par Green as the A3082 to St Austell). The only other significant road, only gaining importance in the C19th for transporting ore from Tywardreath to Fowey, runs E-W from Castledore through Tywardreath to Par. The main railway line through Cornwall enters the parish through a tunnel to run down the Treesmill Valley to Par Station. Here it links with the Newquay branch line (originally a mineral line) and with the ex-Par-Fowey branch which follows the Polmear Valley to Pinnock Tunnel (the route of this line is now used as a haul-road for china-clay traffic to Fowey Docks).

Section 2: Landscape Character Assessment

a) Methodology

As part of the Neighbourhood Plan project a land use classification was carried out by members of the Steering Group, some of whom have formal training in such surveys.

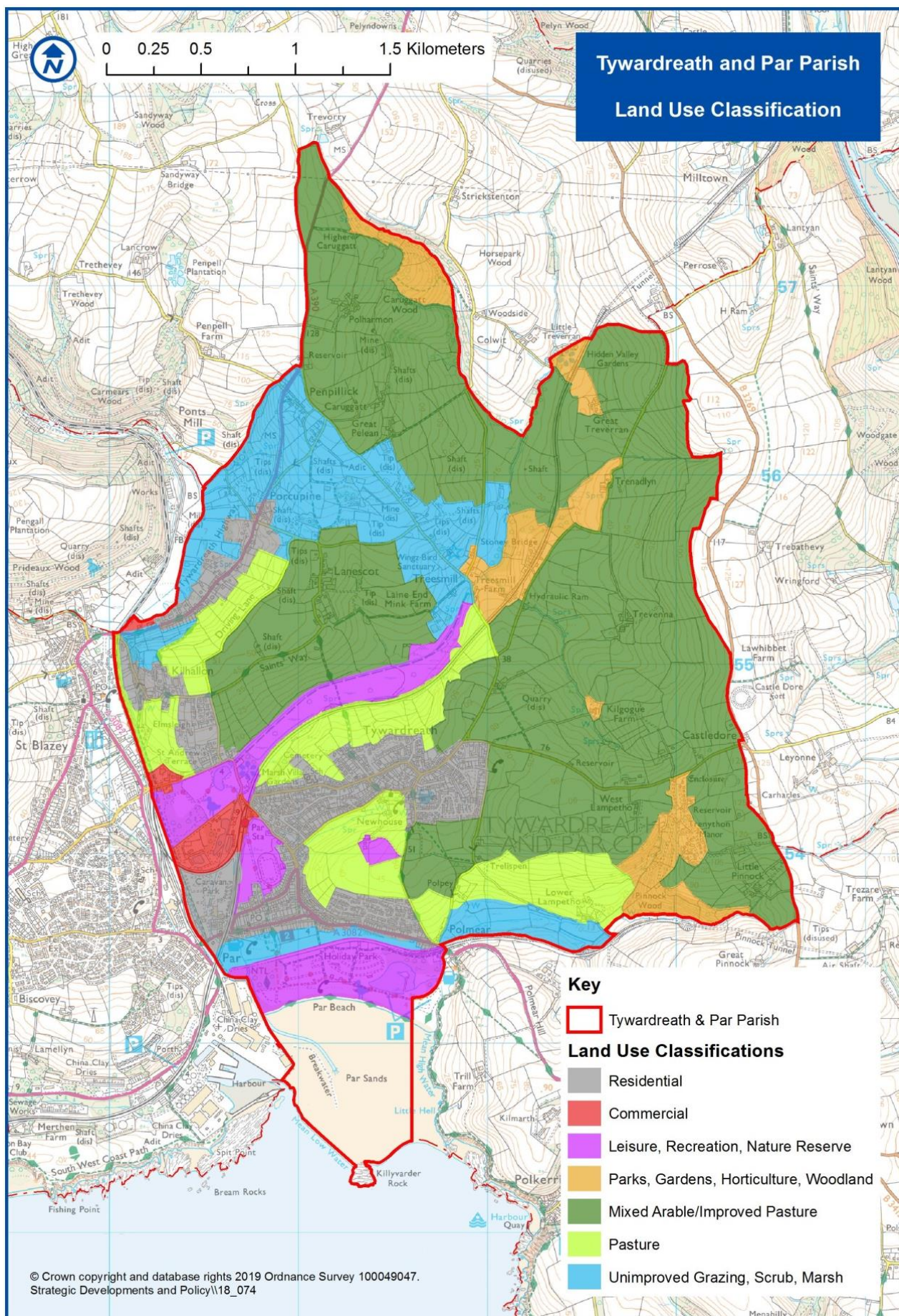
It was done on a field by field basis using aerial photographs and large-scale maps, supported, where necessary, by field work during the autumn/winter of 2018. As appropriate, local knowledge and questioning of landowners was done to clarify specific problems.

Having reviewed the initial data, it was decided that the following categories would be the most appropriate for defining the types of land use.

1. Residential
2. Commercial
3. Leisure, Recreation, Nature Reserves
4. Parks, Gardens, Horticulture, Woodland
5. Mixed Arable/Improved Pasture
6. Pasture
7. Unimproved Grazing, Scrub, Marshland

Results were then plotted on a map of the parish which provides a graphic illustration of the distribution of categories; c.f. Land Use Classification Map, Figure 2 on the following page.





The Land Use Classification Map shows clear spatial relationships of the categories with the landforms. Further information is available in the separate Land Use Classification document in Appendix B. The object of this work was to provide a spatial structure for the formulation of the specific policies contained in the plan. However, it also provides an objective basis for a broad analysis of landscape character types.

b) Landscape Character Types

As indicated earlier, there are three broad Landscape Character types defined by the geological history of the parish. Within these categories, it is possible to identify a number of sub-groups which reflect historic socio-economic activity within them, in particular urban development and mining.

i) Ancient Upland Terraces

Over 60% of the parish falls into this category, predominantly in the east. It is characterised by wide, open expanses of actively farmed, well-drained agricultural land with fairly good soil and moderate gradients, mainly devoted to fodder crops or potatoes alternating with improved pasture. This supports important beef and dairy farming, with virtually no land unused. Fields tend to be of 2 to 5 ha, often irregular in shape and still bounded by Cornish hedges of stone topped with a variety of native shrubs and trees including species such as hawthorn, hazel and holly and are generally in good state of repair as shown on the Cornish Hedges Map.³ Historic evidence (e.g. tithe maps and Dawson's Map, 1804⁴) suggest that most of these boundaries are at latest late-mediaeval in age and there is only limited evidence of subsequent consolidation of fields. Generally, they are of a shape and size to make them amenable to cultivation with modern agricultural machinery.

The eastern part of this area comprises a registered Historic Battlefield Site (from the Civil War) although strong archaeological evidence indicates that the battle (a Dunkirk-style retreat) covered most of the ground from Castledore to Polmear; c.f. Designated Heritage Assets Map and Civil War Battlefield 1644 Map.⁵

With limited exceptions, the only dwellings lying within this category are associated with old farmsteads, although, with the consolidation of farms to modern economic units, several of them are now purely residential properties.

Mining Area

In the NW of the parish a belt of land running roughly NW-SE from the A390 to the Treesmill Valley and occupying some 39 ha represents the site of Fowey Consols Copper Mine; c.f. Industrial Assets Map, Figure 17 in main NDP document and Appendices L, M and P in this document.⁶ Most of the spoil tips and surface buildings have been removed,

³ Cornish Hedges Map, in main NDP and available in Maps, NP Section, Parish Council website, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

⁴ Dawson's Map, 1804, see Figure 3 in this document and available in Maps, NP Section, Parish Council website, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

⁵ Designated Heritage Assets Map and Civil War Battlefield 1644 Map in main NDP and available in Maps, NP Section, Parish Council website, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

⁶ Industrial Assets Map, Figure 17 in main NDP and available in Maps, NP Section, Parish Council website, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

although the listed Austin's Shaft engine house remains a prominent landmark, visible from many vantage points.

Prior to mining, this area would have been similar in character to the surrounding upland. However, the mining activity has left the ground impoverished and it is now largely rough pasture with some scrubland. In the C20th there was some construction of isolated private residences of various styles. These are largely screened by mature trees and the area retains a rural character, albeit less "open" than its surroundings.

ii) Valley Slopes

As mentioned earlier, the valleys of the Par River and its eastern tributaries are characterised by steep slopes. In the case of the eastern side of the main valley, these still retain the form of a somewhat degraded cliff-line as far north as the level-crossing on the A390 and are largely covered in trees and scrub vegetation. Upstream of this and in the tributary valleys of Treesmill, Tywardreath and Polmear, gradients are less severe (15 – 40 degrees). Soils are thin and of poor quality; and this land is largely used for pasture, although hay is cropped on the less steep parts. The upper part of the Polmear Valley is covered in mature woodland, part of the grounds of Trenythron House, once a stately home and today a country-club/leisure complex.

These slopes make a significant contribution to the rural character of the parish. The slopes north and south of Tywardreath village are of particular importance in defining clear limits to the urban area and providing a strong buffer between the village and Par, which make a major contribution to maintaining a strong sense of separation between the two communities.

In the upper part of the Treesmill Valley, some 23 ha of land, naturally lying within this category, have been dedicated to private parkland and gardens. These contain more trees, breaking the broader character of the surrounding landscape but, partly because of the tree cover, associated buildings are subservient in broader views.

Apart from their role in creating the distinctive landscape character of the parish, the woodland and hedges along these slopes provide a "wildlife corridor", offering a remarkably high level of connectivity through the parish, both N-S and E-W. As such they play a key role in maintaining its rich bio-diversity.

iii) Valley Floor

As indicated above, almost all the low-lying land on the western side of the parish occupies the site of a ria (drowned valley) which was progressively infilled from N–S with fine waste from mining upstream from the C18th onward. The pre C19th shoreline is approximately defined by the current 5 m contour: this crosses the main Par valley by the bridge on the A390, the Treesmill valley at Treesmill Farm, extends up the valley towards Tywardreath village for approx. 110 m from the bottom of Tehidy Road and in the Polmear valley crosses the valley some 1,000 m upstream, just below Lower Lampetho Farm. In the C17th, salt was extracted in salt-pans in the lower part of the Treesmill valley. The old cliff-line can still be clearly seen at many locations, from the A390 to Par Beach. As late as the C19th, a ferry operated from the foot of Tehidy Road to Par.



0 0.25 0.5 1 1.5 Kilometers

Tywardreath and Par Parish

Dawson's Map, 1804



Figure 3, Dawson's Map 1804

<https://www.bl.uk/onlinegallery/onlineex/ordsurvdraw/f/0020sd000000005u00321000.html>

Dawson's Map of 1804, the first properly surveyed map of the area, illustrates the situation at the start of the C19th, before the mining boom really got under way and before the coming of the railways. The shore-line can be seen running WNW from roughly Hamley's Corner, approximately on the line of Par Green with an inlet reaching NE to approximately the lower part of Tehidy Road. It is interesting that the long straight ditch which still runs across Par Track was already in existence, probably dug in the C18th to alleviate flooding in the St Andrew's Road area from the Treesmill Stream.

Historically, the progression would have been to tidal mud flats, then salt-marsh, then grassland, which would have been grazed but subject to frequent flooding or colonised by scrub and stunted trees such as willow. Given that the whole of this area lies within 5 m of sea level, the water table is very shallow (< 1 m below surface at high water spring tide). Substantial areas remain marshland to the present day, notably from Treesmill down to the Par River and the lower parts of the Tywardreath and Polmear valleys.

Silting up of the estuary upstream accelerated in the mid-C19th with the building of the embankment for the Cornwall Railway (now the main line), coinciding with the peak of the copper mining activity on either side of the valley and again in the 1870s with the building of the embankment for the Fowey-Par railway line. By 1900, almost all the present land surface was "dry" land, although subject to frequent flooding. Most of it remains categorised as Flood Zone 3.

The Drains and Drainage document and Catchment Basins Map⁷ gives more detail on the reasons for flooding which has resulted in EA interventions in this area. Tywardreath and Par Parish is the focus of the multi-million StARR project which aims to reduce flood risk to communities living and working in the St Austell Bay area, particularly in Par and St Blazey. As part of this initiative, the EA drafted the Flood Risk Management policies in this NDP and drew up the Flood Water Map⁸ on the following page. It is instructive to compare the similarity of this map to the Par Estuary Map Circa 1500 shown above. With the building of the Fowey-Par railway line embankment, the area to its south became the de facto coastline and rapidly became a beach, predominantly formed from waste washed down from china-clay workings, with development of a substantial dune system; currently one of very few accreting dune systems in the country.

⁷Catchment Basins Map in main NDP, Appendix C and available in Maps, NP Section, Parish Council website, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

⁸ Flood Water Map, in main NDP, Appendix C and available in Maps, NP Section, Parish Council website, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

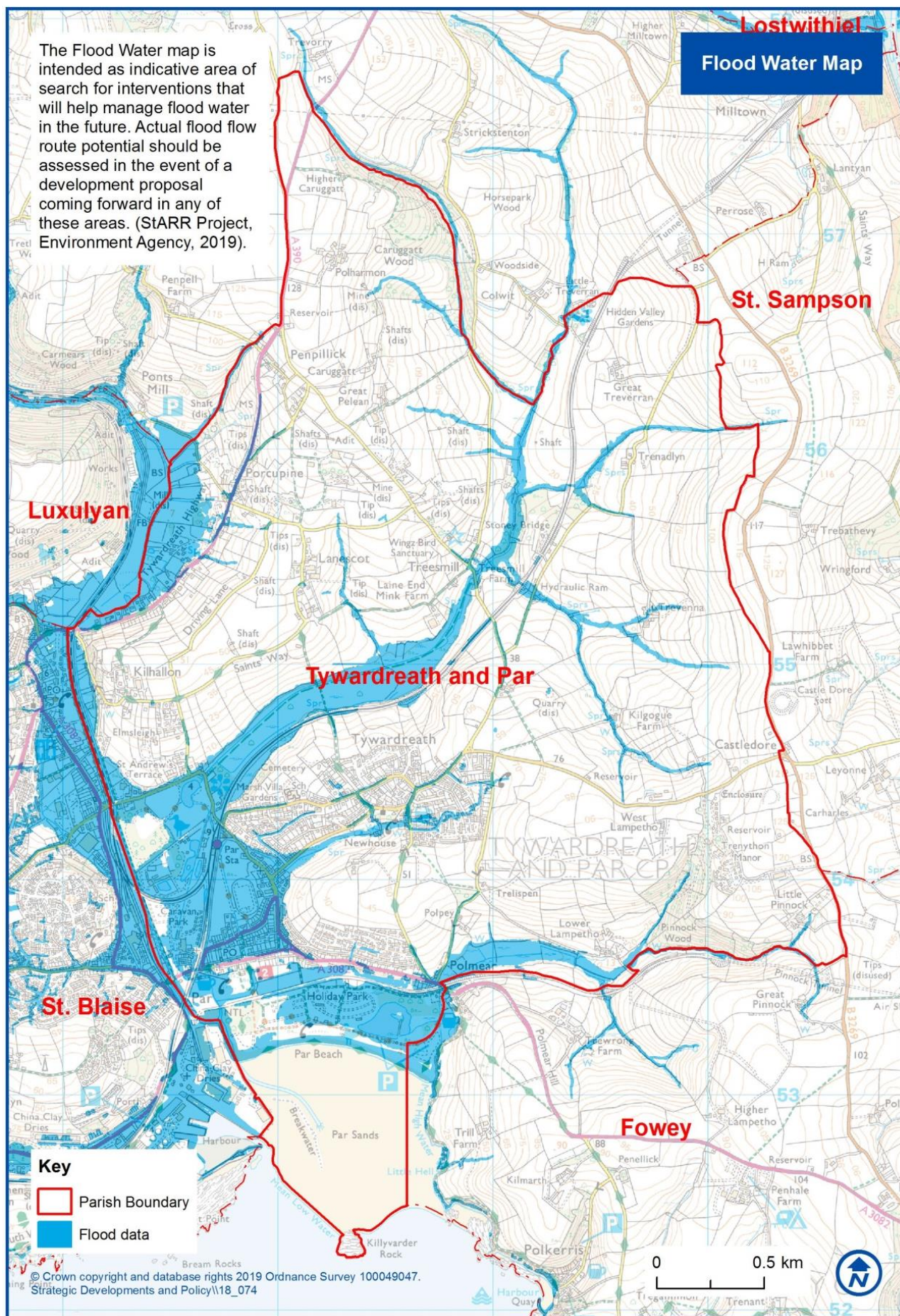


Figure 4, Flood Water Map

Note: The CWLT Wildlife Resource Map, 2018 and associated guidance notes include information on a range of topics including statutory and non-statutory designated sites, e.g. County Wildlife Sites is particularly informative; c.f. Maps, NDP Section, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

Cornwall Council Interactive Mapping also has numerous map layers available including county wildlife sites

<https://map.cornwall.gov.uk/website/ccmap/?zoomlevel=5&xcoord=209015&ycoord=55084&wsName=ccmap&layerName=Areas%20of%20Outstanding%20Natural%20Beauty:County%20Wildlife%20Sites%20-%20no%20implied%20public%20access:Parishes>

The landscape character of this area is closely related to its historical emergence. Four broad categories can be identified.

Willow Carr

A broad swathe of willow carr runs E-SE from the Par River south of St Andrew's Road, almost to the bridge at Treesmill, averaging about some 300m in breadth and covering an area of some 4.63 km². Most of this area is permanently waterlogged and includes Par Duck pond (Par Marsh Id R10, County Wildlife Sites, Cornwall Council Interactive Mapping, 2019). There is an earth bank across the valley just east of St Andrew's Road, with a sluice-gate which can be shut to use the area upstream for flood retention. Almost the whole of the area is covered by County Wildlife Sites and Local Nature reserves and it supports a diverse range of wetland vegetation and associated birdlife, small mammals and invertebrates. It is traversed along its length by a footpath on the bank of the Treesmill stream and N-S from Tywardreath village to Lanescot by the Saints Way path, both well used by walkers who enjoy its tranquillity and wildlife. However, most of it is inaccessible and provides an undisturbed haven for that wildlife.

A second area of carr lies beside the river at the western end of Par Beach, stretching inland to within 50 m of the W end of Par Green where it is linked by a "green corridor" on either bank of the Par River to the area discussed above, providing a degree of bio-connectivity between the two zones. This area has no public access other than a "nature trail" through its SE corner. It serves an important visual and acoustic screen between Par and the industrial activities on Par Docks.

East of the caravan site behind Par Beach is another area of carr covering some 6.5 ha, including a large pond (Polmear Lake, Id R3.3, County Wildlife Sites, Cornwall Council Interactive Mapping, 2019) which attracts large numbers of aquatic birds (including rare migrants). Surrounded by areas of public access, it lacks the tranquillity of the previous areas but is very popular with both locals and visitors. It is an important element of the landscape in both near and distant views.

Immediately NE of this area, on the E side of the A3082, lies an area of marshland, with limited tree growth, running up the Polmear Valley for some 400 m and covering 1.2 km². It lacks the diversity of vegetation of the other areas. However, it has no public access and supports a significant fauna. From a landscape viewpoint, it provides a significant contrast in "texture" with the arable and pasture land to the north and south. It also serves as an effective barrier to ribbon development spreading any further east from Par.

Rough Pasture

As the salt marshes drained in the latter part of the C19th, most of the “new” land (other than the carrs discussed above) was used as rough pasture, with drainage leats being dug. The most prominent of these runs south from Par Station to the Par River just before it enters the sea.

Today, only fragments of this pasture remain, most having been subsumed by C20th urbanisation. That which remains is largely now neglected or in only occasional use due to its poor quality, fragmentary nature and the fact that it is frequently flooded and waterlogged. Examples can be seen in the main Par Valley north of Tywardreath Highway and north of St Andrew’s Road; in the Treesmill Valley just below the bridge at Bridge Farm; in the lower part of the valley running up from Par to Tywardreath; in the area between Par Green/Polmear Road and the haul-road and a small area in the Polmear Valley just west of Lower Lampetho Farm.

This land tends to be waterlogged at times and liable to occasional flooding: it is all in Flood Zone 3. It is of limited agricultural or commercial value. It does, however, have significant landscape value, as it provides (with the carrs discussed above) a strong “green” boundary to the western side of the settlement area and also a clear division between the rural character of Tywardreath & Par Parish and the more urbanised area to the west of the Par River. It is also a valuable component in the bio-connectivity of the lowland areas of the west of the parish, helping maintain their diverse flora and fauna.

Urbanised Land

The older settlements of the parish were, of necessity, located on higher ground, mainly on the western edge of the upland terraces. As the sea receded and flat, easily developed land became available on the valley floor, much of this was progressively used for residential and commercial purposes, encouraged in part by the development of the railway and new roads. Initially (mid-late C19th), this took place on what had been old beach-lines (Polmear, Eastcliffe Road, St Andrew’s Road, Tywardreath Highway) and along the sand-spit running west from Hamley’s Corner (Par Green), spreading north-east with the construction of Moorland Road in about 1900 and subsequent infilling along much of the east side of the main valley. The character of this development reflects the history of its development. As almost the whole area is in Flood Zone 3 and has historically been subject to frequent flooding, this has been a significant factor in constraining the extent and character of development. Almost all of the non-agricultural industrial activity in the parish is concentrated in three small zones on the valley floor: north-east of the level crossing on the A390, east of the level crossing at St Andrew’s Road, and between the Newquay branch line and the Par Duck Pond in St Andrew’s Road Nature Reserve, (Par Marsh Id R10, County Wildlife Sites, Cornwall Council Interactive Mapping, 2019); c.f. the Employment Sites and Land Map⁹. The businesses here are all light industries, housed in low rise utilitarian buildings and have only minor, local, landscape impact.

⁹ Employment Sites and Land Map, in main NDP and available in Maps, NP Section, Parish Council website, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

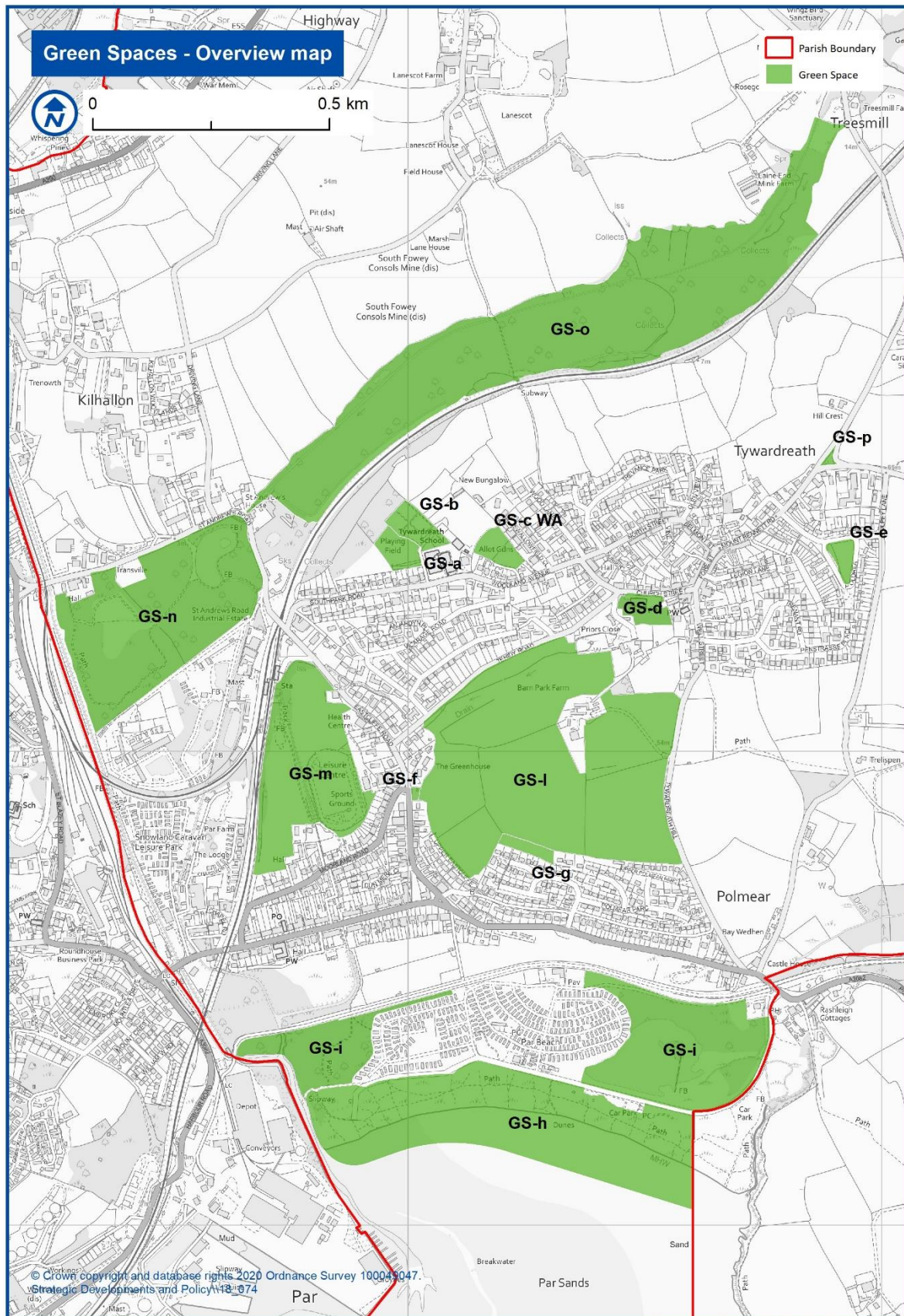


Figure 5, Green Spaces-Overview Map

Leisure Use

Leisure uses occupy a substantial part of the valley floor area.

a) Par Running Track - shown as GS-m on the Green Spaces - Overview Map above.

This occupies a site bounded by Eastcliffe Road, Moorland Road and the main railway line, covering some 7.5 ha. The land was owned by the Borough Council, which used parts of the site as a shallow landfill site during construction of social housing in St Blazey in the mid C20th. It was subsequently levelled and covered with top-soil and designated as a public recreation area. Its amenities progressively improved to include one of two “tartan”¹⁰ athletics tracks in the county as well as a modern, single-storey pavilion, two grass soccer pitches and large areas of grass for informal recreational activity. In 2018 a 125-year lease was granted to Par Track Ltd (PTL), a Community Benefit Society, in order to secure its long-term future as public open space.

The Board of Directors has started on an ambitious programme to improve facilities and encourage wider “fitness” usage in the local community. These proposals will have minimal impact on the impact of the track on the local landscape.

From a landscape character point of view, the track forms a strong “green” physical buffer between the communities of Par and Tywardreath, almost linking with the fields east of Tehidy Road. Although most of its grassland is regularly mown and offers little in the way of habitats for wildlife, its margins and the banks of the drainage leat which traverses the site are largely hedges and rough grass with areas of natural shrubs and mature native trees. These do offer a diverse habitat for invertebrates and small mammals, as well as nesting/roosting sites for birds.

b) Par Beach (Par Beach, Polmear Lake and Par Sands, Id R3.3, County Wildlife Sites, Cornwall Council Interactive Mapping, 2019) and shown as GS-h and GS-i on the Green Spaces - Overview Map above.

Par Beach is locally considered as the whole area south of the haul-road (originally the Par-Fowey branch line) as far as the high-water mark (HWM), from the Par River on the west to the cliffs (and parish boundary) on the east. It is the newest landscape feature in the Parish. In the 1880s the HWM was effectively the southern embankment of the railway line; by 1908 there were some 50 m of beach before the HWM; by 1936 the HWM was some 175-250 m south of the railway, with salt-marsh extending to the southern edge of the present pond; during WW2 a road was built along the back of the beach (the present access road); by 1962 a belt of sand-dunes some 80 m wide and up to 10 m high extended the width of the beach, south of the road, and had started to become densely vegetated; today the dunes are over 150 m wide and still accreting. Below the HWM the sandy seabed shelves very gently south. At low water spring tide it is possible to walk dry-shod to Killyvarder Rock, 500 m off-shore.

There are five components to the leisure area of Par Beach, namely the two areas of carr discussed above; the caravan site; the dunes; and the beach/foreshore. Together these

¹⁰ **Tartan Track** is a trademarked all-weather synthetic **track** surfacing made of polyurethane used for **track** and field competitions, manufactured by 3M. It lets athletes compete in bad weather without serious performance loss and improves their results over other surfaces.

cover an area of almost 4 km², with a beach frontage of some 850 m, between the haul-road and the sea, largely accessible to the public.

Par Beach is an important natural, recreational and economic resource, not only to the local community but also, given its proximity to good public transport (bus and rail within 1km on flat ground) and adequate car parking, to residents of much of Mid-Cornwall and to holiday-makers. Its landscape characteristics clearly reflect this usage, although commercial development is almost exclusively contained within the area of the caravan site.

The current area occupied by the caravan site has been used for camping, touring and “fixed” caravans since the 1950s. Whilst not enhancing the landscape it does provide an important economic resource for the area. In terms of landscape impact, restricting the size and scale of permanent buildings has helped minimise impact.

The dunes are almost unique in Britain for their continuing accretion. This provides a sequence of habitats on which a progressively developing flora can be observed. This includes several rare species, including some “red-listed” ones. There are some problems with the proliferation of sea-buckthorn and *rosa rugosa* on the older parts. Although much used by locals and visitors alike, the dunes also support a varied fauna of invertebrates, amphibians, reptiles, birds and small mammals.

The dunes play an important part in the landscape both in local and broader views, establishing a clear separation between the coastal scenery and the “built” landscape behind.

The beach itself is a very significant feature in the landscape, with fairly flat sand extending over some 4 ha at high tide, up to 47 ha at low water spring tide. It offers safe recreational space for walking, dog-exercising, beach activities and shallow water recreation, being widely used by local residents, those from a wide area of Mid-Cornwall and holiday-makers.



Horses at Par Beach

iv) Urban Landscape Character

The urban landscape of the parish is concentrated in three areas: Tywardreath, Par and Tywardreath Highway, each of which has distinct characteristics reflecting their historical development. Clearly there is considerable overlap in the descriptions below with those in the “Land Use Classification” information and Land Use Classification Map in Appendix B of the Tywardreath and Par Parish NDP.

a. Tywardreath

The village was already a significant settlement at the time of the Domesday Book and centre of a Hundred in mediaeval times, with a priory established in the C12th. With the dissolution of the monasteries it stagnated until the late C18th and the development of a thriving copper-mining industry nearby, for which it became a residential and commercial hub, its population doubling in less than 25 years. Over the next 75 years, most of the buildings in the village were rebuilt, the ruins of the priory being used as a source of construction materials so that there is nothing of its buildings to be seen today. Construction then stagnated until the beginning of the C20th when, largely, detached villas and bungalows started to be built on the roads out of the village. Since WW2 three significant housing estates have been built on fields immediately adjacent to the core of the settlement: Poldrea (1950s), Trenant (1960s), Trevance Park (1980s). Because of their scale, build-rate and proximity to the village centre (all within 500 m), they have been assimilated into the fabric/community of the village. There have also been a number of small in-fill developments and rebuilding of existing structures.

The core of the village is dominated by the parish church with C15th tower and its extensive churchyard (now “closed”) characterised by close-mown grass, “wild” grassland and mature trees. Most of the residential properties are typical C19th terraced miners’ cottages, most opening directly onto the street or with minimal front gardens but often with significant amenity space behind. As noted in the Conservation Area Assessment (see Tywardreath Conservation Area Character Appraisal, Cornwall Council 2010 p3), many of these properties have been “modernised” over the years (in a few cases rebuilt) which detracts from their historical integrity, although it does mean that they do offer good quality accommodation in the C21st. Few properties in the core of the village have off-road parking, so almost continuous on-street parking has a negative impact on the street scene.

In the first half of the C20th, the village saw expansion westward towards the station, between Southpark Road and Tehidy Road. Building styles were eclectic, ranging from semi-detached houses and bungalows to substantial detached properties. Most offer relatively spacious accommodation and are characterised by substantial private amenity space with trees and established gardens, creating a sense of green space. A small council estate at Glenview built between the wars follows these characteristics.

In the late ‘50s the council built an estate of some 50 properties, mainly semi-detached houses with some short terraces at Poldrea, just east of the village core. These properties all enjoy substantial private amenity space and are spaced around a large green area with play equipment; c.f. Poldrea Play Area photo under E1 policy in main NDP. In the early ‘60s the Trenant/Penstrasse estate was built immediately south east of the village centre, consisting of some 90 detached bungalows of varying sizes but with a common general

appearance. Being set back between 10 and 20 m from the road with largely open-plan well-tended front gardens, the houses give the area a sense of openness which is enhanced by the setting in a bowl, surrounded on the east and south by agricultural land which renders the development subservient in the broader landscape.

A few years later the Trevance estate was built immediately north of the core of the village. Its 60 or so properties show a range of building styles, reflecting the chequered history of its development with large detached bungalows, terraced bungalows semi-detached houses and short terraces. However, most properties are set back over 10m from the road, with open-plan front gardens and there is a general sense of spaciousness and coherence.

Over the past 50 years there have been a number of small developments on plots within the existing development zone: St Benedict's Place, St Sampson's Close, Vine Place, Elderfield Close, Anjardyn Place, Priory Close, Swallowfield Close, Nursery Close and along Eastcliffe Road opposite the surgery. These have all been modest in scale (up to 10 dwellings), mainly bungalows, with some family homes. In addition, there have been some 20 individual developments on "windfall" infill sites within the village, mainly of family homes. Generally, building densities have been low (< 20 dwellings/hectare) with good private amenity space and conservation of many ancient boundary hedges.

Overall, the village has maintained a compact, nucleated form with all properties within 700 m of the church at the centre, almost all accessible by well-lit dedicated footways. Over 90% of homes are within 300m of a bus-stop and the furthest is only 1.5 km from the main-line railway station. It retains a rural "village" character.

b. Par

In mediaeval times there was a stone quay on the west side of the Par River, running north-north west from roughly the foot of The Mount: it had no direct road link to St Blazey (this only happened in the mid C19th with the coming of the railway). It was known as Par and was linked by a bridge to fish cellars on marshland roughly where Pearce's Row now stands. It was the boarding point for a ferry which plied to a site at the foot of Vicarage Road in Tywardreath. There was also a fishing hamlet at Porth, close to the present entrance to Par Docks, although there was no direct link between Par and Porth. By the latter part of the C19th, the original quay at Par was no longer functioning and the name Par was being used for the settlement growing up on the east side of the river.

Most of the land occupied today by the settlement of Par was, until the C19th, an estuary, tidal mud-flats and salt-marsh, although silting up rapidly with residues from mining and, later, clay-working, in the Par River catchment. The building of the embankments for the main railway line and the Fowey branch line in the mid C19th led to a much faster rate of silting up, such that by the late C19th the whole area was "dry land". However, to this day, most of Par lies in Flood Zone 3.

For the above reasons, with the exception of a few fishermen's cottages at Polmear, near Hamley's Corner and Pearce's Row, the oldest buildings in Par only date to the latter part of the C19th. The original development was of terraced cottages on the north side of Par Green, which follows the line of an old sand-spit. These were succeeded in the early C20th by generally more substantial semi-detached villas on the south side of the road

and by a mixture of housing at the foot of the East Cliff on what had been the beach and on the land above the cliff at Upper Eastcliffe. From the start of the C20th to the end of WW1, the south side of Moorland Road was developed, mainly with terraced and semi-detached properties. Between the wars a few bungalows and semi-detached properties were built at the eastern end of the north side of the road and in the latter half of the century the remainder of this side of the road was developed with a range of styles of houses and bungalows.

In the late C19th a terrace of cottages and a farmhouse were built between the railway and the Par River west of Par Green. In the latter part of the C20th, land north of this has been developed with “park-homes” as a mixture of residential and holiday accommodation totalling some 150 homes.

Other than a few older cottages and some 15 early C20th terraced and other properties at Polmear, there was no development in Par east of Hamley’s Corner until some 30 spacious detached and semi-detached “villas” and bungalows were built along the north side of Polmear Rd between the wars. At the end of the C20th a linear development was commenced at Polmear Parc, immediately north of this, totalling 101 dwellings, mainly modest bungalows but including 10 small detached houses on the SE side of the development. Although fairly neutral in design, the large open front gardens, wide verges and irregular layout creates a sense of openness. In 2015 a development of one large bungalow, nine detached houses and a block of six maisonettes was built on the NE edge of this development. This is a very cramped site and the unconventional design and location continues to be a source of controversy in the community, particularly on account of its prominence in public views, especially from Par Beach.

In the late C20th two large detached houses and three bungalows were built at the western end of Polmear Road, below the old cliff line. Also, two small estates were constructed, 7 bungalows on an “infill” site off Eastcliffe Road and 4 large dormer bungalows on the former Par Engineering site at the junction of Eastcliffe and Moorland Roads. In addition, there have been half a dozen individual detached properties built on “infill” sites in the area.

Whilst Par does not share the rural village character of Tywardreath, with the possible exception of the developments behind Polmear Road, Par has largely avoided the amorphous suburbanisation which has befallen many similar coastal locations in Cornwall. The natural barrier of the Par River and the railway line form a clear, strong demarcation from the “urban sprawl” to the west and gives it a clear sense of identity.

All public roads in Par have well-lit footways and are close to public transport. The majority of properties in Par have off-road parking for at least one vehicle, although, for the older properties, this is often at the expense of their front amenity areas (although most of them have above average space to the rear). A corollary of this is a loss of on-street parking spaces: this is a significant problem.

c. Tywardreath Highway

Tywardreath Highway is a ribbon development along the A390 east of the level crossing on the Newquay branch line, extending approx. 1 km north east to Porcupine, at the foot of Penpillick Hill, totalling some 90 dwellings.

Development at Tywardreath Highway started in the C19th, associated with the Fowey Consuls Mine immediately to the east (Porcupine gets its name from a pub of that name which served the miners). Most of these buildings were typical modest terraces although there are several larger properties which may have been farms originally. Most of these properties have been modernised and extended over the years and are in generally good state of repair.

From the mid C20th to the present day there has been in-fill development, almost entirely individual dwellings, mainly on the southern side of the A390 but sites are restricted by the steepness of the hillside. Dwellings are in a range of traditional styles, almost all detached, ranging from modest bungalows to 3 / 4 bedroom houses. At the start of the C21st, a development was started on the north-west side of the A390, Grove Park. At present there are six large, individually designed houses in spacious gardens and there could be scope for a few more near the junction with the A390, if EA concerns on flooding can be addressed.

d. Kilhallon

Originally a mediaeval farm on the lane from Par to the bridge over the Par River at St Blazey, there was some development in the C19th, probably associated with the nearby mines, including two substantial properties, Torton and Elmsleigh, the latter now a care-home. In the mid-part of the C20th an estate of 19, individually designed detached properties of varying size, houses, dormer bungalows and bungalows, on a site of approx. 2 hectares was built at Kilhallon Woodlands. A little later, an area of approx. 0.7 hectares was developed on the western corner of Driving Lane comprising 8 individually designed substantial properties. In the past 50 years some 8 individual “infill” properties have been built in Kilhallon.

e. Outlying Dwellings

There are only some 50 or so dwellings in the parish outside the areas discussed above. Most are working farms or farmhouses which have become homes due to farm amalgamation or they are related to on-site rural activities (equestrian, horticulture, bird sanctuaries etc.) or are buildings associated with the past mining activity in the area; 20 or so are private dwellings built in the latter part of the C20th. There is considerable diversity in their size and character: however, most follow traditional styles of design and blend into the rural landscape.

Section 3 Addendum

An important characteristic of the landscape of the parish as a whole is the degree of “connectivity” between the undeveloped parts. Even where “green” areas are not contiguous they are interconnected by stream and river banks, railway embankments and substantial hedgerows, providing a corridor for wildlife; c.f. Blue Green Corridors Map on the following page. Even in the urban areas the substantial mature garden areas and hedgerows provide a haven for fauna and flora. This makes a significant contribution to the rich biodiversity of the parish. It should be a material consideration when assessing any proposed developments, especially in the western part of the parish, where such links are particularly vulnerable.

Appendix B: Land Use Classification

This document is accompanied by a Land Use Classification Map below.

A. Introduction

A clear understanding of current land utilisation and its distribution in the parish is fundamental to recognition of the key characteristics which define its identity and to underlie the policies to guide its future development.

Broadly speaking, the western/southwestern 21% of the parish lies on the flat reclaimed marshland of what was originally the estuary of the Par River; 71%, to the east and north of the parish, lies on upland terraces rising gently from a height of some 50 m to 125 m: this area is dissected by a number of fairly steep-sided, flat-bottomed valleys orientated roughly E-W to ENE-SSW, draining into the Par River catchment. Current land use is largely guided by the physical constraints of these landforms and their historical development. Future land use will also be constrained by the same factors.

B. Methodology

The land use classification was carried out by members of the Steering Group, some of whom have formal training in such surveys.

It was done on a field by field basis using aerial photographs and large-scale maps, supported, where necessary, by field work during the autumn/winter of 2018. As appropriate, local knowledge and questioning of landowners was done to clarify specific problems.

Having reviewed the initial data, it was decided that the following categories would be the most appropriate for defining the types of land use.

1. Residential
2. Commercial
3. Leisure, Recreation, Nature Reserves
4. Parks, Gardens, Horticulture, Woodland
5. Mixed Arable/Improved Pasture
6. Pasture
7. Unimproved Grazing, Scrub, Marshland

Results were then plotted on a map of the parish to provide a graphic illustration of the distribution of categories; c.f. Land Use Classification Map below.

This map shows clear spatial relationships of the categories with the landforms. It is important to note that outside the areas identified as residential, there are only some 50 dwellings, of which the majority are working farms or residences linked to the use of the site (e.g. horticulture, equestrian activity). Thus over 95% of the population live in less than 10% of the area of the parish. It is therefore reasonable to describe the land use of the parish as predominantly agricultural.

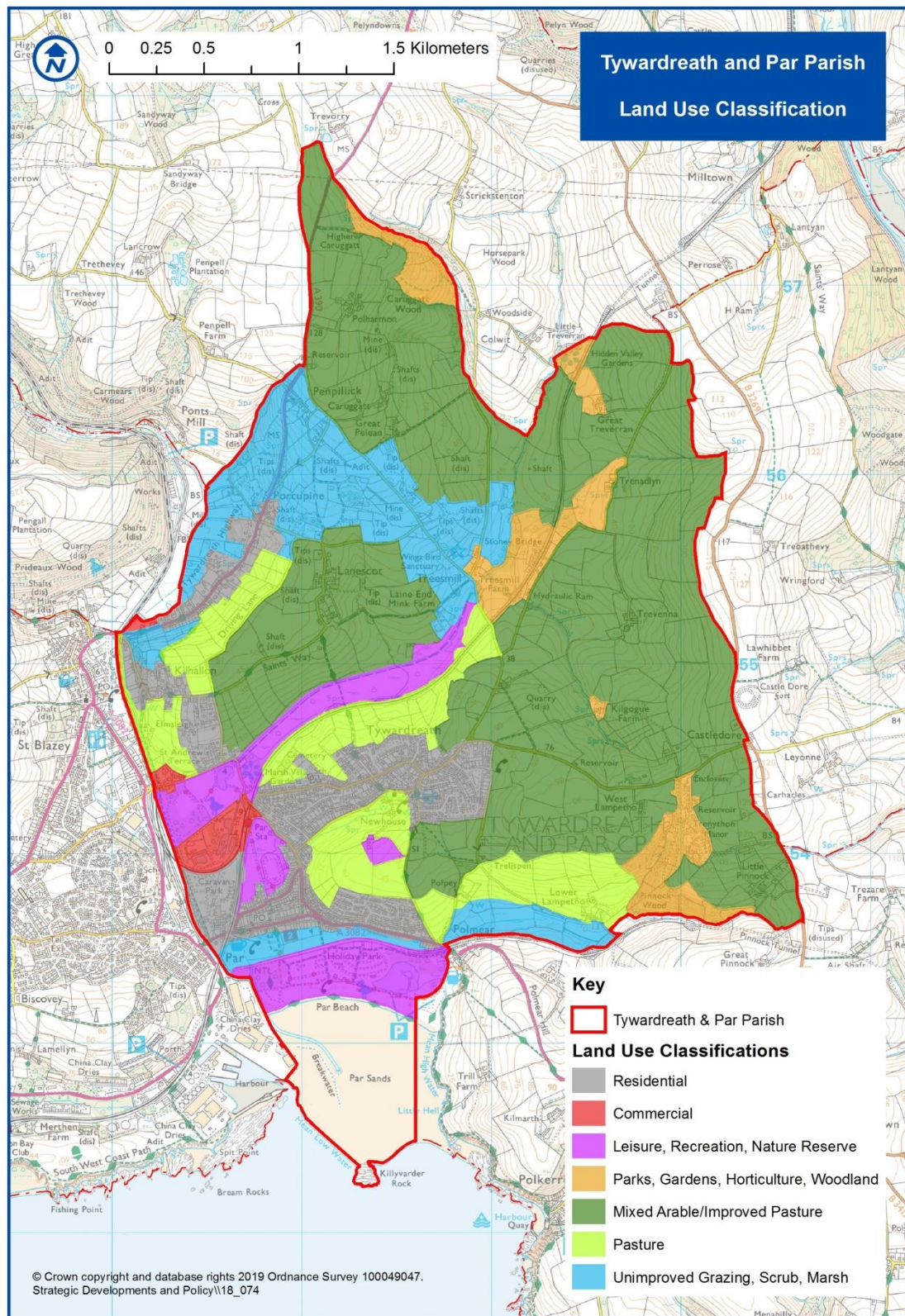


Figure 6, Land Use Classification Map

C. Characteristics of Individual Categories

1. Residential

Residential areas comprise less than 10% of the parish and can be split into four clearly defined areas with distinct characteristics.

a) Tywardreath

The core of the village is of mediaeval origin although most existing buildings date from the late C18th or later. Most of the houses are terraced miners' cottages with occasional larger properties and are generally in good repair with considerable modernisation. In the early C20th development took place on the margins of the village, particularly down Southpark Road and Tehidy Road, mainly large detached or semi-detached properties, in a variety of designs, with substantial gardens, giving these areas an open, green aspect.

Between the wars two small developments of "council houses", semi-detached with ample gardens, were built, at Glenview and Mount Bennett Terrace. In the 50s, a larger council development of some 60 dwellings took place at Poldrea, on the SE edge of the village. These are a mixture of semi-detached homes and short terraces, some divided into maisonettes, with generous garden space, built around a large green space with an equipped children's play area.

Also in the 60s, development started at Trenant Road/Penstrasse Place on the southern edge of the village, predominantly of detached bungalows on relatively spacious plots. A few years later the Trevance Park estate was built on the northern edge of the village, a mixture of detached bungalows on generous plots and smaller, semi-detached properties. This development is characterised by wide green verges and grassed areas coupled to open front gardens giving a very spacious feel to the site.

Over the past 50 years there have been a number of small developments on plots within the existing development zone: St Benedict's Place, St Sampson's Close, Vine Place, Elderfield Close, Anjardyn Place, Priory Close, Swallowfield Close, Nursery Close and along Eastcliffe Rd opposite the surgery. These have all been modest in scale (up to 10 dwellings), mainly bungalows, with some family homes. In addition, there have been some 20 individual developments on "windfall" infill sites within the village, mainly of family homes.

Overall, the housing stock of Tywardreath village has increased by some 300 properties since the 1960s (approx. 20%), an average of some 5 per year. Because of the scale, character and rate of development, the village has been able to assimilate this number without losing its strong sense of identity and social cohesion. The community is well linked by road (with regular bus services) and by rail (Par Station is less than 1km from the centre of the village), and has a church, chapel, primary school, village hall, shop (currently closed), butcher and two pubs. It shares a Health Centre with Par.

The village is contained within clearly defined development boundaries. It is important to note that the communities of Tywardreath and Par, although contiguous at the foot of Tehidy Road, have strong individual characteristics. The presence of the open farmland of Tywardreath Hill, on the east side of Tehidy Road, is of crucial importance in maintaining these identities.

b) Par

Most of the land occupied today by the settlement of Par was, until the C19th, an estuary, tidal mud-flats and salt-marsh, although silting up rapidly with residues from mining and, later, clay-working, in the Par River catchment. The building of the embankments for the main railway line and the Fowey branch line in the mid C19th led to a much faster rate of silting up, such that by the late C19th the whole area was “dry land”. However, to this day, most of Par lies in Flood Zone 3.

For the above reasons, with the exception of a few fishermen’s cottages at Polmear and near Hamley’s Corner, the oldest buildings in Par only date to the latter part of the C19th. The original development was of terraced cottages on the northern side of Par Green, which follows the line of an old sand-spit.

These were succeeded in the early C20th by generally more substantial semi-detached villas on the southern side of the road and by a mixture of housing at the foot of the East Cliff on what had been the beach and on the land above the cliff at Upper Eastcliffe. From the start of the C20th to the end of WW1, the south side of Moorland Road was developed, mainly with terraced and semi-detached properties. Between the wars a few bungalows and semi-detached properties were built at the eastern end of the north side of the road and in the latter half of the century the remainder of this side of the road was developed with a range of styles of houses and bungalows.

In the late C19th a terrace of cottages and a farmhouse were built between the railway and the Par River west of Par Green. In the latter part of the C20th, land north of this has been developed with “park-homes” as a mixture of residential and holiday accommodation totalling some 150 homes.

Other than a few older cottages and some 15 early C20th terraced and other properties at Polmear, there was no development in Par east of Hamley’s Corner until some 30 spacious detached and semi-detached “villas” and bungalows were built along the north side of Polmear Road between the wars. At the end of the C20th a linear development was commenced at Polmear Parc, immediately north of this, totalling 101 dwellings, mainly modest bungalows but including 10 small detached houses on the south east side of the development. Although fairly neutral in design, the large open front gardens, wide verges and irregular layout creates a sense of openness. In 2015 a development of one large bungalow, nine detached houses and a block of six maisonettes was built on the NE edge of this development. This is a very cramped site and the unconventional design and location continues to be a source of controversy in the community, particularly on account of its prominence in public views, especially from Par Beach.

In the late C20th two large detached houses and three bungalows were built at the western end of Polmear Rd, below the old cliff line. Also, two small estates were constructed, 7 bungalows on an “infill” site off Eastcliffe Road and 4 large dormer bungalows on the former Par Engineering site at the junction of Eastcliffe and Moorland Roads. In addition, there have been half a dozen individual detached properties built on “infill” sites in the area.

Par has good access by road (with regular bus service) and rail (Par Station). It has a church, chapel, Scout Hall, pub, two convenience-stores and a bakery, plus Cornubia Hall,

currently being developed as a community “arts hub”. There is a public library at Par Track.

Further development in Par is very constrained by lack of suitable sites. Most of the readily accessible land lies within Flood-Zone 3 and, with the effects of climate change, is likely to become significantly more vulnerable even in the next 20 years. Apart from the importance of the buffer of undeveloped land to the broader landscape setting of both Par and Tywardreath, access would be problematic, significantly reducing the viability of providing affordable homes.

c) Kilhallon

Originally a mediaeval farm on the lane from Par to the bridge over the Par River at St Blazey, there was some development in the C19th, probably associated with the nearby mines, including two substantial properties, Torton and Elmsleigh, the latter now a care-home. In the mid part of the C20th an estate of 19 individually designed detached properties of varying size, houses, dormer bungalows and bungalows, on a site of approx. 2 hectares was built at Kilhallon Woodlands. A little later, an area of approx. 0.7 hectares was developed on the western corner of Driving Lane comprising 8 individually designed substantial properties. In the past 50 years some 8 individual “infill” properties have been built in Kilhallon.

Kilhallon cannot be considered a “sustainable” location for future development, although there might be limited scope for further “infill”. The hamlet has no facilities within it (other than Kittows butchers). It is over 500m, on unlit lanes with no footway, to the nearest bus stop and the nearest shops are over 1km away, Tywardreath Primary school being 1.5km.

d) Tywardreath Highway

Tywardreath Highway is a ribbon development along the A390 east of the level crossing on the Newquay branch line, extending approx. 1 km north-east to Porcupine, at the foot of Penpillick Hill, totalling some 90 dwellings. Development is constrained to the south-east by a steep slope, some 45 m high: to the north-west it is bounded by the flood-plain of the Par River, much of which is in Flood-Zone 3. In the work being done by the Environment Agency in connection with the StARR Project, most of this undeveloped land is designated as “buffer” storage for flood-water. At the extreme west of the area there are a number of properties between the lane leading to Kilhallon and the railway line. Since most of this land is in Flood Zone 3 and the slope rises very steeply to the east there is very limited potential for further development here.

Development at Tywardreath Highway started in the C19th, associated with the Fowey Consuls Mine immediately to the east (Porcupine gets its name from a pub of that name which served the miners). Most of these buildings were typical modest terraces although there are several larger properties which may have been farms originally. Most of these properties have been modernised and extended over the years and are in generally good state of repair.

From the mid C20th to the present day there has been in-fill development, almost entirely individual dwellings, mainly on the southern side of the A390 but sites are restricted by the steepness of the hillside. Dwellings are in a range of traditional styles, almost all detached,

ranging from modest bungalows to 3 / 4 bedroom houses. At the start of the C21st, a development was started on the north side of the A390, Grove Park. At present there are six large, individually designed houses in spacious gardens and there could be scope for a few more near the junction with the A390 if EA concerns on flooding can be addressed.

It is believed that there was a small “general store” on the Highway many years ago, and a chapel; these have been converted into residential accommodation. The only retail unit today is an Indian restaurant. The nearest retail facilities (shops, public house, Chinese takeaway, chip shop and church) are in St Blazey, some 500m south-west of the western end of Tywardreath Highway. The area is served by Tywardreath primary school (minimum 2.3 km); secondary education is at Fowey, St Austell or Bodmin.

There is no regular bus service on this part of the A390, the nearest bus stop being in St Blazey. Par station is at a distance of 1.9 km. There is a pavement on this part of the A390 and adequate street lighting; however, the volume of traffic on the road does not encourage cycling. In reality, most residents of Tywardreath Highway are dependent on private transport to access all facilities, making it questionable whether this could be considered a “sustainable location” in modern Planning terms.

e) Outlying Dwellings

There are only some 50 or so dwellings in the parish outside the areas discussed above. Most are working farms or farmhouses which have become homes due to farm amalgamation or they are related to on-site rural activities (equestrian, horticulture, bird sanctuaries etc.) or are buildings associated with the past mining activity in the area; 20 or so are private dwellings built in the latter part of the C20th. There is considerable diversity in their size and character: however, most follow traditional styles of design and blend into the rural landscape. The character of the rural lanes, unlit and with no footpath, and the distance from even local services or public transport, means that virtually nowhere outside the four areas described above could be considered a “sustainable location” in current Planning parlance.

The area of the parish is 9.72 sq. km and its population, according to 2017 estimates, is 3324, a mean density of 342.1/ sq. km. Since 95% live in the four “urban” areas, the “urban” density is approx. 331 / hectare as might be expected from the nature of the settlements. In the rural hinterland this figure drops to 0.2 / hectare, characteristic of non-moorland rural areas in the county.

Employment Sites

There are only three areas in the parish which are predominantly industrial in character and these are centred on the designated employment sites of St Andrew’s Road, Bailey’s Site; St Andrew’s Road Station; and Tywardreath Highway. These sites comprise only 1.7% of the area; c.f. Employment Sites and Land Map, under Maps, NDP Section, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php> (or NDP, Figure 7).

Immediately north of the level crossing on the A390 at Tywardreath Highway there is a large car maintenance/bodywork business, a motorbike sales and maintenance business.

Immediately east of the level crossing on St Andrew's Road is a large builder's yard/agricultural merchants, a vehicle sales and repair business, a wholesale/retail wine company and a business unit which is currently a timber business. This area lies within the St Andrew's Road Site of the multi-million StARR Flood Risk Management Project; c.f. Flood Risk Management policies within the main NDP document.



St Andrew's Road Employment Site, Par

In the area north of the loop of the Newquay branch-line, immediately west of Par Station, there is an area of mixed industry. Adjacent to the station is a medium sized steel fabrication business, a joinery and a range of facilities associated with railway maintenance. Beyond this is an area used for a range of small businesses including an equestrian tack shop, fishing lake and stores, logo embroiderers and trailer hire.

All of these sites lie in Flood Zone 3 and would be unsuitable for residential development. Most of the premises are modern industrial buildings and have some capacity for expansion within the site but with no space for expansion beyond their boundaries.

A number of small businesses operate within the urban areas, as is normal in such situations. Although contributing importantly to the local economy, they have little or no impact on land use.

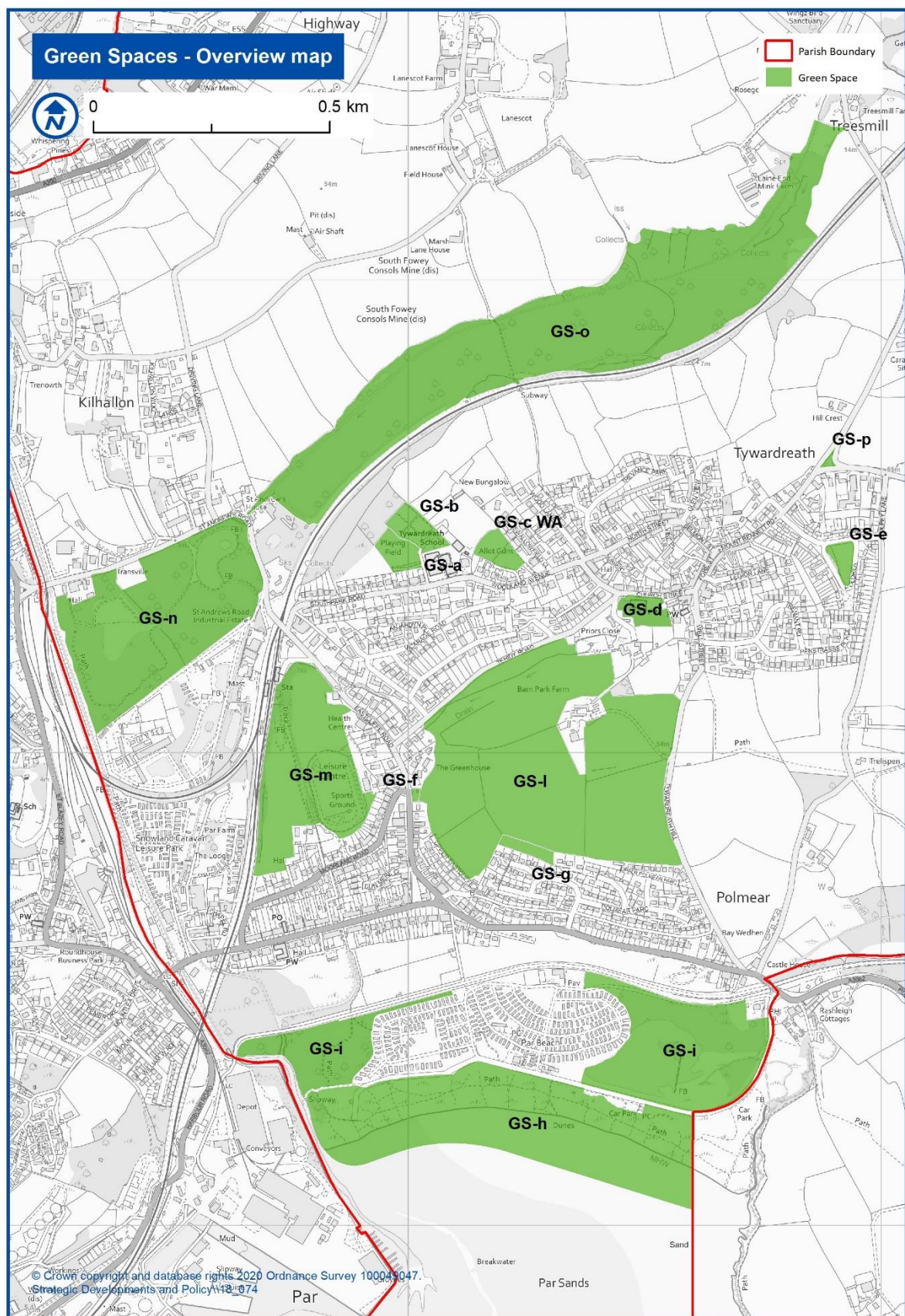


Figure 7, Green Spaces - Overview Map

2. Leisure, Recreation, Nature Reserves

Five principal areas fall into this classification, occupying 72 hectares or some 7.5% of the Parish.

a) Par Beach, Polmear Lake and Nature Reserve (County Wildlife Site id R3.3, CC Interactive Mapping, 2019) as shown on Green Spaces – Overview Map, GS-h and GS-i, Figure 7

Forming the southern boundary of the parish and covering some 34 ha, Par Beach is of major importance, environmentally, for physical well-being and economically. The wide inter-tidal beach offers safe bathing and is used all year round for a wide range of beach activities from picnics and dog-walking to beach sports and windsurfing. It is backed by some 12.5 hectares of accreting sand dunes which, apart from their recreational value, are also home to a diverse flora and fauna, including a number of “red-listed” plants. There is a pond, Polmear Lake, covering some 2.5 ha which, apart from its resident ducks and swans, is a “stop-over” for migratory aquatic species, especially geese, as well as attracting other less common species such as kingfishers and bittern.

Some 8.4 ha in the central northern part of the site is leased as a static-holiday caravan site. This offers a range of facilities including a café, swimming-pool, gym and tennis courts, which are available to the public.

East and west of the caravan site the remainder of the site (other than car parks and a public toilet) is covered with natural woodland and scrub which is formally designated as a nature reserve and includes an orchid meadow. A relatively flat walkway through the western section allows wide public access.

Apart from its value to local residents and holiday-makers, Par Beach is a very important year-round recreational resource to a broad spectrum of residents in much of Mid-Cornwall, not least because of its accessibility by public transport. There is a regular bus service from Mevagissey, Newquay, the clay area and St Austell; Par Station is only 1 km away.

b) Par Duck Pond/ Bunny Field in St Andrew’s Road Nature Reserve (part of Par Marsh, County Wildlife Site id R10, CC Interactive Mapping, 2019) as shown on Green Spaces – Overview Map, GS-n, Figure 7

Covering some 1.2 ha on the western edge of the parish, south and west of St Andrew’s Road, many years ago part of the site was used for waste disposal. When this ceased, material was excavated from the north-east corner of the site, creating Par Duck Pond, to cap the deposits, creating the Bunny Field. The remainder of the site, originally salt marsh, has reverted to marshy woodland.

The pond is very popular for feeding its aquatic birds and for fishing. The Bunny Field is used widely by residents of Par, Tywardreath and St Blazey as a safe place for young children to play. Because of its marshy nature, most of the rest of the site is little disturbed by human activity and provides a haven for wetland flora and fauna. A recently formed local group is seeking to improve habitats and provide information boards to promote public awareness of this valuable resource.

c) Treesmill Wetlands Nature Reserve also known as Tywardreath Marsh

(part of Par Marsh, County Wildlife Site id R10, CC Interactive Mapping, 2019) as shown on Green Spaces – Overview Map, GS-o, Figure 7

Under the management of Cornwall Wildlife Trust, the Tywardreath Wetlands Nature Reserve runs north-east from Par Duck Pond up the valley of the Treesmill Stream for about 1.5 km, bounded by the stream to the north and the railway to the south. Originally a tidal creek it was dammed to make a salt work in mediaeval times and then used as water-meadows. It was abandoned for this use after the influx of mine-waters in the late C18th, reverting to freshwater marshland.

In the 1970s a flood protection barrier with sluice-gate was installed at the southern end, closed at times of serious flood risk. When this happens, almost the whole area can be flooded to a depth of up to 50 cm. Lesser floods can overtop the embankment on the south bank of the stream and natural run-off from the south means that most of the area is permanently marshy. It is also sheltered from wind by its location. This has resulted in a diverse wetland flora and fauna including some rare plants, invertebrates and small vertebrates. It also attracts a wide range of bird life, both permanent and transitory.

A public bridleway follows the embankment throughout its length and it is also accessed directly from Tywardreath by the miners' path (signposted as the Saints Way, a Multi Use Trail) from the village to Lanescot. As a result, it is very popular with both naturalists and general walkers, although the bridleway is, in practice, not currently accessible for horse-riders; c.f. The Public Rights of Way and Trails Map, under Maps, NDP Section, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php> (or NDP, Figure 8).

d) Par Running Track; c.f. Green Spaces – Overview Map, GS-m Figure 7

Par Track is a multi-functional public recreational facility covering some 7 ha of land bounded by the main railway line, Moorland Road and Eastcliffe Road, immediately S of Par Station. Located on reclaimed marshland previously used as a corporation tip, the whole site lies within Flood Zone 3. It has occupied the site for over 50 years. Previously run by the local authority, it was transferred in 2018 to a public interest company on a 125-year lease and is run by local volunteers.

It boasts one of only two all-weather athletics facilities in the county as well as two football pitches, a “pump-track” wheeled vehicle track for skateboards, scooters and BMX bikes and an equipped children's play area (currently being modernised and relocated) as well as a large area for informal ball sports. The new management is working on an ambitious programme to expand the range and quality of facilities available.

The track provides a vital facility for organised and informal recreation for the residents of Tywardreath, Par & St Blazey. It also plays an important role in sporting activity over a wide area of Mid-Cornwall, hosting regular schools and club events, being adjacent to Par Station and on two regular bus routes serving this area.

e) Chicks Country Retreat; c.f. Green Spaces – Overview Map, GS-l Figure 7 for approximate location.

Located in sympathetically converted farm buildings on the hill-top 250 m south-west of Tywardreath Church, this site has been used for over 10 years as a “countryside retreat”. It

provides highly professionally managed “respite” accommodation for children from all over England who come from mainly disadvantaged urban environments. For obvious reasons there is no public access. However, there is strong community support for the project, which has no negative impact on this significant green space, which is important to the setting of the Tywardreath Conservation Area band and the Grade 2* Listed Parish Church. There is serious concern that any alternative use in the future would have a strongly negative impact on the character of the landscape.

4. Parks, Gardens, Horticulture, Woodland

This category covers some 6%, mainly in the east of the parish.

Trenythron Manor, a former mansion, is now a hotel with up-market holiday chalets set in wooded gardens; the grounds are open to guests and the business is very important in local tourism.

In the upper part of the Treesmill valley is a group of private properties with extensive landscaped grounds between Great Treverran and Stoneybridge, not open to the public, as well as Hidden Valley Gardens nurseries and Stoneybridge Organic Nursery; c.f. Quiet Lane, Tranquil Area 8, Tranquil Areas Map, Figure 10, NDP or under Maps, NDP Section, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>.

In the extreme north of the parish lie Carruggatt Woods, an extensive area of native, ancient woodland (extending into Lanlivery Parish) c.f. Tranquil Area 5, Tranquil Areas Map, Figure 10 in NDP or under Maps, NDP Section, <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php> Whilst the woods are not accessible to the public in their entirety, they represent an important landscape and ecological feature through which a public right of way runs.

Immediately north-east of Par station, Marsh Villa Gardens, open to the public, is an attractive facility developed on the south-west end of the Treesmill Wetlands Nature Reserve also known as Tywardreath Marsh (County Wildlife Site, Par Marsh id R10, CC Interactive Interactive Mapping, 2019).

5. Agriculture

Over 75% of the land in the parish is actively devoted to agriculture. According to Natural England's 2010 Survey map ACL006 SW England (1:250,000), this is categorised as Subgrade 3 (undifferentiated).

In practice, at a local scale, this can be subdivided into the three groups discussed below. Whilst not claiming to be a formal field-by-field analysis, the classification is based on field-walking, air-photo interpretation and local knowledge over many years. As is typical for much of this part of the country, livestock farming predominates. Over recent years, as is common, there has been a move to consolidate into fewer farming units and to increase the amount of land used for fodder crops, notably silage, hay and maize, with some other cereals, although there has been a recent significant increase in potato production (some being used locally for distillation of gin and vodka). With these changes there have been major efforts to improve soil quality by heavy manuring, pest/weed control and increased tillage. This is reflected in significant improvement of yields and soil condition.

6. Mixed Arable/Improved Pasture

It is estimated that over 50% of the land in the parish could be categorised as Subgrade 3A, being regularly cultivated with maize, grass for silage or hay and potatoes, generally with good yields. Some other cereals are also grown on occasion. After harvesting, these fields are often used for grazing, mainly beef cattle but some milking herds and sheep. In general, the land in this category lies above the 30 m contour, to the east of the settlement boundary.

It is this land which defines the rural character of the parish and is very prominent in both local and distant views, including from the Cornish Coastal Path in the south, Bodmin Moor to the north, the ridge from Castledore to Fowey Cross to the east and from many public vantage points in St Blazey and St Austell to the west.

7. Pasture

Improved pasture occupies mainly land on sloping sites above the Polmear Valley, south-west of Tywardreath village, and on the north-facing slopes above the Treesmill and Par River valleys. Although some fertilising is done and hay cropped, yields are poor, and the primary use is grazing of cattle and sheep. Such land probably falls in the lower part of Subgrade 3b and in Subgrade 4. It occupies a little less than 12% of the parish.

From a landscape point of view all these areas have an important role in defining the rural character of the parish, in particular the area between Tehidy Road, Tywardreath Hill and Par, where it significantly enhances public views into and out of the Tywardreath Conservation Area and serves as a clear “buffer” between the settlements of Par and Tywardreath; c.f. Green Spaces – Overview Map, GS-I Figure 7.

8. Unimproved Grazing, Scrub, Marshland

In total, this category covers just over 12.5% of the parish. The bulk of this lies in the north west of the parish and occupies the site of the old Fowey Consols copper mine; c.f. Mining Map, Figure 17 in NDP or under Maps, NDP Section,

<https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplanmaps.php>

Although most surface evidence of the mining activity has gone, the ground is stony and often contaminated by mineral waste. It is generally either unused or used as rough grazing, mainly for horses. It has a broadly neutral landscape impact. It is not considered to be “developable” land, partly because of contamination risks but mainly because it is an “unsustainable location”, being over 2 km from any local facilities or public transport, accessed by narrow, unlit country lanes with no footway.

To the north-west of the A390, in the north of the parish is a strip of land occupied by rough grazing. This lies almost entirely in Flood Zone 3 and upstream of the St Blazey flood retention scheme. Because of the high flood risk and poor access, it has low agricultural value and is unlikely to offer any development potential. There is also a small area of scrubby woodland running south from immediately east of St Blazey level crossing, bounded to the west by the lane to Kilhallon. It is on a very steep slope and has no potential productive use. It does, however, make a strong positive contribution to the

landscape, contrasting the urban landscape of St Blazey to the west with the rural nature of the east bank of the Par River.

Between Par Green and the Imerys Par to Fowey haul-road is a belt of marshy rough pasture, sometimes grazed. It has very limited agricultural value because of the very high flood risk, size and shape and limited access.

Running east, north of the haul-road from Polmear, is an area of low-grade land covering some 15.5 ha. The north-west part is marshland, very prone to flooding, with no agricultural value, although an important wetland habitat. To the south and east the land is drier and has been improved to provide rough pasture. Due to the very high flood risk this area has no development potential. On a local scale it makes a positive contribution to landscape quality and biodiversity.



Behind the dunes, between the Haul-Road and Par

Appendix C: Drainage and Drainage Basins

A Catchment Basin Map is to be found at the end of this document.

As discussed in the **Landscape Character Assessment** document in Appendix A, the landscape of this part of Cornwall is characterised by a series of upland plateaux, intersected by often steep-sided valleys, the lower parts often flooded by the sea due to sea-level changes during the Ice Age to form the rias, or creeks, typified by the Fowey and the Fal.

The estuary of the Par River would have been similar, its tributary valleys cut rapidly down to a sea level some 20 m + below the present by water from the melting ice sheets which explains the relatively “youthful” profiles of their upper parts. Infilling from the C18th with mineral waste covered the lower parts of the main river and its tributaries, the Treesmill, Tywardreath and Polmear Streams. The Flood Water Map, Figure 3 (in the main part of the Tywardreath and Par Parish NDP) provides a credible impression of how the estuary would have appeared at the start of the C18th.

Apart from the main Par River, the three stream catchments mentioned above are the basis of the drainage of the eastern $\frac{2}{3}$ of the parish, with catchments of 8.50, 0.58 and 2.18 km² respectively. It can be shown that a heavy rainstorm over the Treesmill Valley of 2 cm would deliver some 170,000 m³ over its catchment. It should be noted that the whole of the north side of the valley, from St Andrews Road up to Caruggatt (also spelt Carruggatt) was intensely mined (in its heyday the World’s most extensive mines). These workings were mainly capped to some extent in the C19th and covered with mine waste and are now flooded to the phreatic level (significantly higher than present sea level). Rain falling on these areas finds its way into the old workings and has a swifter passage to the valley floor than surface run-off.

The Tywardreath Stream has a much smaller catchment but there is evidence that house-building in the C20th has affected ground-water flows causing local instability and increasing the risk of flooding where the stream passes under Well Street and downstream. In recent years there have been significant problems with storm-water from land east of the village overwhelming the drains and running down Well Street to the stream below the bridge. This, in turn, can lead to flooding at the bottom of Tehidy Road. If climate change gives rise to more frequent and severe climatic incidents, the present drainage system will be unable to cope, even if there were to be no further construction in the upper part of the village.

It should be noted that Tywardreath and Par are served by C19th and early C20th “combined sewers” carrying both raw sewage and storm-water. These run almost at sea level under Par, in the area predicted to be most significantly threatened by both fluvial and tidal flooding (Flood Zone 3), before being pumped on up to the Par Moor treatment plant. The pumping station is less than 5 m above sea level and vulnerable to both tidal flooding and sea-level change. Should this system be disrupted, the potential for flooding with contaminated water, both in Par and backing up to Tywardreath, is significant even at present load levels. Any further construction in the development envelope can only exacerbate the present situation.

Although the Polmear Stream catchment is substantially larger, it has been little affected by human factors, other than the silting up of the estuary and effectively discharges directly to the sea. It is significant that, with the exception of the pub, alms-houses and a couple of cottages, which were built at the back of what was the beach when they were constructed, there are no properties built less than 10 m above valley bottom and the only road access to Lower Lampetho goes up the hillside towards Tywardreath, not down to the Par-Fowey Road.

The existing main drainage system serving Tywardreath Highway is already working at times at or above capacity. Inspection manholes have been welded closed to prevent them “blowing-off”, as has happened several times in recent years, flooding properties with contaminated water. The continuing construction of major housing developments downstream in St Blazey adds to the probability of the system being overloaded more frequently.

Virtually the whole of the catchment of the main Par River is within the parish (other than limited, man-made “islands” which would rise a metre or so above the flood waters) and lies in Flood Zone 3, including much of Par. It is important that all the currently undeveloped land within this area remains undeveloped to maintain what resilience it has to absorb the impact of flooding.

The area at risk also includes the main railway line at Par Station and the A390 at St Blazey. In the event of a “50 Year” flood, the only safe means of access or egress to the whole parish would be via the road through Tywardreath village to Castledore and thence by the B3269 to the A390; (it should be noted that this road itself might be flooded at Lostwithiel, making Bodmin the nearest source of emergency services or refuge). This route would be the only one available not only for the parish but also for Fowey and Golant, a total population of some 6,000.

In total, over one-third of the inhabitants of the parish could be directly affected by a major flooding incident. Most of the remainder would be indirectly affected, having no access to medical services or fresh food, with water supply another serious risk as the area receives its water from a pumping station upstream of Lostwithiel on the bank of the River Fowey, which could itself be threatened.

In the light of the above factors and the probable adverse impact of climate change, it is clear that any substantial development in the parish would be likely to seriously overload the already stretched drainage system within the parish, both storm-water and foul sewage: this applies to Tywardreath, Par and Tywardreath Highway. Similarly, further development would adversely affect the ability of emergency services to cope with what is already a significant and potentially dangerous situation in the event of a major flood event.

The Catchment Basins Map follows on the next page.

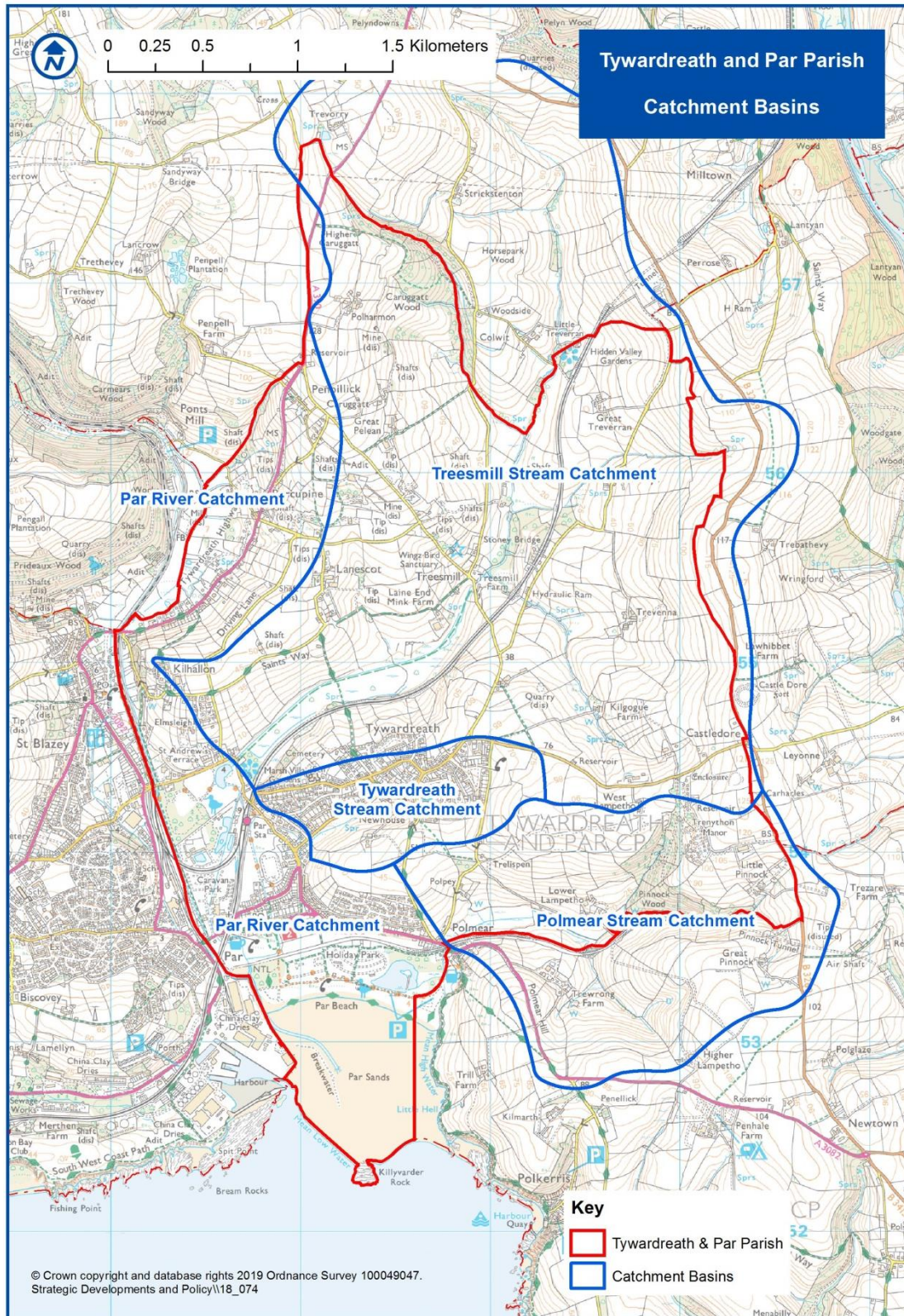
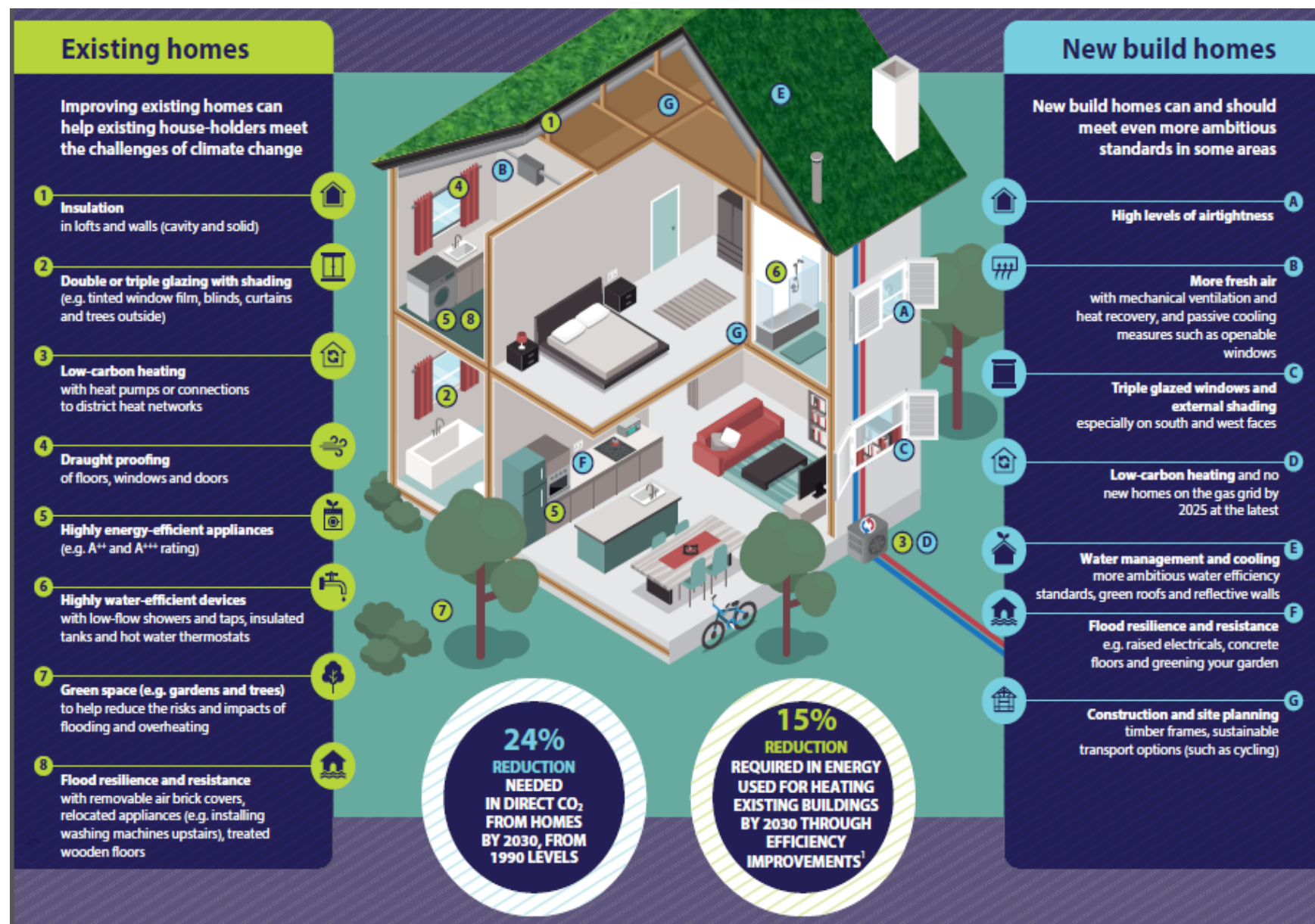


Figure 8, Catchment Basins Map

Appendix D: a low carbon, sustainable home (Housing Fit for the Future, 2019)



Appendix E: Rural Housing for an Ageing Population, extract from HAPPI 4

Note: This page is an extract from Rural Housing for an Ageing Population: Preserving Independence (HAPPI 4), Appendix 3, p.56, 2018, All Party Parliamentary Group (APPG) on Housing and Care for Older People, UK, <https://www.housinglin.org.uk/Topics/type/Rural-Housing-for-an-Ageing-Population-Preserving-Independence-HAPPI-4/>

Nearly ten years ago, the very first HAPPI report, 'Housing our Ageing Population, Panel for Innovation' (HAPPI 1), and its panel of distinguished architects, building and housing experts, identified ten key design elements that can characterise attractive and successful housing for an ageing population. They have been adapted by Jeremy Porteus, Housing LIN, and Rachael Gaunt, Poynton Bradbury Wynter Cole Architects, for this Inquiry to incorporate additional features, as highlighted in italics below:

Additional HAPPI features *in italics* (for rural locations)

- i Generous internal space standards not least *to allow for overnight visitors / carers*
- ii Plenty of natural light with *varied views and vistas*
- iii Accessible private balconies or private outdoor space *at ground floor*
- iv Adaptability and 'care aware' design which is *digitally / technology enabled*
- v Circulation spaces that encourage interaction and avoid an 'institutional feel'
- vi Access to outward facing on-site shared facilities or community 'hubs' *within easy reach*
- vii *Easy access to green space – village green – natural landscape with resting and sitting places*
- viii *Fabric first approach, draught-free affordable warmth, ease of control and energy efficient*
- ix Extra storage for personal belongings and ease of access to mobility aids
- x *Close proximity of accessible public transport and level access for private transport drop off areas*

Appendix F: policy CHW 4 Community Facilities: Accessibility Table

Community Facilities, accessibility and physical infrastructure¹
Buildings – some examples
Clear signage – light background, dark large font + symbols where appropriate
Parking and walking areas clearly delineated
Disabled parking spaces close to entrances
Unobstructed access to the entrance e.g. no signs or parked cars in the way
Entrance paths sufficiently wide to allow 2 wheelchairs to pass each other
Disabled access push buttons for doors so they open automatically
Accessible door bells to attract the attention of those inside
Hearing loop/s
Wherever surfaces and function change, a colour contrast can be useful, e.g. stair treads to risers; handrails to walls; sanitary fixings to walls; floors to walls.
Physical infrastructure e.g. outside areas – some examples
WCs including accessibility adapted facilities are essential and should be located at key sites, e.g. shopping areas, popular Blue Green Spaces; c.f. Glossary definitions
Benches and chairs - low maintenance , e.g. recycled plastic benches and single seats with arms and of a height suitable for those who find it difficult to get up from a seated position. Seating needs to be available in as many places as possible to allow individuals to rest when walking. This also provides opportunities to socialise.
Safe crossing points for all ages and abilities including for those with sight loss
On street reference points and signage appropriate for all For individuals with dementia who might find it difficult to orientate themselves, include distinctive reference points in street design, e.g. planters, sculpture etc. Signage to WCs, shops, the beach etc. is essential and should be accessible to all. ²
Some Sources of information include: Lifetime Neighbourhoods, Designing Dementia-Friendly Outdoor Environments, https://www.housinglin.org.uk/assets/Resources/Housing/Support_materials/Other_reports_and_guidance/Neighbourhoods_for_Life_Findings_Leaflet.pdf Sensory Trust, Access Statements https://www.sensorytrust.org.uk/information/factsheets/access-statements.html Building Control at Cornwall Council https://www.cornwall.gov.uk/business/building-control/guidance-and-information/ Disability Cornwall, Access Audit Checklist, http://www.disabilitycornwall.org.uk/PDF/Access_Audit_Checklist.pdf
Community Facilities in Tywardreath and Par Parish: (not a definitive list) Halls: Tywardreath Village Hall; two Scout Halls, one in Tywardreath and a second in Par; Cornubia in Par; Education room available for community meetings at the Par Beach Café, Par Sands Holiday Park; a room and the garden are available for community groups at the New Inn in Tywardreath. Places of worship: The Church of the Good Shepherd, Par; the Parish Church of St Andrew the Apostle in Tywardreath; Tywardreath Methodist Chapel; and St Mary's Methodist Church in Par.

¹ For definitions of Community Facilities, physical infrastructure, accessibility and other terms; c.f. Glossary in the NDP.

² <https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplandocuments.php>; and 'Welcoming your blind and partially sighted customers-tourism', RNIB, <https://www.rnib.org.uk/>

Appendix G: Community Facilities: Blue Green Health and Wellbeing Table

The description of the three largest Community Facilities associated with Blue Green Health and Wellbeing and/or Blue Green (aka Wellness) Tourism is indicative of what council and community-led organisations are currently managing in the way of community facilities where activities take place in the open air. The table below does not preclude other facilities or services coming forward in the future and being added to what is currently on offer. The activities suggested for securing positive health and wellbeing outcomes are indicative of the opportunities afforded. All the example activities listed below will benefit some individuals, be they residents or visitors to the parish. Some of the activities are especially beneficial for particular health conditions and this is indicated in some of the examples.

<p>Community Facilities associated with Blue Green Health and Wellbeing and/or Blue Green (also known as Wellness) Tourism</p> <p>c.f. Green Spaces Map, Figure 9 in the NDP for locations of the facilities below.</p> <p>Definitions for terms such as Community Facilities, Blue, Green, Wellness are in the Glossary in the NDP</p>
<p>Community Facility: Glenclyffe Community Garden, Eastcliffe Road, Par</p> <p>Description: Green space</p> <p>A small, relatively accessible space for all in the centre of Par Village. Wide entrance gate with dropped kerb. Tarmac-covered, wide pathways and raised beds for vegetable and flower. Seating available.</p>
<p>Examples of current or potential activities</p> <p>Volunteers help run the garden and all are welcome to enjoy it. Activities include gardening; picking fruit and vegetables; and produce is available for free (though many choose to make a donation). The garden is also used for informal gatherings, e.g. picnics, chatting and socialising for all ages, as well as more organised activities, e.g. primary school visits. There are occasional pop-up events, e.g. for fund-raising.</p>
<p>Garden: Potential positive health and wellbeing outcomes (indicative)</p> <p>Promotes social cohesion as all are welcome. Visitors include residents, day visitors to the parish and tourists.</p> <p>Combats social isolation. The garden is an oasis of calm and quiet where those who may be more vulnerable can feel safe and feel welcome whilst being in the centre of a community space.</p> <p>Promotes healthy eating as produce is freely available.</p> <p>Gardening is recognised as being beneficial for health, including for individuals with dementia. ('Gardening for Health; a regular dose of gardening' Thompson, 2018, Royal College of Physicians. The article can be found on Royal College of Physicians website https://www.rcpjournals.org/content/clinmedicine/18/3/201)</p>

Community Facility: Par Beach and Nature Reserve, Par
(County Wildlife Site id R3.3, CC Interactive Mapping, 2019)

Description: Blue and Green space

A sandy beach with “dunes” behind which is Polmear Lake and a grassy area with picnic benches and beach huts. The surrounding area includes marsh and reed-bed grade into scrub and wet willow woodland. Part of the access to the sands is relatively flat and: “The Par Beach Management Group, working alongside Cornwall Council, are continuing to work towards better access for all on Par Beach. Despite better accessibility not being a requirement on a local authority’s asset, the Management Group see it as imperative to the mental and physical well-being of the local residents and tourists who visit the beach. A more open and accessible local nature reserve, such as at Par Beach, will help to create a blue and green open space within the parish for all to enjoy.” (Par Beach Management Group statement, 2019).

Public facilities include toilets, one of which is accessible, and a playground for younger children located behind Par Beach. The Par Beach Café is run by Par Sands Holiday Park and within the café there is an education room available for community meetings.

Examples of current or potential activities

Dog Walking is a popular activity on this beach all year round.

Blue space activities, e.g. Kite Surfing; paddling and rockpooling.

Playing, e.g. in the playground, playing ball on the grassy area and building sandcastles on the beach.

Performance opportunities: In 2018, Par Beach was the venue for ‘Passage for Par’, a dance performance (<https://www.artsadmin.co.uk/events/4132>)

Other similar activities might include, for example, physical theatre and performance-parkour including for young people (<https://prodigalupg.com/about-us>)

Potential positive health and wellbeing outcomes

The prevention of and tackling of obesity by encouraging activity-based exercise including for children and young people. Reducing obesity also reduces the risk of type 2 diabetes

Promotes positive mental health and a feeling of wellbeing:

There is consistent evidence of positive associations between blue space exposure and mental health and physical activity.

(‘Outdoor Blue Space, human health and well-being: A systematic review of quantitative studies’

<https://www.sciencedirect.com/science/article/pii/S1438463917302699?via%3Dihub>

Community Facility: Par Track

Description: Green space

The running track and surrounding recreational fields are leased from Cornwall Council and managed by Par Track Limited. The fields are used by dog walkers and there is an outdoor fitness trail, accessible to all including for those walking with small children and/or pushing buggies. Younger children can play in a dedicated play area and Par Community Library moved to the site in 2019. There is also a community hub, café and toilets (including an accessible facility).

Examples of current or potential activities

A wide variety of activities include: cycling, running, athletics, touch rugby, football and walking football. The 'pump track' offers recreational opportunities for all types of wheeled sports equipment including BMX bikes, skateboards, scooters and wheelchairs. See photo of Gill Butler who campaigned to make this a reality and the team building the track.

Potential positive health and wellbeing outcomes

Remaining active throughout life into old age has been shown to have numerous health benefits e.g. a lower risk of heart disease and stroke. (<https://www.nhs.uk/live-well/exercise/exercise-as-you-get-older/>)

Discomfort from arthritis may be mitigated by walking

(<https://www.arthritis.org/living-with-arthritis/exercise/workouts/walking/walking-works.php>). Walking is also good for rehabilitation after hip and knee replacements when the advice of medical professionals is followed.

Reducing social isolation reduces the likelihood of depression and socialising in this kind of setting will not only promote positive mental health but will also encourage individuals to become more healthy and active generally.

(<https://www.nesta.org.uk/blog/re-imagining-par-track-run-ride-relax-repeat-an-introduction-to-the-project/>)



**Gill Butler and the team
at the Pump Track**

Appendix H: policy E2 Tranquil Areas: Criteria for Selection and Definitions

Guidance Notes to be read in conjunction with policy E2

The reference numbers link to the source documents which can be found in the separate **Summary of Evidence** document.

Footpaths, bridleways, quiet lane network links to other parishes

The criteria for the selection of the identified areas are informed by research into descriptions of tranquillity and definitions (see below). Identified areas were also selected by reference to the criteria for **Local Green Space Designation** i.e. individual areas are valued for their beauty, historic significance recreational value, tranquillity or richness of its wildlife; and are local in character.¹ The Tranquil Areas identified are traversed by one quiet lane, two interlinked Silver rated footpaths through Caruggatt Wood and several Gold rated footpaths and bridleways. A Gold rating is awarded to “Paths known to be in popular use based on ranger knowledge and consultation responses.”² The Tranquil Areas identified include routes which form a network linking Tywardreath and Par Parish with neighbouring parishes, e.g. St Blaise, Luxulyan, Lanlivery, St Sampson and Fowey; c.f. Tranquil Areas Map, Figure10 in NDP.

The selection of walking routes as the focus of Tranquil Areas was determined with the following in mind:

- a) There was significant support for the protection and enhancement of inland footpaths at the Blue Green Workshop (July 2018)³; c.f. Public Rights of Way and Trails Map, Figure 8.
- b) These routes link Blue Green Spaces throughout the parish; c.f. Blue Green Corridors Map, Figure 6.
- c) The Tranquil Areas are accessible to the community at large, be they residents or visitors to the parish, and are integral to Blue Green Health and Wellbeing.
- d) These routes are potentially a significant driver for Blue Green Tourism. The network includes The Saints Way and The Cornish Celtic Way.
- e) The location of these routes is clearly mapped.
- f) “Noise needs to be considered when development may create additional noise, or would be sensitive to the prevailing acoustic environment (including any anticipated changes to that environment from activities that are permitted but not yet commenced).”⁴ In the event of a development proposal coming forward, noise sensitive receptors can be appropriately placed along the mapped routes to measure the background noise level and gauge the potential impact on users accessing these routes for recreational purposes.

Wildlife Sites

Designated sites and other areas of semi-natural habitat are particularly rich in protected species but protected species are also often found outside designated sites. The protected species groups found in Tywardreath and Par Parish include: **bats** which are more likely to be found where there is semi-natural habitat; **dormice** which are particularly associated with woodland, scrub and hedge habitats, especially old or ancient boundaries; **otters** [and **water voles** are] present in local **rivers and streams and ponds/lakes**; **badgers**; and

birds of a wide variety of species. The Tranquil Areas are in rural, countryside locations where protected species are likely to be found.⁵ The NPPF, 2019, advises that: “Noise can adversely affect wildlife and ecosystems. Particular consideration needs to be given to the potential effects of noisy development on international, national and locally designated sites of importance for biodiversity.”⁶ In addition, due consideration should also be given to importance of wildlife corridors, especially Cornish Hedges; c.f. Cornish Hedges Map, Figure 12 in NDP.

Characteristics shared by the identified Tranquil Areas

All areas

- are outside of the development boundary;
- are tranquil in that birdsong can be heard;
- contribute to the Heritage of the area and form part of the background setting and context for Daphne du Maurier’s novels, e.g. “The House on the Strand” and “The King’s General”; and/or appear in other publications such as “A Cornish Walk – the House on the Strand”, Cornwall Today, 2013⁷ and ‘A Cornish Celtic Way’⁸ and a linked Guardian article⁹; and/or are described on heritage websites, in particular those connected with mining¹⁰ and Tywardreath Priory.¹¹
- are potentially an important element in the Blue Green (aka Wellness) Tourism offer.

Definitions and descriptions of ‘tranquil’ and ‘tranquillity’

There is as yet no commonly agreed definition of “tranquil” or “tranquillity” in the UK.

An update relating to Noise was issued in respect of the NPPF (2019) in July 2019.¹² This update states that: “For an area to justify being protected for its tranquillity, it is likely to be relatively undisturbed by noise from human sources that undermine the intrinsic character of the area. It may, for example, provide a sense of peace and quiet or a positive soundscape where natural sounds such as birdsong or flowing water are more prominent than background noise, e.g. from transport.”

The identification of the Tranquil Areas in the parish has also been informed by research into definitions and descriptions used by a variety of organisations including CPRE The countryside charity; the Countryside Agency; and East Suffolk Local Plan. The following statement by the Landscape Institute has also been taken into consideration.

“A distinction is made between absolute tranquillity and relative tranquillity. When we refer to tranquillity in the UK, it is therefore almost always relative tranquillity that we are referring to, but in differing degrees.”¹³

For the purposes of Tywardreath and Par Parish Neighbourhood Plan, the selection of the Tranquil Areas has been informed by the NPPF (2019), the Noise update (July 2019) and the following:

- “the quality of calm experienced in places with mainly natural features, relatively free from disturbance from manmade ones” (extract from CPRE The countryside charity definition)
and
- The notion that there may be occasional intermittent noise from farm machinery or distant traffic sound but for the vast majority of time the main feature of the background

noise level would be that it is relatively quiet, i.e. birdsong can be heard much of the time.

Other Sources on which the selection is based include:

a) The Landscape Institute

“Peace, quiet and calm – the absence of noise and the feeling of ‘getting away from it all’, including a need for solitude.”¹⁴

b) Local Plans, e.g. East Suffolk which makes reference to

“Contributors to Tranquillity – Presence and/or perceptions of natural landscape, birdsong, peace and quiet, natural-looking woodland, stars at night, stream, sea, natural sounds and similar influences” as criteria for the identification of Tranquil Areas.¹⁵

c) The Countryside Agency commissioned a consultation exercise in 2004 which used an approach to consultation known as ‘Participatory Appraisal’ and asked a series of questions in a bid to gain better understanding of the public’s perceptions, values and beliefs in relation to tranquillity.

“3.16 The answers to these questions were understandably varied but a number of themes emerged which were consistent across many of the participants as follows:

- **Perceived links to nature and natural features** - seeing, hearing and/or experiencing nature and natural features.
- **Landscape** - experiencing (particularly in visual terms) the landscape or elements of it, including wild landscapes and rolling countryside as well as characteristics such as fields, moors, woodlands, flora and fauna, natural colours and open views and the sound of water.
- **The importance of wildlife** – seeing wildlife behaving naturally, hearing birdsong.”



Appendix I: Mining in Tywardreath and Par Parish

There is evidence of mining in the parish at least since mediaeval times; c.f. Figure 9, Industrial Assets Map later in this appendix. A Tudor copper ingot was discovered on the site of a cottage in the centre of Tywardreath village and there are suggestions that mining took place in this period at various locations in the parish at this time, although evidence has been obliterated by subsequent activity.

For geological reasons, most of the mining was for copper, although tin was worked briefly at two locations, by Par Station and where “Snowland” now stands, as well as under Par Beach. These were “ring mines” where iron casings were sunk through the sediments to reach alluvial tin concentrates in the bottom of ancient channels (these were briefly explored by ECC in the Cmid-20th).

The centre of mining activity was always the “peninsula” between the main valley of the Par River and the Treesmill stream, where rich copper lodes reached the surface. A major geological fault along the line of the present Treesmill valley effectively terminated this ground and, although exploratory workings south-east of this line were made, notably a mine near Glenview in Tywardreath, an adit a few hundred metres west of the gates of Trenyhton and Wheal Rashleigh, at the east end of Par Beach and a costeaning trench up to 3 m deep running roughly N-S through fields immediately east of Tywardreath village, there was never any significant mining activity south of the Treesmill valley.

Large-scale “modern” mining started in the Lanescot area in 1813 and by 1836 some 15 mines had been amalgamated into Fowey Consols Mine; c.f. Fowey Consols Map below. By 1840 there were some 25 working shafts, the deepest being some 280 fathoms (over 500 m). From the foot of the shaft to the working face could be as much as 500 m. It was claimed that, in its heyday, these were the most extensive underground workings in the world. Today, almost all the land on the “peninsula” south of a line roughly from the top of Penpillick to Colwith are underlain, at some depth or other, by “old men’s workings”; c.f. Figure 11, Transverse Sections of Fowey Consols Mine.

Originally, power for the mine came through a leat system starting at the head of the Luxulyan Valley and entering the site near the top of Penpillick Hill where it was diverted to feed several water-wheels generating between them in 1837 some 417 horsepower. With the expansion of the mine in depth and area, Fowey Consols was from the start an innovative user of steam power but in 1834 it achieved international fame by installing at Austin’s Shaft (now a Grade 1 Listed Building) an 80” pump of revolutionary design, manufactured by Harvey’s of Hayle. Not only did this deliver a huge quantity of power, it did so with a dramatically lower fuel usage.

Another innovation at Fowey Consols was the introduction, for the first time in the world, of the single shaft man-riding engine. Prior to this a worker would have to climb 1,800 ft down vertical ladders to reach the 280 fathom level, taking about 50 minutes, and at the end of his (10 hour) shift, climb back up again in about 1hr 20 minutes. With the man-riding engine, the same could be achieved, with far less effort and danger in 25 minutes each way. This introduced significant improvements in both health and productivity.

Between 1815 and 1867, these mines produced 383,359 tons of copper, worth £2,247,478, the third largest producer of copper in SW England.

Joseph Treffry, the driving force behind the success of the mines was a model of the C19th entrepreneur. “He was ascetic, self-disciplined and forceful, with astonishing drive and energy. He was a fair but demanding employer who inspired respect and admiration from his work people”.¹ One of his greatest strengths was his ability to accept and adapt new technology. Having built a 5 km leat system (including a 30 m high aqueduct over the Luxulyan Valley to provide water-power to the mines), he became a pioneer in the use of steam power in mineral processing. He built a harbour at Par to import coal and export ore, transported originally by canal and then a tramway. He then planned railways to Par and Newquay (the latter to avoid vessels having to go round Lands End when bringing coal or transporting ore to the smelters).

The role of Fowey Consols in the development of the Industrial Revolution is of supreme importance. This has been acknowledged by the designation of part of the site as a part of the Cornwall & West Devon Mining World Heritage Site.

Whilst today there is little on the surface, other than the iconic Austin’s Shaft engine house and the “converted” engine house at Wheal Henrietta, in the Treasmill Valley, the importance of these mines in shaping the landscape and urban development of the parish is hugely important.

¹ David Treffry quoted in “A Richly Yielding Piece of Ground” by Jim Lewis, 1997, Cornish Hill Publications.

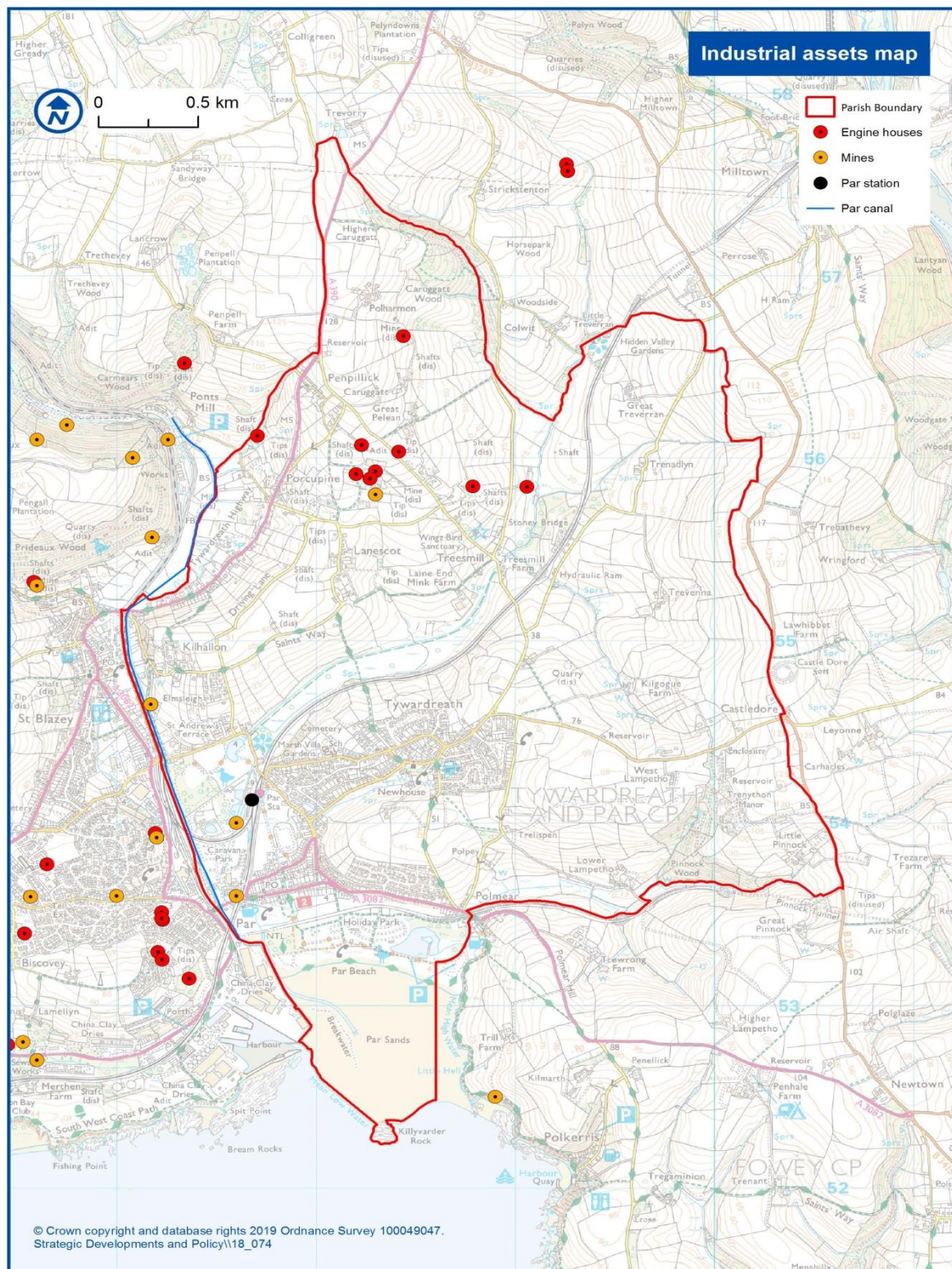
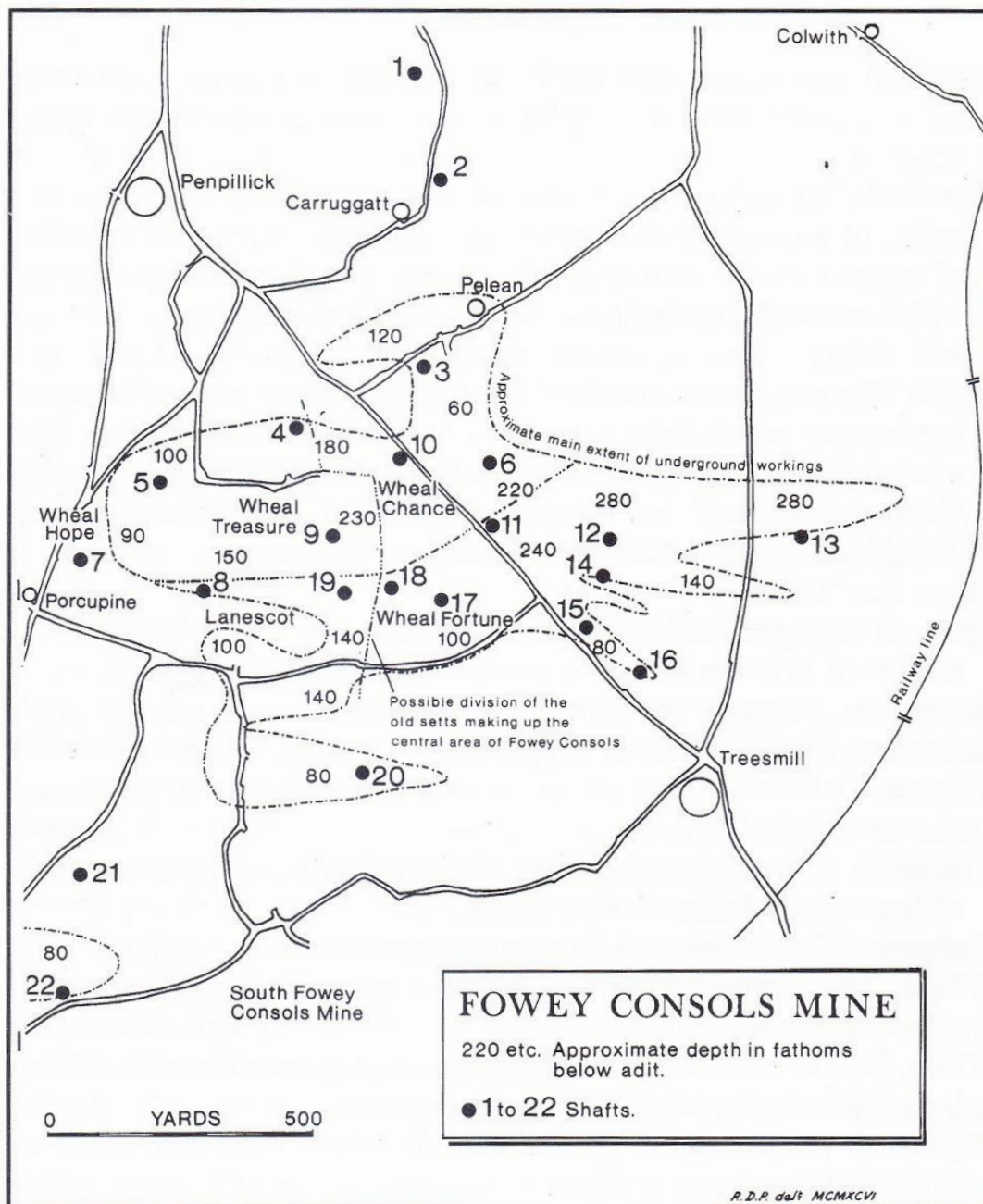


Figure 9, Industrial Assets Map



Map showing shafts and setts.

The main Fowey Consols shafts are shown above. To simplify the central area of the mine the following shafts shown on the de la Beche map on page 63 have been omitted: Coates's, Powne's, Remfry's, Tremayne's.

Numbered shafts:	5. Anthony's	11. Pidler's*	17. Ray's
1. Kendall's North	6. West's	12. Bottrall's	18. Thomson's
2. Carruggatt	7. Tregaske's	13. Henrietta's	19. Sampson's
3. John's	8. Kendall's	14. Blues	20. Hodge's
4. Austen's	9. Union	15. Polsue's	21. Seymour's
	10. Trathan's	16. Mundic	22. Sawle's

*Man engine

Figure 10, Fowey Consols Mine Map

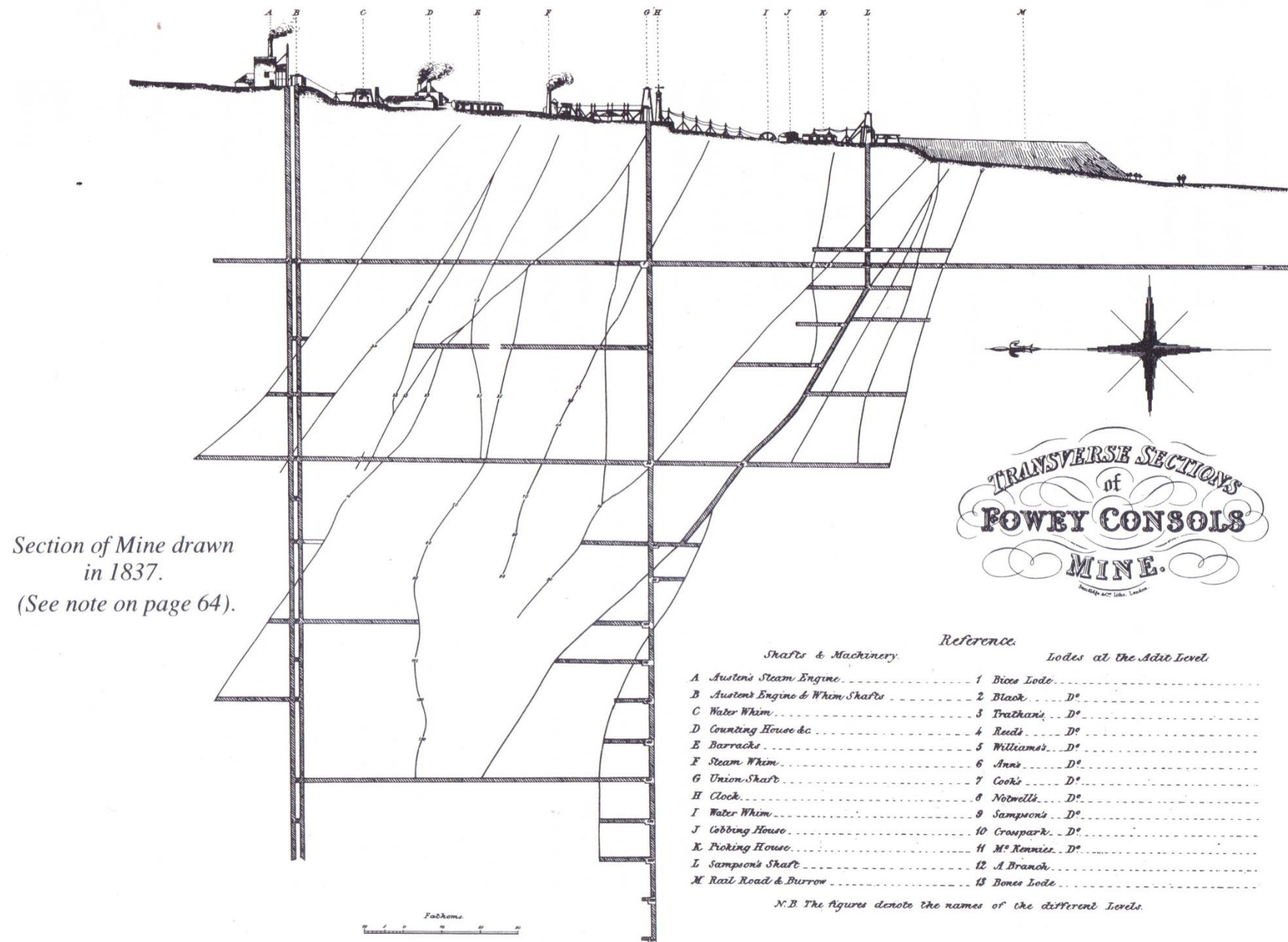


Figure 11, Transverse Sections of Fowey Consols Mine

Appendix J: Tywardreath and Par Parish Historical Background

Evidence from place names (Car-, Lam-, Lan- and Tre-) suggests that some of the farmsteads in the parish are of early medieval origins. The predominant historic landscape character of the parish, defined as 'farmland: medieval', a type of anciently enclosed land, reflects these origins.¹ Tywardreath itself was an established village by the time of the Domesday Book in 1086², the name (house on the beach) suggesting the presence of a religious house prior to the establishment of the priory in the late 11th century. The present church dates from the middle of the 14th century but is likely to have replaced a Norman (or earlier) structure.³ Antiquarian⁴ and recent excavations conducted by the In Search of Tywardreath (ISOT) history group suggest that the priory was situated between Newhouse Farm and the church. However, the full extent of the site is not known. The priory was of considerable importance until its dissolution in 1536⁵, holding land across much of Cornwall and lending the name of the village to what is now called 'St Austell Bay' but which was formerly 'Trewardrayth Bay'.

Tywardreath and its surroundings was briefly embroiled in one of the largest battles of the Civil War, the Battle of Lostwithiel⁶, the second phase of which on August 31st 1644, saw the parliamentary army retreating southwards towards Fowey pursued by the royalists. At the same time another royalist army approached from the direction of St Blazey seeking to cut off the retreat to the coast of Tywardreath Bay, Fowey having been rendered unusable by the capture of Polruan. This led to fierce fighting around Tywardreath up to Castle Dore, where a last stand was made in the Iron Age hillfort before the parliamentarians surrendered. The battle was the largest defeat the parliamentary army suffered during the war. The extent of the battlefield became apparent following the discovery and plotting of large numbers of shot and other items in the fields at the top of Tywardreath Hill and subsequently those leading up to Castle Dore by local metal detectorists from around 2009.⁷

Following the dissolution of the monasteries in the 16th Century, the village faded into obscurity until the mining boom of the 19th Century⁸, the population exploding from 741 in 1811 to 2288 in 1831. Copper mines at the optimistically named Wheals Treasure, Fortune, and Chance, and at Lanescot and Fowey Consols⁹, were established around this time. The boom led to the construction of many of the buildings that contribute so much to

¹ Landscape Characterisation, Parishes, Cornwall Council Interactive Mapping, 2019.
<https://map.cornwall.gov.uk/website/ccmap/?zoomlevel=6&xcoord=208233&ycoord=54600&wsName=ccmap&layerName=Historic%20Landscape%20Characterisation:Parishes>

² Thorne, C, Thorne, F, eds, translation by Padel, O, 1979. Domesday Book 10, Cornwall, Chichester (Phillimore)

³ Henderson, C, The Cornish Church Guide and Parochial History of Cornwall, 1925 (Bradford Barton 1964)

⁴ The Gentleman's Magazine, 1822, 602 at

<http://babel.hathitrust.org/cgi/ptid=chi.79254796;view=1up;seq=644>

⁵ Orme, N, 2010. A History of the County of Cornwall: Volume II Religious History to 1560, Victoria County History, (Boydell and Brewer)

⁶ Ede-Borrett, S, 2004, Lostwithiel 1644: The Campaign and the Battles, (Farnham)

⁷ * Tywardreath Battlefield Report, artefact distribution analysis, N Ferguson, University of Glasgow 2010, NDP Section, Supplementary Evidence,

https://www.tywardreathandparparishcouncil.gov.uk/data/uploads/1068_184693956.pdf

⁸ Tywardreath Organisation, <http://www.tywardreath.org.uk/5his/mining.html#>

⁹ Lewis, J, 1997, A richly yielding piece of ground: the story of Fowey Consols Mine near St Blazey, (Cornish Hillside Publications)

the distinctiveness of the village, including the Butter Market, the village hall (originally a school), the Wesleyan Chapel, a Town Hall, a Masonic Hall, and various public houses. Following the closure of Fowey Consols in 1867 the population collapsed, from 3379 in 1861 to 2097 in 1891. The total population of Tywardreath and Par at the last census in 2011 was 3192. A more detailed history of Tywardreath in particular may be found in the publication Tywardreath Conservation Area Character Appraisal and Management Proposals 2010.¹⁰

The area now occupied by Par was a tidal estuary in the medieval period, the sea once reaching St Blazey church (Landreath, churchyard on the beach), and running the length of Par Moor and as far as Tywardreath and Treesmill via tidal creeks¹¹. The creeks and the bay silted up at least partly as a result of the volume of material washed out of streamworking for tin further up the Luxulyan valley and a ferry that once ran from Little Par to St Blazey church had closed by 1770. Par's origins lay on the western side of the Par (or Luxulyan) river, outside of the parish, the St Blazey tithe map of 1839 showing settlement at the base of Par Lane and along Harbour Road. The Tywardreath tithe map shows settlement within the parish clustered around a group of fish cellars on the site of Pearce's Row and Par Farm and the western end of Par Green. By this time Joseph Treffry's new port at Par, which lies outside of the parish, had been completed and with the canalisation of the Par River below Pont's Mill, the construction of a tramway, and later a railway, up the Luxulyan Valley, and the opening of Par Station on the railway in 1850, Par flourished. The retreat of the sea continued into the 20th century and the shoreline, which once reached the Fowey branch line (now the Imerys haul road) in the late 19th century, is now considerably further south. This has enabled the establishment of the Par Sands holiday complex shown to the right in the photo below. Par has an active Old Cornwall Society.¹²



Haul Road from Par Docks to Fowey

¹⁰ Tywardreath Conservation Area Character Appraisal and Management Proposals, 2010, Supplementary Evidence, NDP Section,

https://www.tywardreathandparparishcouncil.gov.uk/data/uploads/1080_2122567704.pdf

¹¹ An Archaeological and historical survey of Luxulyan valley 1988 Cornwall Archaeological Unit

http://www.luxulyanvalley.co.uk/Luxulyan_Valley_archaeological_survey_1988.pdf

¹² Par Old Cornwall Society, <http://www.oldcornwall.net/par-ocs/4576249887>

Appendix K: Sustainability Check Results Summary

Key to likely impact on sustainability objectives

-	Likely to undermine the Sustainability Objective
+/-	Likely to neither undermine nor contribute to meeting the Sustainability Objective
+	Likely to support the Sustainability Objective
0	Sustainability Theme/Objective(s) irrelevant to this element of the NDP

Theme	Potential Impact of Tywardreath and Par Parish NDP
1 Climate Factors	
2 Waste	
3 Minerals & Geodiversity	
4 Soil	
5 Air	
6 Water	
7 Biodiversity	
8 Landscape	
9 Maritime	
10 Historic Environment	
11 Design	
12 Social Inclusion	
13 Crime & Anti-Social Behaviour	
14 Housing	
15 Health, Sport & Recreation	
16 Economic Development, Regeneration & Tourism	
17 Education & Skills	
18 Transport & Accessibility	
19 Energy	

Key to Themes in Table above

Environmental Themes	Social Themes	Economic Themes
----------------------	---------------	-----------------

Appendix L: The Energy Hierarchy

Energy Systems require investment to develop and change. This includes time, money and other resources. It makes sense to focus on the least costly and easiest to achieve options first. The energy hierarchy uses this simple principle to prioritise action so that sustainable energy systems can be delivered in the most efficient way.

Reducing demand for energy by removing waste is the cheapest and easiest change to achieve and so should be considered before other measures. Similarly, energy efficiency improvements are generally less expensive and easier to deliver than renewable energy technologies. By reducing demand first and then improving energy efficiency, the impact of renewables is also increased because the same renewable capacity will now replace a greater proportion of fossil fuel generation.

Reducing demand by avoiding waste means avoiding the use of heating, lighting and other energy systems when they are not needed. This can be achieved with behaviour change and through the use of technology.

Improving the efficiency with which energy services are delivered means improving the efficiency of heating, lighting and other energy-consuming processes. Common technologies include insulation to reduce the energy use in space heating and low-energy lighting systems.

Replacing centralised fossil-fuelled systems with local renewables means deploying technologies such as solar panels, wind turbines and heat pumps to harness natural resources like wind and solar energy. Local renewables avoid transmission losses as well as replacing fossil fuels in generation.

Source: <https://www.cep.org.uk/help-for-communities/community-energy-toolkit/solutions/>

Appendix M: Flood information, key quotes and maps

1. Climate Change and Cornwall's Shoreline

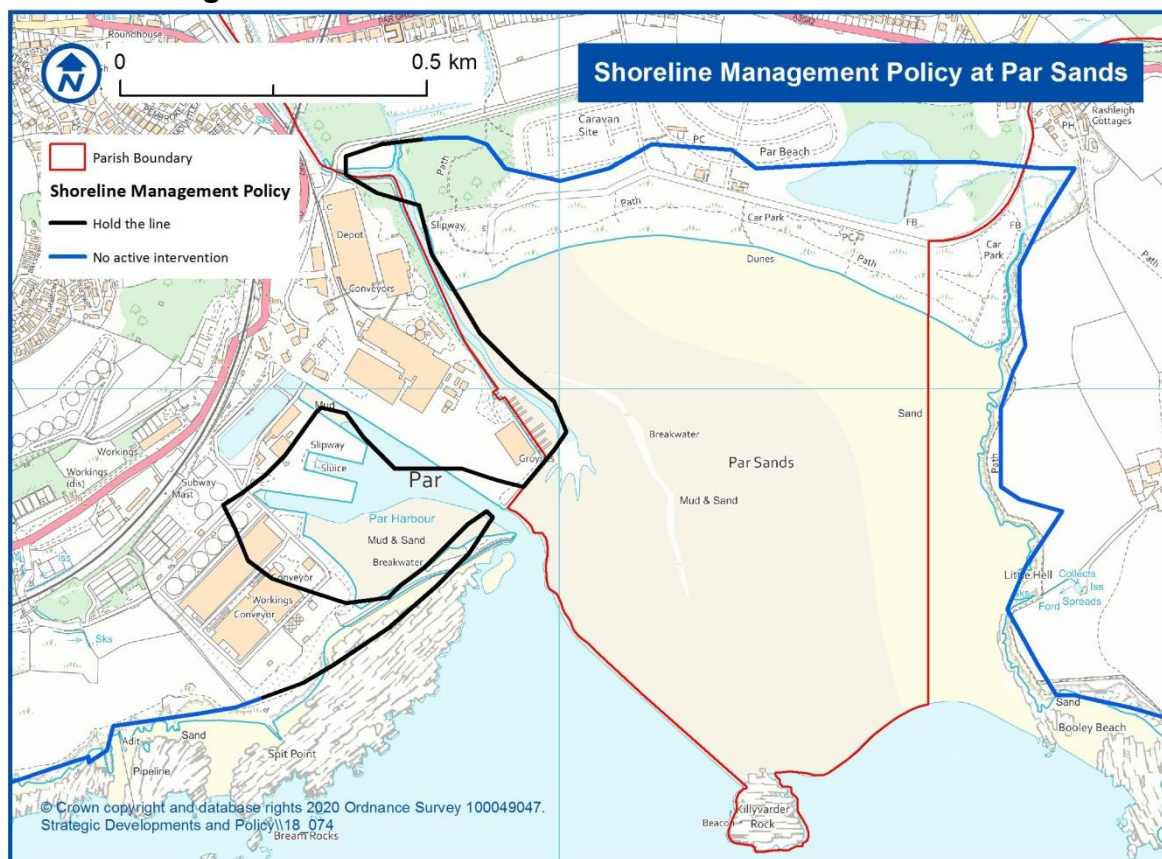


Figure 12, Shoreline Management Map

The map shows the current policy for shoreline management for Par Sands (also known as Par Beach) as denoted by the **blue** and **black** lines.

“The **no active intervention line** means that “there is no investment in coastal defences or operations... The hold the existing defence line in **black** means “maintaining or changing the standard of protection.”¹

From 2025, it is proposed to move to “managed realignment” which means that the shoreline will be allowed to move backwards or forwards, with management to control or limit movement (such as reducing erosion or building new defences on the landward side of the original defences).”

“...there is sufficient scientific evidence to suggest that we need to plan very carefully for the effects of climate change. It is no longer sufficient to simply maintain all defences in their current positions – we need to realise that communities will need to adapt and in some cases the shoreline position will need to be realigned to reduce the risks that climate change poses.”²

¹ Shoreline management plan guidance Volume 1: Aims and requirements, 2006, p14, Defra, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69206/pb11726-smpg-vol1-060308.pdf

² Cornwall and Isles of Scilly Shoreline Management Plan 2, 2011, p.8, Cornwall Council <https://www.cornwall.gov.uk/media/33487170/cios-smp2-summary-document-final-040411.pdf>

2. Sustainability and coastal systems: Projected coastal erosion, Par Sands

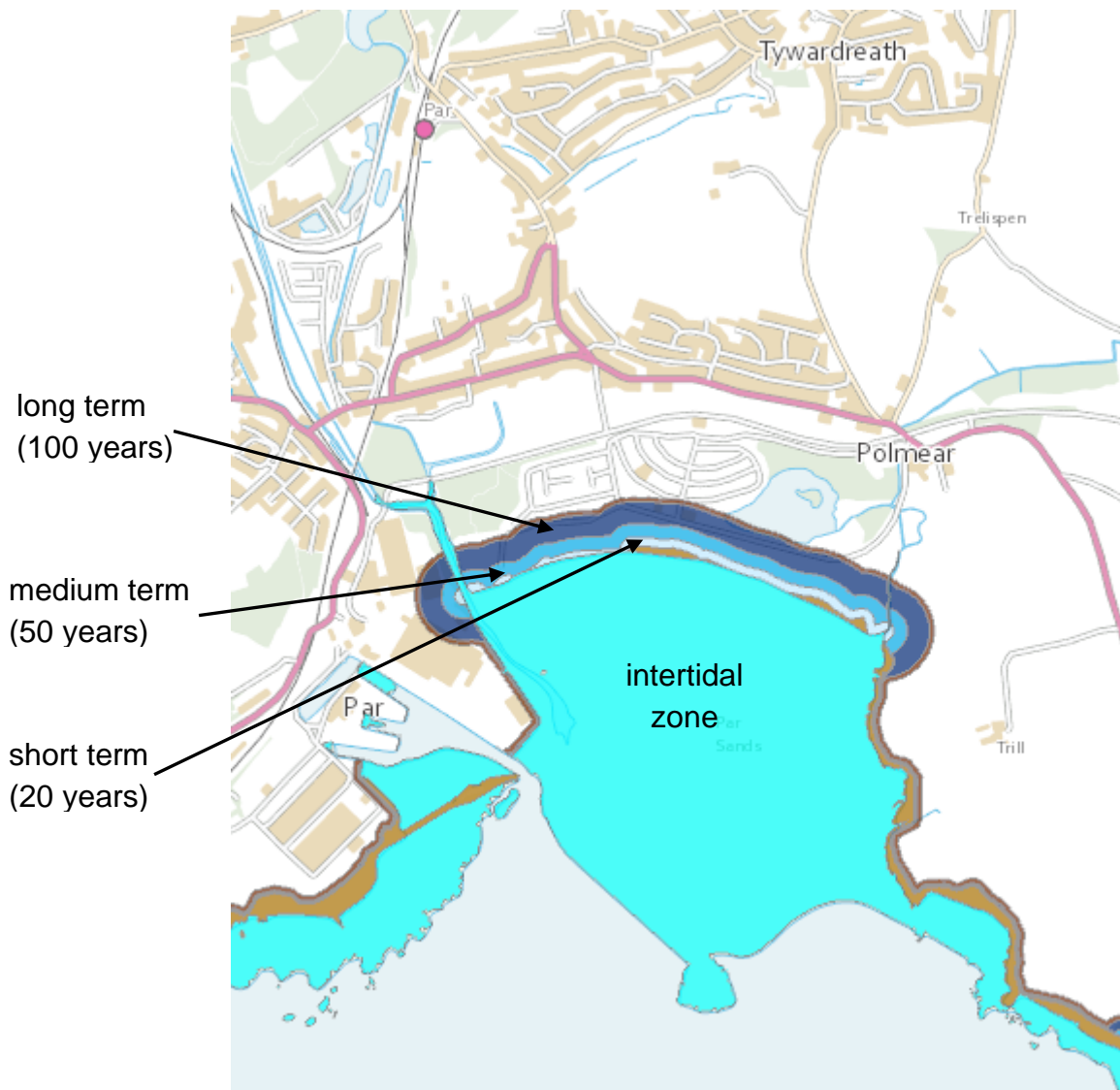


Figure 13, Map showing projected coastal erosion at Par Sands

The map shows projected coastal erosion with a probability of 5% (1 in 20 chance) over the short term (20 years), medium term (50 years) and long term (100 years).

Source: https://map.cornwall.gov.uk/website/ccmap/index.html?zoomlevel=6&xcoord=207704&ycoord=53018&wsName=sfra&layerName=Coastal%20erosion%20-%20NCERM_NAI_LT_05_10m

“The Cornwall and Isles of Scilly Plan has strived to achieve a balance between human aspirations and natural processes in such a way as to create the opportunity for sustainable management of the coast for future generations.”³

³Cornwall and Isles of Scilly Shoreline Management Plan 2, 2011, Chapter 3, pp.4,10,12 Basis for the development of the plan, Cornwall Council
https://www.cornwall.gov.uk/media/33383993/3_basisdevelopmentplan_final_report.pdf

“As an overall principle it is adequate to take the definition provided by the original 1987 statement of sustainable development: *‘development which meets the needs of the present without compromising the ability of future generations to meet their own needs’*, subsequently amended and adopted in the Defra SMP guidance, in relation to defence management policy as avoiding: *“tying future generations into inflexible and expensive options for defence...A sustainable coastal system is one that is allowed to behave as naturally as possible, without significant further intervention.”*⁴

3. Par Sands

All the quotes below are taken from ‘Beach and Dune Management Plans– Par Sands, 2016, pp 27-29, Cornwall Council.’

“The dunes have a flood defence function to the low-lying land behind and it therefore very important that they are maintained in their current if not a more robust state.”⁵

“The key issue at Par Sands is that the dunes provide a flood defence function to the low-lying land behind. The dunes appear to be stable and in places accreting, so intervention required at present is probably limited. However, as sea levels rise and without new influx of sediment, this accreting trend will likely stop and reverse to become one of erosion. This will in turn lead to erosion and narrowing of the dunes, particularly if the dune system is constrained from migrating landwards due to natural or human factors. The size of the dunes in this area will therefore reduce, making the system more vulnerable to storm impacts and increased risk of erosion leading to breaching and so flooding.”⁵



“...as sea levels rise the need for dune stabilisation measures will become increasingly necessary to ensure the dunes continue to fulfil an important flood defence role.”...⁵

“Even in the short term under a No Active Intervention policy, some form of dune stabilisation for ‘access or safety management’ may be acceptable to, for example, ensure historic landfill within the dunes is not exposed and to address erosion of the River Par dune bank.”⁵

⁴ Cornwall and Isles of Scilly Shoreline Management Plan 2, 2011, Chapter 3, pp.4,10,12 Basis for the development of the plan, Cornwall Council

https://www.cornwall.gov.uk/media/33383993/3_basisdevelopmentplan_final_report.pdf

⁵ Beach and Dune Management Plans– Par Sands, 2016, pp 27-29, Cornwall Council, Supplementary Evidence, NDP Section,

<https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplandocuments.php>

“Natural forms of stabilisation, such as planting, thatching, mulching, matting or sand binders, combined with fencing and signage, would allow natural processes to continue, help retain sand on the dune system, and assuming native plants are used, could have long term positive effects on BAP habitats. Over-stabilisation of the dunes would, however, not be desirable for habitats and risk the dunes becoming un-dynamic and unable to react to pressures.”⁶

If stabilisation measures are required, access management and signage will be needed to prevent beach visitors trampling any establishing vegetation and hindering stabilisation of the dunes. Although these are relatively low-cost measures, they would require ongoing commitment to management and maintenance, with the expectation being that storms will periodically erode stabilised areas and thus re-stabilisation will be needed to encourage post-storm recovery.”⁶

“Trampling of the dunes has previously been a problem which has been overcome through access management, including fencing of older dunes to prevent access and the construction of ramps to provide disabled access.” “The construction of boardwalks in key areas may be required to reduce the impact of this high level of trampling on the dune surface.”⁶

4. Par Docks and Par Sands – looking to the future

“Identification of this area as a ‘Coastal Change Management Area’ within the land use planning system may be necessary.” ⁷ The beach and dunes at Par Sands serve a vital purpose in protecting the low-lying settlement area of Par and St Blazey. They also serve to protect key infrastructure, such as Par Station, the main arterial link through Cornwall; the A390 Truro-St Austell-Plymouth road; and the A3082 which runs from St. Austell through Par and Polmear to Fowey, shown below.



⁶ Beach and Dune Management Plans– Par Sands, 2016, pp. 30, 30, 34, 35, Cornwall Council, Supplementary Evidence, NDP Section,

<https://www.tywardreathandparparishcouncil.gov.uk/neighbourhoodplandocuments.php>

⁷ CIOSS Shoreline Management Plan (SMP) 2, Mid Term Review, 2016, Gribbin Head to Par Docks, p.22, Cornwall Council, <https://www.cornwall.gov.uk/media/28416326/cornwall-smp2-mid-term-review-appendix-ma01-ma18.pdf>

“Even with the Harbour Pier maintained, the whole curved bay shape will develop inland, putting existing defences under greater pressure and properties at greater risk. Reinforcing defences will result in loss of the beach and will radically alter the whole character of the settlement. The intent set out in the SMP is to allow retreat of the shoreline in line with sea level rise, managing this process through adaptation of the settlement.”⁸

“Par Sands is protected and the bay is shaped, certainly over its western end, by the presence of the docks. Management of the harbour structures and, in consequence, the future use of the harbour area will strongly influence the risk and future manner in by which risks to the hinterland of Par Sands are managed. The dock area is shown as being potentially at flood risk, certainly over the longer term, and this needs to be considered in relation to any proposed development, together with agreement over future management of the harbour structures.... resolving this uncertainty in relation to future use of the docks will have a major influence on the management of Par Sands itself.....”⁸

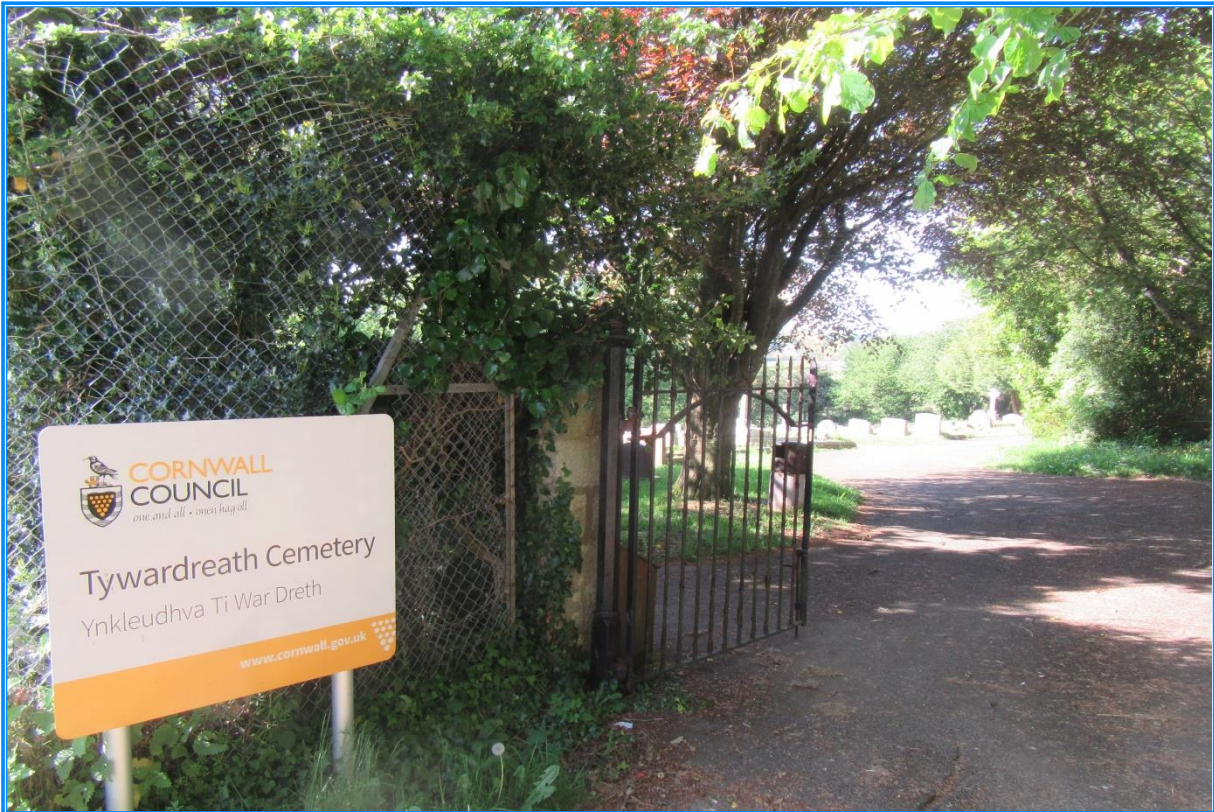
“At present, there are two distinct dune ridges. The landward ridge appears to provide a coherent flood defence to the area of the caravan park behind, while the seaward ridge is not continuous and flooding does occur to the dune slack between the two ridges. The seaward ridge does, however, provide a significant sand reservoir which will tend to roll back and potentially reinforce naturally the rear ridge if allowed to do so. Essentially, there is seen to be potentially significant width in the system for maintenance of a competent defence to be maintained over the short to medium term. The on-going response of the frontage does need to be monitored to determine how this may develop into the longer term and, furthermore, in line with the intent of the SMP to encourage natural development of the shoreline, consideration needs to be given as to how further need for width needs to be accommodated within the area to the back of the rear ridge.”⁸

“Critical to this will be further investigation of [the nature of] the identified landfill sites and the need for managing future development of and around the caravan park. Potentially, over the next 100 years, the set back of the beach could be as much as 100 m. This would impact on the car park to the eastern end of the bay and various facilities along the road to the rear of the dunes.

The area to the rear of the dunes and further inland along the valley running through to Par is shown to be at flood risk. In part, development of this risk will depend on water on high sea levels feeding along the course of the river. The recommendations within the SMP for managed realignment (including the potential need for adaptation of land use) apply principally in relation to the management of the coastal bay. However, quite clearly, in terms of risk management this needs to take account of the potential flood risk via the water course. The SMP highlights the need to consider potential flooding of access to The Par Docks, potentially influencing decisions with respect to use of the area and reemphasises the need to define the area as a Coastal Change Management Area relating to future development of the broader area.”⁸

⁸ CIOSS Shoreline Management Plan (SMP) 2, Mid Term Review, 2016, Gribbin Head to Par Docks, p.22, Cornwall Council, <https://www.cornwall.gov.uk/media/28416326/cornwall-smp2-mid-term-review-appendix-ma01-ma18.pdf>

Appendix N E1 Supplementary Photos



Tywardreath Cemetery GS-b



Woodland Avenue Allotments GS-c

Appendix O E3 Views, Panoramas and Vistas



View 1 from Cemetery and Cemetery Playing Field, Tywardreath



View 2 from Treesmill east along the valley towards Castledore Hill Fort



View 3 from Treesmill Triangle, Tywardreath



View 4 from Poldrea Play Area, Tywardreath



View 5 from the intersection of PROW 425/9/2 and PROW 425/9/3, Tywardreath



View 6 taken from close to PROW 425/10/1, Tywardreath



View 7 from public road, Tywardreath Hill



View 8 from Par Beach to open fields above Polmear Parc



View 9 from Par Track looking East



View 10 from Tehidy Rd. looking up valley towards St Andrew's Church, Tywardreath



View 11 from the Saints' Way, Lanescot



View 12 from PROW 425/3/4 and PROW 425/2 looking towards Luxulyan Valley, World Heritage Site



View 13 looking from near to the top of Penpillick Hill over to St Austell Bay



View 14 from public road at Castledore

Appendix P Potential Contaminated Land and Radon

In February 2020, Cornwall Council published a draft consultation document relating to the proposed Contaminated Land Inspection Strategy, 2020-2025. The objectives of the strategy include amongst others: to “encourage the redevelopment of brownfield sites over greenfield sites in the county in line with the objectives of the local plan” and “to ensure that where development occurs within the County the process deals effectively with contaminated land.”¹

“The term “contaminated land” when used in this strategy has a specific meaning, taken directly from the legislation. The detail of this definition is set out the Contaminated Statutory Guidance 2012 and is considered different to any other terminology such as “land that is affected by contamination” which is a term used in planning. Threats from radon and underground voids (e.g. mineshaft collapses) are excluded from this definition and strategy. Section 78A (2) defines Contaminated Land for the purposes of Part IIA as: “any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that: a) significant harm is being caused or there is a significant possibility of such harm being caused; or b) significant pollution of controlled waters is being caused or there is a significant possibility of such pollution being caused.”¹

“The concept of contaminant linkage” requires an unbroken chain of three components to be in place before land can be thought of as Contaminated Land, whatever its state or condition is at the time. These three components are termed:

1. **A contaminant** - a substance which is in, on or under, the land and which has the potential to cause harm or to cause pollution of controlled waters.
2. **A receptor** – in general terms, something that could be adversely affected by a contaminant, such as people, an ecological system, property, or a water body.
3. **A pathway** – a route or means by which a receptor can be exposed to, or affected by, a contaminant. Each of these elements can exist independently; however, unless all three elements are in place a contaminant linkage cannot exist...

An area of land may not be considered as Contaminated Land if there is no significant contaminant linkage present. It is possible that there may be elevated levels of contaminants on a particular site; however, if there are no valid pathways or receptors identified [then] the definition of contaminated land will not be met.”¹

A map showing Potential Contaminated Land and the areas likely to be affected by Radon in the parish is to be found at the end of this appendix.

¹Cornwall Contaminated Land Inspection Strategy, 2020-2025, Draft for consultation, pp.7, 10-11, Feb 2020, Cornwall Council, <https://www.cornwall.gov.uk/media/42609932/cornwall-contaminated-land-inspection-strategy-consultation-full-copy-feb2020.pdf>

Potential Contaminated Land

Four potential sources of contamination have been considered, as set out below. For each one, their geographical location has been described, the nature of potential contaminants, receptors and pathways identified where relevant, and a subjective assessment made of risk. This does not pretend to be an exhaustive survey but should provide an indication of where in the parish, developers and planners might consider specific contaminated land surveys to be appropriate.

1. “Natural” Alluvium

As discussed elsewhere in the NDP, all the land on the present floodplain of the Par River, from the A390 at St Blazey to Par Beach comprises alluvial deposits laid down largely from the late C18th to the mid-C20th. Whilst some of this is natural alluvium derived from soils washed down from surrounding fields, the bulk of the volume is comprised of fine residues from mining activity, both local copper mines and material carried down from metalliferous mining and china clay working higher up the Par River catchment.

Consequently, the sediment contains a much higher level of metallic minerals than would be expected in a natural sediment, especially heavy metals. Indeed, there is some evidence that these sediments were “streamed” for tin and copper in the C19th.

The area in question can generally be defined to the west by the parish boundary from just north of the A390 to the coast; to the east by the 5 m OD (Ordnance Datum) contour from St Blazey to the cliffs at the eastern end of Par Beach; and to the south by the beach.

Potential receptors would be any residential or other properties within this area, along with watercourses draining this land. Given the thin topsoil, any excavation in excess of 25 cm is likely to bring this material to the surface, although it is probable that the highest concentrations of potential contaminants are likely to be found at deeper levels due to the depositional history of the sediments. Any mixing of this alluvium with recent topsoil is likely to increase the heavy metal content of the soil and could, in an extreme case, cause plants to have unacceptably high levels. As far as is known, there are no abstractions of potable water in this area and it is not likely that groundwater drainage into watercourses will cause significant risk.

It should be noted that shafts were sunk in these sediments from a couple of hundred metres north of the west end of Par Green as far south as close to Killyvarder Rock to work “stream” ore, whilst exploratory work by ECC (English China Clays) in the mid-1960s indicated mineral content of up to 5% metal. This provides a measure of how high levels of potential contaminants might be in some areas.

2. Mine Sites

A substantial part of the north of the parish was mined extensively for copper, especially in the C18th and C19th; c.f. Appendix I, and in the main NDP Justification for policy E.4 and Figure 17, Industrial Assets Map. Subsequently, most of the buildings on the surface have been demolished and the stone used throughout the parish in construction. Similarly, with very few exceptions, the waste tips have been removed and used for fill or have been flattened and covered with topsoil and have reverted to agricultural use, mainly pasture.

The area concerned can largely be delimited by the 5 m contour in the west of the parish, the route of the main railway line and the northern and western parish boundaries. There was limited mining further south in the parish, with a mine recorded at Glenview (NE edge of Tywardreath village) and some 300 m north of Trenyhton, with evidence of workings running south from Chapel Park Farm to Poldrea and the unsuccessful Wheal Rashleigh at the eastern end of Par Beach. None of these latter workings have any current surface manifestations and probably do not represent any significant risk.

Generally, mineral separation was relatively effective, so the vast bulk of the mine waste would have been made up of killas (shales and mudstones) and vein quartz. However, the waste would also contain significant levels of metal ores (mainly copper, tin and iron but with traces of other heavy metals) as well as compounds of sulphur and arsenic. All of these materials have the potential to be serious contaminants.

Almost all of the potentially contaminated land is given over to agriculture, mainly pasture and fodder crops which are unlikely to be significant receptors, although the use of the land for horticulture might be inadvisable. Since the area is largely well outside the Development Boundary, it is unlikely that there will be any significant new development here. However, in considering any building or development work, it will be essential to carry out appropriate contaminated land surveys as development could bring contaminated material to the surface, where it could represent a significant health problem. Similarly, residents should be made aware of the health risks of eating food grown on this land.

The extensive network of underground levels is now flooded to the water-table and mine water will be percolating into ground water. This could make any abstraction of potable water dangerous. Also, several drainage adits discharge into local streams, notably the Treesmill stream. This could have significant impact on water quality, especially after periods of heavy rain.

Although the level of risk is highest in the intensely mined northern part of the parish, the presence of old mine workings elsewhere in the parish, particularly to the east of Tywardreath village, should be noted, bearing in mind that there may be other, unrecorded, exploratory workings. As these activities were unsuccessful, the land concerned quickly reverted to agriculture and any contaminated spoil was dispersed by 150 years of ploughing. Consequently, there is a possibility of high levels of heavy metal contamination over significant areas outside the “mining area”. It would therefore seem reasonable to require a contaminated land survey for any proposed development sites within 500 m of the Tywardreath and Par Parish Development Boundary as any site disturbance could bring contaminants to the surface, with risk to humans.

3. Historical Landfill Sites

During the mid-C20th, the District Council used substantial areas on the western side of the parish as short-term land-fill sites. Never more than 2 – 3m in height, they were subsequently capped with topsoil and used as recreational space or allowed to revert to wasteland. Material tipped there included domestic waste and waste materials generated during the building of the Council estates in St Blazey. These sites were checked for methane until the demise of the former District Council of Restormel. As far as is known,

no unacceptable levels were detected at surface in recent times. Unfortunately, all records of the detailed locations and materials tipped were lost at the time of the transfer to the Unitary Authority of Cornwall Council.

The locations of these sites are as follows:

a) Bunny Field (an area in Par Marsh, County Wildlife Site R10)

Roughly bounded by St Andrew's Road; Par – Newquay Branch Line; Par Duck Pond; marshland to south.

b) Par Track

Essentially, this is the area presently covered by Par Track recreation area, including alongside the main railway line, Moorland Road and Eastcliffe Road.

c) Par Beach (Polmear Lake and Par Sands, County Wildlife Site, R3.3)

This area is bounded to the North by the haul-road; to the South by the road behind the dunes; to the East by the lake; to the West by the Par River.

It is not considered that, under present circumstances there are any significant pathways or receptors involved, although any proposed developments involving excavations could represent a risk and should be accompanied by a contaminated land survey. However, the presence of the Par Beach tipping area should be taken into account in any Coastline Management proposals.

Two further, non-local authority tipping sites are identified:

d) "Snowlands"

There has been uncontrolled tipping at "Snowlands" over many years to raise the land above the flood plain. It would seem that this material has been "construction" waste. "Snowlands" occupies a triangular area between the main railway line and the Newquay branch/Par Docks line covering some 8 ha. With minimal capping, there is an easy pathway to receptors in the residential and holiday caravans and chalets and the various commercial activities on the site. There is also a significant risk of seepage into the adjacent Par River and canal.

e) Tywardreath Village

There is historical evidence that much of the land contained by the property boundaries of Church Street, Fore Street, Belmont Street and North Street was used for disposal of domestic waste in the C19th. It is unlikely that this now contains any significant contaminants and it is therefore considered to be of low risk.

4) Present and Past Industrial Activity

Other than mining, potentially contaminating industrial activity in the parish in the last century would appear to be restricted to the following sites:

a) Tywardreath Highway Employment Site; c.f. Employment Sites and Land Map, Figure 7 in main NDP document

Two adjacent businesses, covering a combined area of some 2 ha, are located north off the A390, adjacent to the railway at the Tywardreath Highway Employment Site. Both have been involved in the sale, maintenance and repair of motor vehicles for many years (one was once also a petrol station). Neither business is known to have had any contamination issues, but the nature of their activity involves a range of hazardous materials. Given that these businesses are located beside the Par River, upstream of Par and St Blazey, it is important that the river is protected from accidental contamination as this could affect not only those living downstream but also users of Par Beach. Any proposals for development on these sites would require stringent risk evaluation.

Immediately south of the level crossing is an old lime kiln. It has not operated as such in living memory, but has been used for a variety of small scale industrial activities over the years. It is unlikely to represent a significant contamination risk.

b) St Andrew's Road Employment Site; c.f. Employment Sites and Land Map, Figure 7 in main NDP document

An area of some 1.3 ha to the north and south of St Andrew's Road, immediately east of the level crossing, has been in industrial use for at least 70 years. The principal users over this time have been an agricultural and builder's merchant and motor sales and repair. The nature of their activity is such that potentially hazardous materials are used.

However, given that the site is in Flood Zone 3 and indeed would be in the high-risk range of that category, it is unlikely that any significant development would be approved on the site. The only significant risk would be erosion from the site in extreme flood conditions.

c) Par Station

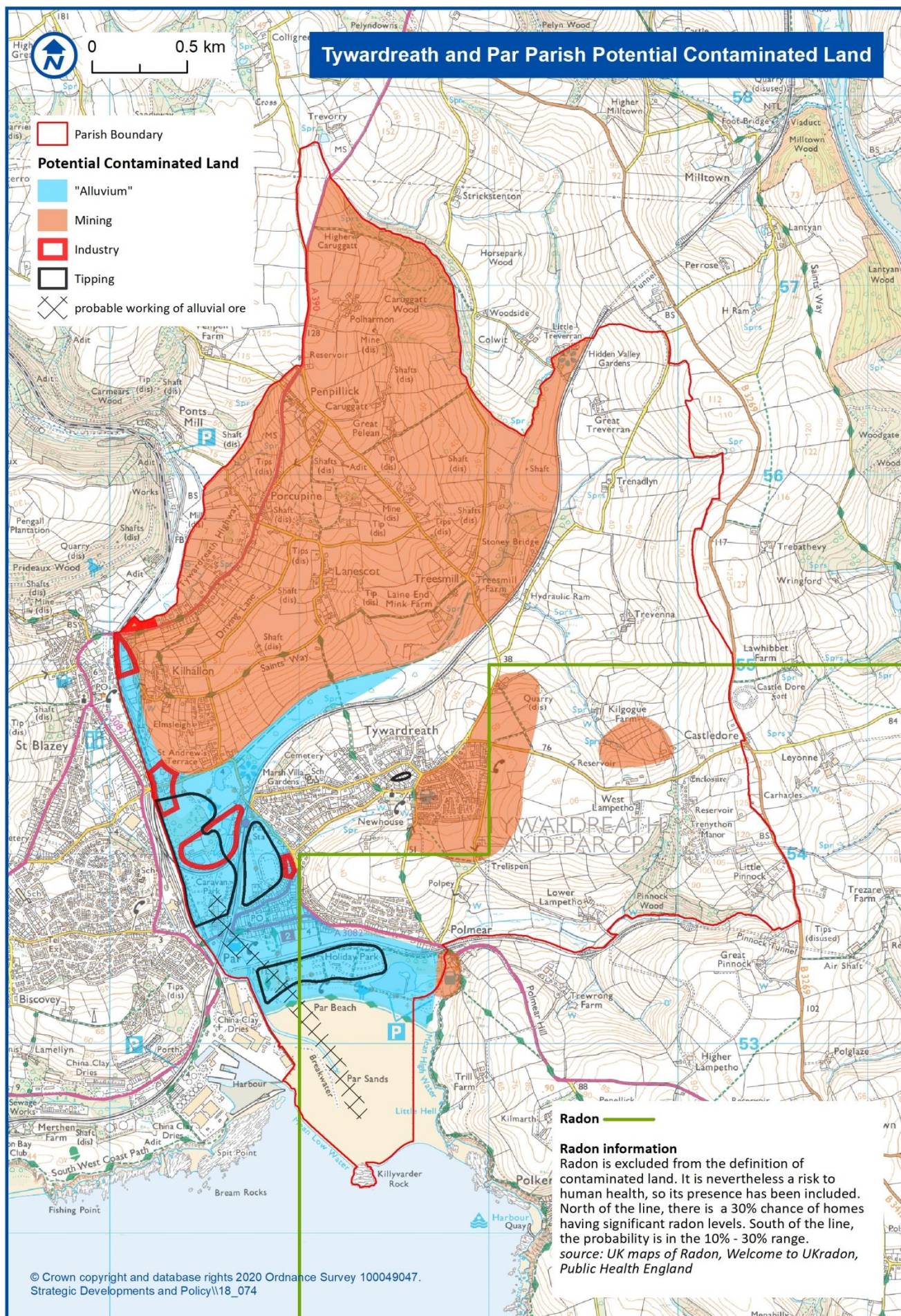
An area of some 6.5 ha, contained within the curve of the Newquay branch line, immediately west of Par Station is used for a range of light industrial activities, some of which may use potential contaminants. However, because of the high flood risk, there is unlikely to be any proposed development which might generate sensitive receptors (unless further expansion of the caravan site carries on into this area).

d) Former Par Engineering Site

This occupied an area of some 3,300 m² at the junction of Moorland Road with Eastcliffe Road for about 50 years until the end of the C20th. It specialised in steel fabrication and vehicle repair and maintenance as well as operating a petrol station. Subsequently, the site was redeveloped for housing. Although there was potential for ground contamination, it is now considered to be low risk.

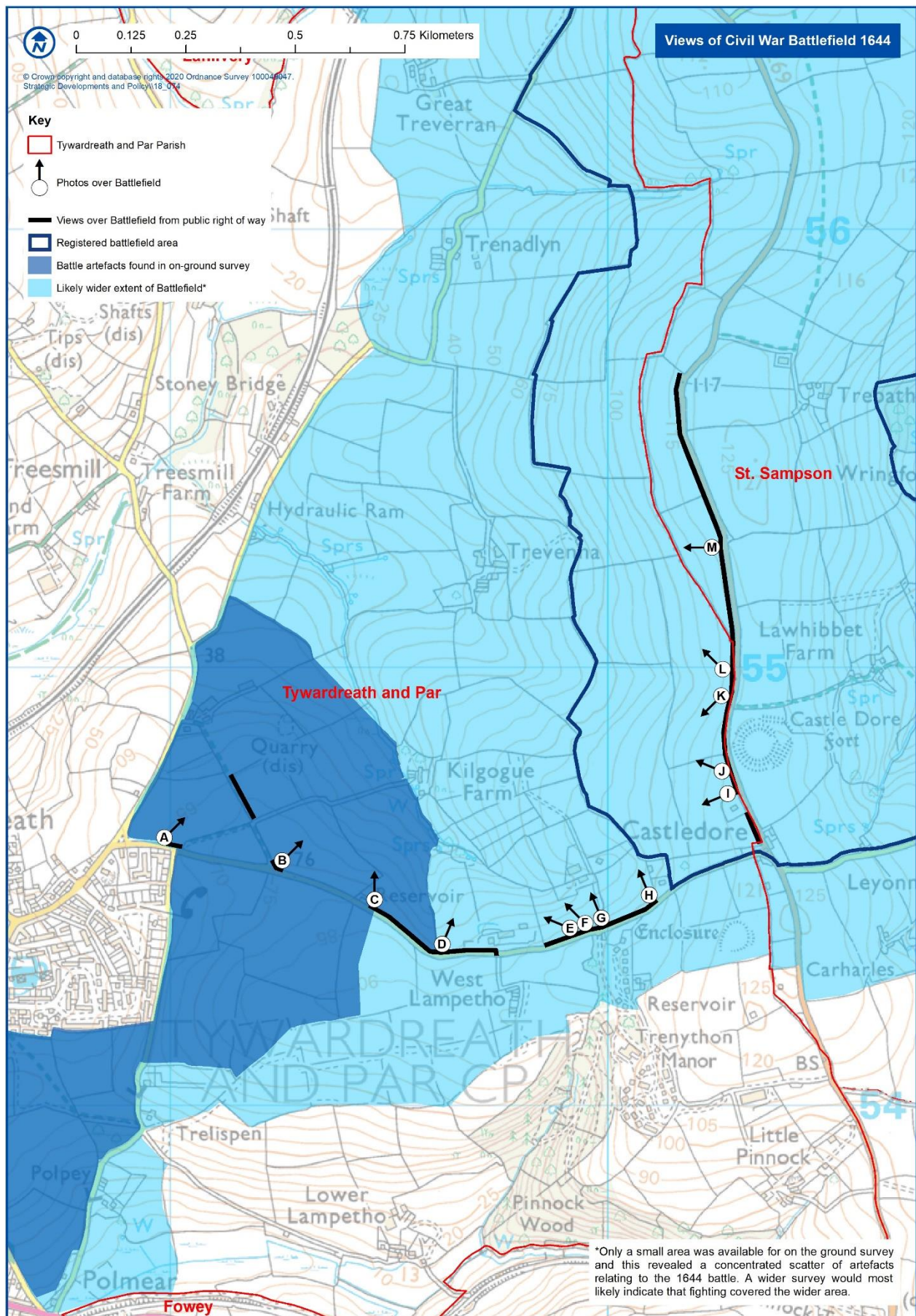
e) Railway Land

The main railway line traverses the parish SW–NE, the Newquay branch line follows its western boundary and the old Par–Fowey line (now a private haul-road, operated by Imerys) runs east from Par Docks to the eastern boundary of the parish. The track-beds will have absorbed oils, hydraulic fluid and other waste for many years and must be considered as contaminated land. However, there is no short-term prospect of this land being disturbed and therefore the contaminated land risk is considered minimal.



Potential Contaminated Land and Radon Map

Appendix Q Views of Civil War Battlefield 1644 Map and Photos



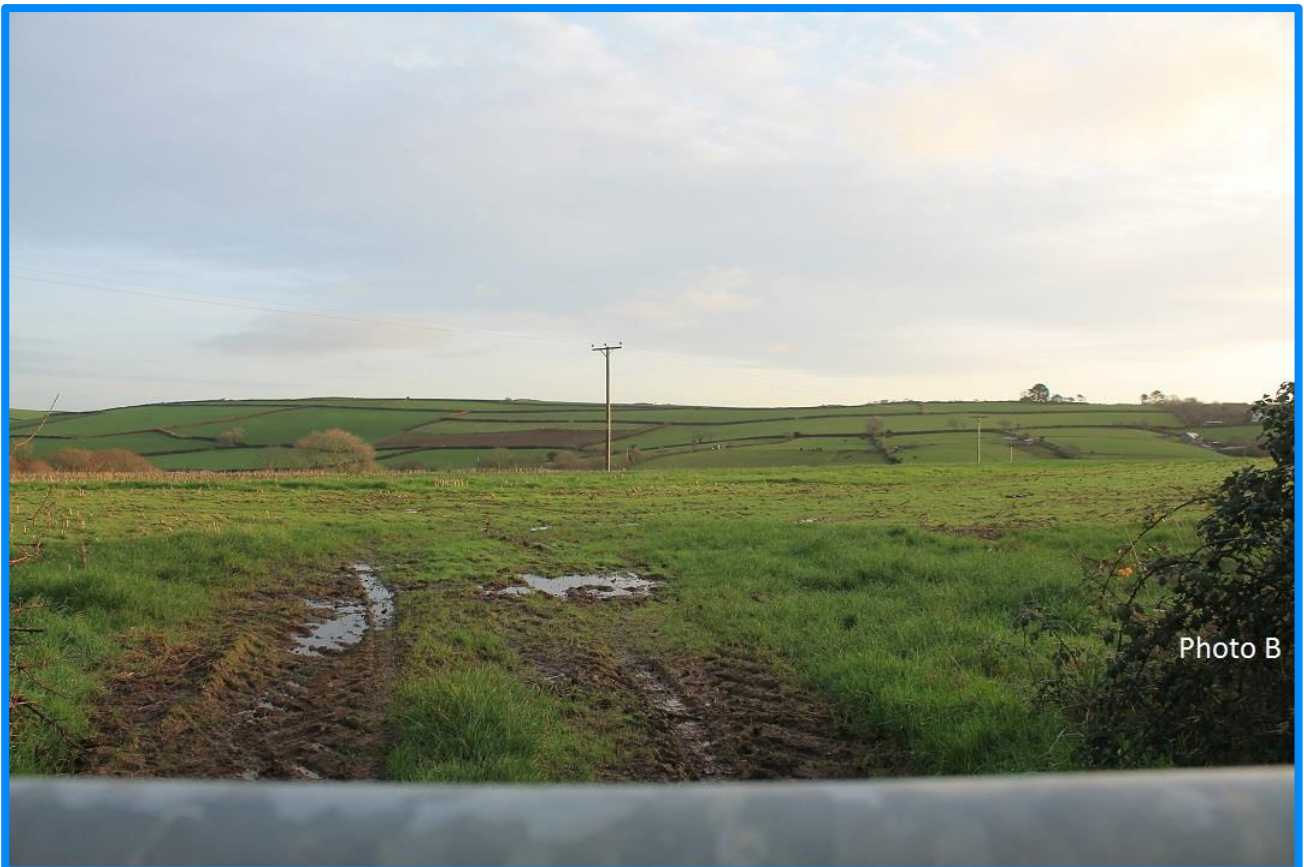










Photo I

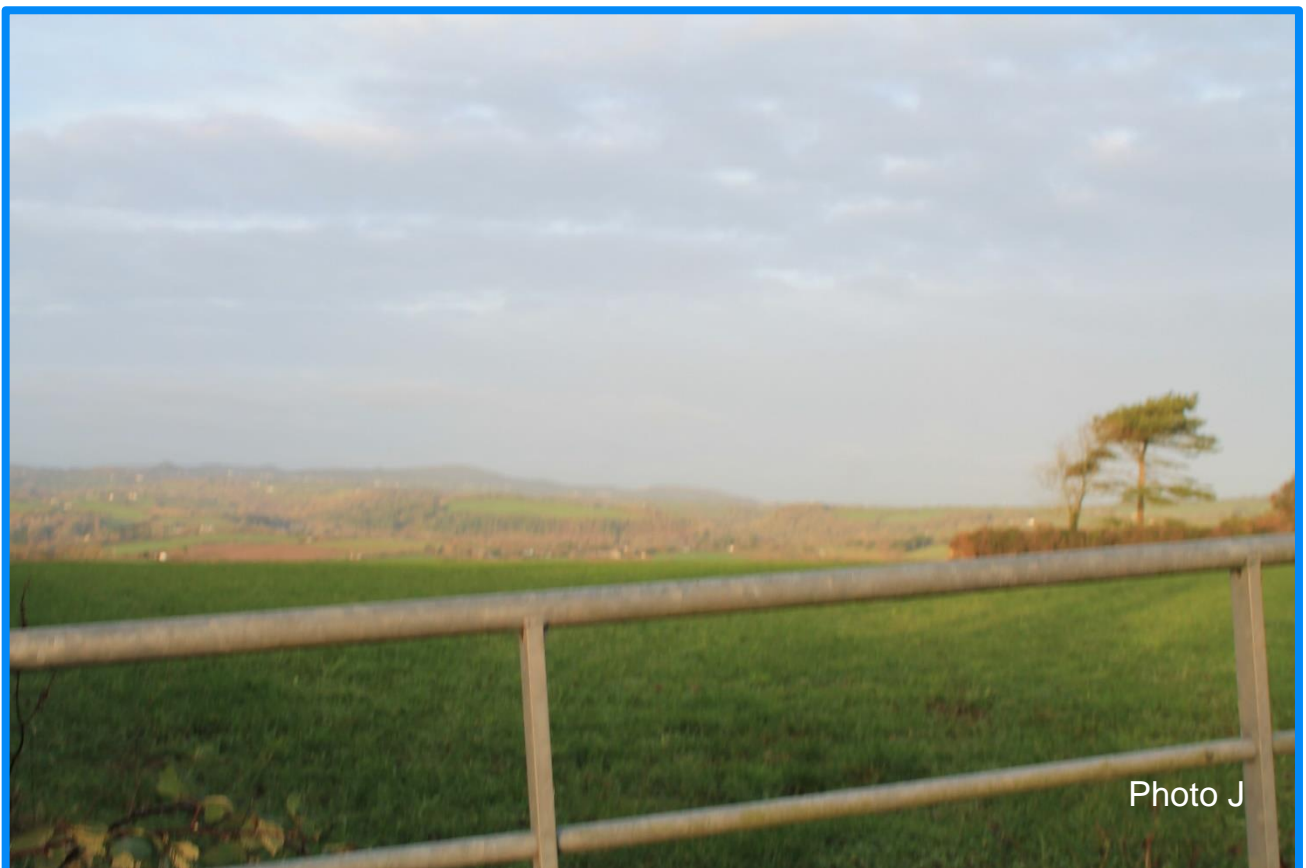


Photo J



