Cornwall & Scilly Urban Survey

Historic characterisation for regeneration

HAYLE

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South West of England
Regional Development Agency

Cornwall and Scilly Urban Survey

Historic characterisation for regeneration

HAYLE

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October 2005

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Maps

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Cover illustration

Hayle viewed from the north. Prominent features include the harbour system with its extensive quays and wharfs, Copperhouse Canal branching to the left and Carnsew sluicing pool to the right. The bowing line of Hayle and Penpol Terraces face over the harbour separated from Foundry Square by the viaduct carrying the main line railway through the town. Trees in the landscaped grounds of the large houses and villas in the Foundry Hill are also a distinctive feature. (CCC Historic Environment Service, 3137, 1992).

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Abbreviations

CAU	Cornwall Archaeological Unit (now the Historic Environment Service of Cornwall County Council)
CCCo	The Cornish Copper Company (also known in the 19th century as Sandys Carne and Vivian)
CSUS	Cornwall & Scilly Urban Survey
DCMS	Department for Culture, Media and Sport
DTLR	Department for Transport, Local Government and the Regions
GIS	Geographical Information Systems
HERS	Heritage Economic Regeneration Scheme (English Heritage)
LOTS	Living over the shop scheme
South West RDA	South West of England Regional Development Agency
THI	Townscape Heritage Initiative (Heritage Lottery Fund)

Summary

Cornwall & Scilly Urban Survey

The Cornwall & Scilly Urban Survey is a pioneering initiative aimed at harnessing the quality and distinctive character of the historic environment to successful and sustainable regeneration. The Survey is investigating 19 historic towns and creating for each an information base and character assessment which will contribute positively to regeneration planning. The project is based within Cornwall County Council's Historic Environment Service and funded by English Heritage, Objective One and South West RDA.

Hayle

Never based on a single industry, or a true 'company town', 300 years of industrial and commercial history has created in Hayle a robust, complex settlement.

It was not just a port and takes on much of the significance of the great manufacturing and industrial centres like Camborne and Redruth that lie at the heart of the central mining area. Hayle would be important in this context if for no other reason than that the largest steam engines in the world were produced here, but more than this, the town is in a sense a microcosm of the industrial history of Cornwall, especially for that brief period in the early 19th century when Cornwall was in the very forefront of technological and commercial development in the World.

This complexity of activity still underlies the character and appearance of Hayle, as well as some of its current problems. The extensive series of quays, now much more than is required for current operational needs, reflects the great rivalry between the two major concerns in Hayle, Harvey's and the Cornish Copper Company.

The rivalry is still reflected in the two surviving centres, until 1934 two separately administered towns, and the presence of a third neutral area around St Elwyn's Church. This area (Penpol or Hayle proper) only really makes sense in its present disjointed state when set against its late emergence as a 19th century focus for the town.

Even the less-obviously industrial elements of Hayle are intimately linked to its industrial past - the wonderful group of stuccoed villas and mansions around Foundry for instance – all built for members of the Harvey/West/Trevithick family that ran the Foundry, and culminating in Downes House.

Under these circumstances it becomes invidious to single out areas of greater or lesser importance in Hayle, since the significance of the whole adds up to so much more than the sum of the individual parts. When the true relationship of one element, no matter how humble or seemingly derelict, to the others is not understood, then the whole complex can be damaged – 'tidying up' a run-down area could have the knock-on effect of destroying meaning in a whole range of other sites. A better approach than to look at individual structures or monuments would be in the first instance to view proposed policies, developments or enhancement in terms of their impact on the complex of relationships within the town, and of the parts to the whole.

Historical development

The strategic importance of the estuary has been recognised since the prehistoric period, as the Iron Age hillfort at Carnsew and the possible Roman fort under the churchyard at Lelant demonstrate. Control over the estuary meant control over trade, shipping and an important safe haven on the north coast. There is evidence of Iron Age/Romano-British settlement in a pattern of enclosed farm settlements (rounds).

Evidence suggests that the estuary was an important international trading place in the early medieval period, especially in the 5th to 7th centuries. This success may have facilitated the early development of Christianity. Both Phillack Church and Lelant church are important early foundations.

The pre-industrial pattern of settlement around the estuary was of scattered estate centres, churchtowns, hamlets and farmsteads.

The town of Hayle, however, is a product of the industrial revolution of the 18th and 19th centuries. The Hayle mining area was one of the first areas in Cornwall to exploit its copper reserves on a large scale (from about 1750, with the greatest expansion beginning in the 1790s). The new town's early industrial development was to supply and service the local mining industry. Hayle was involved with mines in and around the town and with activity further a field in the Helston area.

Hayle developed in the main over the waste grounds and common lands along the shoreline of the estuary. The first industrial venture at Hayle was a small copper smelter set up near the lower end of Penpol Creek in 1710. From 1740 increasing demands by local miners and traders for imported coal, timber, rope, bricks and other mining essentials led to the development of the first industrial quays at Copperhouse Creek and Carnsew. The earliest recorded residential properties directly associated with Hayle's industries were built at Carnsew in 1758 as part of the development of the quays. An important trade was established between South Wales and the great trading centre at Bristol with mine materials imported and copper ore exported for smelting.

In 1758 the Cornish Copper Company (CCCo) set up a copper smelter on the foreshore of the Phillack estuary (Copperhouse Creek) and in 1779 John Harvey established a small foundry and engineering works at Carnsew. The success of these two companies and their intense rivalry was to shape the urban form and character of Hayle. The pre-existing pattern of landholding and the power of the Hockin family, Rectors of Phillack from 1763 to 1922, who were industrialists and developers in their own right as well as being financially linked to the CCCo, also influenced the development of the town and harbour with its extensive and complex system of quays and flushing pools. Copperhouse and Foundry, in practice two separate towns until 1934, originated as, developed and to some extent continue with distinctive and different identities strongly affiliated to the rival companies. As well as development relating directly to industrial processes and transportation logistics, both companies built residential properties. The CCCo have left their mark on the urban form and built environment of Copperhouse with the high density terraced housing for their workforce, often built from distinctive scoria block manufactured from a waste product of their smelting. By 1779 the CCCo were building residential properties in Copperhouse and by 1785 there was enough of a community there to warrant a Methodist meeting house. During the early 19th century the company laid out a grid of streets on which cottage rows were developed by tenants and the centre of Copperhouse was developed as a fully fledged town centre, with a market house by 1814 together with shops and services.

Development around Harvey's Foundry was later in date and different in character. With a fluctuating work force, Harvey's had little incentive to provide workers housing. Unlike the CCCo, the company was unable to purchase large amounts of land and that which it did acquire, was used as farmland to feed the horses and mules vital for pre railway transportation of import-export goods, but mostly in order to build large houses set in spacious grounds for the extensive

family and directors of the firm. The company also developed other facilities for the company good, such as hotels to entertain business visitors, a school for workers and emporiums for the workers run by the firm itself.

The Penpol area, between these two settlement foci, formed a middle ground populated by the professional classes and shopkeepers – those not directly linked to either company. Workers' housing here was developed from the 1820s with the development of better quality housing around 1845. This area became more of a civic focus for the town during the late 19th century with the development of St Elwyn's church, the Passmore Edwards Institute and a new Drill Hall.

In 1819 the CCCo ceased to smelt copper ore and diversified as a foundry and engineering works. It became one of the 'big three' in Cornwall ranked alongside Harvey's and Perran Foundry for the quality of work and engineering expertise.

Transportation between the mines and the port was an important logistic. Initially by pack horses and mules (necessitating industrial scaled stable complexes), later local railways were established linking the mines with the wharfs (eg Hayle Railway 1837).

Both companies were involved in ship building from the early 19th century. Harvey's shipyard built SS *Ramleh* in 1891, at 4000 tons the largest ship ever built in Cornwall. But shipbuilding had largely finished by 1893.

By 1880 both Harvey's main competitors (the Copperhouse Foundry at Hayle and the Perran Foundry) had ceased operating, victims of the decline in Cornish mining. Harvey's acquired much of the Copperhouse business including its wharfs giving access to greater trading capacity. Although the heavy manufacturing elements of the Foundry closed in 1903, Harvey's survived, successfully diversifying the business as merchants and traders in bulk goods.

The creeks and estuaries attracted milling industries from the medieval period. From the early 19th century milling was one of the major industries of the town with corn mills producing feed for pack horses and the local population.

Despite the decline of Cornish mining Hayle continued to be an important industrial centre for most of the 20th century. New industries were established, many focused on the North Quays and Hayle Towans area, such as the National Explosives works on Hayle Towans (1888-1919). The harbour continued its import - export business, including coal imported for the Power Station established on the Towans in 1910.

Decline here only really set in the 1960s with a marked period of collapse in the 1970s. Harvey and Co. merged with builders merchants in 1969 to form Harvey-UBM. The foundry site was sold during the 1980s.

Hayle continues today as an industrial town, although the proportion of the population employed in industry continues to fall, the 1980s and 1990s having seen much decline. It continues as a fishing port of some local importance. Active regeneration is beginning to reverse the effects of this decline in the built fabric of the town with an ongoing major programme of works already achieving significant change at the Foundry complex.

Historic settlement character

The history and geographical location of Hayle has created a town with a strong locally distinctive character. Major elements of this include the following.

- The close relationship of the town with its spectacular natural setting; the estuary location with views to the beaches and open sea in St Ives Bay, the extensive harbour and quaysides, the sluicing pools at Carnsew and

Copperhouse, the sand dunes of the Towans and the surrounding farmland inland.

- The poly-focal development of the town with the rival centres of Copperhouse and Foundry, connected by the harbour and quays and later residential and civic development of the Penpol area has created a distinctive settlement form. The principal urban centres are on level reclaimed land. The distinctive grid of industrial housing at Copperhouse forms a strong urban grain in direct contrast to the larger, spacious and grandiose character and grain of Foundry, with its group of large villas and mansions built for the Harvey family and company managers.
- The built environment of the town retains a number of pre-urban estate or farm centres with elements of 17th century fabric, impressively engineered quays, wharfs and canal, remains of industrial complexes, commercial, civic and public buildings and a full range of residential dwellings. Roughcast stucco with decorative fenestration margins and other architectural ornamentation is a common surface finish. Scoria block is a locally distinctive building material made from a waste product of copper smelting by the CCCo.

Character-based principles for regeneration

These principles have been derived directly from the analysis of the character areas and should underpin all regeneration initiatives in Hayle:

- Recognise Hayle's historic environment as a major asset and distinguishing element in its distinctive sense of place. Maintaining, ensuring full use and enhancing in the long-term the elements which create and sustain this special character are therefore key actions for all regeneration.
- Respect and safeguard the fundamental importance of the natural setting and physical topography to the character of Hayle, particularly views across the estuary and harbour area, the sluicing pools and the enclosing horizon formed by the Towans to the north.
- Recognise the quality and particular distinctive character of the historic built environment of Hayle, and achieve equally high quality and distinctiveness in all future new build and the public realm.
- Reinstate character and quality in the built environment, public realm and key open spaces where it has been eroded by inappropriate past interventions.
- Respect the different Character Areas within the town and acknowledge and reinforce the urban hierarchy and diversity they represent.
- Present, interpret and promote Hayle as an historic Cornish town of quality, character and international significance.

Regeneration and the historic environment: key themes for Hayle

- Understand, conserve and positively manage the historic environment asset
- Improve connectivity – an holistic approach to Hayle's regeneration
- Enhance and define focal points within the townscape
- Retain industrial character through the redevelopment of industrial sites
- Integrate conservation approaches to regeneration – respect historic buildings

- Manage the public realm and enhance the townscape
- Respect and utilise the town's natural setting as a positive asset
- Manage and enhance the urban greenscape
- Assert Hayle's historic significance

Character areas and regeneration opportunities

Four distinct Character Areas have been identified within the historic urban core. These are differentiated by their varied historic origins, functions and resultant urban topography, the processes of change which have affected each subsequently and the extent to which these elements and processes are evident in the current townscape.

These character areas are a means of understanding the past and the present. In turn, that understanding provides the basis for a positive approach to planning future change which will maintain and reinforce the historic character and individuality of each area - sustainable local distinctiveness.

A summary of the attributes for each character area, with key themes for heritage-led regeneration is presented below.

1. Copperhouse

Copperhouse is the commercial heart of Hayle. It retains a Market House of 1839 and a good collection of 19th century shopfronts. Historically an intensely industrial area, this use has reduced over time but an industrial character is retained in the surviving elements including the canal and dock, the continued warehouse / manufacture use of the former industrial sites and in the strong grid pattern of industrial housing laid out by the CCCo on the rising land to the south of Copperhouse Pool. A significant feature of the architecture of the area is the extensive use of scoria block, a by-product from the CCCo's copper smelter located here in the 18th and 19th centuries.

- **Retain the industrial character of the CCCo sites. Conserve any remnant remains and investigate the archaeological potential of the site.**
- **Enhance and better define the key urban spaces to strengthen the sense of place and urban form.**
- **Celebrate the historic importance of Copperhouse and the CCCo.**
- **Secure a new use for Loggan's Mill.**
- **Celebrate, repair and maintain the surviving historic shopfronts and replace inappropriate late 20th century examples.**
- **Seek to maximise use and reuse underused and empty shop units.**
- **Secure a new use for the Brewery complex and its office building.**
- **Enhance the special character of the area through public realm improvements.**
- **Explore the potential for waterfront access in the car park at Market Square.**

2. Foundry

Foundry Square forms the most impressive urban set-piece of the town. The scale and detailing of the surrounding architecture displays a grandeur and distinctly urban character not matched to the same extent elsewhere in Hayle. Foundry forms a secondary commercial focus in the town, particularly important for banks, post office, cafes and local shops. The important remains of the foundry complex represents the best surviving

- **Reinforce the urban primacy of Foundry Square**
- **Celebrate the historic importance of Harvey's Foundry and town**
- **Regain the sense of enclosure and scale on the eastern side of Foundry Square**
- **Address the adverse visual impact of certain poorly designed buildings**
- **Enhance the special character of the area through public realm improvements**

industrial group in the town and one of the best in Cornwall. The international importance of Harvey's Foundry makes the survival and ongoing regeneration of the complex all the more important in the context of the World Heritage Site bid. The large villas set in their mature landscaped grounds are closely connected with the ambition of the Harvey family and business, and are a distinctive feature of the area and an important architectural group within the town.	• **Enhance the railway station as a key gateway to the town** • **Recognise, respect and enhance the importance of large gardens, ornamental and designed landscapes, open green spaces, trees and planting in the area** • **Counter the threat of plot subdivision and increased density of development**
3. The harbour The harbour has been the economic powerhouse of the town. The estuary was the reason the industrial companies established here and therefore the reason the town developed here. The estuary and the three channels that flow into it at this point have been extensively manipulated and modified with the extensive engineering that has gone on to create the current arrangement of quays and wharfs, canal channels, sluicing pools and causewayed roads. The harbour complex is a remarkable piece of engineering. This area is seen as the major regeneration site for the town.	• **Repair and stabilise the listed harbour walls.** • **Recognise and respect the historic significance and importance of these surviving harbour buildings.** • **Ensure that the proposed harbour redevelopment respects its natural and historically important setting and character.** • **Promote the amenity, leisure and wildlife potential of the estuary.** • **Ensure open access to the quays is part of the proposals for any future harbour redevelopment.**
4. Penpol This area forms a middle ground between the two settlements of Copperhouse and Foundry. An 18th century focus around Merchant Curnow's quay is located at the west end of Hayle Terrace. Mid 19th century terraces built for the professional classes were developed here to take advantage of picturesque views over the harbour. Later 19th century development seems to suggest a concerted effort to develop an urban focus here including the landmark church of St Elwyn, designed by Sedding.	• **Ensure any future redevelopment on the south side of Copperhouse Creek respects both the character of the Pool and the Road.** • **Improve the setting of St Elwyn's church when the opportunity arises.**

1 Introduction

Regeneration and the historic towns of Cornwall and Scilly

In July 1999 Cornwall and the Isles of Scilly were designated as an Objective One area, bringing potential investment from European funds of more than £300m over the nine-year spending period. Economic regeneration schemes and development projects within the region's towns are likely to form a major element of the Objective One Programme.

Regeneration on this scale offers an unparalleled opportunity for contemporary contributions in urban design and architecture to the built environment of Cornwall and Scilly's towns. At the same time, the Objective One programme emphasises environmental sustainability (including the historic environment) and regional distinctiveness as key considerations in regeneration planning. The process of change launched by current regeneration initiatives could, if not carefully managed, have a negative impact on the historic environment and the unique character and sense of place of each of these settlements. The pressure to achieve rapid change could in itself result in severe erosion and dilution of their individuality and particular distinctiveness and, at worst, their transformation into 'anywhere' towns.

It is clear from recent research that a high-quality historic urban environment and the distinctiveness and sense of place integral to it are themselves primary assets in promoting regeneration. The effect may be direct, through heritage tourism, for example, but there is a more powerful and decisive impact in prompting a strong sense of identity and pride of place which in turn creates a positive and confident climate for investment and growth.

This synergy between the historic environment and economic regeneration was recognised and strongly advocated in the *Power of Place* review of policies on the historic environment carried out by English Heritage in 2000, and its value clearly highlighted in the government's response, *The Historic Environment: A Force for the Future* (2001). The tool by which the two may be linked to create a framework for sustainable development in historic settlements is *characterisation*.

Characterisation and regeneration

'The government . . . wants to see more regeneration projects, large and small, going forward on the basis of a clear understanding of the existing historic environment, how this has developed over time and how it can be used creatively to meet contemporary needs.'

(DCMS / DTLR, *The Historic Environment: A Force for the Future* (2001), 5.2)

'Characterisation' provides a means of understanding the diverse range of factors which combine to create 'distinctiveness' and 'sense of place'. It involves the creation of a comprehensive knowledge base on the historic environment. This includes what is known of a settlement's historic development and urban topography (that is, the basic components which have contributed to the physical shaping of the historic settlement, such as market places, church enclosures, turnpike roads, railways, etc.), together with an overview of the surviving historic fabric, distinctive architectural forms, materials and treatments and the significant elements of town and streetscapes. Characterisation may also provide the

basis for assessing the potential for buried and standing archaeological remains and their likely significance, reducing uncertainty for regeneration interests by providing an indication of potential constraints.

Characterisation is also a means whereby the historic environment can itself provide an inspirational matrix for regeneration. It emphasises the historic continuum which provides the context for current change and into which the regeneration measures of the present must fit if the distinctive and special qualities of each historic town are to be maintained and enhanced. It both highlights the 'tears in the urban fabric' wrought by a lack of care in the past and offers an indication of appropriate approaches to their repair.

Characterisation is not intended to encourage or to provide a basis for imitation or pastiche: rather, it offers a sound basis on which the 21st century can make its own distinct and high-quality contribution to places of abiding value.

Cornwall and Scilly Urban Survey

The Cornwall & Scilly Urban Survey (CSUS) was set up – funded by English Heritage and the Objective One Partnership for Cornwall and Scilly (European Regional Development Fund ERDF) – as a key contributor to regeneration in the region. Additional funding has been provided by the South West of England Regional Development Agency. The project is investigating 19 historic towns and creating for each the information base and character assessment which will provide a framework for sustainable action within these historic settlements.

These towns have been identified, in consultation with planning, conservation and economic regeneration officers within the seven district, borough and unitary authorities in the region, as those which are likely to be the focus for regeneration. The project's 'target' settlements are:

Hayle	Newlyn
Penzance	St Ives
Camborne	Helston
Redruth	Falmouth
Penryn	Truro
St Austell	Newquay
Bodmin	Camelford
Launceston	Liskeard
Saltash	Torpoint

Hugh Town (St Mary's, Isles of Scilly).

CSUS is a pioneering initiative aimed directly at cutting across the boundary that traditionally divides conservation and economic development. Nationally, it is the first such project carrying out a characterisation-based assessment of the historic urban environment specifically to inform and support a regional economic regeneration programme. Future regeneration initiatives in other historic settlements, both in Cornwall and further afield, will benefit from the new approach developed by the project.

Cornwall's historic towns

Although best known for its coast, countryside and mining, Cornwall has an unusually high density of historic towns. All are small by English standards (the largest, St Austell, containing only *c*28,000 people in 2001), but all have a full range of urban components. These include commercial, administrative, community and ecclesiastical buildings, various public and private spaces, and varieties of residential areas, from dense terraces of workers housing to large

detached town houses set in their own enclosed grounds.

While each has these components in common, each Cornish town also has its own particular history and its own form and character. Many developed from medieval market towns, evenly spaced about twelve miles apart and integrated into ancient road patterns. These towns often retain key elements like market places, burgage plots and back lanes, but each has subsequently experienced different influences and so has developed its own identity. Other towns began as ports, resorts, fishing settlements, dock towns and centres of industry, and so contain specialised buildings, structures and spaces. Of course, each town also has its own response to local topography, makes special use of local building materials, is subject to local building traditions and national economic and social trends, and is influenced by varying degrees of control by local landowners.

It will therefore be important when planning and designing regeneration initiatives, and when maintaining the fabric of Cornish towns, to take care to recognise the essential elements of the town's own unique character. This should inform the design of all works and so ensure that each town retains this unique character.

All Cornish towns are also complex places, having developed either gradually or in surges, and so have patterns of zones or areas that vary according to such things as phase, form, condition, quality, activity, tranquillity, open-ness and uniformity. There is also variety in the responses people, whether as communities or as individuals, have to these areas and their components. So, as well as maintaining each town's distinctiveness in relation to other Cornish towns, regeneration and management should also ensure that this variety of historic character within the towns is also maintained and enhanced.

CSUS reports

CSUS reports present the major findings and recommendations arising from the project's work on each town. They are complemented by computer-based digital mapping and data recorded using ArcView Geographical Information System (GIS) software, and together the two sources provide comprehensive information on historic development, urban topography, significant components of the historic environment, archaeological potential and historic character.

Importantly, the reports also identify opportunities for heritage-led regeneration and positive management of the historic environment. However, they are not intended to be prescriptive design guides, but should rather be used by architects, town planners and regeneration officers to inform future development and planning strategies.

The reports and associated digital resources are shared with the appropriate local authorities; economic regeneration, planning and conservation officers therefore have immediate access to the detailed information generated by the project. Additional information is held in the Cornwall and Scilly Historic Environment Record, maintained by the Historic Environment Service of Cornwall County Council (CCC).

Public access to the report and to the associated mapping is available via the project's website - **www.historic-cornwall.org.uk** - or by appointment at the offices of Cornwall County Council's Historic Environment Service, Old County Hall, Truro.

Hayle Historical Assessment

The historic environment of Hayle has previously been studied and reported on

in the Hayle Historical Assessment. This two volume report consists of an assessment of the historic development, significance, surviving historic components, and character of the town. The first volume also presents a review of existing designations and makes positive conservation management proposals, reviews past archaeological investigation, explores archaeological potential and reviews ongoing and future regeneration initiatives. The second volume forms a detailed inventory providing in depth information on historic environment elements identified during the audit. The report is supported by extensive GIS based mapping and analysis.

The report was produced by Nick Cahill BA, IHBC with Cornwall Archaeological Unit (now the Historic Environment Service of the County Council) in July 2000. It was commissioned by English Heritage.

Information and mapping contained in the Hayle Historic Assessment has been extensively used in the creation of this CSUS report. No additional historical research has been undertaken and much of the GIS based mapping has been assimilated. The CSUS methodology provides a more detailed characterisation of the town and additionally identifies opportunities for heritage-led regeneration.

Extent of the study area

The history and historic development of each town are investigated and mapped for the whole of the area defined for the settlement by the current Local Plan. However, the detailed characterisation and analysis of urban topography that together form the primary elements of the study are closely focused on the *historic* urban extent of the settlement. Generally for the purposes of this project, the area is defined as that which is recognisably 'urban' in character on the second edition c1907 Ordnance Survey (OS) Revision 1:2500 map (Figs 1 and 2). Outlying rural settlements that have been incorporated into the modern urban area since 1907 are intentionally excluded. Phillack, therefore, has been intentionally excluded from the primary study area despite its close geographic and historic relationship with Hayle. This churchtown settlement has retained its village-like character and is distinctively a separate place. The relationship between Hayle and Phillack is discussed in the report and Phillack's contribution to Hayle's character is also explored.

A full technical appendix is included providing full definitions, explanations and suggestions for the use of the information provided in the figure sequence bound at the back of the report. It also provides metadata information on the GIS mapping used to create the figures.

2 Hayle: the context

The town of Hayle is situated on the north coast of Cornwall (Fig 1). It lies four miles to the east of St Ives, on the east side of the Hayle estuary. It is eight miles from Penzance and five from Camborne and the great industrial heartland of 19th century Cornwall. Until 1934 Hayle was governed by two authorities, Hayle Urban District Council and Phillack Urban District Council. From 1934 to 1974 it was a parish council within West Penwith Rural District Council. Currently the Town Council has the status of a Parish Council within Penwith District. The town was traditionally divided between the parishes of Phillack (to the north and east) and St Erth (to the south and west). A third historic parish and church, Lelant, stands on the west side of the Hayle Estuary. A new parish of St Elwyn was created in 1870 from Phillack, and a church built in 1888. The three churches of Lelant, St Elwyn and Phillack are today the most potent symbols of the late origin of the town within its varied geographic and historic setting.

Hayle in its landscape setting *(CCC Historic Environment Service, ACS 5663, 2002)*

The regeneration context

By Claire Tiffin and Georgina McLaren, Cornwall Enterprise, June 2005

Summary

Hayle is located on the north coast of Cornwall 21km east of Lands End, in the District of Penwith. The town and harbour have grown around the Hayle Estuary, situated at the south of St Ives

Bay, with the long, linear urban area of modern Hayle concentrated around the earlier settlements of Foundry, Penpol, Copperhouse and Phillack. The main A30 trunk route (Exeter to Land's End) skirts the southern margins of the town. The main London-Penzance railway line also runs through Hayle, with a branch

line from nearby St Erth to St Ives, 5km to the west.

Since the early years of the twentieth century Hayle has experienced considerable industrial decline with an associated legacy of derelict sites and ailing port facilities. The town now suffers from serious economic and social deprivation and is a priority for strategic spatial investment under the European Objective One Programme for Cornwall and the Isles of Scilly. The future of the harbour area will be the key driver for the regeneration in Hayle.

Hayle is also identified as one of ten key sites in the current World Heritage Site bid for Cornish Mining, due to the international significance of its harbour and former foundries. If successful, this has the potential to be a significant factor in future regeneration activity.

Current Situation

Hayle parish has a population of approximately 11,349 (2001 Census). The age structure has an imbalance, with the population skewed towards the elderly, whilst younger people have tended to leave the area to seek training and employment.

Hayle comprises of a number of ward areas, Gwinear, Gwithian and Hayle East; Hayle North and Hayle South.

With reference to the index of multiple deprivation for 2004, Hayle South ward is ranked 4586 out of 32,482 (total wards for England and Wales). Parts of Hayle South (High Lanes) fall within the worst 20% of the Super Output Area (SOA) level nationally with other areas of Gwinear, Gwithian and Hayle East falling into the worst 30% and Hayle North and parts of Hayle South (Hayle South West) falling into the worst 40%.

With reference to the index of multiple deprivation for employment, 2004, part of Hayle South ward is ranked 5310 out of 32,482 (total wards for England and Wales), while the remainder for this ward is ranked at 9090. With reference to the SOA levels nationally, Hayle South (High Lanes) and parts of Gwinear, Gwithian and Hayle East (Connor Downs E/Gwithian) fall within the worst 20% with the remainder of the wards falling into the worst 30% SOA.

There is also a significant need for affordable housing across Penwith. The ratio of house price to incomes indicates that the average cost of housing relative to personal incomes is high – considerably higher than for the South West or for England and Wales as a whole. The average house price in Penwith is £218,797 (Penwith District Council, May 2005).

Current regeneration initiatives being implemented include a phased programme of regeneration at Harvey's Foundry. Phase 1 is now complete and was opened by HRH Prince of Wales in 2004. This includes new employment space and the refurbishment of the main Foundry offices. The second phase is included in the current £4.1 million Hayle Townscape, a combined Townscape Heritage Initiative and Heritage Economic Regeneration Scheme. The works include bringing the derelict Foundry Farm complex back into use as workspace and affordable housing, plus interpretation of historic context. The work at Foundry is supplemented by a system of grants to owners of privately owned historic buildings to facilitate substantial restoration and enhancement works especially to main road frontages. There is also top up capital funding for public realm works, notably streetscape enhancement projects. The first grant aided project has recently been agreed at White's Warehouse building in Foundry Square. This building is being repaired and converted bringing it back into productive use with stylish studio/offices on the two upper floors and the potential for either retail or restaurant use for the ground floor.

Regeneration of the Foundry complex is ongoing. No. 24 Foundry Square has been refurbished as part of Phase 1 works

A new build element of the Foundry regeneration has also been completed

The THI/HERS project is complementary to the proposed World Heritage Site.

Future Plans.

The Cornwall Structure Plan 2004 states that for 'Other Main Towns and Local Centres;' '*Development should be in, or well integrated with, the built-up areas, and support the role and function of centres in meeting the needs of their own populations and surrounding areas to reduce the need to travel.'*

'The level of development in the main towns and local centres will be assessed against their ability to consolidate their roles and functions and to support balanced growth through jobs, services and transport infrastructure.'

The Structure Plan also highlights that *'Employment provision should focus on the needs of the local area and on opportunities relating to local characteristics and distinctiveness.'* The Structure Plan's main policy drive is to reinforce existing roles and strengthen economic, social and transport infrastructure.

As a result of Hayle's historical background the town has two main centres, Foundry and Copperhouse linked by Penpol. Although the present commercial activity of the town is split between these two areas there is nevertheless a single factor which serves to unite the town in both environmental terms and future economic prospects. This is the estuary, which was fundamental to Hayle's importance as a port, still dominates the town and presents valuable opportunities for regeneration.

The Structure Plan identifies that employment opportunities should be centred on the key towns, inclusive of Hayle, where the majority of the population live, where services are provided and where road, rail and sea link are available.

Within the Penwith Local Plan there are policies for both Hayle town centre and the harbour area for the redevelopment of vacant and derelict sites which could have significant employment benefits. The Local Plan recognises Hayle as an urban area for development and emphasises that development proposals should maximise the re-use of previously developed land. Many of the issues previously identified by the Civic Trust 1992 Action Plan are now addressed in the Local Plan. These include the town's historic heritage, urban conservation and landscape, tourism, the economy, social housing, traffic and the harbour.

As part of the bid for World Heritage Site status for the Cornwall and West Devon Mining Landscape a five year management plan (2005-2010) has been formulated that provides a framework of policies and actions to ensure consistent positive conservation management of the bid areas. The plan focuses on managing those historic components within the bid area that demonstrate its Outstanding

Universal Value. The historic environment and special character of Hayle is a crucial element of this importance.

Although the most significant opportunity to improve both the environment and the economy of the town lies in the economic regeneration of the harbour area, it is important that the environmental implications are also clearly and fully assessed.

The harbour quays are identified in the Local Plan as a valuable resource. It is suggested that, with the increasing emphasis on the movement of freight by alternatives to road transport, they could provide facilities for improved sea transport.

Hayle Harbour was purchased in October 2004 by the Dutch firm ING Real Estate Development. An initial exhibition was held in December 2004 summarising their outline proposals for delivering a regenerated harbour. Proposals include small business units, flats and houses, marina and sailing club, new fisherman's harbour and fish processing facilities, combined business centre/college, community facilities, traffic calming, landscape/townscape improvements and industrial units. Revised proposals, resulting from public feedback and a number of specialist reports gathered, are expected in late 2005.

Hayle is included in the Regional Development Agency's Market and Coastal Town Initiative and has been successful in securing funding to undertake a Town Centre Health Check and consultation to develop a Community Strategic Plan.

Landscape and setting

Hayle is situated at the point where the Hayle River, the Penpol River and the Angarrack stream join and enter the sea. The name 'Hayle' itself is derived from the Cornish *heyl* meaning 'estuary' (cf Helford). The shallow, broad estuary narrows considerably as it approaches the sea, where it cuts through the Towans, a high expanse of sand dunes which borders the coast from Hayle to Gwithian, before opening out into St Ives Bay. The estuary and creeks have silted up and become much shallower since the medieval period, largely as a result of tin-streaming and mining inland (St Erth on the Hayle River was a medieval port accessible to sea-going merchant ships until the 16th century).

The natural environment of Hayle is one of great variety and beauty, a unique blend of natural and man-made environments - farmland, marshes, sand dunes, river, mudflats, beach, bay, low lying moor - the importance of which is reflected in a series of statutory and local designations designed to protect and manage this landscape and setting of rare natural beauty.

The Towans is the second largest area of sand dunes in Cornwall and is prominent when viewed from across the bay. They are prone to erosion and damage from overuse - in the summer season tourists flock to the miles of sandy beaches bordering the dunes.

One of the special features of Hayle is its large open harbour which, while huge in itself, is still dwarfed by the scale of the estuary. The estuary and the various pools beyond the harbour, comprising mudflats and saltmarshes, provide a habitat for a wide variety of birds and plants. Copperhouse Pool is an important feature within Hayle which is visually dominant when viewed from the east and also provides a constant reminder of the proximity of the estuary from within the built up area of the town.

Agricultural land provides a contrasting landscape south west of the town up the Hayle River valley and on the northern side of the estuary around Riviere, with

areas of Grade 2 agricultural land actually within the town (e.g. at Phillack).

Hayle is in a natural amphitheatre, with important views ranging across the arms of the estuary and over the enclosing slopes. While not heavily planted with trees, certain groups (around Phillack Rectory, Bodriggy House and St. Michael's Hospital for instance) are of great importance, and the ridge lines of all the surrounding slopes are dominant landscape elements.

While the broad expanse of estuary, glimpses of open seascapes, areas of dunes and moorland and agricultural vistas give an impression of great space, in reality the landscape is small in scale with a limited capacity to absorb development.

Historic environment designations

The current historic environment designations in Hayle's historic urban core are shown on Figure 5 and listed below.

- Six Scheduled Monuments (SMs) within and close to the study area. These largely reflect the importance of Hayle's prehistoric and early Christian past, particularly the concentration in and around Phillack Churchyard of early Christian crosses and inscribed stones. In the same category, but isolated from this main group, is the Cunaide Stone at Carnsew hillfort.

  Two monuments of the industrial era are also scheduled, the 1811 road bridge across Copperhouse Creek built of scoria blocks and known as the Black Bridge, and the early railway bridge which carried the Hayle Railway (1837) across the same creek.

  Copperhouse Canal and Dock have been recommended by English Heritage to be Scheduled as monuments of national importance.

- There are currently 129 listed items within the study area, although this represents a much larger number of actual structures, since some of the items include several structures within the listing, and many other structures will be protected by virtue of being within the historic curtilage of the main listed buildings. Of the 129 listed items, none are Grade I, 10 are listed as Grade II*, and the remainder Grade II.

- There are two existing conservation areas (CAs) within the study area (Phillack and Hayle Town), and a third just outside the western edge of the study area in Lelant, encompassing the churchtown and village centre.

- Other designations: Most of the estuary was designated as a Site of Special Scientific Interest (SSSI) in 1993 (Hayle Estuary and Carrick Gladden), including Carnsew Pool and excluding only the deep water channel serving North Quay, East Quay and South Quay. The Towans north of Phillack Church is also a SSSI (Gwithian to Mexico Towans, 1987). In addition, the estuary, apart from the deep water channel, is a RSPB Reserve, a Cornwall Nature Conservation Site and has been designated as an Area of Great Scientific Value.

- Hayle is a crucial part of the proposed Cornish Mining World Heritage Site. The WHS Bid seeks to demonstrate the international importance of the developments within mining and allied technologies which took place within Cornwall and West Devon during the last half of the 18th century and into the 19th century, establishing beyond doubt the contribution of this region to the

development of the modern, industrialised world.

The World Heritage Site Management Plan 2005-2010 statement of Outstanding Universal Value states that: *'The Cornwall and West Devon Mining Landscape was transformed during the period 1700-1914 by early industrial development that made a key contribution to the evolution of an industrialised economy and society in the United Kingdom, and throughout the world. Its outstanding survival, in a coherent series of highly distinctive cultural landscapes, is testimony to this achievement'*.

The formal WHS bid to UNESCO for World Heritage Site status was submitted to UNESCO in February 2005 by the Cornish Mining World Heritage Site Bid Partnership. The bid also demonstrated the far reaching effects of the technological changes on the society, economy and landscape of the area, and identified a number of areas within Cornwall and West Devon where the results of these processes are still well-preserved. The final decision is expected summer 2006.

3 Historical and topographic development

This chapter comprises chapters 5 and 6 of the Hayle Historical Assessment; Chapter 5 Outline history of Hayle and Chapter 6 Physical development of the town. A summary of the historical development of the town can be found in the Summary section of this report. Refer to Figure 3 for historic development mapping and Figure 4 for historic topography mapping.

Outline history of Hayle

This section is divided into three sub-sections, the first covering the period up to 1710 when permanent industrial and commercial developments can first be traced on the Hayle estuary, the second dealing with the main period of industrial development in the 18th and 19th centuries, while the third traces the decline of the town's industrial base in the 20th century. The history of the industrial period is further sub-divided to explore the different areas of industrial and commercial activity in Hayle.

Hayle in prehistoric, medieval and Tudor Times

Since prehistory the estuary has provided a safe harbour and a focus for settlement, trade and shipping. The Iron Age hillfort at Carnsew was sited to overlook the estuary, and the graveyard of Lelant parish church may preserve the rectangular outline of a Roman fort well placed to control access to the estuary. There are also a number of Iron Age/Romano-British enclosed farming settlements (rounds) recorded in the area.

In the early medieval period the estuary continued to be an important trading centre, especially in the 5th to 7th centuries. Finds of imported pottery of this date reflect international trade (tin perhaps traded for wine, oil, and pottery), which probably facilitated the early

Carnsew Hillfort, incorporated into mid 19th century landscaped gardens

Phillack churchtown has retained a village character despite its proximity and strong links to Copperhouse and Hayle

development of Christianity. Phillack Church has an important group of early Christian memorial stones and, as a settlement, may date from the Iron Age, with evidence of pre-Christian graves and with a long continuity of use as an ecclesiastical centre. The settlement (and surrounding estate) was first recorded in 1130, as 'Egloshayle' meaning the church (eglos) on the estuary. The present name (Phillack) is of unknown origin, and may actually have given rise to the secondary dedication of the church to St Felicitas, the original dedication being to Piala. At Carnsew Fort the nearby 5th century memorial stone, together with the discovery of a Roman coin hoard, may suggest that the fort continued to be an important centre long after the Iron Age.

Both physical and documentary evidence survives of trade and a network of quays around the estuary by the medieval period, with quays at Lelant, a ferry across the estuary mouth, roads leading

to the waterside and causeways across the mudflats. By 1495 Chapel Angier on the Lelant shoreline (outside the study area) had been built by the guild of St Anta (of Lelant church) as a guide for boats entering the estuary mouth. Leland's well-known description of St Erth in the 1530s adds to the picture - 'Ther cam to this place ons, the haven being onbarrid, and syns chokid with tynne workes, good talle shippes' (quoted in Acton 1992, 40). His remarks illustrate that tin streaming had become a major industry with huge amounts of waste sand and silts beginning to clog up the estuary, resulting in the development of a new port at the estuary mouth; St. Ives, a daughter settlement of Lelant. The small hards and quays around Lelant, however, continued in use throughout the period. This was an area of hamlets and scattered farmsteads, with medieval estate centres, like the churchtowns at Phillack and Lelant, situated slightly back from the waterfront on higher ground, and the farms or hamlets at Trevassack, Bodriggy and Penpol, subsequently absorbed into the town. Many of these farming settlements bordering the estuary appear in documents for the first time in the 13th century, but most are likely to be much older.

18th to 20th century industrial history of Hayle

Detailed accounts of the two main industrial concerns in Hayle - Harvey's and the Cornish Copper Company, as well as those of some of the other major industries in Hayle, can be found in published histories, the more important of which are listed in the Sources *section.*

The early industrial development of Hayle was driven by the need to supply and service the local mining industry. Until diversification and the establishment of new industries in about 1900, Hayle continued to be dependant upon the prosperity of mining, both in the immediate hinterland of the estuary, and further to the south and east around Godolphin and Wendron. While the manufacturing and trading businesses that concentrated around the estuary have a significant history of their own, the fundamental importance of tin and copper mining cannot be overemphasised. The business of mine merchant which first led to the growth of the town remained its main economic activity throughout the 18th and 19th centuries, giving rise to the first quays in the 1740s, and the great wealth of John 'Merchant' Curnow who died in 1780. In the 19th century, both Harvey's and CCCo were shareholders (and indeed active as managers and promoters) in many local mines and, most importantly, were the biggest shareholders in the great Wheal Vor mine. Hayle's involvement in the mining industry around Helston was so great that eventually in 1833 it replaced Helston as the local coinage town. It is clear, moreover, that many more of the inhabitants of Hayle were directly employed in the local mines than has hitherto been assumed, forming a sizeable proportion of the population.

Mining

Hayle's position so close to the mines, and its location on the north coast made it ideal as a port to service the mining industry, since it was well placed to trade with the great coal and smelting areas of South Wales and the great trading centre at Bristol. The St Erth valley was an ancient and well-established tin-mining area with many long-established stamping mills. The area turned largely to copper from 1798-1850, and ancient tin-steaming works in St Erth were active throughout the 19th century, using steam engines by 1873, while the waste was still being re-worked during the Second World War.

Real growth came in the early 18th century, with the expansion of tin mining in the Angarrack area, east of Hayle, but especially with the development of copper mining. Both tin and copper were exploited on a greater scale and at much greater depths, which led to a growth in

the use of steam engines. The Hayle mining area was one of the first areas in Cornwall to exploit its copper reserves on a large scale (from about 1750) - the area of Mellanear Mine was already being worked in 1750, and was then known as Leah Copper Work.

The greatest expansion in local mining began in the 1790s with the opening of Wheal Alfred in 1793, based on the amalgamation of older workings. This mine really took off in about 1805, going through several phases of closure and re-opening between 1816 and 1864. By the early 19th century the mine employed some 1500 people, and was described in 1814 as the third largest copper mine in Cornwall. Other local mines included several on the same lodes and in the same area as Wheal Alfred, with some large sales of copper in the 1790s, but generally little produced after about 1800.

There was some mining actually within the area of the present town of Hayle in the late 18th century. An adit was driven from Copperhouse Creek southwards under the lands owned by the CCCo, which was also involved in the development of North Wheal Alfred, whose dumps, together with some surviving buildings, are still visible south of Trevassack. Harvey's owned or leased the land Mellanear mine was on and had some degree of involvement in its expansion.

The last major phase of working at all these local mines was between 1846-62, with some initial success at Wheal Alfred that led to a number of other local mines being re-opened after about 1850, only to close by 1862.

Another series of local mines around Hayle was concentrated on and around the edges of the Towans to the north of Copperhouse Creek. Wheal Dream (Loggans or Phillack Towans Mine) had been in existence in the 1770s, and was opened again in the 1850s with little success. Boiling Well Mine had been working before 1815, was worked again 1821-56 (closed 1862), with both the Harvey and Hockin families involved (as was the great designer William Morris, a director from 1856 - he was also a promoter of the British Mining and Smelting Co active in Cornwall from 1865 and liquidated 1874). Never a great payer, the mine gave rise to the local expression 'On Boiling Well pay-day', meaning 'never' (Hamilton Jenkin 1962, 44). There had been some ancient tin workings on the Towans, mostly worked out by the 19th century, but in 1872, the Reverend William Hockin, Rector of Phillack, formed a new company on acquiring the Riviere estate and spent vast sums on equipping a new mine (Wheal Lucy) employing 60 men. It never paid and closed in 1874, with an unsuccessful attempt at re-working in the 1890s.

Further away in the Godolphin/Wendron mining area were a series of famous and ancient tin mines, which were of very great importance to Hayle, especially Wheal Vor, one of the most celebrated tin mines of all. This was the first mining area to turn to steam power in the early 18th century, one of the main stimulants to the expansion of coal importing and the development of the quays in Hayle. By about 1800, Harvey's and CCCo were the biggest shareholders in Wheal Vor; Harvey's provided steam engines for it, and set up a tin smelter at Foundry for its produce in 1816 (the mine adventurers also used the old Copper smelter at Copperhouse for a while in the 1820s). Fabulously rich in the 19th century, Wheal Vor not only paid handsome dividends to both companies, but Harvey's in particular made huge sums of money supplying about two thirds of all goods to the mine, eventually creating a new harbour at Porthleven in the 1860s to handle the trade associated with this and other mines in the Helston area. The eventual closure of Wheal Vor in 1860 was the

biggest single financial loss in Cornish mining history (£207,000).

Mine-related industries

The first industrial venture at Hayle was a small copper smelter set up near the lower end of Penpol Creek in 1710. It was located here to take advantage of local supplies of ore, and to eliminate the cost of road transport of coal (the biggest single potential expense in any copper smelting enterprise in Cornwall, and the reason why all but a small fraction of ore was exported to and smelted in South Wales throughout the 18th century and 19th century). Although profitable, the smelter was closed by 1735, the original partners having died or retired.

From 1740, the increasing demands by local mines and traders for imported coal, rope, bricks and other essentials led to quays being built in the narrows at the mouth of the 'East Loe' (Copperhouse Creek) - known as 'Merchant' Curnow's quays - and at Carnsew. Dr William Borlase, the great Cornish Antiquary, wrote in 1758 that between 500 and 1000 mules and pack horses were usually to be seen at Hayle each day, transporting supplies inland and returning laden with copper ore (quoted in Noall 1985, 114).

In 1758 the CCCo moved here from Carn Entral, Camborne and set up a copper smelter on the foreshore waste of Ventonleague on the southern shore of the Phillack estuary (Copperhouse Creek). By the 1780s the company had become extremely successful, a canal had been dug from the mouth of Penpol Creek up to Ventonleague to bring vessels right up to the works; additional land for industrial use and housing was purchased on both sides of the creek, and two old quays (North Quay and Carnsew Quay) had been acquired by 1789.

John Harvey (1730-1803) was a blacksmith at Carnhell Green who set up a small foundry and engineering works at Hayle in 1779 to supply the local mining industry; by 1800 50 men were employed by Harvey. The foundry expanded from 1803; family and professional partnerships with great engineers such as Richard Trevithick, William West and (from 1816) Arthur Woolf gave the firm a level of expertise unmatched by other engineering works in Cornwall.

Throughout the 18th and 19th centuries the main activity, business and profits of both Harvey's and the CCCo remained the considerable seaborne trade between Hayle, South Wales and Bristol - the import and sale of coal, timber and building materials. Although most of the shipping in the harbour was used to supply the mining industry of Cornwall, with copper ore and tin metal returning to South Wales, there was also an important and long-lived passenger trade between Hayle and Bristol.

As fierce competitors, the CCCo and the Harvey family became locked in a bitter and drawn out dispute over rights to the waterfront at Carnsew and Penpol. This is one of the central episodes in Hayle's history, which affected the development of the harbour and quays in a way which is still evident today, and contributed to the distinctive, and different, identities of Copperhouse and Foundry.

In 1819 the CCCo ceased to smelt copper ore; it needed to diversify, and a new works was constructed which became the Copperhouse Foundry and engineering works. In later years this iron foundry was known as Sandys, Carne and Vivian, or simply "Copperhouse". The foundry became one of the "big three" in Cornwall, ranking alongside Harvey's and Perran Foundry (at Perranarworthal, between Truro and Falmouth) for the quality of their work and engineering expertise.

Tin smelting continued to be an important industry to Hayle even after the closure of the Copper Smelter. Harvey's erected a tin smelter in 1816 specifically to smelt the product of Wheal Vor in which they had a major

shareholding. Although this closed in 1820, tin smelting continued in Foundry, with Trelissick Smelter operating between 1820 and 1855 on the site of the present Post Office in Foundry Square. The firm of Williams Harvey (no relation to the Harveys of Hayle) set up Mellanear Tin Smelter in 1837, and, with their other smelters (at Truro) dominated smelting in Cornwall through the 19th century - although the biggest single smelter in Cornwall was Bolitho's at Angarrack. Mellanear continued throughout the 19th century, smelting imported Australian tin ore and most of the ore from the great Dolcoath mine at Camborne. Harvey's acquired an interest in the business in 1888, and moved the main operation to Bootle in 1908, but kept the buildings at Mellanear, which were re-opened 1915-22. In 1845 there were estimated to be 9,000 people in tin mining and processing in Cornwall, and 22,000 in copper, but only 60 in smelting in the whole county, so smelting probably had little effect on the size of the settlement at Hayle. However, the wealth it generated was out of all proportion to the scale of the plant required or the numbers employed, and it certainly contributed to the overall prosperity of the town during the 19th century.

Harvey's influence and prosperity peaked from around 1820 to 1870, with 460 employed in the Foundry in 1841, and another 400 engaged in the wharves, and the building and coal trades.

By 1880 both Harvey's main competitors (the Copperhouse Foundry at Hayle and the Perran Foundry at Perran Wharf) had ceased operating, victims of the decline in Cornish mining. By the 1860s Copperhouse had few orders and was struggling to survive. Closure came in 1869; there was no buyer for the foundry itself (although the quays and other property were quickly acquired by Harvey's) until 1876, when Harvey's purchased the works at a very low price. The machinery was then scrapped or removed.

Both main foundry companies in Hayle were building ships from the early 19th century, at first quite small timber-built lighters and coasting schooners. Harvey's in particular expanded its shipyard into one of the principal elements of its business. The shipbuilding yard was expanded in 1888 with new slipways, boilerworks and machine shops, intended to compete on a national level with other yards, building in 1891 the SS *Ramleh*, at 4000 tons the largest ship ever built in Cornwall. In this year Harvey's employed 1200 men. The shipyard, closely followed by the quay-based trades, became the main employer, in effect compensating for the foundry business which declined in importance and profitability in the later 19th century.

Having acquired the CCCo wharves and trading capacity, and with the closure of the heavy manufacturing elements of the foundry (1903) and the shipyard (the last ship built was 1893), Harvey's continued in business as merchants and traders in bulk goods. The harbour continued to import general cargoes, especially coal for Hayle power station, and grain for the various milling enterprises; fuel oil was also important in the 1950s and 1960s.

Milling

With medieval origins, milling was one of the major industries in Hayle from the early 19th century. It developed at first as a sideline, with the big industrial concerns needing to supply their own horses and men with feed. It expanded into a major commercial concern, with flour production and export, baking and retailing all becoming more important throughout the 19th century and well into the mid 20th century. Large grist mills were part of Harvey's business from the 1780s; sited by the Millpond, they were extended 1878-9; milling ceased in the 1890s, when a mint humbug factory took over part of the building.

In 1842 CCCo built the tidal mill (Paddy's Mill) at Copperhouse, which continued in use until 1930, then being run by Hosken, Trevithick and Polkinghorne, who traded as HTP. This was the successor firm (from 1890) to J H Trevithick, formerly part of the Harvey's group, and William Hosken and Sons of Loggans' Mill. Loggans Mill was their main base in Hayle. First recorded in 1688, it was rebuilt along modern lines following a fire in 1852, and again reorganised in 1884. HTP had other premises around Hayle, and in 1913 owned a large farm, 50 horses, 3 traction engines, lorries and steamers, were still bringing wheat to Copperhouse wharf for the mills, and were also the largest wholesale grocers west of Bristol. HTP removed all their operations from Hayle in about 1930.

The 20th century

For most of the 20th century, Hayle continued to be an important industrial centre, and the harbour remained one of the busiest in Cornwall. Decline only really set in in the 1960s, with a marked period of collapse in the 1970s. Hayle remains an industrial town, but there have been recent factory closures, and the proportion of the population employed in industry continues to fall, the 1980s and 1990s having seen much decline.

Large-scale heavy engineering in Hayle was all but over by the end of the 19th century. Both foundries had closed (1867, 1903) and shipbuilding had largely finished by 1893. Only the metalworking business of J & F Pool, founded in 1862, survived in Copperhouse. The harbour, however, continued to be very busy; the wharves were extensively used for general cargo, especially coal, timber and grain, while the passenger service to Bristol lasted until 1917. In the 1950s and early 1960s an average of 400 ships a year still used the harbour.

New industries arrived in Hayle in the early 20th century, such as the National Explosives works on Hayle Towans (1888 - 1919), which employed 700 by 1906 and over 1500 during the First World War, becoming the largest single employer Hayle has ever had.

Other industries were located here specifically because of the harbour: the Electricity Power Station built 1910, closed 1977; a glass factory 1917-25 on the site of the old calcining works, making extensive use of the sand from the Towans and imported china clay waste from St Austell; a magnesium and bromine plant (opened by ICI in 1940) using sea-water; and an oil depot operated by Esso before, during and after the Second World War. All these were sited on the North Quays.

Although ship building ended in 1893, the Carnsew shipyards were used until after the Second World War for ship-breaking, as was Lelant Quay, which having been used in the 19th century for the berthing of ships carrying gunpowder for the Bickford-Smith Fuse Factory in Tuckingmill, was repaired and extended for use by the Royal Navy during the War.

The firm of Harvey & Co. continued to act as builders' merchants, and merged with UBM in 1969. In the 1980s Harvey-UBM sold the site of the foundry to a firm of developers which demolished many of the structures. At Copperhouse J & F Pool continued to expand, and in 1978 the remains of the foundry buildings were demolished for their expanding factory; although the firm has contracted in more recent years, it remains a major employer in Hayle.

The harbour closed to commercial shipping in 1977, but has in recent years (1990s) been re-opened. Hayle continues to be a fishing port of some local importance.

Hayle - Second World War

Hayle was an important place during the Second World War for the following reasons.

- Harbour facilities and ship building.
- Engineering works producing guns and other war materials.
- Hayle Power Station was the only one in Cornwall.
- Octel works producing bromide for aviation fuel.
- The very large beaches on either side of the estuary were potential invasion beaches.

The anti-invasion defences consisted of machine gun pillboxes at the entrance to the estuary and along the beaches on either side with a minefield on Harvey's Towans. A regular series of posts were erected along the long beach towards Gwithian to prevent aircraft landing at low tide. Coastal batteries were built on Godrevy, Porthminster Point and St Ives to defend the bay.

The harbour, power station, bromide works and engineering works were defended by a ring of anti- aircraft guns; heavy guns (3.7 inch) at Wheal Alfred (Gwinear) and Trevarrack (Carbis Bay) and eight light anti-aircraft (Bofors) batteries closely straddling the estuary. As a further precaution a decoy (codename Temporary Starfish) was constructed on Phillack Towans which when lit gave the impression of a town.

Various houses and buildings were requisitioned and air raid shelters, emergency water tanks, first aid posts and road blocks were built but virtually all have gone now. Shipbuilding during the war mainly involved building of small ancillary naval vessels for the D-Day landing (slipways constructed on Middle Weir were associated with this operation).

Only the pillboxes, a few traces of the various gun batteries, some of the bromide plant buildings and the remains of an Italian prisoner of war camp at St Erth survive to indicate the strategic significance of Hayle at that time.

Physical Development of the town

Overview

The physical development of Hayle is inextricably linked with its industrial history outlined above. This development, however, took place over a pre-existing pattern of landholding, which influenced the way the industries spread, developed their wharves, and the land that was available to them to build housing and other facilities. These estate and parish boundaries have as much to do with the way in which Copperhouse and Foundry developed as the industrial enterprises themselves, and are a key to understanding the disputes between Harvey's and the CCCo. Although it is not possible to explore many of these themes in detail in a study like this, they are important to understanding the settlement, as are other influences, most notably the power of the Hockin family, Rectors of Phillack from 1763 to 1922. The Hockins were financially linked to the CCCo, but were also industrialists and developers in their own right (Wheal Lucy, Penmare Hotel), and provided bridges, schools and churches for their community, and could be seen as the third great force in the development of Hayle after the two major industrial concerns.

While the physical development of Hayle can be easily described, the division between the two towns produced a psychology of rivalry that lasted long after the trade disputes between Harvey's and the CCCo had finished. When administration of the settlements had

developed beyond the capability of the parish vestries of Phillack and St. Erth, two separate local government boards were set up in 1866, followed by two separate Urban District Councils in 1894, which lasted until 1934, each with their own offices in Copperhouse and Foundry. The area shown on 19th century maps as Hayle, around the site of St Elwyn's church, seems to have occupied a sort of middle ground where the professional classes and shopkeepers, those not directly employed by either company, mingled with members of both factions. This, as so often in Hayle, may be a result of landownership, since after the death of R O Millet in 1830, this land passed to his heirs, who were clearly not so antagonistic to the Harvey interest as he (a director of the CCCo) had been. The position and the dominating form of St. Elwyn's church at the meeting point of the two towns has not only great architectural and landscape significance, but also great symbolic significance, because it is in Phillack parish, but was supported by and funded in large measure by the directors of Harvey's, who lived, worked and were prominent in the adjoining parish of St. Erth. .

The development history of Hayle described below is divided into six periods. While these reflect in broad terms identifiably different phases of development, the actual dates used have been determined by the availability of accurate maps and aerial photographs. Thus, although some parts of the area had been mapped 1791-6 (RIC MMP/51), the first usable map evidence for the whole area is the OS field notes of 1807, from which the first edition 1 inch map was produced for the area in 1813, so that 1810 is given as a convenient summary point between these two dates. This was a time when both Harvey's and the CCCo were well established in Hayle, but neither had yet become nationally, or even regionally, important industrial or commercial concerns. Both St Erth and Phillack parish Tithe Maps were produced in 1842, and the period between 1810 and the 1840s saw the transformation of both Harvey's and the CCCo into major manufacturing concerns, and the emergence of Hayle as a recognisable township in its own right. The OS edition of 1877 more or less coincides with the collapse of the CCCo in 1870, and the comparison with the edition of 1907 allows the relative stability in the late 19th century to be explored, together with the effects of the ending of heavy engineering around 1900. This was just before new industries and the World Wars caused a major shift in economic activity and focus in the town, so that the period 1910-1946 was recognisably different to what went before and what came after. The RAF aerial photographs of 1946 provide the last date before present, a date that marks not only a change in the economic fortunes of Hayle, but a very real change in the style, fabric and nature of the buildings and infrastructure in the town.

Development up to 1810

Settlement pattern and buildings

The pre-industrial pattern of settlement around the Hayle estuary was of scattered estate centres, churchtowns, hamlets and farmsteads, as described above. To some extent this pattern continued relatively unaffected by the growth of the new town, since this took place by and large on the waste grounds and common lands along the shoreline of the estuary.

Eighteenth century economic activity in Hayle, while it was conducted on a large scale, is difficult to relate to actual settlement development. With no cartographic evidence earlier than the 1791 map of Hayle (RIC MMP/51), it is impossible to tell how many non-industrial or commercial buildings may have stood next to Penpol Smelter, or Merchant Curnow's cellars and warehouses. The majority of workers almost certainly lived in the farming and

manorial settlements, especially to the south and east, where the St Erth valley and Angarrack were already densely settled and were the location of tin working and both tin stamping and corn mills. In addition, the smallholdings around Mellanear, High Lanes and Guildford probably provided workers for both the estuarine activities and local mines. The earliest recorded residential properties directly associated with Hayle's industries were built at Carnsew in 1758 as part of the development of the quays there.

Alongside their expanding works, and the Copperhouse Dock (1769), CCCo were building residential properties in Copperhouse by 1779, including some along what had been the Bodriggy foreshore, which was built out with scoria and is now Fore Street. By 1785 there was enough of a community there to warrant a Methodist meeting house (demolished 1820), with a Sunday school by 1798. Riviere House and cottages were built in 1791, but were to remain isolated and not really part of the main settlement until the late 20th century. The earliest cottages at Ventonleague date from this period, especially those with large plots of enclosed land (more akin to the smallholding pattern of settlement typical of 18th century mining areas). The only other certain development of the late 18th century is the houses at Glebe Row, part of the hamlet of Undercliff, which were built in 1784 by a group of independent artisans and tradesmen using scoria blocks bought from the CCCo.

The 1791 map shows a few buildings along the south shore of Copperhouse Creek at Harvey's Point, Bodriggy Quays and near Tremearne's Quay. Recorded in 1754, these were probably a mixture of commercial and residential properties.

Development around Harvey's Foundry was naturally slower and smaller in scale given the fact that it had only started here in 1779. The original foundry, offices, farm, millpond and hammer mills were on a relatively small scale, employing only 50 men by 1800 and most of them probably lived in St Erth. By 1791, there were only two large houses and a handful of cottages here.

Transport infrastructure

In 1758 500 to 1000 mules and packhorses were usually to be seen at Hayle each day, transporting supplies inland and returning laden with copper ore. The animals were virtually all hired in from the surrounding countryside, so that stabling facilities at both Harvey's and the CCCo were at this stage very limited. The old main route to the estuary from the east was along High Lanes from Angarrack, through Guildford, and down into Penpol (early milestones survive along the route). The shoreline on the south side of Copperhouse Creek was not yet improved. The main routes from the west were still the ancient causeways across the sands from Lelant, or the roads to the south and the bridge at St Erth. At least one quay was built at Grigg's Quay; this saved on the cost of road transport for a considerable distance along the western side of the estuary. The cost and inefficiency of packhorse transport grew more burdensome with the expansion of both the major companies, leading to proposals for a number of improvement schemes, such as a canal from Hayle to Angarrack and beyond in 1801, a tramway from Hayle to Helston in 1819, and a series of proposals for turnpike improvements from 1798 - 1814.

1810-1842

Settlement pattern and buildings

The major development of both Foundry and Copperhouse took place in the second two decades of the 19th century, 1810-1830, and to a lesser extent the 1840s. This coincided with the great period of expansion of both Harvey's and the CCCo, their often violent opposition to each other, and the

Copperhouse with its distinctive grid of streets, remains of large industrial units and Copperhouse Pool *(CCC Historic Environment Service, ACS 1257)*

Foundry. Foundry Square and Harvey Foundry complex to the west, with the prominent railway viaduct *(CCC Historic Environment Service, ACS 3600, 1993)*

development of the extensive system of quays and flushing pools at Hayle. It also saw great improvements in communications. Changes in land ownership and leaseholds enabled both companies to expand, and to an extent determined the form that expansion took.

At Copperhouse, the CCCo acquired leases on part of the Bodriggy Estate and laid out a grid of streets. As was the normal practice in Cornwall, while there was clearly a single surveyor laying out the plot allocations for the Company, individual tenants built their own houses, or sometimes small groups of houses, allowing for variation in size, material and detailing. At the same time, there was some expansion in the older areas of development, especially Ventonleague. Within Copperhouse, the area south of the Quays was developing as a fully fledged town centre, with a market house by 1814, replaced with a larger purpose built market in 1839. The increasing pressure for shops and housing led to the demolition of the old Methodist Chapel, and the building of a new larger Chapel just to the south of the main centre. Many of the CCCo houses were built not for its own employees, who numbered only about 300 in the 1820s, but for the local miners. Slater's Trade Directory for 1852 makes this point: 'The population has more than doubled itself from 1821 from the vicinity of the extensive mines and manufactories'. The smallholdings and hamlets around the periphery of Hayle saw modest expansion at the same time, particularly on the south side of the area.

A major phase of development for CCCo came after the acquisition of the freehold of Lord Arundel's lands around Copperhouse Creek. This enabled the company to shift their principal offices and warehouses to Penpol/Merchant Curnow's quays, extend North Quays, and improve the sluicing capacity of Copperhouse Pool at the same time. Partly in response to Harvey's new quay being built at Penpol, but also no doubt to consolidate this shift in focus westwards from Copperhouse, the CCCo built the New or East Quay in 1819, and Penpol Terrace was laid out on reclaimed land. This was in some ways a new element in the town, since it was clearly not intended for humble workers, but was lived in generally by shopkeepers, school teachers, sea-captains, professional men and retired spinsters of moderate means.

Also as a result of acquiring the freehold of the Riviere Estate in 1811, the CCCo developed more housing in Phillack, with a number of rows on the west side of Phillack Hill (in an area known as Parc an Dix). Phillack remained a relatively small settlement, however, although the expansion of the churchyard in 1805-6 and again in 1825-6 is an indication of the pressure of the expanding town at Copperhouse (Foundry was in the parish of St Erth).

The scattered plots and quays along the southern shore of the Copperhouse Canal were acquired by CCCo in the 1820s, and the old shoreline began to see more housing similar to the middle-class houses of Penpol Terrace - Hayle Terrace in particular was clearly in the process of construction at the time of the 1842 Tithe Map.

At Foundry, the expansion of Harvey's works, and the development of new quays in 1819, saw a corresponding increase in the small settlement in the valley - in the case of Drover's Row the decision to expand the foundry Stables and keep large numbers of draught horses on site led to the need for a row of cottages for the drovers. However, with fluctuating numbers of workers (230 in 1825, 150 in 1826), Harvey's had little incentive to provide workers housing. They also had little opportunity to acquire land on the scale that the CCCo had done in the 18th century (also thereby providing several large houses for their directors and managers), and had two major conflicting requirements for the land they did acquire, firstly as farmland to supply their horses, but mostly in order to build large houses for the extensive family and directors of the firm.

The settlement around Foundry therefore, had already by 1842 taken on a very different character to that at Copperhouse; it was full of large houses in spacious grounds, with only three or four rows of worker cottages. Harvey's were constrained on the east side of the area by Penpol manor, owned by R O Millet, one of the Directors of the CCCo, and inimicable to the Harvey interest. He died in 1830, and the two rows that stand on what was his land - Tremeadow Terrace (formerly Mill Row) and nos. 1-10 Penpol Road - probably date from after his death and reflect a more open attitude towards Harvey's by the new landowners. If, as has been suggested, Harvey's employed nearly 800 people at their works and in their wharves in 1841, it is clear that only a tiny proportion of these numbers lived at Foundry. Such facilities as had been provided at Foundry were very much for the benefit of the company; hotels to entertain their business visitors, a school for their workers, shops and emporiums for the employees run by the firm itself.

In the early 19th century, the increasing size and population of Hayle can be traced in Trade Directories, as a recognisable town took shape. The descriptions used in the directories are very revealing of the growing status of the new settlement. In 1823-4 Hayle is described under St Ives, to which it was a subordinate port: 'Hayle is a port....carries extensive trade in iron, limestone etc., - 'lately very considerable improvements in erecting commodious wharves for shipping', notably ore out to South Wales and coal back (Pigot's Directory 1824-5). By 1830 Hayle has grown sufficiently to be described on equal footing with St. Ives: 'on the shores are very extensive quays and considerable mercantile establishments, with iron-foundries which furnish for the use of the mines the most powerful and splendid steam-engines in the world; the construction of these, which may always be inspected, is worthy the observation of the stranger.' (Pigot's Directory 1830). By 1840, Hayle has its own entry, although only after 1852 is it described separately as a matter of course. 'The different works for roasting and smelting ores in this town and neighbourhood, have arrived at great perfection, and are inferior to few besides in the kingdom.' (Robson's Commercial directory, c 1844). In another directory of 1844 (Pigot's), Hayle is described as a 'small market town'.

Transport infrastructure

Considerable road improvements took place in this period, enabling the use of large wagons, which led to the sort of expansion in provision of wagons and horses already seen at Harvey's. The

creation of the Causeway (1824-6) from Foundry to Grigg's Quay was the major development of the period. This turnpike route was extended westwards to Ludgvan in 1836-8.

Prior to the creation of the Hayle-Redruth turnpike in 1837-8, which created the current main road along the south side of Copperhouse Creek, the CCCo provided for better road communications between their works and their principal quays by the construction (probably around 1811) of Sea Lane and the Black Road, which ran across the Copperhouse creek and along its north side.

The scale of the transport requirements problem, and their intimate link with the mining industry, is reflected in the early establishment of a railway in Hayle. The Act for the Hayle Railway was passed in 1834, and the line was opened in 1837, with its terminus at Foundry Square. The route was from Hayle to Redruth, with branches to Portreath, Crofty Mine, North Roskear Mine and Tresavean. In 1843 the first regular passenger service was begun between Hayle and Redruth. This line ran along the northern side of Copperhouse Creek (see Fig. 4).

1842-1877

Settlement pattern and buildings

The 1840s saw the completion of the middle class rows along the southern side of Copperhouse Creek, and the building of Clifton Terrace (1840-49), named in honour of the Clifton Suspension Bridge contract won by the CCCo (1840). The 1840s were disastrous for most of Cornwall, and certainly saw some retrenchment in Hayle which depended on supplying goods to the stricken mining industry. The two companies survived, however, on the strength of a number of large contracts for water pumps and other engineering projects. Apart from Clifton Suspension Bridge, both foundries shared in a massive order for pumping engines for Holland. At Foundry, the landscaping of Carnsew Hillfort that occupied Henry Harvey's retirement years in the 1840s was also seen as a celebration of the successful completion of the Dutch contract, commemorated by the building of the triumphal arches on the hillside.

Apart from the almost continuous alteration and redevelopment of the central area of shops and commercial premises in Copperhouse, the major housing development there was Mount Pleasant. Development along the north side of Commercial Road started in this period, probably for the most part post-dating the acquisition of the CCCo's waterside properties by Harvey's in 1868.

Urban development at Foundry was slower than at Copperhouse, because it started later, the works employed fewer people until the mid 19th century, and because Harvey's provided their own shops, Working Men's Institute and School. However, the development of workers' housing on Penpol land seen in the 1820s was followed by the development around 1845 of better quality housing, probably always with shops, in Chapel Terrace. Harvey's meanwhile continued to build the great range of large family villas that characterise Foundry, on both the east and west slopes of the valley, culminating in Downes. These houses, in ever larger grounds, were situated further away from the grime and toil of the foundry and quays than had been the case in the earlier 19th century, and were suburban rather than urban in character.

The stagnation of the mining industry is revealed by the lack of growth in the groups of smallholdings to the south of Copperhouse, although they were not yet being abandoned as they were by 1908. Meanwhile, the growth of mining and industry in the Towans (Wheal Lucy 1872, British Arsenic Co. 1868) was reflected in a number of cottages being built at Mexico for instance.

The most important event in Hayle in the mid-late 19th century was the closure of the CCCo. It is difficult to gauge the effect of this on the pattern of settlement, however, since the wharves and quays were acquired by Harvey's, and all kept working, even Copperhouse Dock. The gasworks and tidal mill around the Dock continued in use, part of the site of the CCCo works was used by Harvey's as a grain store, other parts used by the expanding business of J & F Pool, and the population, although declining slightly during this period, found alternative work in the expanding works at Foundry, Pools, and the local mining industry which experienced something of boom in both the 1850s and 1870s.

Transport infrastructure

Throughout the 1840s, the limitations of the Hayle Railway were all too apparent, especially the use of fixed steam engines to rope-haul carriages up inclined planes and the light rails and granite setts, which although well suited to horses (used in Hayle itself), precluded the use of any but the smallest and lightest steam locomotives. In 1846 the West Cornwall Railway was authorised to purchase the Hayle Railway and lay new track from Penzance to Hayle, Redruth and Truro, bypassing the Angarrack and Penponds inclines and passing through Hayle high above the town on a new viaduct over Foundry Square. This new line was opened in 1852 and forms the course of the current railway line. A branch was built from the new Hayle Station to the quays, joining part of the old Hayle Railway to the new line. After 1866, the Hayle line was fully integrated into the County and National networks. The wooden viaduct at Foundry was rebuilt in 1886.

In 1877, the St Ives branch railway was built, the last broad-gauge line built in Britain, with a spur to a much enlarged Lelant quay. This was the last major expansion of harbour facilities in the estuary.

1877-1907

Despite the apparent decay in industrial activity, and a drop in population, as Kelly's 1897 Directory stated 'The most important manufacturers in Cornwall are located here', and Hayle continued to be a major trading and industrial centre. Facilities still appeared in and around Copperhouse, which continued to be the main shopping centre in Hayle, but increasingly so in the area between the two centres, with St Elwyn's, the Passmore Edwards Institute, and a new drill Hall. It was as if the neutral ground was becoming a new centre. There was very little housing added during this period to either Foundry or Copperhouse, however - a single Terrace was built about 1901 on the old Copperhouse ropewalk site - but there were more houses being added to the three main groups of late villas at Bodriggy, Station Road, and Trelissick Road, an indication that some wealth was still being generated in the town.

1907- 46

The National Explosives factory on the Towans, started 1888, was at its peak during the First World War when it employed 1500. Two more terraces were built on the old ropewalk site at Copperhouse, where the tenants were well placed to find work in the expanding Pool works, the large HTP organisation based at Loggans Mill, and the National Explosives works.

Major developments along North Quays from 1910 to the Second World War (the Power Station, the Chemical Plant, and later the oil depot), do not seem to have had much impact on the expansion of the town, as they merely absorbed an existing pool of labour coming from the older, declining industries.

Apart from a few bungalows at High Lanes, Loggans Mill and Bodriggy, there

was little new housing between the wars - the large estate at Bodriggy seems to have been an immediate post Second World War build and may have been the last example of industrial housing in the town, since Hayle, never really developing as a holiday town, still looked to its quays and waterside industries for work.

1946 to present

The building of the by-pass around the southern side of Hayle in the 1980s has had a significant impact on the shape of the town, and the way it is perceived by visitors, particularly at the eastern end by Loggans Moor. The roundabout and interchange has taken a significant area of open land that was part of the setting of the town, and recent commercial and industrial developments have spread the built up area significantly beyond its historic limits for the first time in over 100 years. Another major area of non-residential development has been the creation of the Guildford Road Industrial Estate. These developments have in effect shifted the economic focus of the town to its eastern fringes. To the west, along the Causeway, an existing small garage/industrial use had been replaced by a large group of industrial buildings (the Kier and Tempest buildings) on land built upon and enclosed from the mudflats with prominent retaining walls of caisson construction.

There has been a significant increase in housing throughout the town since 1946, with large estates of both bungalows and more traditional housing types. While they have to some extent spread the built-up area of the town, they have been mainly confined to infill within the area bordered by the railway line, or by the historic outlying hamlets, particularly at High Lanes or Loggans. The major area of spread into the countryside has been in the south-west part of the town along Trelissick Road and Mellanear Road, where development has reached the by-pass.

While new housing and new industrial development has been taking place, the most significant alteration to the character of Hayle has been the demolition of a huge area of the industrial remains at Foundry and Copperhouse, and on the Carnsew and South Quays. Fewer buildings have been demolished on North Quays, but these were no less significant historically. These demolitions have also included some early cottage rows at Carnsew, the car park in Foundry and North Quay. The most significant loss of cottage rows, however, has been in Copperhouse, where the three earliest rows in the town have been demolished in the heart of the central area (Market Street/New Row/Trevassack Row). Modern housing schemes have partly replaced the demolished buildings in Copperhouse and Foundry, the rest of the areas remain as cleared sites.

4 Archaeological Potential

Hayle's archaeological record (Fig. 6)

The varied historic development of Hayle is likely to have created a rich archaeological record. Its evolution has shaped today's town; its roads and lanes, the harbour, quays, canal and flushing pools, the grain of the built environment, building plots, historic structures and open spaces. Hayle's archaeological record includes all these visible manifestations of the settlement's past as well as the hidden, buried remains.

Archaeology is potentially a rich asset for the town. The documentary record is silent on aspects of the settlement's development and archaeological investigation may be the only way in which certain aspects of the town's historic development and character can be better understood. Archaeology can also make a contribution in both cultural and economic terms: remains of the past have important potential for education, tourism and leisure, as well as a role in maintaining local pride, sense of place and belonging.

Hayle's archaeological potential

While the above identifies the potential, Hayle's archaeology is as yet a largely unknown resource as few archaeological interventions (excavations, watching briefs, evaluations, etc) have been undertaken within the historic core of the town (Fig 6).

Future investigations and surveys are likely to add to a better understanding of Hayle's historic development, character and archaeological potential.

It should be emphasised that 'archaeology' does not refer solely to buried remains. Information on the historical sequences embodied in standing buildings and other 'above ground' features could be extremely valuable and a building survey of the town would be likely to yield significant new information.

Opportunities for investigation and recording should be sought when buildings are refurbished or undergo substantial alteration. Figure 5 indicates the survival of historic fabric and buildings which offer potential for archaeological investigation. As well as showing all the Listed Buildings in the primary study area this figure also shows other Historic Buildings that, for these purposes, are defined as surviving buildings shown on the second edition Ordnance Survey 1:2500 map of *c*1907.

Further detailed documentary research is also likely to yield new information. This area of study, together with participation in building survey, could provide a challenging and worthwhile avenue for involvement by local people wishing to investigate aspects of their heritage.

Archaeological remains are an important and non-renewable resource and as such are protected by national legislation and local planning policy. One component of future investigation of both buried archaeological remains and standing buildings may be through more extensive targeted implementation of PPG15 and PPG16 as part of the development control process.

In order for this development-based investigation to have maximum effect a research strategy for the town should be developed, providing a framework of research questions for investigators to be guided by and attempt to answer. This report goes some way to shaping such a strategy.

Indicators of archaeological potential

Figure 6 indicates the potential extent of certain aspects of the buried archaeological remains of Hayle, although it must be emphasised that this depiction of potential is indicative, not definitive, and future archaeological investigation and research will test and refine its value.

An understanding of the potential is broadly derived from the historic extent of the settlement itself. In simple terms, any location within the area developed up to the early 20th century (as represented on the 2nd edition 1:2500 Ordnance Survey map of *c*1907) is regarded as having the potential for standing or buried archaeological features. The historic core of the settlement is of particular archaeological interest and sensitivity in that deposits are likely to provide valuable information on its early form and development. Urban archaeological remains are likely to be more complex in these areas.

The figure also identifies a number of sites and areas of known historic significance: i.e., those places where the presence of a significant structure or feature has been demonstrated by archaeological investigation or can be identified from historic maps or documentary sources but does not now survive above ground. Points are used to approximately locate features where the available sources are not adequate to pinpoint a specific location.

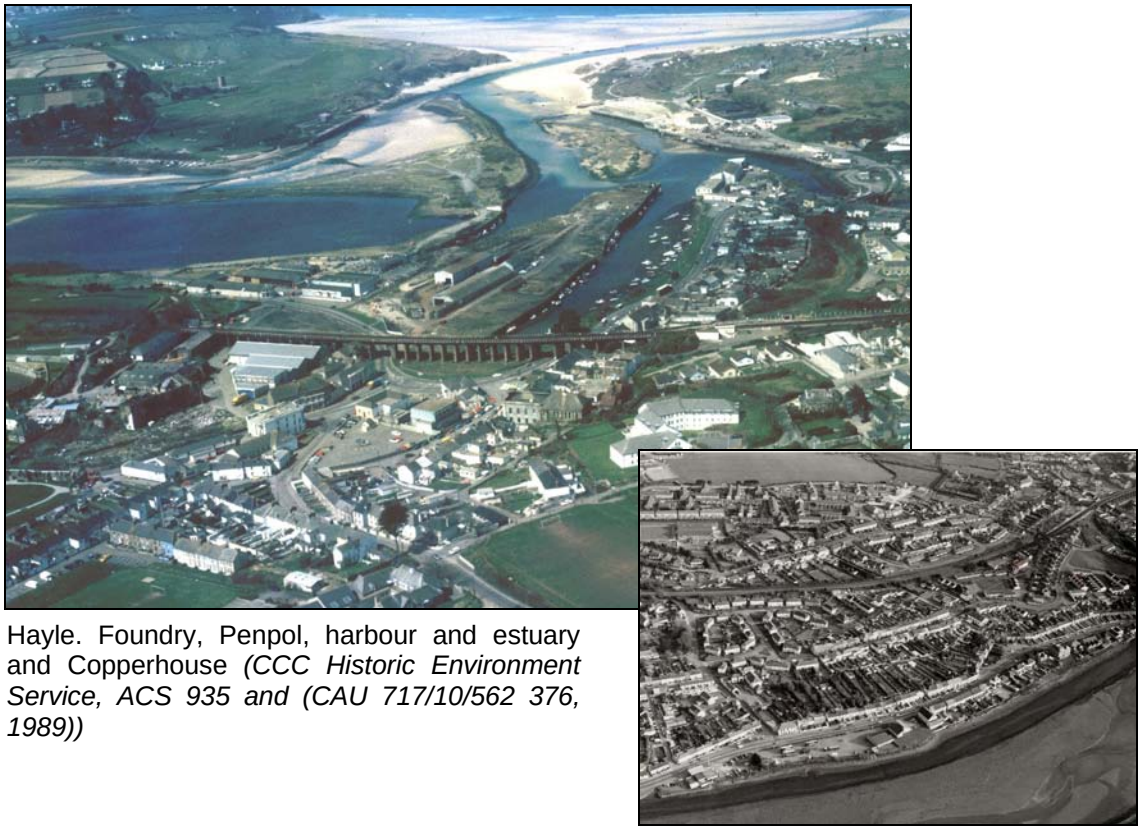
It should be noted that there is also potential within the area for the survival of archaeological remains that pre-date or are unrelated to the development of the town. In the absence of specific information such as reports of finds or antiquarian references the potential presence of such sites is difficult to predict.

NB. Overviews of the buried archaeological potential of the various Character Areas within the town are also presented in Section 8.

5 Statement of significance, Hayle

The mining port of Hayle is one of Cornwall's most important industrial towns. It was a key element of the exploitation of the Cornubian Orefield, forming part of an integrated mining landscape unique in England. But its significance is international. The town was home to two of the world's three largest early-19th century foundries producing steam engines for mines – Harvey's, 1779 – 1903, and the Cornwall Copper Company, 1820-1869. The world's largest steam engines were built here, designed by some of the most famous and innovative engineers of their time. The harbour exported the greatest number of mine engines of any port to the world's orefields. This international importance is recognised in Hayle's inclusion in the Cornwall and West Devon Mining Landscape bid for World Heritage Site status. This important past and the intense rivalry between the two principal companies has shaped the morphology and character of today's town with the CCCo creating the company town at Copperhouse, with the grid of industrial housing and retail centre and Harvey's creating an ostentatious urban statement at Foundry with the civic grandeur of Foundry Square and the group of villas and large houses set in landscaped grounds providing high status residences for the extended Foundry family. The archaeological heritage, distinctive built environment and urban quality these forces have created is of great significance.

Hayle has a strong relationship with its impressive natural setting. The estuary location and the three water courses which merge and flow to the sea have played a crucial part in the town's origins and development and continue to form an important part of its special character and significance.



Hayle. Foundry, Penpol, harbour and estuary and Copperhouse *(CCC Historic Environment Service, ACS 935 and (CAU 717/10/562 376, 1989))*

6 Present settlement character

Hayle is a settlement of unique character and great historical significance, contained within a landscape of equal merit.

The character of Hayle is defined by its natural setting, its late development within an ancient landscape and settlement pattern and its industrial and commercial history. It is a special place and distinct from many other Cornish towns due to its fascinating origins and evolution.

Topography and settlement form

One of the major assets of Hayle is its close relationship with its spectacular natural setting. Its important estuary location, extensive harbour and quaysides and the sluicing pools at Carnsew and Copperhouse form a beautiful natural setting for the town. Surrounding farmland, marshes, sand dunes and views to the beaches and the open sea at St Ives Bay are other important elements in this backdrop. Few towns in Cornwall are so strongly defined by such natural features, nor retain such important wildlife habitats within the boundaries of the settlement.

Physically it is unlike most other Cornish towns with many of its main urban areas set on unusually level ground compared to the dramatic hillside locations of many other settlements. Much of this level ground has been reclaimed from foreshore and wasteland and is a feat of engineering in itself, for example Fore Street and Foundry Square, the principal urban spaces of the town, are both laid over reclaimed ground.

View over the harbour to the estuary and Towans from Carnsew Hillfort

Carnsew sluicing pool *(CCC Historic Environment Service, ACS 6194, 2004)*

The harbour and estuary area demonstrates extensive engineering. Middle Weir, the great harbour spit, was created in 1819, Copperhouse Canal in 1769/87, and the sluicing pools in 1789, whilst Causeway Road (1824-5) is one of Cornwall's earliest road engineering monuments. The extent that the natural landscape has been changed and adapted is a significant element of the character of the town.

Hayle is not a simple town, it has grown from numerous centres and focal points. The pre-urban landscape of churchtowns and estate/farm centres was radically changed by the development of the rival settlements of Copperhouse and Foundry. These two settlements form the basis of the polyfocal development of the town with the harbours and quays and the Penpol middle-ground infill development connecting the two.

Copperhouse and Foundry are both set in small valleys leading off the main arms of the estuary. Although both are based

around the works of industrial companies the two places have been shaped in very different ways and their contrasting characters and urban form is a significant element in the present character of the town.

Copperhouse was developed as an urban centre from the start and continues to be the retail centre of the town. Its urban form shows this with the Market Square and Market House and main shopping street. It was also the focus of planned speculative development of industrial housing. A grid of densely packed workers' housing was developed on the rising land to the south of the main street. The grid still dominates and the resulting streetscape is highly urban. Most of the houses have little or no front gardens, but generally long back gardens producing a distinctive urban grain. A similar industrial grid development is seen at Camborne.

This is in direct contrast to Foundry where commercial activity was tightly controlled by Harvey's and largely limited to Foundry Square. On the fringes residential buildings were extended with single storey commercial premises constructed in front gardens. Some workers' housing developed but here the priority was for large villas for the Foundry family and managers, resulting in a spacious urban form of large plots and gardens. These sites are set on higher ground, historically more salubrious, set away from the fumes and smoke of the industrial processes on the shore line.

One of the consequences of the open and flat topography of the town is that there are wide ranging views throughout the townscape and the harbour. Backs of houses and streets are often as visible as the main street-front elevations. This high visibility means that features often affect the wider townscape and not just the local streetscape.

Bodriggy, a pre-urban estate focus. This grade II* listed building was remodelled in the 18th century but retains 17th century fabric

Standing historic fabric

Survival

Despite the pre-urban centres and 18th century origins, Hayle is essentially a Victorian town. It has a good concentration of surviving historic fabric that represents evidence of its origins and subsequent evolution. Despite the relatively good survival, most of Hayle's historic assets are not covered by existing statutory designations, and there is considerable scope for extending the protection these afford for enhancing the existing character of the town. The condition and use levels of a number of important historic buildings have been cause for concern in recent years and heritage-led regeneration initiatives have been put in place to address some of these issues (see Sections 2 and 7).

Earliest surviving built elements in the study area predate the industrial town, such as the estate centres at Bodriggy and Penpol. These 18th and 19th century remodelled buildings have surviving elements dating to the 16th century. As remnant pockets of a more ancient landscape, and as heavily planted and enclosed areas within a more urban context, they form important green wedges and contribute much to the character of the town.

The majority of the surviving historic fabric dates to the 18th and 19th centuries. Important architectural groups include buildings relating to the many and varied industrial processes of the town and the harbour, the commercial and service centres that developed around these industrial foci and the residential areas housing both the industrial workforce and the managerial and professional classes.

There has been extensive loss of industrial structures relating to the CCCo's industrial activity at Copperhouse and of industrial buildings on many of the quaysides.

Fire damage has led to a loss of architectural integrity of some of the most important buildings in Hayle. The former Public Assembly Rooms at Foundry Square, now Lloyds Bank, was reduced to a single storey structure by fire and the Market House at Copperhouse lost its clock turret.

Other significant architectural losses include the buildings at the railway station and the Literary Institute under the viaduct at Foundry Square.

Architecture, materials and detail

The majority of buildings in Hayle have a rendered and painted surface finish and there is relatively little originally exposed stone work in housing compared with, for instance, the granite district around St Just. More has been inappropriately exposed by the removal of the original render. A common form of rendering is roughcast with quoins, door surrounds and other details in plain, rusticated or sometimes vermiculated stucco. A similar style of rendering finish is seen in Camborne and St Ives. Other ornamentation is also included such as the classical inspired motifs of the White Hart Hotel. This form of decoration and surface finish seems to have developed in the 1820s (Hayle Terrace / Penpol Terrace) and ran right through to be applied to early 20th century bungalows in

Typical surface treatment of roughcast with vermiculated plaster quoins and door surrounds and plain plaster window margins

More elaborate classically inspired plaster details and architectural moulding

The Old White Hart, 1824. An unusual mixture of killas rubble and granite ashlar construction

Scoria block construction, side elevation of Phillack church hall, Copperhouse. The distinctive seams from the casting process remain visible even in painted walls.

the town. It is seen across the whole spectrum of status of buildings from the smallest workers' cottage to the most prestigious of civic building.

Many of the structures in the town are stone-built. Granite and local killas stone are common. Granite ashlar is seen in some of the high status and municipal buildings such as the Passmore Edwards Institute and school buildings. Earlier high status houses, such as Bodriggy House (remodelled in 1718), the Old White Hart (1824 build date quoted on interpretation panel) and Bridge House (possibly Merchant Curnow's House, and thought to date to late 18th/early 19th century) are also built of granite ashlar. Killas rubble is often teamed with granite details such as lintels and quoins in residential terraces and rows.

The extensive use of scoria block around Hayle contributes a particularly local distinctiveness. This material was a by-product of the CCCo's Copperhouse copper smelter. Molten copper waste was poured and set in casting blocks and the resulting hard wearing dark red-brown block can be seen throughout the settlement (especially in Copperhouse) and nearby surrounding area (Phillack). Most often the material was formed into rectangular blocks but coping stones were also cast and can be seen on the Black Bridge. Distinctive casting lines are typical in the surface of the block and make the material recognisable even when it has been painted. Often the use of the material suggests a link with the CCCo but the blocks were also sold to private developers and have been reused and recycled in later buildings. The material, prominent in the CCCo's wharfs, waterside complexes, canal and grid of industrial housing was made until the closure of the copper smelter in 1819.

The architectural scale of the town is generally of two storey terraces, and three storeys for the larger buildings.

Industrial town and port

Despite the demolition of much of Copperhouse Foundry and key elements of Harvey's, Hayle is still largely intact as an industrial town and port. The surviving industrial elements represent the very reason for Hayle's existence. The international importance of the town's industrial past is recognised in its inclusion as one of ten bid areas covered in the Cornwall and West Devon Mining Landscape World Heritage bid.

Key industrial structures and complexes survive within the town.

- Harvey's foundry - the largest surviving standing complex with around 25 historic structures forming a relatively coherent group.
- Much remains of the harbour and its extensive system of quays, wharfs, sluicing pools and canal system.
- Loggan's Mill – which forms a prominent landmark at the eastern entrance to the town.
- The Ellis's Hayle brewery complex, Sea Lane, Copperhouse

Hayle's extensive harbour system is an important legacy of its industrial past and an important regeneration opportunity for its future success. Waterways, sluicing pools, quays and the wider estuary are all important assets of the town.

Commercial, civic and religious

Copperhouse has always been the more developed commercial core of the town but Foundry developed a grander, more civic character. The Penpol area was developed as a neutral area between the two. There seems to have been a concerted effort in the late 19th century to make this the focus of the town. Important surviving buildings include:

- The Market House, Copperhouse
- St George's Hall / Old Cinema, Market Square, Copperhouse
- Numerous surviving traditional shop fronts, especially at Copperhouse where they form an important character element
- The Grade II listed 18th and 19th century inns/taverns:
  - Copperhouse Inn
  - Cornubia Tavern
  - Cornish Arms, and
  - Royal Standard
- War Memorial (20th century, Grade II)
- Passmore Edwards Institute (1893-6, Grade II)
- St Elwyn's Church, (1886-1888, Grade II* and its Church Hall, 1905, Grade II)
- Foundry Chapel (1845, Grade II)
- Freemasons Hall, the original White Hart Hotel in Foundry Square (1834, Grade II)
- White Hart Hotel, Foundry Square (1838, Grade II*)
- Foundry House, former Cornubia Biscuit Factory, (late 19th century, Grade II)
- Barclay's Bank, purpose built for Harvey's as part of emporium, (early 19th century, Grade II)
- John Harvey House, formerly Harvey's offices (early 19th century, Grade II)

St Elwyn's Church and Copperhouse Pool. The church is a powerful landmark throughout the town and forms part of the civic focus developed in the Penpol area during the later 19th century.

Single and double fronted terraced villas set behind front gardens are a characteristic house type in Hayle

Less ostentatious workers housing with front yards at Foundry

Spectacular views across the harbour and estuary to Lelant, St Ives and the surrounding hills and moors of West Penwith connect the town with its surrounding landscape

- White's warehouse, formerly Trevithick's (early 19th century, front remodelled late 19th century, Grade II)
- Lloyds Bank, former public assembly rooms / market house (19th century, Grade II)

In the Penpol and Foundry areas there is a distinctive built form where originally residential buildings have been converted for commercial use with single storey extensions built in the front gardens. Some of these are rather rudimentary structures but others, such as the former dairy at 36 Hayle Terrace and former butchers at 42 Penpol Terrace, are very fine and listed for their architectural significance.

Housing

Although some of the earliest industrial rows in Copperhouse have been demolished, good examples survive that reflect the social divide of industrial labour – high density industrial housing of the work-force, seen at Copperhouse, contrasts with the villas and mansions of the Harvey family and the managerial class, seen around Foundry and at Riviere on the north side of Copperhouse Pool.

In between these two extremes are the middle-class rows of Chapel Terrace, Penpol Terrace, Hayle Terrace, Commercial Road and Fore Street.

Streetscape

The streetscape of Hayle has great potential for enhancing overall character (discussed in Sections 7 and 8). In general the public realm currently fails to emphasis the quality of the natural and built environment of the town. Instead traffic, road paraphernalia, poor quality materials and standard street furniture are often allowed to dominate key streets and principal urban spaces.

Enclosure levels and urban form are generally very good but the principal urban focal points are under played and as a result their sense of place is weakened. There is scope for significant improvements through schemes such as the Hayle Townscape THI/HERS project.

Landmarks and views

The topography of the town and the estuary make for high visibility throughout and provides many striking views around the settlement, the estuary and to the sea beyond.

Landmark features and views are numerous and include:

- Lelant and Phillack Churches and church towns
- The twin-armed tidal estuary, harbour and quaysides and the sluicing pools filling and draining with the changing tide
- Views out to the beaches and sea of St Ives Bay and to St Ives itself
- Clifton Terrace, Riviere house and farm on the north side of Copperhouse Pool viewed from the town.
- Also views to the surrounding countryside – Trencrom Hill and the hills and moors of West Penwith.
- Importance of the enclosing skyline of the towans to the north and the landmass on the other side of the River Hayle
- Striking urban views – Copperhouse from the north side of Copperhouse Pool; St Elwyn's Church forms the prominent urban landmark from the harbour
- Viaducts and arches of the mainline railway. The viaduct, in particular, now forms a key component in the

townscape and industrial character of the town, as well as an important boundary feature defining Foundry and separating it from the harbour.

- The close relationship between the town and the water. Since nearly all of Hayle is ribboned along a shoreline, or the edge of open areas of quays and wharves, or within narrow valleys, the intimate views over and between the industrial areas and the quays are of as much significance to the character of the town as the larger vistas.
- Carnsew Hillfort has dominated the southern part of the estuary since the prehistoric period. Landscaped in the 1840s by Henry Harvey, this was meant to be seen, and to be a viewpoint, to survey not only the estuary and the stunning natural environment but also and more importantly, the Foundry, the quays, wharfs and shipyards etc which were Henry Harvey's primary interest and achievement.

Identifying Character Areas

Understanding character

The CSUS investigation, in addition to identifying the broad elements of settlement character that define Hayle as a whole, identified four distinct Character Areas within the town's historic (pre-1907) urban extent (see Section 8, below; Fig 7 and Character Area summary sheets.)

1. Copperhouse

2. Foundry

3. The harbour

4. Penpol

These Character Areas are differentiated from each other by their varied historic origins, functions and resultant urban topography, by the processes of change which have affected each subsequently (indicated, for example, by the relative completeness of historic fabric, or significant changes in use and status), and the extent to which these elements and processes are evident in the current townscape. In simple terms, each Character Area may be said to have its own individual 'biography' which has determined its present character.

Taken with the assessment of overall settlement character, the four Character Areas offer a means of understanding the past and the present. In turn, that understanding provides the basis for a positive approach to planning future change which will maintain and reinforce the historic character and individuality of each area and the town as a whole - *sustainable* local distinctiveness.

7 Regeneration and management

Hayle has many ongoing and proposed regeneration initiatives. As part of this activity its historic environment is already being used as the catalyst for major investment in the town. It is important for the town's future that the surviving historic environment components and special character are recognised, respected and used as a positive asset underpinning proposed regeneration initiatives. The Hayle Historic Assessment provides detailed information to ensure an understanding of the heritage asset. The Market and Coastal Towns Initiative Revitalise! Hayle have identified 'Environment' and 'Culture' as important forces for the future of the town and the historic environment has an important place in these themes.

Characterising the historic environment of Hayle has produced an understanding of its historic fabric, archaeological potential and townscape character. This, together with supporting data can be used as a conventional conservation and planning tool to define constraints, as a yardstick against which to measure new development and policy proposals, and as the basis of well founded conservation management, restoration and enhancement schemes and policies.

More importantly, however, characterisation also reveals the essential dynamic factors underpinning the character of the town. Regeneration planning which is informed and inspired by these elements can take a much more sure-footed and proactive approach to creating beneficial change, both reinforcing and enhancing existing character and ensuring that new developments are better integrated into the existing urban framework, more focused and ultimately more successful.

Character-based principles for regeneration

These principles have been derived directly from the analysis of the character areas and should underpin all regeneration initiatives in Hayle:

- Recognise Hayle's historic environment as a major asset and distinguishing element in its distinctive sense of place. Maintaining the elements which create and sustain this special character, ensuring their full use and enhancing them in the long-term are, therefore, key actions for all regeneration.
- Respect and safeguard the fundamental importance of the natural setting and physical topography to the character of Hayle, particularly views across the estuary and harbour area, the sluicing pools and the enclosing horizon formed by the Towans to the north.
- Recognise the quality and particular distinctive character of the historic built environment of Hayle, and achieve equally high quality and distinctiveness in all future new build and the public realm.
- Reinstate character and quality in the built environment, public realm and key open spaces where it has been eroded by inappropriate past interventions.
- Respect the different Character Areas within the town and acknowledge and reinforce the urban hierarchy and diversity they represent.
- Present, interpret and promote Hayle as an historic Cornish town of quality, character and international significance.

Regeneration and the historic environment: key themes and issues

Characterisation has highlighted regeneration and conservation opportunities both for the historic area of Hayle as a whole and for specific areas and sites. These opportunities can be grouped into the following themes.

Understand, conserve and positively manage the historic environment asset

The distinctive character of Hayle is based on its setting and the quality and diversity of its historic components. To promote future success it is in the town's economic, social and cultural interest to understand, protect and enhance the historic environment through strong and positive conservation management.

To be successful, any regeneration scheme or proposal, should take full account of the historic environment.

Appropriate designations and management policies should be put in place at an early stage. This will benefit the regeneration by giving certainty to the planning and development process. It also offers links to the priorities of funding programmes, especially Objective One's requirements for enhancing local distinctiveness and respecting the cultural and historic resource.

Re-evaluating designations and the information base as part of this process might include:

- A review of the statutory list of historic buildings.

The town has a number of important buildings that are not currently recognised that could usefully be considered for such designation.

Whilst increased designation is sometimes perceived as a constraint against regeneration, it should instead be seen as confirmation of a building's interest and value, and it can also provide important opportunities to draw down additional funds for heritage-led regeneration schemes.

- Creating a supplementary list of locally significant structures.

Such a list would acknowledge the significance of and provide information about locally important, but unlisted, historic structures. It would be a significant and beneficial planning and regeneration tool. The 'other significant buildings' identified on Figure 5 and in CSUS digital mapping offer an initial baseline for such a list.

The Conservation Area has recently been significantly expanded and now better represents and defines the special character of Hayle. This, together with the preparation of a Conservation Area Appraisal and implementation of an Article 4 direction will go some way towards safeguarding the historic environment of the town.

An Article Direction removes a number of generally permitted development rights. Although much incremental loss in the buildings of Hayle has already taken place, such as the extensive loss of historic windows and doors, there may be value in protecting surviving examples and other important features such as boundary walls, traditional roof coverings and stuccoed and roughcast surface treatments.

To be effective all these measures require strong, clear policy and guidance framework and consistent enforcement by PDC.

Improve connectivity – an holistic approach to Hayle's regeneration

One of the main issues for the town is its polyfocal topography. Its two centres of Copperhouse and Foundry split the provision of services offered by the town, people visit the banks in Foundry

and then drive to the shops in Copperhouse and vice versa. Improving links between these two centres is a major regeneration priority for the town.

Throughout the town's regeneration care should be taken to ensure that Hayle is thought of and treated as a whole, rather than concentrating on single areas to the detriment of other locations. For example, although obviously the proposed and long awaited harbour redevelopment is a major opportunity for the town, this development should not be allowed to eclipse the needs and opportunities at the other end of the settlement at Copperhouse.

Historically Hayle has been somewhat disjointed – purposefully so due to the intense rivalry of the founding companies. However, for the town to reach its potential in the 21st century it needs to combine its resources and pull together as a more unified settlement.

Opportunities to improve the physical connectivity between the two ends of the town should be explored, such as a town centre hopper bus or tram service or an improved cycle route.

Enhance and define focal points within the townscape

Important urban focal points within the settlement are currently underplayed within the townscape. Better defining these important spaces has great potential for enhancing overall character. At present, good open spaces or intimate enclosures are too isolated to impact much on the wider settlement and several of the most significant urban focal points such as Foundry Square and Market Square at Copperhouse offer significant potential for improvement.

Retain industrial character through the redevelopment of industrial sites

Many of the former industrial areas of the town - the Harbour, Foundry and Copperhouse - are clearly target sites for future regeneration. Their historical importance and industrial character needs to be recognised and factored into future proposals. As part of the ongoing design process for the current harbour redevelopment proposals a Conservation Management Plan has been produced (prepared by Kathryn Sather Associates). The aim of this piece of work is to understand and safeguard the significance of the heritage asset in any future management, repair, alteration or new development projects. The Hayle Historic Audit provides detailed information about the significance and value of surviving buildings, features and elements and should be used to inform both the development of proposals and the planning decision making process.

Integrate conservation approaches to regeneration – respect historic buildings

Redundant and underused buildings

The overall quality of the built environment in Hayle throws into sharp contrast a relatively small number of structures and sites which are currently underused or where character has been eroded by a past lack of care.

Traditional approaches to repair, maintenance and enhancement of historic buildings could be an important component of regeneration in Hayle, helping to improve attractiveness, support property values and benefit the overall condition of the housing and general building stocks. The THI 'Heritage' funded scheme will target many such opportunities.

As well as reinstating distinctive architectural features on historic buildings and in the public realm, this could free up an available stock of

buildings and sites for development and reuse and act as a significant catalyst to wider investment in the town, as has already been the case with the completed elements of the Foundry regeneration. The result would be a sustainable source of brownfield development sites, increased occupation, and help in meeting demand for (affordable) housing, thus securing the vitality of the town centre where historic buildings are concentrated.

LOTS type schemes can help create affordable housing and ensure maximum use of historic buildings, increasing surveillance levels and evening activity levels and spend.

Shopfronts and architectural details
Hayle has a good collection of surviving historic shopfronts and buildings with elaborate architectural detailing. To maintain this interest and integrity such structures should be looked after and sensitively repaired if necessary. The THI has such works as one of its key aims.

Conversely, there are a number of historic buildings within the town that are currently marred by inappropriate shopfronts and signage. Where the opportunities arise improvements and more appropriate fittings should be encouraged.

Manage the public realm and enhance the townscape

In a number of areas the quality of the surviving historic buildings and urban form of the town are let down by the existing public realm streetscaping and street furniture. For example the continuous use of standard street lighting along the spine road of the settlement fails to respect the character of the historic streetscape and could be beneficially replaced with fittings of a more suitable scale and design.

Another potential improvement for the townscape would be the undergrounding of heavy overhead cables which mar the urban experience and views in a number of locations throughout the town.

In general the public realm of Hayle is not as cluttered as many other Cornish towns. Historic elements include granite kerb stones and other features such as the numerous granite boundary stones. However, much of the public realm is of poor quality modern materials which add little to the special character of the town. The THI has a specific objective of restoring and / or upgrading historic street and paving surfaces and other streetscape features at key locations within the town.

Traffic is often a negative factor in the streetscape and several areas have been highlighted where a reduction in the carriageway, junction mouths and related road signage and markings could usefully be undertaken to reclaim important urban places for the pedestrian. There are a number of places in Hayle that clearly illustrate the difference between 'Roads' as places for vehicles and 'Streets' as places for people.

Respect and utilise the town's natural setting as a positive asset

The waterfronts and natural resources of the town offer the opportunity of being better celebrated and promoted as positive and uniquely special assets of the town. The wildlife and scenic qualities of the flushing pools, river courses, estuary and sea and beaches are a very special resource for the future of the town and have the potential to be used in the promotion and development of a Unique Selling Point (USP) for the town, a way to tap into the thriving local tourist market. Potential opportunities to increase physical and intellectual access to this resource should be explored.

Manage and enhance the urban greenscape

Hayle benefits significantly from areas of highly attractive planting, parks and

gardens. This should be continued and seen as an important part of the character of the town and considered in future regeneration proposals throughout the settlement. The potential for further planting including street trees could be considered as part of some townscape improvements.

Assert Hayle's historic significance

Hayle's fascinating origins and development offer another USP that could be developed as part of the future success of the town. There is much that remains and much to celebrate.

The formation and development of Hayle has been shaped by a fascinating story of rivalry between two industrial companies. The international importance of activities undertaken here will be recognised within the proposed Cornish Mining Landscape World Heritage Site and there is considerable scope for increased interpretation and celebration of the town's important and interesting past. This can be achieved through a wide variety of activities including: increased interpretation on the ground, town trails (as proposed as part of the THI), a blue plaque scheme, public art, a town museum or display, walks and talks and days of celebration of the town's past such as Camborne and Redruth's Trevithick and Murdoch Days.

8 Character areas

1: Copperhouse

(Fig 7 and Character Area summary sheet 1)

Statement of significance

Copperhouse is the commercial heart of Hayle. It retains a Market House of 1839 and a good collection of 19th century shopfronts. Historically an intensely industrial area, this use has reduced over time but an industrial character is retained in the surviving elements including the canal and dock, the continued warehouse / manufacture use of the former industrial sites and in the strong grid pattern of industrial housing laid out by the CCCo on the rising land to the south of Copperhouse Pool. A significant feature of the architecture of the area is the extensive use of scoria block, a by-product from the CCCo's copper smelter located here in the 18th and 19th centuries.

Issues

- The major historic industrial buildings in Copperhouse have been demolished, as have important early industrial housing. The industrial character of the sites is retained but is under threat from redevelopment pressure. Loss of this character risks the loss of the identity of the place and the understanding of why the settlement developed.
- Key urban spaces are underplayed and dominated by the main spine road causing a weakening of sense of place.
- Elements of the CCCo survive but are not celebrated.
- Loggan's Mill is an iconic building of the town but has been derelict and so under threat for many years.
- Historic shopfronts are an important feature of the area but can be lost through lack of sensitive repair. Poor shopfronts degrade the building in which they are set and the general streetscape.
- Several shop units are underused or empty, reducing the vitality of the main street.
- Brewery complex and adjacent office building are underused and derelict and therefore under threat.
- Although not excessively cluttered the public realm is generally of low quality.
- The waterfront and Copperhouse Pool could be used in a more extensive way as a positive asset of the area.

Recommendations

- **Retain the industrial character of the CCCo sites. Conserve any remnant remains and investigate the archaeological potential of the site.**
- **Enhance and better define the key urban spaces to strengthen the sense of place and urban form.**
- **Celebrate the historic importance of Copperhouse and the CCCo.**
- **Secure a new use for Loggan's Mill.**
- **Celebrate, repair and maintain the surviving historic shopfronts and replace inappropriate late 20th century examples.**
- **Seek to maximise use and reuse underused and empty shop units.**
- **Secure a new use for the Brewery complex and its office building.**
- **Enhance the special character of the area through public realm improvements.**
- **Explore the potential for waterfront access in the car park at Market Square.**

Historic background and key components

Copperhouse developed largely through the activities of the CCCo. From the development of the copper smelter in 1758 on the foreshore waste of Ventonleague (Copperhouse Creek) and the subsequent construction of the Copperhouse Dock (1769) and canal connecting the smelter to Penpol Creek (1780) the townscape and character of this area was being shaped by the company's needs and its success. Purposefully developed as a commercial centre from the start, Copperhouse is historically, and remains today the commercial heart of Hayle. The grid of industrial housing laid over the rising hillside forms the most distinctly urban character area in the town.

Key components in this character area include:

- Bodriggy – a pre-urban estate centre
- Ventonleague – settlement focus to the north east with smallholders cottages and industrial housing, with 'village green'
- Copperhouse Fore Street and Market Square – retail heart of Hayle
- Grid of industrial housing
- Industrial sites and remains
- Loggans Mill
- Residential ribbon development along Fore Street and Commercial Road to the west and Copper Terrace and Beatrice Terrace to the east
- Institutional and industrial development on the south shore of Copperhouse Pool on reclaimed land

Topography and urban form

The main road running through this character area comprises Beatrice Terrace, Copper Terrace, Market Square, Fore Street and Commercial Road. It forms a level route skirting Copperhouse Pool and was built as a turnpike route in 1837/8 on reclaimed land from the foreshore waste of Copperhouse Creek. All development along the north side of this spine road is on made-ground. Prior to this earlier quays were connected by access lanes but the main route to the estuary was above the industrial town on the rising land to the south via High Lanes.

12-16 Commercial Road. Buildings set at a different alignment to the road, relating to an earlier quay

Despite the loss of much of the CCCo's historic industrial works, industrial character remains in Copperhouse

There are a number of cottage rows on the southern side of the road that have a different alignment than the road itself, such as 12-16 Commercial Road and 86 – 108 Commercial Road. These structures are of 18th century and early 19th century date and predate the turnpike, their angle relating to an earlier road. Plots 12-16 Commercial Road were related to the earlier Bodriggy Quay which was close to the site of the present war memorial.

The pre urban estate centre at Bodriggy has now been subsumed into the industrial town. This complex originally stood alone, much as Trevassack, to the east, continues to do. It forms a self-contained and inward looking element of the townscape.

The industrial sites of the CCCo are located to the south of residential development on Copper Terrace and Beatrice Terrace. Originally these sites, located on the foreshore of the Creek, were served by the Copperhouse Dock. As land was reclaimed and developed for residential and commercial use the remains of these former industrial works have been distanced from the dock.

Although little from the historic industrial uses survive, the sites retain their industrial character with the surviving 18th and 19th century boundary walls continuing to define the layout and grain of the sites and the 20th century industrial units reflecting something of the original industrial character and scale. There is, however, pressure for redevelopment on these sites.

Recommendation: Retain the industrial character of the CCCo sites. Conserve any remnant remains and investigate the archaeological potential of the site.

- The industrial use of these sites is the reason for the creation of the settlement. This importance should be reflected in the treatment of the sites. The industrial character and scale of the area should be retained in any future redevelopment.
- Historic boundary walls and other surviving remnants should be retained and conserved.
- Due to the high archaeological potential of these sites archaeological investigation and mitigation may be required as part of any future redevelopment.

The grid of workers' housing laid out by the CCCo on the rising ground to the south of the main spine road has a strong urban form. It responds to the underlying topography with rows of houses laid out along the contour on the level east west roads and little development against the gradient, on the north south roads. This area together with the housing at Ventonleague is characterised by the long garden strips attached to the plots – very similar in pattern to the industrial housing in Camborne.

The curving line of the main spine road usefully encloses and defines certain areas and adds an underlying urban quality. However, key urban spaces within Copperhouse are somewhat underplayed at present. For example the Market Square which forms the heart of the Copperhouse settlement complete with Market House, has little sense of its urban importance. The constant flow of traffic along the main road cuts the settlement in two and ignores important urban focal points. Other important urban spaces along the main road in this character area include the road widening by the Cornish Arms and the triangular space with the war memorial. As a result of the traffic the settlement is perceived as one long strand. By enhancing these important urban spaces as well as strengthening the urban form of the town, a stronger sense of place and progression through the settlement could be created and the impact of the road lessened.

Recommendation: Enhance and better define the key urban spaces to strengthen the sense of place and urban form.

- Maximise the potential of these important townscape spaces.
- Make the most of the enclosing built fabric by ensuring full use, sensitive treatment and good levels of maintenance.
- Utilise all potential assets, such as important trees, views, access to waterfronts, good urban form.

- Make the traffic respect 'Place'. Reduce the negative impact of traffic by reclaiming these important spaces for people rather than vehicles. Reduce carriageway widths, make the road respect the urban form, ensure road markings and related signage do not degrade character.
- Use public realm treatment and where appropriate soft landscaping and street trees to enhance and announce key spaces.

Survival of standing historic fabric

The majority of surviving buildings in this character area date to the 19th century. There are however some earlier survivals such as the grade II* listed pre-urban estate centre of Bodriggy containing 17th century fabric in the early 18th century remodelled house. The current building dates to a rebuild of about 1718 and has a granite ashlar façade and Delabole slate roof. It has an attached farmyard.

Originally a highly industrialised area, very little of the great CCCo engineering and foundry works still survive. The major industrial buildings have been lost but elements of the works survive and are all the more important for this. The extant boundary walls have already been noted; in addition to this a fragment of the 18th century copper smelting complex survives in a car park wall.

More substantial CCCo survivals are a number of important 18th century ancillary buildings close to the industrial sites. The company's 18th century office survives as 2 Pond Walk (*c*1775) with further offices surviving at 9-10 Market Street (1779). It is thought that this property was the Manager's House prior to the construction of Riviere House (1791).

Other important CCCo industrial survivals include the canal and Copperhouse Dock. As with many of the

The grid of workers housing created by the CCCo is a strong underlying topographical form

Key urban spaces, such as the triangular road junction featuring the war memorial, are currently somewhat underplayed

A surviving fragment of the CCCo's 18th century copper smelting complex, Copper Terrace

9-10 Market Street. The three storey building to the left is thought to be the early CCCo's Manager's House

structures relating to the company, all these survivals feature the distinctive scoria block in their construction.

Recommendation: Celebrate the historic importance of Copperhouse and the CCCo.

- The CCCo was the reason Copperhouse developed. This significance should be celebrated.
- The surviving fragment of the CCCo complex could be stabilised and conserved and its significance interpreted.
- A blue plaque scheme could be considered for the surviving buildings and structures relating to the company.
- A public monument could be considered commemorating the international significance of the company and its role in Copperhouse.

Other 18th century buildings survive in this area such as the already mentioned 12-16 Commercial Road and some of the first housing at Ventonleague.

The 19th century survivals include the industrial housing of the CCCo grid development, roadside ribbon development along the main spine road of the settlement and the civic and commercial buildings in the settlement centre.

As well as the loss of the CCCo industrial structures there have been further significant losses in this area. Early industrial housing in Market Street has been demolished and although it still contains the oldest standing buildings in Copperhouse, the street's partial redevelopment has left what should be an intimate and exciting area bereft of focus and quality. The Wesleyan chapel (1816) and school on Chapel Lane was demolished in 1998 after years of being vacant. It was a significant example of a town chapel with full gallery. Its scoria block boundary wall still survives. The Penmare Hotel (1824) is another recent loss.

Architecture, materials and detail

The architectural style seen in Copperhouse is dominated by a residential two storey scale. Many of the commercial buildings in the main street were originally residential properties converted as the retail market grew. There are however important industrial complexes and some civic structures of a larger scale.

The extensive use of scoria in this area is a notable characteristic, a defining feature of the 'Copperhouse vernacular'. This by-product of the Copperhouse smelter was once offered free to workers of the CCCo and its hard wearing characteristics have allowed it to be recycled in later buildings. It is used as the main building material in many structures, is left exposed, painted or rendered over, it is used for detailing such as quoins and door and window reveals in conjunction with killas rubble and it is used in boundary walls. The characteristic cast seam lines are often visible through painted facades and it is likely that more are disguised under stucco and rendered surfaces.

Many of the buildings in this area are rendered with a greater or lesser degree of architectural ornamentation.

There are several landmark buildings and important architectural groups in the Copperhouse area.

Loggans Mill to the far east, forms a major monument within Hayle. It has become the iconic feature of the eastern gateway to the town. The current building is a rebuild of 1852 following an extensive fire, but the mill is first recorded in 1688 and is likely to have medieval antecedents. It has been derelict for many years despite its listing status and the extensive redevelopment of its surrounding site, which to some extent has compromised its integrity. This

building is very important to Hayle and should be returned to full use.

Recommendation: Secure a new use for Loggan's Mill.

- This building is ripe for sensitive conversion. By securing a new use for the building its future survival will be safeguarded.

Market Square has an interesting group of buildings which creates an important urban centrepiece and includes:

- *The Market House* – This grade II listed building was built by the CCCo in 1839, replacing an earlier market house on the site of St George's Hall / Cinema. It is the most important urban building in Copperhouse. It has a stuccoed front with granite dressed rustications. An original clock tower which emphasised its civic importance was lost following a fire. Current signage detracts from the architectural quality of the building and erodes its potential contribution to place-making in Market Square.
- *St George's Hall/Cinema* – this structure may incorporate elements of the earlier Market House built on the site in the 18th century. Its flamboyant terracotta façade dates from the early 20th century and is one of the most architecturally ornate statements in Hayle and one of the few, if not only, examples of imported terracotta. Its unrendered side elevations are of rubble and scoria block. The scale and grandeur of this building dwarf the neighbouring structures. It forms a visual stop to the eastern end of curving Fore Street. The white rendered projection that defaces the structure is a 1930s projection room; the original arrangement housed in a smaller, central oriel projection is recorded in historic photographs. Sufficient evidence survives to return the architectural integrity of the building. It is important that the structure is treated as one in the future.
- *Phillack Church Hall* – on the opposite side of the street and set back from the road behind a railed yard. This originally 18th century building of scoria blocks (possibly the Sunday School for the first Methodist chapel) has been re-fronted and rendered with a parapet inscribed Phillack Church Hall in 1912. While an interesting and historically valuable building, the hall has relatively little impact in the wider streetscape and its setting and surroundings need considerable enhancement.

The Market House of 1839, now much altered

St George's Hall. The glazed terracotta façade of this former cinema is defaced by a 1930s extension to house a projection room

Fore Street forms the main shopping area of Copperhouse. A constant and regular build line defines either side of the relatively wide street. Diverse building heights, widths and styles make up this constant elevation and add diversity to the area. The varied roof line and styles

of roof including half hipped and hipped as well as the more standard gable style are a feature. Although universally of two stories, the scale of the buildings varies extensively. Public houses are notably larger than the shops.

- *The Copperhouse Inn* – a grade II listed building originally of 1791 but remodelled in the early 19th century has stucco walls with classical details including a porch featuring Doric columns. The rear elevations are of painted scoria blocks.
- *The Cornubia Tavern* – although of two stories the scale of this grade II listed building of 1867 dwarfs its neighbours, indicating its urban importance. Another stucco building with classical detailing, this establishment was used for CCCo meetings, including the eventual sale of the company in 1870.
- *Shops* – Copperhouse has always been, and remains, the main retail centre in Hayle. There are a number of good surviving 19th century shop fronts. There is markedly better survival on the south side of the road where some early 19th century examples survive. Later 19th century examples are associated with the development of the north side of Fore Street, and the rebuilding of earlier buildings on the south side. These historic shopfronts form an important part of the character of Copperhouse.
- There are also late 20th century frontages and signage that are unsympathetic to the building in which they have been set and are incongruous in the streetscape.

Recommendation: Celebrate, repair and maintain the surviving historic shopfronts and replace inappropriate late 20th century examples.

- Surviving traditional shopfronts should be enjoyed, well maintained and sympathetically repaired.
- Poor frontages should be targeted for sensitive replacement to enhance individual buildings and the street as a whole. Prime targets here include the Market House and St George's Hall / cinema.
- The Civic Trust report for the town and Penwith DC's shopfront design guidance set out basic principles of good shopfront design:
- *respect neighbouring shopfronts*
- *relate the shopfront to the rest of the building*
- *re-use existing old features wherever possible, replacing with replicas where parts are worn out, and only in extremes redesigning from scratch*
- *pay attention to the design of shopsigns, taking care over choice of lettering and avoiding over-large, brightly-coloured back-lit adverts*
- *encourage interesting displays of goods or services - after all the whole point of having a large shop window.*
- This area also has a number of underused and empty shop units. These buildings reduce the vitality of the rest of the streetscape.

Recommendation: Seek to maximise use and reuse underused and empty shop units.

- By keeping historic buildings in use they are more likely to be maintained and therefore not fall into disrepair.
- Maximising use of upper floors through LOTS-type schemes is a means of ensuring maximum financial return from properties, increasing natural surveillance and boosting evening economies. Such a scheme should be considered here.

Fore Street, Copperhouse.

A group of good surviving historic shopfronts are an important characteristic of the area

Underused and empty shop units reduce the vitality of the area

The former Brewery is an important grade II listed complex and suitable for sensitive conversion

Elsewhere within this character area there are other public and commercial buildings of interest.

- *The Cornish Arms* – grade II listed, built originally in the late 18th/early 19th century as a beer shop. This inn has a half hipped scantle slate roof and might originally have been two houses.
- *The Brewery* – grade II listed, built between 1842-77 as a brewery and bottling plant. The office building, Also grade II listed, probably *c*1820, stands in a poor condition and is in danger of being lost. The unlisted maltings, probably of *c*1815-20, is a three storey painted stone building that has been converted to residential use. Its original industrial character has been retained in the main street elevation. The brewery complex appears to be in only partial use.

Recommendation: Secure a new use for the Brewery complex and its office building.

- These buildings are suitable for sensitive conversion that would retain their important industrial character and securing the building's future survival.

- *St John's Mission Church, St John's Street* – dating from 1895 this building is rendered with a bellcote and half-hipped roof and set behind a rubble wall with granite piers.
- *Bodriggy Primary School, Bodriggy Street* – this school was built in 1923 from dressed granite in a stripped down style based on Sylvanus Trevail's late 19th century Cornish Board School designs.

The major surviving element of the industrial settlement at Copperhouse is the workers housing laid out in grids of streets by the CCCo.

- *Early housing – late 18th century* - The first houses were built in the late 18th

century in the Ventonleague area. Constructed from rendered scoria blocks they were built in a piecemeal fashion, some with large gardens.

Early 19th century developments included Prospect Place, Higher Church Street, St John's Street and Bodriggy Street. These rows of houses were built in a mixture of materials – painted and rendered rubble, some exposed rubble with scoria block details, and some roughcast with stucco detailing. The company provided a hierarchy of accommodation with streets containing both half and double fronted houses. This range of sizes was also reflected in the size of the gardens.

Ribbon development housing along the main spine road running through the area is an important element of this character area.

- *Mid 19th century housing* – following the construction of the turnpike road in 1839 Commercial Road was created. The houses built along this new road are of a typical Hayle style of roughcast with stucco detailing. Similar style houses were built in Mount Pleasant and also included later examples of stone fronted houses.

Later housing was developed over the disused Copper Foundry site and its ropewalk from 1901.

- *Later housing* – Copper Terrace is a typical example of this Edwardian housing development. A true terrace of uniform housing with hipped two storey bay windows, rendered street elevations with enriched moulded stucco surrounds. Rear elevations and boundary walls show the reuse of reclaimed scoria blocks, presumably from the various CCCo buildings formerly on the site.

Industrial housing set straight on the pavement edge, Bodriggy Street

Copper Terrace

Streetscape and views

The Copperhouse area has a range of streetscapes.

- the densely urban, hard landscape dominated streets in the industrial housing grid with houses either set on the pavement edge or behind small front yards with boundary walls.
- the wide, relatively clutter free pavements in the main shopping street which emphasis a feeling of space
- the rural 'village green' ensemble at Ventonleague Green with the chapel set behind its railed forecourt forming the focal point of this remarkably complete 19th century streetscape
- and the ribbon development along the spine road set behind generous front gardens enclosed with boundary walls and gates rising up to the houses set above the road level.

Throughout these scenes there are some surviving historic elements in the street scene, such as granite kerb stones and

boundary markers. However, much of the public realm is of modern, low quality materials which whilst not detracting significantly does not add positively to the special character of Copperhouse.

Compared to many town centres Copperhouse does not suffer overly from streetscape clutter. However, noticeable negative features include the excessive and heavy overhead cables, prominent CCTV in front of The Cornubia, an important historic building, and the standard street lighting that pays little respect to the character of the townscape.

A row of granite posts subdivides the wide pavement by the Market House and the Old Cinema. This has become a focus of street furniture with litter bins and signage attracted to this line. As a result the true width of the pavement and sense of space is compromised and the pavement has been taken over for car parking.

Recommendation: Enhance the special character of the area through public realm improvements.

- There is significant scope for regeneration gain through townscape improvements to better define the quality of the underlying urban space and form and enhance the quality of the surrounding historic buildings.
- High quality, natural materials could add integrity to the streetscape in the form of improved surfacing.
- The negative impact of the road should be addressed. Narrowing the carriageway and maximising the footway is one method for making the spine road more 'street' than 'road' ie more pedestrian focused rather than vehicle focused. Assisted crossing points should be provided to reduce the north – south severance currently experienced.

Green space, soft landscaping and access to Copperhouse Pool are important elements in the Copperhouse streetscape. An attractive, almost promenade-like piece of townscaping has been carried out at the bend in Fore Street where it breaks onto the edge of the Pool. Exotic planting, benches and railings create a pleasant place to soak up the exceptional views that are available, of the Pool, the Black Bridge and development across the Pool to Phillack churchtown and the towans beyond. The car park at Market Square offers potential for a similar scheme at the heart of the settlement, part of the place-making enhancement of this primary urban space.

Recommendation: Explore the potential for waterfront access in the car park at Market Square.

Attractive planting and a place to sit and enjoy views over the Copperhouse Pool

Buried Archaeological potential

- Remains of the CCCo copper smelter and foundry complexes, including evidence of the 18th and 19th century buildings, machine fittings and casting floors and other industrial processes, the ropewalk, stables and farm, millpool and leat system.
- Earlier quays preserved in reclaimed made ground of the north side and line of the Fore Street – Commercial Road spine route – eg Bodriggy Quay close to the war memorial.
- The round Chapel of 1784.
- The first market house on the site of the later cinema.
- Limekiln on the south side of Market Square.

- Remains of the core of the original Copperhouse settlement that was demolished in the late 20th century with no record of the buildings destroyed, nor of the townscape eliminated. Now Pool's Court development. Including remains of the early housing at Market Street and buildings used by J & F Pool's metal working business when it was set up in 1862.
- Evidence for mining exploration adits dug by the CCCo in the late 18th and early 19th century and known as Wheal Jane and Wheal Arthur. Thought to be somewhere near the Copperhouse Dock Gate.

2: Foundry

(Fig 7 & character area summary sheet)

Statement of significance

Foundry Square forms the most impressive urban set-piece of the town. The scale and detailing of the surrounding architecture displays a grandeur and distinctly urban character not matched to the same extent elsewhere in Hayle. Foundry forms a secondary commercial focus in the town, particularly important for banks, post office, cafes and local shops. The important remains of the foundry complex represents the best surviving industrial group in the town and one of the best in Cornwall. The international importance of Harvey's Foundry makes the survival and ongoing regeneration of the complex all the more important in the context of the World Heritage Site bid. The large villas set in their mature landscaped grounds are closely connected with the ambition of the Harvey family and business, and are a distinctive feature of the area and an important architectural group within the town.

Issues

- Foundry Square is underplayed and dominated by traffic.
- The long term derelict and underused foundry complex is being regenerated.
- Fire damage suffered by the Lloyds building left the structure single storey and reduced the sense of enclosure on the east side of Foundry Square.
- The area contains a number of inappropriate buildings that detract from the quality of the townscape.
- The public realm treatment of this area is often of low quality.
- Demolition of historic buildings has left the railway station somewhat denuded.
- The large villa land plots are under pressure for sub division and increased density of development.

Recommendations

- **Reinforce the urban primacy of Foundry Square**
- **Celebrate the historic importance of Harvey's Foundry and town**
- **Regain the sense of enclosure and scale on the eastern side of Foundry Square**
- **Address the adverse visual impact of certain poorly designed buildings**
- **Enhance the special character of the area through public realm improvements**
- **Enhance the railway station as a key gateway to the town**
- **Recognise, respect and enhance the importance of large gardens, ornamental and designed landscapes, open green spaces, trees and planting in the area**
- **Counter the threat of plot subdivision and increased density of development**

Historic background and key components

Foundry developed largely through the 18th and 19th century activities of Harvey's Foundry, although the strategic importance of the estuary and the meeting of the three rivers had encouraged earlier activity including Carnsew Iron Age hill fort.

The first industrial development that became part of the creation of the town took place in 1758 when a number of residential properties were built in association with a new quay at Carnsew. Major development of the area, however, began after John Harvey set up a foundry and engineering works here in 1779. This was the establishment that gave the area its name and shaped its present day character.

Unlike the CCCo at Copperhouse, Harvey's did not build a settlement of industrial housing at Foundry. A shortage of available land for such development, a fluctuating workforce and other priorities

led to available land being used for the horses vital to the transportation logistics of the business and for grand houses for the extended family and company managers and directors.

Shops, housing and service facilities developed around the foundry, although, tightly controlled by the Harvey interests, the development was not as marked as at Copperhouse. The two rival settlements, therefore, developed distinctly different characters as a result.

Key components in this character area include:

- Carnsew Iron Age hill fort and the surrounding 19th century landscape garden
- Remains of the foundry complex – the most complete industrial survival in the town
- Foundry Square – an important urban 'set-piece' within the town
- The railway station and viaduct
- Rows of industrial housing and terraces of residential housing
- Large houses and villas

Topography and urban form

The close relationship of the area with the estuary is the reason for the initial development here. The hill fort was strategically located to control the estuary and the later industrial activities were sited to take advantage of the estuary, quays and wharfs and the water power of the river flowing to the sea. However, this relationship is no longer readily apparent within the streetscape as the viaduct screens the area from views of the harbour.

Foundry Square, the central core of this area, is developed on reclaimed ground from the marshy foreshore and waste ground at the head of the Penpol branch of the estuary. The outline of its former course has been fossilised in the street pattern, broadly defined by the western side of Foundry Square and Foundry Hill and the line of Chapel Terrace. The river is now culverted under Foundry Square and Foundry Hill between the millpond and Penpol Quay.

The principal pre urban road of the area runs through this Character Area and has obviously been an important factor in the development of the town. It is now represented as Penpol Road and Foundry Hill and originally skirted and crossed over the Penpol river.

Apart from the level lying ground at Foundry Square the rest of the area is set on rising ground, to the east rising to High Lanes and to the south to a plateau on which the large houses of Downes and Paradise Park (formerly Glanmor) are set. The foundry complex displays extensive terracing into this hillside with the creation of tiered platforms.

There is a wide variety of urban form within this character area, ranging from the large scale grain of the industrial complexes and high status grand houses to the densely packed and fine grain of the industrial housing and terraces with their uniform pattern and long, thin garden strips. This mixture of form means that the area is not as densely 'urban' in character as the grid pattern houses of Copperhouse.

Foundry Square is the most important urban space in the Character Area and one of the most important in the town as a whole. This large open space surrounded by some of the most impressive architecture of the town currently has a rather barren atmosphere and is dominated by the busy road and junction layout. It offers the best opportunity in Hayle to provide a focal space of real character.

Recommendation: Reinforce the urban primacy of Foundry Square.

- Maximise the potential of Foundry Square. Reclaim this grand urban set-piece and present the area to emphasis

the quality of the space and the surrounding buildings.

- Reduce the negative impact of the road and junction. Make the traffic respect 'Place' and reclaim this important space for people rather than abandoning it to vehicles. Reduce carriageway widths, provide improved crossing places, ensure road markings and related signage do not degrade character.
- Use the public realm treatment to better unify the space.
- Make the most of the enclosing architecture; ensure full use, sensitive treatment and good levels of maintenance.

Survival of standing historic fabric

The majority of the surviving fabric in this character area dates to the 19th century. However, some earlier buildings survive including Penpol House, a pre-urban estate centre. This grade II listed property set within walled gardens, is a 16th century house, remodelled in the 17th, 18th and 19th centuries.

The surviving elements of the foundry complex form the most complete industrial survival in the town and one of the best in Cornwall and are of great significance. After years of dereliction and under use, which has led to the loss of some elements of the complex, the ongoing regeneration of the site will ensure the buildings and industrial character of the area will be retained into the future – a major achievement for the town. The regeneration has breathed new life into the area, providing new office, business and residential accommodation space for the town. As well as conservation of the historic buildings there has also been an element of new building within the site, providing Hayle with overtly 21st century architecture.

Foundry Square, an important urban space currently somewhat underplayed

The road running through Foundry Square currently dominates the area with prominent signage and road markings

Most of the 25 or so surviving buildings date from the major phase of expansion of the foundry of 1839-45 and includes –

- Offices – 24 Foundry Square – grade II* – early 19th century extension of original 1780s offices. Harvey and Co. – stucco, slate hung clock tower with pyramidal roof, recently regenerated
- Elements of a Boring mill – grade II – massive buttress, rubble masonry, ashlar granite blocks
- Elements of a Boiler house – grade II – masonry, dressed granite quoins
- Pattern shop – grade II – killas and elvan rubble, granite quoins and brick dressings
- Plantation Stores – grade II – rubblestone and granite quoins

Stable complex including:

Regeneration of the Foundry has already had a positive effect in the area. Panel from the newly refurbished 24 Foundry Square with locally distinct references

Surviving elements of the Foundry are important heritage assets and ongoing works as part of the THI/HERs will ensure the site is conserved and regenerated for the benefit of the town

- Late 18th century barn– grade II – rubble and brick with granite quoins.
- Granary – grade II – late 18th early 19th century – rubble with dressed granite quoins and brick detail.
- Two stable blocks
- Fire engine shed
- Boundary walls – rubblestone and granite capped with buff bricks.

These are currently undergoing repair and conversion and comprise a critical project in Hayle Townscape's regeneration programme.

Across the road from the main foundry complex are the remains of a hammer mill and a grist mill with associated mill ponds. These remains have been used to create a public park.

Principal losses from the complex include several key buildings such as the 'Coliseum' building which formed the street frontage onto Foundry Hill and the original 'Foundry House', John Harvey's own house built *c*1800. Also the large casting shop of the foundry has been lost, its site partially built over by the Bookers Warehouse building, which does little to enhance the surviving structures.

The complex has a dominant role in the local townscape and will be important in terms of the interconnection between the redeveloped harbour and the historic settlement.

Recommendation: Celebrate the historic importance of Harvey's Foundry and town.

- Harvey's Foundry was the reason Foundry developed. The company was internationally significant. This significance should be celebrated.
- The ongoing programme of regeneration ensures the survival of this important complex.
- Interpretation of the buildings and their local and international significance would promote public access to understanding and valuing the Foundry townscape. A blue plaque scheme should be considered.
- As recommended in the Civic Trust report of 1994 a public monument should be considered commemorating the international significance of the company and its role in Foundry and Hayle.

Tin smelting was another major industrial activity in Foundry in the 19th century. Of the three smelters that worked here, there are remains of Mellanear Smelter at the southern end of Millpond Avenue.

Nineteenth century survivals include the residential rows and terraces that developed around the foundry, the large villas and the civic and commercial

buildings that serviced Harvey's and the local population.

Principal losses of the area include an early railway station of 1843, now the site of the pocket park, Isis Gardens, below the viaduct at Foundry Square, a Drill Hall now the Post Office site, a Men's Institute, a Literary Institution close to the early railway station and the station buildings of the later replacement and current railway station of 1852.

Architecture, materials and detail

Foundry contains some of the most aspirational architectural of the town, possibly a direct result of the Harvey's ambition. Here are the grand civic statements, typified by the three storey structures of polite architectural design with classical references which define Foundry Square and the ostentatious villas of the foundry elite. These architectural statements are set side-by-side with the industrial processes of the foundry and related works and the workers' cottage rows and middling bay windowed terraces.

Notable for the absence of scoria block, common building materials and finishes include stuccoed elevations, sometimes elaborately decorated, of the prestigious civic buildings, villas and villa rows. Pastel shades and neutral tones dominate the area's colour scheme. Surviving industrial structures, workers' rows and later terraces are characterised by their exposed killas and granite rubble walls with granite lintels and dressings. The current 'Foundry House', the former Cornubia Biscuit factory and stores, is of rubble build but its red brick dressings dominate the impressive street frontage. This use of exposed brick is unusual in the town, but has been copied by the adjacent apartment buildings, on the site of the former 'Coliseum' building.

Side elevations are often of exposed rubble, as seen with Foundry House and Foundry chapel.

There are several landmark buildings and important architectural groups in Foundry.

Foundry Square is one of the most overtly urban spaces within Hayle and this has much to do with the group of buildings that define the space.

- *White Hart Hotel* – This grade II* listed building was built by Henry Harvey *c*1838 on land reclaimed from Penpol Pool. Built by Harvey to replace the Old White Hart (adjacent) this building was used as a counthouse / reception suite for Harvey's. This is a most significant landmark building in Foundry Square. Three stories in height, its stucco façade with classical detailing including a central pediment above the parapet, engaged giant columns, pilasters and projecting porch complete with its life sized white hart, directly address the Square. This striking hotel with its robust architectural detailing is the key focal building in this important urban space.
- *Freemasons Hall* 8-9 Foundry Square – Adjacent to the White Hart Hotel this grade II listed building of early 19th century date housed the original White Hart establishment where the hostess was Jane Trevithick, sister of Henry Harvey and wife of the engineer Richard Trevithick. The two storey building is of granite ashlar with irregular rubble packing, presumably intended to be rendered over. It has a symmetrical front elevation, three windows wide with a central doorway under a distinctive hipped roof. The difference in the scale, style and setting of the two White Hart buildings is notable.
- *Lloyds Bank* 3-4 Foundry Square – Forming the eastern side of the Square the character of this grade II listed structure has been dramatically changed following extensive fire

The impressive White Hart Hotel forms the principal building in Foundry Square

Lloyds Bank, formerly a public hall and market house, originally of two storeys but badly damaged in a fire

damage. Built in 1869 as a public hall with a market house in the basement, it was designed as a grand building of two storeys – a rival in status to the White Hart. However, a fire in 1935 led to the loss of the upper floor. Now of one storey, this classically detailed stuccoed building struggles to impose its presence on the wide expanse of Foundry Square, not aided by its unlandscaped, walled forecourt.

Recommendation: Regain the sense of enclosure and scale on the eastern side of Foundry square.

- If the opportunity arises thought should be given to raising the height of the Lloyds Bank building to its original scale in order to better enclose the Square.
- Alternatively landscaping of the forecourt could help to regain this sense of enclosure. Mature street trees could provide the necessary height to respond to the scale of this important urban space.

- *Foundry House* 18-20 Foundry Square - The western side of Foundry Square is dominated by the grade II listed, red brick detailed Foundry House. Originally this site was used as Harvey's coppersmith's shop, later the foundry offices and shop stood on this site but the current building largely dates to 1895 and its conversion to the Cornubia biscuit factory and stores, although elements of the earlier buildings may survive. This three storey building creates a very active street frontage with ground floor shop units, distinctive first floor round headed windows and paired sashes to the second floor.
- Other buildings on the western elevation of the Square are all thought to be related to the foundry complex or Harvey's general trading business, including the newly refurbished 24 Foundry Square (John Harvey House) which was the 19th century offices of the company, 22-23 Foundry Square a pair of shops in a stuccoed building with planted pilasters with iconic capitals (now Barclays bank) and a double fronted house, 21 Foundry Square, now stripped of its stuccoed finish to expose rubble walling.
- *White's Warehouse* 25 Foundry Square - Set back from the road and forming a yard with the northern elevation of 24 Foundry Square complete with its prominent clock tower, is a late 19th century brick detailed warehouse. The detailing and scale of the building give it a similar character to

Foundry House. This is undergoing repair and conversion for commercial uses.

- *Post Office* - Just off the main defined Square is the early 20th century Post Office. This building of *c*1911 is on the site of the former drill hall and, before that, of the tin smelter. Angled to address the Square it holds a prominent position and architecturally represents a continuation of the local traditional style of roughcast and moulded stucco.
- *Office* – the mid 20th century sorting office / telephone exchange is visually intrusive in this central core area. Its form, detailing and materials fail to respond to the character and quality of the surrounding area. The building is highly visible from the car park, Chapel Terrace and Foundry Square and blocks views rather than defining or enclosing space.

Recommendation: Address the adverse visual impact of certain poorly designed buildings.

- When the opportunity arises such buildings should be replaced with more sensitive structures, that, whilst being of their time, are also of their place.

Other prominent commercial and civic buildings are located along Chapel Terrace.

- *Foundry Chapel* – This grade II listed building of 1845 forms one of the largest buildings of the area with the late 19th century school at the rear. The stucco front with classical details including pediment forms a strong architectural feature of the area. This former chapel is now in commercial use.
- To either side of the chapel originally residential buildings have been extended and converted into commercial use. Of mid 19th century date the original residential buildings are typical of the Hayle style of rendered roughcast and decorative stucco details. Non-Harvey controlled shops developed here in the 19th century in an architectural form distinctive in Hayle. Shop units were created in single storey extensions to residential houses. These units were built in the front gardens of the properties. The same architectural form is seen along Penpol Terrace and elsewhere within the town. Residential properties were also converted for commercial use; for example Grade II listed 18 Chapel Terrace was used as Bolitho's bank.

White's Warehouse, currently undergoing repair and conversion

Foundry Chapel an impressive building now converted to retail use

Further from the civic core of Foundry Square Penpol Junior and Infant School on Penpol Road is a notable building. Of

early 20th century date this single storey building is typical of early 20th century Cornish Board School detailing with walls of rock faced granite.

Penpol Road, early 19th century row of workers housing (left), with later *c*1900 terrace with bay windows and surviving shopfront to end property

Typical Hayle style roughcast and plaster detail villas, Penpol Road

Millpond Avenue villa set in extensive grounds

The important surviving industrial buildings of the Foundry complex have already been discussed. Former stable buildings to the rear of the White Hart Hotel have a strongly industrial/service character in strong contrast to the civic face given by the establishment onto the Square itself.

Early 19th century cottages, Millpond Avenue

As well as the foundry complex itself, housing relating to Harvey's also forms part of the character of the area, although of a different nature than that seen at Copperhouse.

- *Early housing* – early 19th century granite rubble cottages survive at the northern end of Millpond Avenue.
- *Drovers Row* 4-32 Foundry Hill (even) – Although Harvey's did not build as much workers housing as CCCo, they did build some, of which this is an example. This row of two storey cottages dates from *c*1830 and provided mixed single and double fronted properties of granite and sandstone. Most are now painted or rendered. As with the Copperhouse examples, these houses include long strip garden plots. In this example the plots form the front gardens to take advantage of the south facing aspect. The two end houses are noticeably larger than the rest. That to the east was known as 'The Foreman's House' and that to the west was home to a WJ Rawlings at the time of the tithe map. Then an official at Harvey's he later became a partner and commissioned Downes house and gardens to be made.

Penpol Road shows within a very short stretch the change in vernacular housing styles in Hayle through the 19th and early 20th centuries.

- *Penpol Road* (north west) – the earliest type of housing here is the early 19th century row of single-fronted half

houses of granite rubble with large granite lintels over the paired doors. This row is set behind enclosed front gardens. Chimney stacks and pots are a prominent feature of the roof line.

- *Penpol Road (north east)* – row of detached and semi-detached houses of mid / late 19th century date. Of two storeys, two and three windows wide, with hipped roofs and typical Hayle roughcast with rusticated stucco details.
- *Penpol Road (south)* – a true terrace of *c*1900. These substantial half houses of squared rubble with granite dressings feature two storey canted bay windows. Set behind longer front gardens, their boundaries feature railings and hedges as well as low lying boundary walls.

Perhaps more important to the distinctive character of the area and forming an important architectural group for the town is the development of large detached houses and villas set in landscaped gardens built for the extended Harvey family and managers and partners of the business. There is a remarkable collection of large and ostentatious houses including the following.

- *Millpond Avenue and Foundry Hill villas* – throughout the 1820s and 1830s provision was made for various members of the Harvey, West and Trevithick families on Harvey owned property. Substantial buildings of two stories with symmetrical facades of stucco with classical detailing are common. The series of residences along Millpond Avenue were originally designed to be highly visible from the road with evidence of railings in the low lying boundary walls. However, today more privacy is required and boundary hedges have been planted and gateways sealed, changing the character of the area.
- *Penpol Road villas* - After 1840 when space within the Harvey property was used up, further villas were built on land further afield. For example the three villas on Penpol Road built on the land of old business enemies the Millets of Penpol and in the 1850s *Glanmor* (now Paradise Park), Foundry Hill, on land owned by the Rodd family.
- *Downes* – was the culmination of the Harvey's villa series. Built for JW Rawlings, a partner in the firm, this grade II* listed small country house was designed by Edmund Sedding in the Tudor Gothic style and was built 1867-8. It is set within landscaped grounds which have been designated as a registered garden. The property is now a Roman Catholic convent.
- The Harvey's villas stimulated others to be built, such as Crofthill and Rodfield Villa that are not clearly linked to the family.

Streetscape and views

Recommendation: Enhance the special character of the area through public realm improvements.

- A series of enhancement suggestions is provided below.

Foundry Square is the most urban streetscape of the whole town. This formal set piece is currently dominated by the roads which run through it and associated signage. Recommendations have been suggested for enhancement. In particular the forecourt in front of Lloyds Bank offers scope for significant improvements. Removal of the boundary wall could usefully reintegrate the space with the rest of the Square and reclaim the space for pedestrians rather than barricade it off for vehicles.

Just off Foundry Square the car park forms something of a tear in the urban fabric of the town. Demolition of historic cottages has created this somewhat

denuded area. Although enclosed by a low lying boundary wall and featuring planters at the entrance and toilet block area the space erodes the urban grain. Further boundary planting, including mature trees could help enclose and contain the space.

In this area a lot of space is given over to wide road junctions. By reducing the carriageway, as well as controlling the traffic greater pavement space could be created promoting pedestrian priority. Left over areas are currently poorly presented and there is scope for considerable enhancement of the streetscape.

The current railway station, dating to 1852 was the replacement of the earlier terminus. Unfortunately its original station buildings have all been demolished, replaced with what are poor quality shelters in comparison. As a result the station gives a somewhat denuded welcome to the town, although welcome boards, maps and a recent railing scheme have provided some improvement. The railway station is an important gateway to the town and should provide good first impressions.

Recommendation: Enhance the railway station as a key gateway to the town.

- The impressive views available from the station could be better utilised with the undergrounding of the heavy overhead cables that obscure the views.

Green landscaping is also an important part of the character of the area. In many of the residential parts of Foundry front gardens play an important part of the overall streetscape. Planting softens the hard landscaping. Mature trees in the villa gardens of the Foundry Hill area form an important backdrop to the town.

Public parks and Downes registered garden are an important feature of this character area. The RNLI's Isis Gardens under the viaduct provides a green space in the heart of the urban core. Better crossing facilities from Foundry would promote its use and increase connectivity

Foundry Square, much space is taking up by wide road junctions, there is scope for streetscape enhancements

Millpond Gardens form an attractive park and pond area and retain elements of historic industrial buildings

between this area and the Penpol and Harbour areas – especially important in terms of the connection between the new harbour development and the historic town.

The Millpond Gardens form an attractive park and amenity developed on this formerly industrial land. Modern landscaping has created an open air performance space using the ruinous remains of a hammer mills. Other industrial remains are extant within the park and include a grist mill, a boring mill and other industrial structures probably dating to the 1790s. The mill ponds and leat system that powered these activities form an attractive feature and offer amenity value including wild life interest. A former rope walk has been made into a walking trail.

Carnsew hill fort remains an important landscape feature and provides a good vantage point for impressive and wide reaching views across the estuary and town. Incorporated into a later landscape garden, it forms part of an engineered landscape with triumphal granite ashlar arches with vermiculated quoins and voussoirs. Henry Harvey began this landscaping in 1843/4 in celebration of the success of the Foundry in winning contracts to build huge steam engines for the Leeghwater drainage project in Holland. Together with the registered gardens at Downes, this park provides a green corridor around the edge of the settlement. There is potential to promote public access and interpretation of this planned landscape.

These large gardens attract pressure for redevelopment which often includes the loss of mature trees and landscaping and the loss of the typical large scale grain of development.

Recommendation: Recognise, respect and enhance the importance of large gardens, ornamental and designed landscapes, open green spaces, trees and planting in the area.

Recommendation: Counter the threat of plot subdivision and increased density of development.

Buried Archaeological potential

- Carnsew hillfort
- Pre industrial activity (the Cunaide stone was found in Foundry Lane and may indicate the presence of further 5th century deposits)
- Industrial archaeological remains of the foundry complex and associated processes along the Penpol Stream.
- Remains of the Mellanear Smelter.
- Remains of the Trelissick Tin Smelter in the island between Foundry Square and Chapel Terrace, 1820-1855.
- Row of 19th century cottages on the western side of the car park demolished in the 1980s.

3: The harbour

(Fig 7 and Character Area summary sheet 2)

Statement of significance

The harbour has been the economic powerhouse of the town. The estuary was the reason the industrial companies established here and therefore the reason the town developed here. The estuary and the three channels that flow into it at this point have been extensively manipulated and modified with the extensive engineering that has gone on to create the current arrangement of quays and wharfs, canal channels, sluicing pools and causewayed roads. The harbour complex is a remarkable piece of engineering. This area is seen as the major regeneration site for the town.

Issues

- In places areas of the listed harbour walls have collapsed, other areas are in a poor condition
- Many of the surviving historic buildings around the harbour are not listed.
- The proposed harbour regeneration will have a dramatic impact on the character of this area.
- The estuary creates important wildlife habitats and leisure and amenity facilities.

Recommendations

- **Repair and stabilise the listed harbour walls.**
- **Recognise and respect the historic significance and importance of these surviving harbour buildings.**
- **Ensure that the proposed harbour redevelopment respects its natural and historically important setting and character.**
- **Promote the amenity, leisure and wildlife potential of the estuary.**
- **Ensure open access to the quays is part of the proposals for any future harbour redevelopment.**

Historic background and key components

The estuary and creeks have been used as a focus for trade since the prehistoric period. Finds from the 5th and 7th centuries indicate that by this time the estuary was an important early trading centre. There is evidence of a network of quays and causeways around the estuary by the medieval period.

However, the majority of surviving fabric dates to the intensification of industrial use begun in the 18th century by John 'Merchant' Curnow and developed by the CCCo and Harvey's during the 19th and 20th centuries. In Hayle, whoever controlled the quaysides controlled trade and the intense rivalries between the CCCo and Harvey's led to pitched fights between gangs of employees on the quay sides.

This character area has historically been the economic powerhouse of the town, the reason for the location of the industrial premises that led to the creation of the town – it is the reason for Hayle.

Key components include:

- The estuary
- The Quays and wharfsides - Carnsew Quay, Penpol Quay, East Quay, North Quay, Merchant Curnow's Quay, Copperhouse Dock
- The Copperhouse Canal
- The sluicing pools – Copperhouse Pool and Carnsew Pool
- Route of the Hayle railway running along the northern side of Copperhouse Pool

Topography and urban form

The character of Hayle harbour is derived from its quays and associated remains. Even dwarfed as it is by the

Hayle Harbour, a complex and integrated system of quays, wharfs and sluicing pools *(CCC Historic Environment Service, ACS 2880, 1989)*

scale of the wider estuary, these extensive remains have produced a unique industrial character and texture. One of the remarkable features of the harbour is the extent to which the natural topography of the estuary has been adapted and engineered to provide the extensive quay sides and wharfage needed for the vast array of industrial processes and trading that took place here.

Much of what can be seen is man made. With the importance of built-up land using the scoria and slag from the various smelting and foundry businesses in the town forming much of the land around the harbour – Fore Street/Commercial Road, Penpol Terrace, Copperhouse canal and dock (1769/87), the scoria built Black Road and Black Bridge (1811), Causeway Road (1824-5; one of Cornwall's earliest road engineering monuments), Customs House Quay, Carnsew Pool (1834) and Copperhouse Pool (1789) are all constructed in this way. Even Middle Weir (1819), the great spit which looks so much like a natural feature extending out into the estuary, looking so much like a natural feature, is an engineering product, although like most of the wharves and quays it is founded on natural shoals and reefs.

The harbour is not a random collection of structures, but an integrated engineering system, with important elements surviving of the four sets of sluices, the swing bridge and winding gear, and the railway and road networks and bridges. Moreover, it is integral to understanding the history and surviving character of the other varied industrial processes and systems that created Hayle.

The contribution the quays make to the character of the town cannot be overemphasised. It is not just their extent, but also the broad open spaces which have always characterised much of the wharf areas.

Survival of standing historic fabric

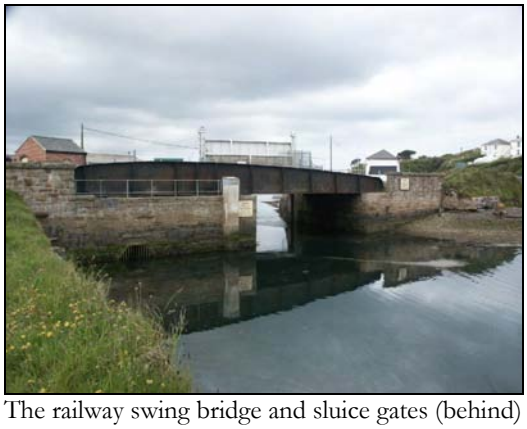
The majority of surviving fabric dates to the 18th and 19th centuries.

Although much of the quay walls and harbour infrastructure itself survives

Some of the quaysides have been cleared of their former industrial buildings and have a waste ground character at present, South Quay

Carnsew Quay and the remains of Harvey's timber yard

Historic rail tracks and surfacing surviving at North Quay



The railway swing bridge and sluice gates (behind) at the neck of the Copperhouse Pool

many of the industrial buildings formerly packed onto the quay sides have gone leaving them empty with a waste ground atmosphere. South Quay and North Quay share this somewhat desolate character. However, there are a number of survivals including the remains of Harvey's timber yard on South Quay, still in use as a builders merchants and the grade II customs house on North Quay. East Quay retains a more comprehensive range of 19th century buildings including the town gas works, stores and warehouses.

The railways that connected the quays with the industrial complexes and mines have also been lost, although some evidence of the extensive network of rails and tramways and historic surfacing on the quays survives – especially on North and East quays, and perhaps some areas of paving on South Quay. Such features are important archaeological evidence and should be recorded if vulnerable to loss. The railway swing bridge of 1877 survives with machinery still intact crossing Copperhouse Canal.

Architecture, materials and detail

The architectural character of the harbour has an overwhelmingly industrial flavour. The quality and quantity of granite used in the construction of the quaysides is notable, with the scalloped plan of the quay walls, in the best parts ashlared and moulded (Carnsew sluices), together with the extensive series of bollards, steps and spillways going together to make the area so special and prominent in the townscape.

Extensive remains of the historic quays and wharfs survive and provide important information about the development and evolution of the harbour. The Hayle Historic Assessment was able to demonstrate that more evidence survives of the earliest stages of industrial growth in Hayle than had been previously recognised.

- Evidence of Merchant Curnow's quays of 1740s survives behind later 18th century facing at Penpol and Riviere, while the stone quay walls of Carnsew Quay of 1758 are still visible, if partly buried in 20th century fill.
- The stone structure of weir and sluice which created Copperhouse Pool still survives.
- Penpol Quay 1817-19 – square granite blocks, killas rubble, granite ashlar, copper slag and granite dressings. Survives almost unaltered.
- East Quay 1818-19 – granite and killas rubble with granite coping. Survives almost unaltered. Still has granite bollards and steps.
- Carnsew Pool – 1834 – built to flush out harbour. Outer walls rubble and slag – south side earlier quay walls.

In a number of places the quayside walls are in a poor condition with areas of collapse and other areas close to collapse.

Recommendation: Repair and stabilise the listed harbour walls.

- Ensure that further historic fabric is not lost. Take this opportunity to record the archaeological evidence held within the walls and the exposed stratification behind them about the phases of harbour development, evolution and engineering.

Few of the buildings which historically stood on the quays survive today. The largest group is on East Quay and includes:-

- Quay House – pre 1842 – rendered – possibly an office and one of the most important survivals.
- a store at the north end of the quay, also pre 1842, with a rare and early (late 19th century) corrugated iron roofed warehouse attached to it.

The substantial granite quay sides give a robust, industrial character to the area

Urgent repair works to the harbour walls are required in a number of places, South Quay

East Quay retains the largest group of historic buildings

Quay House, East Quay

- The town gas works – 1888 – granite and killas rubble with red brick dressings.
- Customs House, Customs House Quay 1862 – grade II – stone rubble. More diverse remains stand on Customs House Quay, including the Customs House itself, now an office. The nearby stable/office ruins are variously described as wharf offices or stables for the now-demolished Britannia Inn.
- Carnsew Quay buildings – the surviving drawing office and listed timber store represent only fragments from the once extensive buildings of the shipyard, boiler works and timber mills that Harvey's built here.

Recommendation: Recognise and respect the historic significance and importance of these surviving harbour buildings.

- Although not listed many of these buildings are important in the townscape of Hayle and provide a crucial link to the industrial past of the harbour.
- Conserve and reuse these important historic structures.
- The stable / office ruins related to the lost Britannia Inn is a listed building in a very poor condition and should be considered at risk. Urgent action is required.

Of the once huge later 20th century industrial buildings located on the edge of North Quay and the Towans not many remains of value survive compared to the scale of the original enterprises – the Electricity works were demolished in 1977, although the large transformer blocks still stand and are massive structures in themselves. Only the stack of the old Calcining Works, which became the site of a glass factory 1917-25, remains. Some administration / secondary structures associated with the

The former town gas works of 1888, East Quay

Industrial remains on the North Quay include Pentowan stack relating to the old Calcining works. Elements from the former chemical works and power plant are also retained.

ICI magnesium and bromine plant survive.

The proposed regeneration of the harbour represents an exciting opportunity for Hayle. Such a development represents the chance to breathe life back into the harbour that has historically been the economic powerhouse of the town. The challenge for the proposed harbour development is to create high quality 21st century architecture that is both of its time and rooted in its place, that respects its important natural and historic and that complements rather than competes with the historic settlements of Copperhouse and Foundry.

Recommendation: Ensure that the proposed harbour redevelopment respects its natural and historically important setting and character.

- Care should be taken with important views to the sea and beaches, views of the enclosing towans – especially the

skyline they form, views to Lelant church and views from the harbour back into the town itself.

- Scale and massing issues will be important in the success of the redevelopment. The harbour is a robust, industrial structure and new development should respond to this, ie fairly large buildings can be accommodated and would be more in keeping with the former industrial character of the area.
- Connections between the new development and the surrounding historic townscape are crucial to the successful integration of the harbour redevelopment. Whatever is constructed here will be highly visible not just from the harbour area but from the wider town, for example the quays are highly visible from Penpol. The scheme will only work if it becomes part of the town, rather than a rival to the town. Views, routes and connections, scale, style and use of materials of the architecture, public spaces and soft landscaping are all elements that will be crucial in this integration. Connections with Foundry Square and the regenerated Foundry complex will be crucial to this.

Streetscape and views

The harbour provides a physical link between the different areas of the town and settlements around the estuary; joining Foundry with Copperhouse and Penpol, linking Phillack with Lelant.

The relationship of the solid quay walls to the ebb and flow of the tide, the changing appearance and shifting nature of the estuary itself is an essential part of Hayle's character. Many of the spectacular views of the town focus on the estuary, the sluicing pools and the harbour area.

The Harbour is the focus of many of the most impressive views of the town *(Photograph: Charles Winpenny, Cornwall CAM.)*

King George V memorial walk, a popular linear park along Copperhouse Pool reusing the line of a former railway

There are popular walks and cycle track along King George V memorial walk – the linear gardens created along the line of the disused railway line on the north side of the Copperhouse Pool. Also across the pool on the Black Road causeway – providing direct access to the salt marshes and mud flats.

Access onto the quays, and especially New Pier / Middle Weir (the central spit of land in the middle of the harbour) is considered to be one of the most crucial amenity assets of the town. These areas are well used by locals and visitors, providing them with access into the very centre of the estuary.

Recommendation: Promote the amenity, leisure and wildlife potential of the estuary.

- There is significant potential to improve and make more use of the Copperhouse Pool through enhanced leisure facilities – cycle routes and

trails, wildlife projects and promotion. The beauty of the natural environment so close to the town is one of Hayle's strong positive assets and should be marketed and developed.

Ensure open access to the quays is part of the proposals for any future harbour redevelopment.

- The quays should continue to be open to extensive public access to allow everyone to enjoy this amenity.

Buried archaeological potential

All these quays have considerable buried archaeological potential since, by and large, original buildings have been demolished and levels built up, with very little new buildings to disturb below ground deposits.

There may be a surprising amount of archaeological potential beneath some of the existing 19th century quays. Many of the surviving quays and cinder banks overlay natural or semi-natural banks that have a long history of use as beach landings and storage areas. The exposed parts of the quays walls where they have collapsed on Penpol (Foundry) Quay show stratification, with layers of coal dust and ore dust, which may be a construction method, but which also suggests an earlier date than the given construction date of 1819, when a pre-existing bank used to unload ships since at least the 17th/early 18th century may have been encased in stone.

Similarly, areas of mud and tidal shingle were used as docks before stone quays were built to replace them. Below East Quay, just to the west of the Copperhouse sluice and north of the Gas Showroom was Bristolmen's Dock. This was in use in the 18th century, and was incorporated into the new East Quay in 1818, shown on the 1842 Tithe Map, but infilled by 1877.

Earlier evidence of the causeway and tracks across the mud, such as that still surviving along the line of the principal route past the Royal Standard, may exist beneath the embankments and quays. For instance, the tunnel through Foundry Quay which took this ancient road to Lelant is still marked by metal sheeting on the east wall of the quay, where the masonry has collapsed, and by a clear area of stone rebuilding on the west face.

The landward edge of Carnsew may be important for both the 18th and early 19th century evidence of use as a foreshore beaching area, with the old Penpol beach now lying below Foundry Square. It may be relatively undisturbed by any subsequent building operation. Moreover, there may be even earlier habitation/shoreline archaeology - although the ground on which the Foundry and Foundry Lane were built is clearly excavated down from the ancient level, the areas immediately south and north of Carnsew Road probably retain their original levels undisturbed, and have seen relatively little building work. This is the area at the foot of Carnsew Hillfort where the early Christian Cunaide stone and associated burial were found.

The actual structures of the quays are for the most part still surviving, even if, as at Carnsew, partly buried in later tipped material, but the stages of development, and in some cases the extent of some of the early quays has yet to be fully established, and at Carnsew, Riviere Quay, Merchant Curnow's Quay, Tremearne's Quay and Copperhouse wharves, the evidence is likely to survive.

A series of quays was located along the south side of Copperhouse creek, with landing stages and hards being progressively built out further into the creek as the southern shoreline was reclaimed. Some sites, such as Bodriggy quay, are now below the built up ground on which Commercial Road stands, while remains of others stand on the edge of the present shoreline, or behind recent

At Carnsew later 20th century tipped material buries the historic harbour structure

Partially buried dock gate at Carnsew, (1834)

embankment improvements, such as the wharf at Harvey's Point. Together with the small quays in Lelant and Grigg's Quay there is the potential here to locate and understand some of the lesser known quays which operated around the estuary from the Middle Ages right into the early 20th century and thus add to the complete understanding of the character and history of the town.

As regards the archaeology of the built structures on the quays from the mid 18th century onwards, there are potentially large quantities of below ground deposits. Most buildings on the quays were cleared in the mid-late 20th century, and there has been little use of the quays since then, so foundations should survive relatively well. At Carnsew, the buildings demolished at this time include the 18th century limekiln and cottages, as well the 19th century remains of Harvey's sawmills. Most of Harvey's shipyard buildings were on Penpol Quay, as well as a whole series of other buildings of various uses. They are recorded on the 1842 Tithe map, mid 19th century plans of Harvey's and later OS maps, and on ground and aerial photographs right up to the 1970s, so that their position and form can for the most part be accurately plotted, and the sequence of buildings and any changes can be adequately mapped to relate to any surviving remains. The shipyard at Carnsew is of particular importance, not only for the buildings, but also for the slips and docks, all of which are buried under subsequent tipped material, a lot of it contaminated. The potential value of the buried deposits is in identifying the uses and length of use these various building were put to, and in uncovering, for instance, the process of change from building timber ships to iron ships which took pace at Carnsew in the 1860s.

Most other quays in Hayle had few buildings on them - the site of the Britannia Inn on Riviere Quay may lie undisturbed below later concrete platforms, and there are groups of buildings of unknown use shown at the western end of North Quay on the 1842 Tithe Map and 1877 OS map. At Copperhouse there may be undisturbed remains of the limekilns built in 1822 on the north side of the dock, and of the tidal mill built about 1842.

One of the main types of structure on the quays were the ore and coal hutches, secure walled enclosures open to the quayside, and shown on North Quay, East Quay and South Quay, the actual shapes and sizes of the groups of hutches varying through the 19th and 20th centuries as shown on OS maps and both ground and aerial photographs.

Elements of the rail/tram system partly survives on all the quays, and again can be relatively easily and accurately plotted. On North Quay granite setts and iron rails survive on the quay surface, and here and elsewhere there may additional remains surviving under the immediate tarmac/rubble surfacing.

The area around the Royal Standard and the garage at Hayle (the former Penpol Cellars) has most potential for investigation for building complexes associated with but not on the quays. Here was the earliest industrial enterprise in Hayle - the Penpol Smelter, and Merchant Curnow's cellars - the first quays were here (surviving but refaced c.1800) - and the CCCo offices and warehousing was here from 1814.

In all these cases, the potential value lies not just in locating buildings, which could be accurately plotted from maps, but in understanding the uses and relationship between the buildings, the quays and the town which map evidence alone will not provide. While written descriptions do exist of Harvey's Foundry, for instance, this was in a sense a show-case industrial site, and there has been much less attention paid to the more workaday activities of the quays, yards and warehouse, and even to the shipyards, drawing offices and boilerworks situated on the quays.

Copperhouse Dock has significant potential for buried archaeology. The sites of the gasworks of the 1830s and the tidal mill of 1842 are all on undeveloped ground around the Copperhouse wharves, while the site of the 1822 limekiln lies under a supermarket car park. Evidence of the construction and use of structures built upon these wharves is likely to survive undisturbed, since there has been no subsequent development. Given that at least one 18th century building survives on the wharf and another may survive disguised behind a 19th century facade, the whole mid 18th century Copperhouse Dock complex, or at least recoverable evidence for it, may in fact survive almost intact below ground.

4: Penpol

(Fig 7 and Character Area summary sheet 1)

Statement of significance

This area forms a middle ground between the two settlements of Copperhouse and Foundry. An 18th century focus around Merchant Curnow's quay is located at the west end of Hayle Terrace. Mid 19th century terraces built for the professional classes were developed here to take advantage of picturesque views over the harbour. Later 19th century development seems to suggest a concerted effort to develop an urban focus here including the landmark church of St Elwyn, designed by Sedding.

Issues

- There is pressure for increased density of development along the southern side of the Copperhouse Pool.
- The setting of St Elwyn's church is marred by an unsympathetic garage forecourt.

Recommendations

- **Ensure any future redevelopment on the south side of Copperhouse Creek respects both the character of the Pool and the Road.**
- **Improve the setting of St Elwyn's church when the opportunity arises.**

Historic background and key components

This Character Area defines an area that originally formed a 'no-man's land' between the rival settlements of Copperhouse and Foundry. Merchant Curnow developed a quay at the western end of Hayle Terrace in the 1740s, later used by the CCCo. Mid 19th century development of residential terraces form much of the character of the area. Towards the end of the 19th century there seems to have been a concerted effort here to create some kind of civic focus, possibly designed to tie the two industrial settlement foci together.

Key components in this Character Area include:

- Penpol Terrace
- Hayle Terrace
- Clifton Terrace and Riviere House
- Industrial complex close to Merchant Curnow's 18th century quay
- Made land on the southern shore of Copperhouse Creek
- Late 19th century civic development including St Elwyns, the Drill Hall and the Passmore Edwards Institute

Topography and urban form

The relationship between this area and the estuary, Penpol Quay and Copperhouse Creek is very important in the character of the area and in the reason for the development of the residential terraces overlooking the water.

Hayle Terrace, Penpol Terrace, Clifton Terrace and Riviere House are purposefully sited to achieve picturesque views over the harbour. The terrace developments are set on slightly raised, terraced sites, and their build line purposefully curves along its length to enhance the available views.

The historic development is very shallow in form. Penpol Terrace backs onto the disused railway line which confined development to the east. Hayle Terrace has 20th century residential development behind it and Clifton Terrace still stands alone.

Made ground along the Copperhouse Creek has led to the development of buildings on the north side of the road

The linear terraces of this Character Area have a close relationship with the harbour and Copperhouse Pool (*CCC Historic Environment Service, ACS 774)*

Reclaimed ground has been developed along the southern side of the Copperhouse Creek and there is currently pressure for redevelopment of several sites here (*CCC Historic Environment Service, ACS 5656, 2002)*

Bridge House, close to Merchant Curnow's Quay, it is likely that this late 18th century building is associated with early industrial activity

compromising the views from Hayle Terrace. There is pressure for further more intense redevelopment of these plots.

Recommendation: Ensure any future redevelopment on the south side of Copperhouse Creek respects both the character of the Pool and the Road.

- Any future redevelopment here needs to be double fronted, respecting both the natural and historically industrial significance of the Pool but also the importance of the street and the residential terraces.

Survival of standing historic fabric

The majority of buildings in this area date to the 19th century. However there are a number of important earlier 18th century survivals likely relating to Merchant Curnow's quay.

Architecture, materials and details

18th century complex relating to Merchant Curnow's Quay

There are several 18th century buildings surviving in a group to the west of Hayle Terrace that probably formed a group around Merchant Curnow's Quay.

- *Royal Standard public house* - this grade II listed, late 18th century building probably stands on an earlier structure and is situated where the early causeways reached the shore. Includes scoria block construction.
- *Bridge House* - Adjacent to the Royal Standard this high status granite ashlar building is of late 18th century date and grade II listed. It may have been John Curnow's town house or office. Three windows wide with an original oriel window in the centre of the first floor. The ground floor has been truncated by the raised road level, indicating the age of the structure.

Housing

The terraces of this area form an architectural group typical of Hayle and also seen in the Copperhouse Character Area (eg continuing along Commercial Road). It is important their architectural integrity is protected and the recently expanded Conservation Area will go someway towards promoting that their quality is recognised.

Penpol Terrace, single and double fronted terraced dwellings with single storey commercial extensions in former front garden plots

- *Penpol Terrace* – developed by the CCCo as part of their 1819 development of New or East Quay. The terrace is mostly shown on the 1842 tithe map and includes a mixture of half and double fronted houses, most with the Hayle-style of detailing with roughcast render and rusticated stucco detailing with a mixture of motifs.

Hayle Terrace, bay window details. Front gardens and boundary walls are important elements of the character of the area

- *Hayle Terrace* – Nos. 14-54 – pre1842, rest pre-1877. Similar to Penpol Terrace with some examples of added full height bay windows *c*1900.
- *Commercial extensions* – single storey extensions in the front gardens of these residential properties have been added during the late 19th and early 20th century to provide additional commercial premises for the area, (as seen in the Foundry Character Area). The southern end of Penpol Terrace has the greatest density of these structures but some very good isolated, listed examples are seen further up the Terrace at 42 Penpol Terrace with a former butcher's shop of 1893 complete with terra-cotta heads and mural and at 34-36 Hayle Terrace where a grade II listed shop of 1891 has an elaborate classically detailed frontage with granite dressings.

Some of the commercial units are architecturally elaborate and recognised as nationally important by their listed status; a former butcher's shop, Penpol Terrace

Clifton Terrace, mid 19th century substantial villas elevated above Copperhouse Pool

- *Boundary walls* – a defining characteristic of these terraces is the

strong boundary delineation between plots with enclosing boundary walls defining the streetscape enclosure and running the length of the front garden plots which rise to the elevated properties.

- *Clifton Terrace* – this row of substantial detached and semi-detached houses are similar in detailing to the other terraces in this area. Built between 1840 and 1849 to celebrate the CCCo winning the contract to build the Clifton Suspension Bridge.
- *Riviere House* - a grade II large detached villa built for John Edwards manager of the CCCo in 1791. With a stucco main façade and slate hung garden elevation and scoria blocks used to construct the basement.

Late Victorian Civic Centre

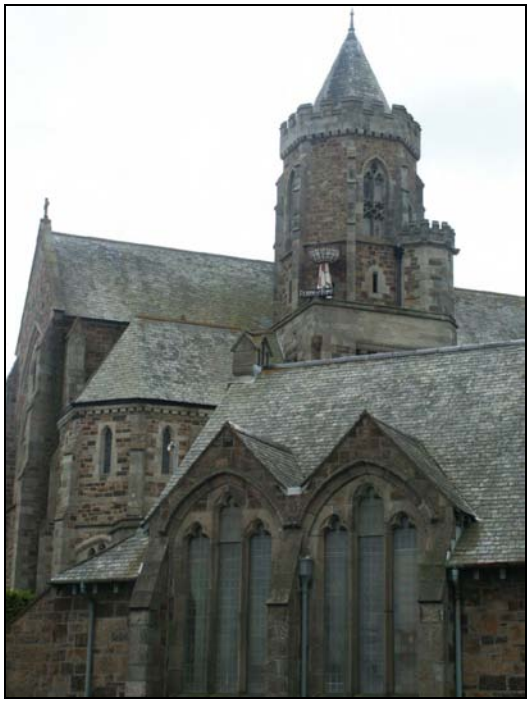
- *St Elwyn's Church* – This grade II* building designed by John Sedding 1886-8 is an impressive landmark building. Set on a raised site the building is highly visible from the harbour and on the approach from Copperhouse. It is of roughly dressed granite, granite dressings, and features a Gothic tower and octagonal spire. The setting of the building is unfortunately dominated by a petrol station.

Recommendation: Improve the setting of St Elwyn's church when the opportunity arises

- The setting of the church is currently marred by an unsympathetic garage forecourt. Where the opportunity arises any future redevelopment of the plot should better respect this landmark structure.

- *Church Hall* – Set below the church on the road side is a hall of 1905. Also grade II listed, it shares the gothic character of the church and the roughly dressed granite building material and was obviously designed to complement the church.
- *Passmore Edwards Institute* – This grade II building of 1893 was designed by Sylvanus Trevail on a site donated by

Riviere House, 1791, home of John Edwards, manager of the CCCo



7 St Elwyn's Church, an important landmark building designed by John Sedding 1886-8

Passmore Edwards Institute, 1893 Silvanus Trevail, an impressive civic structure

the Harvey's. Of dressed granite, granite ashlar and granite dressings it is one of the most overtly civic structures of the town. Two pedimented gables pierce the roofline of this three window wide building. It is an important building in the streetscape and forms a group with the nearby Drill Hall. However, although a significant building in itself, the Institute is too isolated from the main public areas of the town to impose any great presence upon anything other than its immediate context.

- *Drill Hall* – This single storey structure of 1911 was built on the site, also donated by Harvey's of the old tin smelter.

Streetscape and views

The impressive views over the harbour that led to the development of the terraces here still remain an attractive feature of the area. As such the impact of the harbour redevelopments to this area needs to be carefully considered.

A delightful linear park has been created along the line of the former railway running along the side of Penpol Quay. Views across to Lelant over the other side of the estuary are a key feature. The exotic planting including blazing bedding and Cornish palms underline the seaside atmosphere also fostered by the 'bucket and spade' goodie shops along the terrace, and the boats on the water. The park includes elements of public art and a memorial to Rick Rescorla, a Hayle man who died saving others in the 9/11 attack of the World Trade Centre, New York.

Buried archaeological potential

- Remains of Merchant Curnow's quay and associated industrial complex and offices
- Remains of earlier quays along the southern shore the Creek that have been buried within the made ground
- Remains of the railways that ran through this area

The Drill Hall of 1911

Linear Park along the side of Penpol Quay. Hayle is often successful in Britain in Bloom contests.

Memorial to Rick Rescorla who died saving others in the 9/11 terrorist attack in New York

Technical Appendix: GIS metadata information, definitions, explanations and suggestions for use

This section comprises a technical appendix providing metadata, full definitions, explanations and suggestions for use of the geographic information collated, created and provided as the base for the figure sequence bound at the back of the report. Five GIS-based datasets have been created for the study. These comprise:

- **Extent of the study area:** defines the c1907 settlement boundary.
- **Historic development:** defines the geographical growth of the settlement as mapped from available cartographic sources.
- **Historic topography:** details the historic 'building blocks' that have shaped the development and evolution of the settlement.
- **Surviving historic components:** depicts survival patterns and statutory designation coverage of the settlement's surviving historic buildings and features.
- **Archaeological potential:** indicates the potential for urban archaeological remains.
- **Character areas:** illustrates the character areas distinguished within the town as defined in chapter 8.

The datasets (known as shapefiles) have been created using ESRI's ArcView GIS. Each shapefile comprises a number of polygons (areas), and/or lines and/or points depicting the spatial extent of the various areas, sites and monuments of interest identified during the study. These features are attributed with two types of information; the first describes the nature and form of the site, area or monument itself (eg. name, date etc) whilst the second describes the context of the dataset's creation (eg. creator, date created, original source, capture scale). Attribution of these shapefiles has been guided by the project's requirements and as far as possible the attribute values adhere to current CCC HER heritage information standards.

Extent of the study area *(Figure 1)*

This dataset forms the basis for Figure 1. The detailed characterisation and analysis of urban topography and historic survival that together form the primary elements of this study are closely focused on the *historic* urban extent of the settlement. For the purposes of this project this area is defined as that which is recognisably 'urban' in character on the second edition Ordnance Survey (OS) Revision 1:2500 map, *c*1907. Outlying rural settlements that have been incorporated into the modern urban area since c1907 are intentionally excluded.

The study area GIS shapefile dataset is attributed with the following values:

Shapefile primitive: polygon (area)

Shapefile attribute properties:

Attribute Name	**Field type**	**Width**	**Description**	***example***
Study_area	Field Character	25	*Settlement Name*	*Hayle*
Description	Field Character	250	*Brief description.*	*Urban extent c1907*
Capture_scale	Field Character	20	GIS *digitisation scale*	*1:2500*
Creation_date	Field Character	25	*Creation date (ddmmyyyy)*	*20082001*

User	Field Character 25	*Creator initials*	*KSN*
Project_code	Field Numeric 25	*CSUS Project Code*	*2001013*
Source	Field Character 250	*Information source*	*c1907 2nd Edition OS Revision*

Ordnance Survey 1:2500 2nd edition (1907) *(Figure 2)*

This figure overlays the primary study area on the second edition Ordnance Survey map 1:25 000 of c1907.

Historic development *(Figure 3)*

This dataset forms the basis for Figure 3. Phased historic development mapping was created by carrying out a traditional map regression and comparison with the geographical extent of the settlement mapped from a series of available historic map and aerial photograph sources. Generally only overtly urban features have been mapped therefore outlying sites (eg. industrial complexes) may not be featured on the mapping until the site/working has stopped, and the land was reclaimed and re-developed as part of the expanding town.

For Hayle the historic map and photographic sequence included:

- 1807 Ordnance Survey's 2-inch drawings for the 1813 Ordnance Survey first edition 1" to the mile map
- 1842 Tithe Maps of St Erth and Phillack parishes
- 1877 1st Edition Revision Ordnance Survey 1:2500
- 1907 2nd Edition Revision Ordnance Survey 1:2500
- 1946, 1951 RAF air photographs
- 2002 Ordnance Survey Landline 1:2500

This mapping illustrates the original focal points of the settlement and its subsequent evolution. It highlights areas likely to have the oldest surviving remains and archaeological potential.

The historic development GIS shapefile dataset is attributed with the following values:

Shapefile primitive: polygon (area)

Shapefile attribute properties

Attribute Name	**Field type**	**Width**	***Description***	***example***
Study_area,	Field Character	25	*Settlement Name*	*Hayle*
Historic_phase	Field Character	25	*Period of settlement growth*	*c1840 – c1880*
Source,	Field Character	250	*Original data source*	*1877 1st Edition OS Revision*
Creation_date,	Field Character	20	*Creation date (ddmmyyyy)*	*20082001*
Capture_scale,	Field Character	20	*GIS digitisation scale*	*1:2500*
User,	Field Character	25	*Creator initials*	*KSN*
Project_code	Field Numeric	25	*CSUS Project Code*	*2001013*

Historic settlement topography *(Figure 4)*

This dataset forms the basis for Figure 4. This mapping seeks to define the 'building blocks' that have shaped the development and evolution of the settlement. Historic settlement topography includes plan-form and relief, hydrology, blocks of particular types of housing or building (eg. industry, ecclesiastical etc) and other well defined land allotment patterns, historic road routes and streets, railways etc.

The historic settlement topography GIS shapefile dataset is attributed with the following values:

Shapefile primitive: polygon/polyline/points

Shapefile attribute properties

Attribute Name	**Field type**	**Width**	***Description***	***example***
Study_area,	Field Character	25	*Event Record*	*Hayle*
Topo_descrip	Field Character	250	*Topographic description*	*Foundry*
Period	Field Character	25	*Epoch or period*	*18th/19th*
Creation_date,	Field Character	20	*Date of creation of dataset*	*20082001*
Capture_scale,	Field Character	20	*Digitisation Scale of dataset*	*1:1250*
User	Field Character	25	*Person responsible for data capture*	*KSN*
Project_code	Field Numeric	25	*CSUS Project Code*	*2001013*

Surviving historic components *(Figure 5a and b)*

This dataset forms the basis for Figures 5a and b. It seeks to illustrate the survival patterns and statutory designation coverage of the settlement's surviving historic features. Generally these features are standing buildings, but some other historic features, such as boundary walls, leat systems, gateways and stone crosses, are also included.

Scheduled Monuments (red features). 'Scheduling' is shorthand for the process through which nationally important sites and monuments are given legal protection by being placed on a list, or 'schedule'. English Heritage takes the lead in identifying sites in England which should be placed on the schedule by the Secretary of State for Culture, Media and Sport. A schedule has been kept since 1882 of monuments whose preservation is given priority over other land uses. The current legislation, the Ancient Monuments and Archaeological Areas Act 1979, supports a formal system of Scheduled Monument Consent for any work to a designated monument. Scheduling is the only legal protection specifically for archaeological sites. The Scheduled Monument data has been derived from GIS datasets maintained by Technical Services, Cornwall County Council. The mapping was last updated on 05/12/2003 and mapping is therefore accurate to that date. Contact the Historic Environment Record team, HES, Cornwall County Council or English Heritage for potential updated changes to this designation coverage.

Listed Buildings (yellow features) identify those buildings of special architectural or historic interest as defined by the Planning (Listed Buildings and Conservation Areas) Act 1990. Under this legislation the government maintains a list of buildings of special architectural or historic interest, and operates a Listed Building Consent process to control works which affect them. The Listed Building GIS data has been derived from GIS datasets provided by Penwith District Council in 2002 and mapping is therefore accurate

to that date. Contact Penwith District Council's Conservation Officer for potential updated changes to this designation coverage.

Conservation Areas (blue outline) identify areas of historical or architectural interest as defined by the Planning (Listed Buildings and Conservation Areas) Act 1990. This is mostly used in urban areas, although as with Carn Brea can be used in more rural settings. The legislation places a duty on local planning authorities to identify the special qualities and formulate proposals for the conservation and enhancement of Conservation Areas, known as Conservation Area Statements or Appraisals. Contact Penwith District Council's Conservation Officer for potential updated changes to this designation coverage.

Registered Historic Park and Gardens (green features) have been added from a national record of England's historic parks and gardens, maintained by English Heritage, since the 1980s. It records gardens of special historic interest ranging from town gardens and public parks to great country estates. Parks and Gardens included within this national register are not subject to additional statutory controls. However PPG15 guides planning authorities to take account of the need to protect registered parks and gardens when preparing development plans and in determining planning applications.

Historic buildings (dark blue features) are also illustrated. This category does not convey a statutory designation, although it could form a useful basis for creating a list of locally important buildings. Buildings shown here are surviving structures that pre-date c1907 (ie they are shown on the c1907 OS 2nd edition). In addition to this definition some buildings post dating c1907 are also included if they are part of the same development as buildings shown on the c1907 OS 2nd edition (ie part of a street clearly under construction at the time of mapping, or a later extension to an historic building), or if they post date this nominal cut off date but are of significant townscape quality or are important historic features of the town. This coverage is generated first by a desk-based comparison of current OS Landline and OS MasterMap mapping and historic mapping, with the identified buildings then checked on a site visit.

Historic plots (light blue features) identify plots (often gardens) that remain unaltered from the c1907 OS 2nd edition map. Plot size and shape and uniformity or irregularity of plots within different parts of the settlement are key factors in grain and historic character and therefore this information also feeds in to character analysis, survival levels and patterns and identifying areas of loss of townscape grain and character. Historic plots are identified through modern and historic OS map comparison followed by corroboration in the field.

This dataset is effectively a scaled down GIS version of the CCC HER/SMBR database and the attribute fields represent the minimum data information requirements for inclusion in the CCC HER. The surviving historic components GIS shapefile dataset is attributed with the following values:

Shapefile primitive: polygon/polyline/points

Shapefile attribute properties

Attribute Name	**Field type**	**Width**	***Description***	***example***
Name	Field Character	250	*Name*	*Hayle*
Site_type	Field Character	250	*Site Type*	*Market house*
Broad_term	Field Character	25	*Broad site type term*	
Class	Field Character	100	*Site type class*	
Site_id	Field Numeric	10.5	*Unique PRN HER/SMR database*	31955
Form	Field Character	50	*Condition of site type*	*Extant*

Start	Field Character 10	*Start date of feature -specific*	1839
End	Field Character 25	*End date of feature –specific*	
Period	Field Character 25	*Epoch / century of feature*	*19th*
Sam_no	Field Character 25	*Scheduled Monument number (if applicable)*	
Grade	Field Character 25	*Listed building number*	*SW 56833792 11/176*
Short_desc	Field Character 250	*Max 250 characters description*	*Copperhouse Market House..*
Bibliography	Field Character 250	*Source material used to identify feature*	Listed building description
Parish	Field Character 100	*Local Authority District*	*Penwith*
Project_code	Field Character 10	*CSUS Project Code*	*2000013*
Feat_code	Field Numeric 3	*Code to distinguish legends for features*	*3*
Capture_scale	Field Numeric 10	*Capture Scale of digitisation*	*1:2500*
User	Field Character 25	*Creator initials*	*KSN*

Archaeological potential *(Figure 6)*

This dataset forms the basis for Figure 6. It indicates the potential for urban archaeological remains, although it must be emphasised that this depiction of potential is indicative, not definitive, and only future archaeological investigation and research can test and refine its value.

An understanding of the potential is broadly derived from the historic extent of the settlement itself. In simple terms, any location within the area developed to c1907 is regarded as having the potential for standing or buried archaeological features; the earlier settlement core (as shown by the 1840 Tithe map) may have more complex and deeply stratified deposits.

The figure also identifies a number of sites and areas of known historic significance: ie those where the presence of a significant structure or feature can be identified from historic maps or documentary sources but does not now survive above ground. Points are used to approximately locate features where the available sources are not adequate to map as a polygon specific location.

It should be noted that there is also a proven potential within the area for the survival of archaeological remains that predate or are unrelated to the development of the town, particularly prehistoric and/or early medieval sites. In the absence of specific information such as reports of finds or antiquarian references the potential presence of such sites is difficult to predict.

This dataset is effectively a scaled down GIS version of the CCC HER/SMR database and the attribute fields represent the minimum data information requirements for inclusion in the CCC HER. The archaeological potential GIS shapefile dataset is attributed with the following values:

Shapefile primitive: polygon/polyline/points

Shapefile attribute properties

Attribute Name	**Field type**	**Width**	***Description***	***example***
Name	Field Character	250	*Name*	*Hayle*
Site_type	Field Character	250	*Site Type*	*Hill fort*
Broad_term	Field Character	25	*Broad site type term*	
Class	Field Character	100	*Site type class*	
Site_id	Field Numeric	10.5	*Unique PRN HER/SMR database*	*31934*

Form	Field Character 50	*Condition of site type*	*Site Of*
Start	Field Character 10	*Start date of feature -specific*	
End	Field Character 25	*End date of feature -specific*	
Period	Field Character 25	*Epoch / century of feature*	IA
Sam_no	Field Character 25	*N/A*	
Grade	Field Character 25	*N/A*	
Short_desc	Field Character 250	*Max 250 characters description*	*Carnsew hill fort…*
Bibliography	Field Character 250	*Source material used to identify feature*	*HHA*
Parish	Field Character 100	*Local Authority District*	*Penwith*
Project_code	Field Character 10	*CSUS Project Code*	*PR1013*
Feat_code	Field Numeric 3	*Code to distinguish legends for features*	*2*
Capture_scale	Field Numeric 10	*Capture Scale of digitisation*	*1:2500*
User	Field Character 25	*Creator initials*	*KSN*

Character areas *(Figure 7)*

This dataset forms the basis for Figure 7 and the Character Area summary sheets. The CSUS investigation, in addition to identifying the broad elements of settlement character that define St Ives as a whole, identified five distinct Character Areas within the town's historic (pre-1907) urban extent (see Section 8; Fig 7 and Character Area summary sheets 1-6).

Character area 1: Copperhouse

Character area 2: Foundry

Character area 3: The harbour

Character area 4: Penpol

These Character Areas are differentiated from each other by their varied historic origins, functions and resultant urban topography, by the processes of change which have affected each subsequently (indicated, for example, by the relative completeness of historic fabric, or significant changes in use and status), and the extent to which these elements and processes are evident in the current townscape. In simple terms, each Character Area may be said to have its own individual 'biography' which has determined its present character.

Taken with the assessment of overall settlement character, the five Character Areas offer a means of understanding the past and the present. In turn, that understanding provides the basis for a positive approach to planning future change which will maintain and reinforce the historic character and individuality of each area and the town as a whole - *sustainable* local distinctiveness.

The character areas GIS shapefile dataset is attributed with the following values:

Shapefile primitive: polygon

Shapefile attribute properties

Attribute Name	**Field type**	**Width**	***Description***	***example***
Study_area,	Field Character	25	*Event Record*	*Hayle*
Char_Area_Name	Field Character	250	*Character Area name*	*Foundry*
Creation_date,	Field Character	20	*Date of creation of dataset*	*20082001*
Capture_scale,	Field Character	20	*Digitisation Scale of dataset*	*1:2500*

User,	Field Character	25	*Person responsible for data capture*	*KSN*
Project_code	Field Numeric	25	*CSUS Project Code*	*2001013*

Sources

Published Sources and Documents

Acton, B, 1992. *A View from Trencrom,* Landfall Publications.

Barton, D B, 1967. *History of Tin Mining and Smelting in Cornwall.*

Buck, C, and Smith, J R, 1995. *Hayle Town Survey and Historic Audit*. CAU, CCC publication.

Cahill, N and CAU, 2000. *Hayle Historical Assessment, 2 vols - main report and inventory*. CAU, CCC publication.

Earl, B, 1978. *Cornish Explosives.* Trevithick Society publication.

Earl, B, and Smith, J R, 1991. *National Explosives, Upton Towans, Hayle, An Archaeological and Historical Assessment.* CAU report.

Gordon Lewis Associates, 2000. *Harvey's Foundry Action Plan.*

Hamilton Jenkin, A K, 1962. *Mines and Miners of Cornwall: Hayle, Gwinear and Gwithian,* Truro.

Holmes, J, 1995. *St Ives Bay, Archive photographs Series,* Chalford.

Jones, A, 1998. *Upton and Gwithian Towans, Hayle, An Archaeological Assessment*. CAU report.

Jones, A, 1999. *Upton and Gwithian Towans, Structural recording Work*. CAU report.

Noall, C, 1985. *The Book of Hayle,* Barracuda Books.

Pascoe, W H, 1981. *C.C.C. The History of the Cornish Copper Company,* Dyllansow Truran.

Rew, M & M, 1998. *Hayle, Images of England*, Tempus.

Smith, J R, 1995. *Foundry Square, Hayle. Archaeological Assessment.* CAU report.

Smith, J R, and Buck, C, 1995. *Foundry Square, Hayle, Archaeological and Historical Evaluation.* CAU report.

Smith, J R, 1999. *Harvey's Foundry, Hayle, Cornwall, an Archaeological Assessment*. CAU report.

Thomas, N, 1998. *Loggans Mill, Hayle, An Archaeological and Historic Building Assessment.* CAU report.

Thorne, G, 1992. *The St Ives Branch and the Hayle Wharves Railway*, CHB Publishing.

Vale, E, 1966. *The Harveys of Hayle,* Bradford Barton.

Wessex Archaeology 1997. *Hayle and Camel Estuaries Historic Audit. Draft Report*. Report prepared for the Environment Agency.

n.d. *The Old Days in Hayle*, Packet Publishing.

Strategic, Policy and Programme Documents

Cornwall County Council, 2004. *Cornwall Structure Plan.*

Civic Trust Regeneration Unit, 1994. *Hayle Action Plan.*

Historic Environment Service, 2004. *Cornwall and West Devon Mining Landscape World Heritage Site Nomination Document.*

Historic Environment Service, 2004. *Cornwall and West Devon Mining Landscape World Heritage Site Management Plan 2005-2010.*

Historic Environment Service, 2004. *Cornwall and West Devon Mining Landscape World Heritage Site Management Plan 2005-2010 Summary.*

Kathryn Sather and Associates, August 2005. *Draft, Hayle Harbour, Cornwall, Conservation Management Plan.*

ING Real Estate, Dec 2004. *Hayle harbour initial proposals*

Penwith District Council, 1998. *Penwith Local Plan Deposit draft.*

Revitalise! Hayle Coast and Country, 2005. *Community Health Check*. Market and Coastal Town Initiative report.

Historic maps and primary sources

1807 OS drawings

1842, St Erth Tithe Map, CRO ref. TM59

1842, Phillack Tithe Map, CRO ref. TM 186

1877, OS First Edition 1:2500

1907, OS Second Edition 1:2500

Trade Directories housed at Cornwall Local Studies Library

(Pigot & Co.'s Directory, 1823-4, 1830 & 1844; Robson's Commercial Directory, c. 1840; Williams' Commercial Directory, 1847; Slater's Directory 1852-3; Post Office Directory, 1856, 1868 & 1873; Harrod's Court Directory 1878; Kelly's Directory 1883, 1897, 1906 & 1926).

Cornwall County Council Historic Environment Record

Cornwall and Scilly SMR (CAU)

Listed Building maps and descriptions (CCC Planning Directorate)

1946 RAF 1:10,000 black and white vertical air photographs

1951 RAF 1:10,000 black and white vertical air photographs

1968 OS 1:7,500 black and white vertical air photographs

1971 JAS & Ptnrs 1:10,000 black and white vertical air photographs

1995 1:10,000 colour vertical air photographs, taken by BKS Ltd for CCC