

South Quay,
Hayle Harbour

HERITAGE IMPACT ASSESSEMENT



Stephen Levrant Heritage Architecture Ltd
62 British Grove, Chiswick, London W4 2NL
T: 020 8748 5501 f:020 8748 4492

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Contents

1	INTRODUCTION.....	3
1.1	Aim.....	3
1.1.1	International Guidelines for the protection of World Heritage Sites	3
1.1.2	National Guidelines	3
1.2	Assessment Methodology and Significance Criteria	3
2	IDENTIFICATION OF THE ATTRIBUTES OF OUTSTANDING UNIVERSAL VALUE THAT MAY BE AFFECTED BY THE PROPOSAL.....	6
2.1	Statement of Outstanding Universal Value that may be affected by the proposal	6
2.1.1	Statement of Outstanding Universal Value.....	6
2.1.2	Criteria for Inscription.....	6
2.1.3	Integrity (2010)	7
2.1.4	Authenticity (2010).....	7
2.2	Context, condition, authenticity and integrity of South Quay, Hayle Harbour.....	7
2.2.1	Authenticity and integrity	10
2.2.2	Tangible heritage assets and their setting.....	12
2.2.3	Intangible heritage assets.....	21
3	ASSESSMENT OF IMPACT AND CHANGE.....	22
4	SUMMARY AND CONCLUSION.....	41

1 INTRODUCTION

1.1 Aim

This report provides an assessment of the likely impacts of proposed development at the South Quay, Port of Hayle, part of the Cornwall and West Devon Mining Landscape World Heritage Site.

This Heritage Impact Assessment has been prepared as recommended in the document Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (ICOMOS, January, 2011), and reflects policies and guidance set out in the following international and national planning documents:

1.1.1 International Guidelines for the protection of World Heritage Sites

Operational Guidelines for the Implementation of the World Heritage Convention (UNESCO) 2008

Guidance on Heritage Impact Appraisals for Cultural World Heritage Properties (ICOMOS) January 2011

Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas (ICOMOS) 2009

Vienna Memorandum of the World Heritage Convention 2005

Burra Charter (Australia ICOMOS) 1999

Nara Document on Authenticity (ICOMOS) 1994

1.1.2 National Guidelines

PPS1: Delivering Sustainable Development

PPS5: Planning for the Historic Environment

PPS5: Planning for the Historic Environment: Historic Environment Planning Practice Guide

Circular 07/2009: The Protection of World Heritage Sites

The Protection and Management of World Heritage Sites in England (English Heritage) 2009

Conservation Principles (English Heritage) 2008

1.2 Assessment Methodology and Significance Criteria

There are no standard agreed methodologies for the appraisal of impacts on Listed Buildings, conservation areas, non-designated heritage assets or settings. Therefore the methodology followed in this report is a synthesis of the extent in which the proposed works are expected to enhance, alter or impair the special interest and/or current state of significance of a given heritage asset.

The ICOMOS Guidance on Heritage Impact Appraisals for Cultural World Heritage Properties¹ states in Para 2-1-5 that *'In the case of WH properties, their international significance is established at the time of inscription and defined as their Outstanding Universal Value (OUV). States Parties undertake to retain and guard this OUV through protecting and conserving the attributes that convey OUV. The Statement of Outstanding Universal Value (SoOUV) which sets out why a property is deemed to have OUV and what the attributes are that convey OUV will be central to the HIA.'*

A thorough evaluation of the significance of heritage assets within the Site can be found in the Heritage Statement and PPS5. The heritage assets within the site and its vicinity have been identified from the SoOUV approved 2010, and from national and local designations, HER² data and expert opinion. The determination of the significance of these assets is based on statutory designation and/or professional judgement against four values (EH "Conservation Principles" 2008)³:

Evidential value: the potential of the physical remains to yield evidence of past human activity. This might take into account date; rarity; state of preservation; diversity/complexity; contribution to published priorities; supporting documentation; collective value and comparative potential.

Aesthetic value: this derives from the ways in which people draw sensory and intellectual stimulation from the heritage assets, taking into account documentary and oral sources;

Historical value: the ways in which past people, events and aspects of life can be connected through heritage assets to the present, such a connection often being illustrative or associative;

Communal value: this derives from the meanings of a heritage asset for the people, who know about it, or for whom it figures in their collective experience or memory; communal values are closely bound up with historical, particularly associative, and aesthetic values, together with educational, social or economic values.

The effects from the proposed development on the heritage attributes have been identified as adverse neutral or beneficial. The scale or severity of the possible changes or impacts on those attributes has also been identified, since the latter in combination with the former define the significance of the impact or effect.

The scale and severity of impact is used as a basis for assessing the significance or effect or overall impact, as indicated in the chart below, taken from Guidance on Heritage Impact Assessments for Cultural World Heritage Properties (ICOMOS, January, 2011).

¹ ICOMOS Guidance on Heritage Impact Assessments for Cultural World Heritage Properties, January 2011.

² Historic Environment Records.

³ Conservation Principles. Policies and guidance for the sustainable management of the historic environment. Published by English Heritage. © English Heritage April 2008.

VALUE OF HERITAGE ASSET	SCALE AND SEVERITY OF CHANGE/IMPACT				
	No change	Negligible change	Minor change	Moderate change	Major change
For WH properties Very High – attributes which convey OUV	SIGNIFICANCE OF EFFECT OR OVERALL IMPACT (EITHER ADVERSE OR BENEFICIAL)				
	Neutral	Slight	Moderate/Large	Large/Very Large	Very Large

Fig. 1 Scale and severity of impact Chart

Since the significance of effect or overall impact may be beneficial, neutral or adverse, they have been assessed according to the following nine-point scale:

- Major beneficial
- Moderate beneficial
- Minor beneficial
- Negligible beneficial
- Neutral
- Negligible adverse
- Minor adverse
- Moderate adverse
- Major adverse

Cumulative effects of separate impacts have also been considered, as well as what temporal and spatial scale the effect is anticipated to produce. For example, the effect of a particular impact is anticipated to be short-term, temporary, local and of moderate adverse significance.

Mitigation measures that would need to be implemented in order to reduce, offset, or ameliorate any of the significant adverse potential effects identified have also been developed.

Finally, the residual effects of the development (those accounting for the implementation of the mitigation outlined above) are shown with the significance of the effect reassessed accordingly.

If no mitigation has been required because a particular potential effect is found to be beneficial or negligible, then the residual effect has remained as the potential effect.

2 IDENTIFICATION OF THE ATTRIBUTES OF OUTSTANDING UNIVERSAL VALUE THAT MAY BE AFFECTED BY THE PROPOSAL

2.1 Statement of Outstanding Universal Value that may be affected by the proposal

2.1.1 Statement of Outstanding Universal Value

The attributes of OUV constitute the 'baseline data against which impacts must be measured' (ICOMOS 2011:7)

All World Heritage Sites are required by the World Heritage Committee of UNESCO to have Statements of Outstanding Universal Value (SoOUV) in place by 2012. Cornwall and West Devon Mining Landscape SoOUV was been approved in 2010.

Such documents, produced by the World Heritage Site coordinators at each site with assistance from English Heritage, ICOMOS UK and IUCN UK, contains a brief description, Statement of Significance, Statement of Authenticity, Statement of Integrity and a section describing how the World Heritage Site (WHS) is protected and managed.

The following paragraphs extracted from the Cornwall and West Devon Mining Landscape SoOUV summarise the global values and criteria for the entire World Heritage Site, of which Hayle is a constituent part :

'The landscapes of Cornwall and west Devon were radically reshaped during the eighteenth and nineteenth centuries by deep mining for predominantly copper and tin. The remains of mines, engines houses, smallholdings, ports, harbours, canals, railways, tramroads, and industries allied to mining, along with new towns and villages reflect an extended period of industrial expansion and prolific innovation. Together these are testimony, in an inter-linked and highly legible way, to the sophistication and success of early, large-scale, industrialised non-ferrous hard-rock mining. The technology and infrastructure developed at Cornish and west Devon mines enabled these to dominate copper, tin and later arsenic production worldwide, and to greatly influence nineteenth century mining practice internationally.

*The extensive Site comprises the most authentic and historically important components of the Cornwall and west Devon mining landscape dating principally from **1700 to 1914**, the period during which the most significant industrial and social impacts occurred. [...]*

The substantial remains within the Site are a prominent reminder of the contribution Cornwall and west Devon made to the Industrial Revolution in Britain and to the fundamental influence the area asserted on the development of mining globally.

2.1.2 Criteria for Inscription

Criterion (ii): *The development of industrialised mining in Cornwall and west Devon between 1700 and 1914, and particularly the innovative use of the high-pressure steam beam engine, led to the evolution of an industrialised society manifest in the transformation of the landscape through the creation of smallholdings, railways, canals, docks and ports, and the creation or remodelling of towns and villages. Together these had a profound impact on the growth of industrialisation in the United Kingdom, and consequently on industrialised mining around the world.*

Criterion (iii): *The extent and scope of the remains of copper and tin mining, and the associated transformation of the urban and rural landscapes presents a vivid and legible testimony to the success of Cornish and west Devon industrialised mining when the area dominated the world's output of copper, tin and arsenic.*

Criterion (iv): *The mining landscape of Cornwall and west Devon, and particularly its characteristic engine houses and beam engines as a technological ensemble in a landscape, reflect the substantial contribution the area made to the Industrial Revolution and formative changes in mining practices around the world.*

2.1.3 Integrity (2010)

The areas enclosed within the property satisfactorily reflect the way prosperity derived from mining transformed the landscape both in urban and rural areas, and encapsulates the extent of those changes.

Some of the mining landscapes and towns within the property are within development zones and may be vulnerable to the possibility of incompatible development.

2.1.4 Authenticity (2010)

The property as a whole has high authenticity in terms of form, design and materials and, in general, the location and setting of the surviving features. The mines, engine houses, associated buildings and other features have either been consolidated or await work. In the villages and towns there has been some loss of architectural detail, particularly in the terraced housing, but it is considered that this is reversible.

The ability of features within the property to continue to express its Outstanding Universal Value may be reduced, however, if developments were to be permitted without sufficient regard to their historic character as constituent parts of the Site. The spatial arrangements of areas such as Hayle Harbour and the settings of Redruth and Camborne are of particular concern and these may be vulnerable unless planning policies and guidance are rigorously and consistently applied.'

The Heritage Statement and PPS5 report accompanying this application provides a summary of existing information about the archaeology and cultural heritage of the site, and an assessment of significance relating to the Statement of OUV.

2.2 Context, condition, authenticity and integrity of South Quay, Hayle Harbour

'[...]As a manufacturing centre for the mining industry, a smelting centre for both tin and copper, the main port of entry for coal, timber, leather, grain, iron and all the other goods needed for the mines, the major home port for the fleet that carried the goods, and the major shipbuilding centre in Cornwall, Hayle was in a very real sense the power house of Cornish industry.' (Cahill 2000:15)⁴

The construction of South Quay is a direct result of the Cornish mining industry and the estuarine setting that allowed its positioning. Its creation illustrates the expansion and burgeoning of the industry, which shaped the whole town of Hayle. However, the configuration and character of South Quay and immediate environs developed over the years and is the evidence of an important past, which transcends its correlation with the mining industry. In fact, Hayle was, and is, first and foremost

⁴ Hayle Historical Assessment. Cornwall. Nick Cahill with Cornwall Archaeological Unit, 2000.

a port, for trading, and it was its topographical situation that allowed the development leading to the universally recognised industrial contribution that it made. The quay and the harbour survived beyond the servicing of the mining industry and the industrial innovation it generated because it adjusted to the economic changes and opportunities, thus permitting the port to continue to be commercially active until 1977. It still provides facilities for pleasure craft and a number of small fishing craft. The harbour survived the vicissitudes and, more generally, the decline of the mining industry due to the ability of its owner, the Harvey Company, to transform the principal function of the site according to economic and social circumstances. The merchant trading and importation of goods continued to expand throughout the 19th century and early 20th century and, as the export of ores declined, ship building increased. Harveys were uniquely placed for the construction of iron ships in Cornwall, due to their engineering expertise and manufacturing abilities, but were hampered by the limitations of the channels and quays (with 4000 tons being the largest ship constructed). After shipbuilding ceased in 1893 it continued providing quays and wharves for general goods and particularly building material trading and distribution centre. The economic vibrancy of the quays and harbour were maintained through the operation of the sluicing, which until the early 1970s preserved the navigable channels.

The development of South Quay was tightly connected with the evolution of the Harvey Company which controlled the growth of both South Quay and Foundry (see Chapter 3 of the Heritage Statement and PPS5). The following are the milestone events that contributed to the spatial configuration and character of the site:

- Carnsew Dock was constructed in the early C18th for merchant trading prior to Harvey.

South Quay was built by Harvey on a natural rock outcrop or peninsula, between 1817 and 1819 in order to facilitate the expedient loading and unloading of ships exporting foundry products and importing other mine merchant materials needed to service the mining industry, as well as a large range of other materials ready and made goods. The quay occupied a long and thin area next to a timber pound, which was also a constituent part of the trading business.

- In 1834 the construction of the Carnsew Pool was completed together with the sluice gates, penstocks and the training wall. Designed to scour out the harbour channel adjacent to the dock at each tide to allow vessels to enter the harbour unimpeded. Lock gates allowed shipping to access the Pool for additional quayside.
- Between 1828 and 1840 the quay was extended over the timber pound which was filled in. A number of buildings clustered at the southern end of the quay as part of the foundry works including hammer mill, saw mill timber stores and probably in connection with some shipbuilding.
- In 1837 the Hayle Railway was nearly completed. It ran from Foundry Square along Penpol Riverbanks across Copperhouse Pool sluice gates and continued to link up with the mining areas of the district. A series of branches developed to serve South Quay and other wharves. In 1852 the West Cornwall railway built the Brunel timber viaduct across Penpol Creek, to allow continuation of the line to Penzance. This was replaced by the stone one (still in place today) in 1886. The viaduct twice crossed the A30 (now the B3301) becoming a striking and most distinguished landmark feature in the town and the backdrop of South Quay when viewed from the north. It dissected Harvey's foundry works, which continued developing buildings

and works on south quay. The low level original rail line remained as the Hayle Wharves Branch.

- Around 1879-1890 the quay edge was changed and a new slipway constructed closer to the boiler works and ship yard to facilitate the construction of larger ships. At this time a number of buildings clustered at the south end of the Quay including a much enlarged ship yard boiler yard steam hammers and saw mills. These had large footprints. The main road from Penzance passed through Harvey's works, bordered by his buildings, yards and cranes.
- Harvey's shipbuilding ceased in 1893 and heavy foundry manufacturing and engineering was ended in 1903 when the entire works contents were sold. The merchant trading activities continued to expand into a major builders' merchant trade site.
- In the 1920s and until the 1950's the quay was used for shipbreaking.
- Harvey & Co. merged with United Builders Merchants in 1969. The harbour was closed to commercial shipping in 1977. The entire harbour and port was sold in 1983, resulting in total demolition of all buildings on south quay, and the infilling of the dock and slipways and part of the Carnsew channel with rubble. The south quay area adjacent to Carnsew Pool is now in separate ownership, with a boundary line dissecting the Carnsew dock.

South Quay is strictly interrelated with four distinct areas: the Harbour and its estuary, Foundry, Penpol and Copperhouse (Hayle - Historic Characterisation for Regeneration 2005:46)⁵.

Foundry and Penpol Character Areas determine the built environment that constitutes the setting or backdrop for South Quay. Foundry is a conglomeration of impressive buildings - villas and industrial buildings - reflecting the dominant presence of the Harvey's enterprise in town and memory of its industrial and trading past. The association of the quay with Foundry is not only by proximity and visual connection, but also historical, as the two areas were inexorably linked under the control of the same company and have interconnected economic activities. Today this relationship has been weakened by the presence of the busy Carnsew Road, which acts as a detrimental element to the physical connectivity, and by the loss of much of the built form. The dominant presence of the Foundry viaduct now acts as a visual and physical barrier whereas historically the industrial activities permeated it. The soft landscape of Isis Garden, with its boundary wall, once the place of the early railway station, also interrupts the physical and historical link. However, the South Quay's buildings had a somewhat different appearance from those industrial buildings that survive in Foundry today, as they were purpose-built for different usage. Some of the structures on the quays were to some extent of a more provisional nature, and strictly functional, as they had to be easily adjusted to the changing needs of the port. These comprised "hutches" for storage, with an open side for loading, and large sheds for shipbuilding. The mills were also of large footprints and now major foundations have been discovered which also indicated something of their lighter construction onto the man-made ground of the quay. Later buildings did have concrete bases which are still extant to a degree, and there is some evidence of later steel construction.

The relationship with Penpol is established through physical proximity and, visual connection. This area forms a middle ground between the Foundry and Copperhouse, and it is constituted by mid 19th

⁵ Hayle - Historic Characterisation for Regeneration. The Historic Environment Service Cornwall Council as part of the Cornwall & Scilly Urban Survey (CSUS), 2005.

century terraces built for the professional classes. The relationship with the Copperhouse Character Area beyond is stronger in historical terms, given the rivalry between the two foundries that ultimately led to the production of two distinct industrial developments. In spite of the relevant industrial remains, the character of Copperhouse is now largely formed by the presence of 19th century terrace housing and commercial development, as well as the remaining early quays, sluicing pond and canal.

The natural environment in which South Quay is set is considered part of The Harbour Character Area, which reflects the natural attributes of the estuary along the sea combined with the remarkable man-made landscape of the port and quays.

2.2.1 Authenticity and integrity

The Nara Document on Authenticity [1994] and the Vienna Memorandum [2005] recognise the need for urban areas to evolve and change as part of a process of urban management. Both documents acknowledge that authenticity cannot depend entirely on the integrity of individual buildings and monuments. Further work on heritage values has stressed the need to think of settlements not as monuments, but as places where people live, work and interact over time.

Para 13 of the Nara Document on Authenticity states: *‘Depending on the nature of the cultural heritage, its cultural context, and its evolution through time, authenticity judgements may be linked to the worth of a great variety of sources of information. Aspects of the sources may include form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling, and other internal and external factors. The use of these sources permits elaboration of the specific artistic, historic, social, and scientific dimensions of the cultural heritage being examined.’*

In the evaluation of the particular South Quay attributes of OUV, the major challenge is to sustain the authenticity and integrity of the WHS within a context of urban transformation and change that lead to a presently barren zone, deprived of any built structures, but the quay itself, as remainders of the trade, the mining activity, or the rivalry between the two principal companies that shaped the place.

‘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 [664], [666], East Quay [661] and South Quay [344], 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.’ (Cahill 2000:42)

The most characteristic structures of the quay, as mentioned above, were temporary hutches to store the stocks bought from the mines before they were loaded onto the ships and for storage of the goods and materials needed for distribution. No vestiges of these structures remain above ground level. Further, the iconic large structures at the south end of the quay for shipbuilding and engineering also have virtually no remains other than some scant archaeology. Thus at a tangible built environment⁶ level, the integrity of the South Quay is severely undermined directly impacting its authenticity. Even though the remains can be said to be authentic, they have, due to the lack of integrity, lost much of their potential to convey the site’s contribution to the WHS OUV.

⁶ The built environment consisting of buildings, structures, objects, and associated features; non-archaeological sites, and districts composed of these resources.

South Quay, built 1817-19 by Henry Harvey, is highlighted in the *Hayle Historical Assessment. Cornwall* (Cahill et al. 2000) as of particular importance since it was the first quay built by Harvey's⁷, and because it survives almost unaltered, in its overall form. It was altered and adapted to accommodate shipways for ship construction which required partial demolition of the original stone walls. The most significant recent alteration, besides the demolition of the industrial remains in the early 1990s is the infill of its west side, which begun in the late sixties' according to the photographic records of Cornwall Council.

'[...]The main areas where there has been substantial loss of historic fabric are unfortunately in the main areas of late 18th/early 19th century industrial development - especially at the Copperhouse Foundry complex, the shipyards and other buildings on Carnsew/South Quays, and some of the key elements of Harvey's Foundry. Even in these areas, however, there is good potential for archaeological investigation of buried remains, especially on the quays and at Harvey's.'(Cahill 2000:37).

The buried remains, although retaining tangible values depicting the history and evolution of the quay activities, hold its primary value in archaeological research. Exposure of buried remains is not always achievable or recommendable. The UNESCO Operational Guidelines for the Implementation of the World Heritage Convention, 2008, emphasises in Para 86 that:

'In relation to authenticity, the reconstruction of archaeological remains or historic buildings or districts is justifiable only in exceptional circumstances. Reconstruction is acceptable only on the basis of complete and detailed documentation and to no extent on conjecture.'(UNESCO 2008:22)

At national level, English Heritage agreed in 2001 a Policy Statement on Restoration, Reconstruction and Speculative Recreation of Archaeological Sites including Ruins⁸, a statement conforming to national and international guidance:

'There is a strong presumption against restoration in British building conservation practice, based on the influential writings of William Morris and John Ruskin. The presumption in UK guidance on the treatment of historic buildings and ruins is that restoration or reconstruction is something that should be approached cautiously and never carried out on a speculative basis. [...]General guidance and policy therefore is that speculative reconstruction is wrong because it may damage original fabric and may affect authenticity.' (EH 2001:4)

Furthermore, the same document states:

'[...] Excavation removes deposits which cannot be replaced, and even the repair of masonry or other structures inevitably introduces changes. In order to minimise such changes and preserve the fabric, evidential quality and character of each site as far as possible, English Heritage policy is to carry out the minimum conservation work necessary for the long term survival and, where possible, display of a site.' (EH 2001:4)

The extent and condition of the archaeological remains in the South Quay is described in the Archaeological and Heritage Chapter of the ES Report, part of the supplementary information provided for this planning application. International and national policies and guidelines have been followed and most of the remains exposed on the South Quay during the archaeological trial

⁷ Before the purchase of Carnsew Quay the firm used the bare foreshore for trading and boat building (Cahill 2000:39).

⁸ English Heritage Policy Statement on Restoration, Reconstruction and Speculative Recreation of Archaeological Sites including Ruins, 2001.

excavations have been documented and are at present preserved buried in order to ensure their survival.

The authenticity of the South Quay therefore lies in-between the tangible values of its strategic position, the man-made quay and its retaining (statutorily listed) walls⁹, the archaeological remains documented and reburied, and the intangible narrative of its role as part of the integrated complex of mines, railways and ports serving each mine district and contributing to the industrial development that influenced so greatly the nineteenth century mining practice internationally.

2.2.2 Tangible heritage assets and their setting

Within the site

A. South Quay

In spite of the extremely deleterious impact caused by the demolition of the above ground remains, South Quay in itself, with its listed Grade II walls including Carnsew Dock holds the highest level of authenticity and integrity on the site. The Quay provides not only tangible evidence of Hayle's outstanding commercial port contribution to the industrial revolution, as acknowledged in the WHS OUV, but it also speaks of the sites adaptability to changing industrial and commercial demands that affected its built form.

The scalloped profile of the quay to accommodate vessels moored alongside can only be seen on the east side at present. Modern infill obscures the western side of the quay which accommodated Carnsew Dock and slipways. Carnsew Dock was in active use throughout the history of South Quay until the end of commercial shipping activity in 1977. The currently infilled slipways are testimony to the intensity of shipbuilding activity that occurred on site as Harvey's adapted his enterprise to market demands, surviving the collapse of the mining industry. The slipways were used for Harvey's own ships and for construction of bigger vessels, culminating in the 4000 ton SS Ranleh of 1891, but ended in 1893. The slipways were then increasingly used for ship breaking and some commercial shipping activity, as confirmed by the construction or adaptation of the last slipway in 1907. T W Ward, who purchased Harveys foundry, continued ship breaking into the 1950s, including some sizable vessels such as the destroyers HMS Cockatrice (broken-up 1921) and HMS Sable (B- u 1937), the corvette HMS Clarkia (b-u 1947) and the Submarines HMS Unseen (b-up 1949) and Uther (B-u 1950). It is not clear whether further alterations to slipways were necessary to accommodate these.

The western walls to the Carnsew channel appear to have been shaped to enhance the effectiveness of the sluicing activity installed in 1834. The walls are slightly battered and have dressed granite copings.

The quay walls are made of large granite copings fixed with iron cramps, but also with some areas having joggled joints, with a mixture of walling body materials including granite, ashlar, freestone, random and coursed blocks as well as some copper slag blocks and scoria from the smelting. The variations in technique and materials provide important information about the development of the quays and evolution of the harbour. In spite of alterations to the western profile of the quay and the blocking up of the arched connection under the quay through the mudflats to the north and west, the authenticity and integrity of the walls still confer a significant character to the place.

⁹ Although partially buried according to the archaeological reports by Northamptonshire Archaeology 2010-11

B. Slipways, buried Remains and Carnsew Dock

Both the slipways and the Carnsew dock remain buried below the modern infill material and surface finishes. Their condition and integrity is largely affected as stated in the archaeological reports by Northamptonshire Archaeology 2010-11. The archaeological evaluations located the positions, layout and state of preservation of the slipways and dock and the nature of their construction.

The permanent exposure of the shipways is not recommended. Therefore, the development will seek to enhance the historic environment by allowing for greater exposure of those remains particularly the dock which can be safely exposed without further threatening their integrity. The parts exposed by trial trenches excavated so far have been recorded and further excavation will allow for more comprehensive recording. Further measures will be taken to enhance the public understanding of the buried remains through site interpretation strategies.

C. Visual Context

Due to the visual connection and historical relationship with the surrounding environment, the following views from the site outwards are considered to be significant heritage baselines: view to Penpol Terrace, to the estuary mouth and to the Foundry Complex. [Refer to Baseline and Proposed Views, pg 31-39].

This section provides a brief appraisal of the visual characteristics of the proposed development site.

The width of the estuary and the shallow tributary valley sides facing down towards the site leave the proposed development very exposed. From the majority of viewpoints the site is seen in the context of Hayle's existing urban fabric and surrounding landscape setting. The railway viaduct, the skyline of the sand dunes, scale of the estuary, beach and churches at Phillack, Lelant and Hayle Terrace all form significant landscape features around the site. It is the estuarine qualities that contribute to the spatial arrangements that have resulted from the industrialisation and human intervention to the locale.

While the valley sides to the estuary leave the site highly visible at their foot, they also provide higher ridgelines preventing the proposed development site from breaking the skyline in many of the surrounding views. This important criterion informed the design process to the extent of ensuring a low height, with horizontal emphasis.

The general extent of visibility of the proposed development site is summarised and assessed as per the following views:

View 1 – From the Towans looking southwest

View 2 – From North Quay looking south

View 3 – From Clifton Terrace looking west towards Carnsew Pool

View 4 – From Penpol Terrace looking south-west

View 5 – View 5 – From Carnsew sluice looking north-east

View 6 – From Foundry Square looking north

View 7 – From the Iron Age Hillfort looking northeast

View 8 – From the grounds of Grade II* listed Lelant Church looking south-east

C.1. View 1 - From the Towans looking southwest

This view is taken from the end of a path south of the Hayle Cricket Club in the Towans. The view is taken from a similar view point as the 1895 view of Hayle, above the site of the later power station. East Quay in the centre, and South Quay, Carnsew Dock, the railway viaduct and Harvey's Foundry are in the background.

There most prominent Grade II and Grade II* listed buildings within this view are:

East Quay built in 1818-19, is contemporary to South Quay as it was built in direct competition with Harvey's quay.

Carnsew Quay Dock and Quay walls. Circa 1740, extended early 19th century.

Hayle Customs House, dating to 1862.

Church of St Elwyn (GV II*). Parish church for newly-formed Peel parish. 1886-1888 by John Sedding (his last work).

For additional listed buildings on this view refer to Heritage Appendices – Appendix 5.

C.2. View 2 - From North Quay looking south

This view is taken from the southern section of North Quay look at the north-eastern section of South Quay. In this view the site is seen in conjunction with East quay (left), Carnsew Dock (right) and the Iron Age Hillfort (right, background). The tidal variation and the present shallowness of Penpol Channel is quite evident. A few buildings on Foundry Square are seen beyond, mostly obscured by the prominent presence of the viaduct.

The most prominent listed Grade II buildings in this view are:

South Quay. 1817-19, built for Henry Harvey.

Carnsew Quay. Quay walls. Circa 1740, extended early 19th century.

East Quay. Quay walls. Early 19th century, built for The Cornish Copper Co..

Former Harvey's Timber Store and Drying Shed (Jewsons Builders Merchants) - Timber store and drying shed built circa mid 19th century for Harvey and Co; altered late 20th century.

For additional listed buildings on this view refer to Heritage Appendices – Appendix 5.

C.3. View 3 – From Clifton Terrace looking south

This view is taken from the northern end of Clifton Terrace looking south towards the quay due to vegetation. At the centre of the view a section of the Quay is seen in conjunction with listed buildings set within the industrial setting of East and Customs House Quays. Carnsew Pool is seen in background together with the recent residential development along Carnsew close to the foot of the Iron Age Hillfort.

The most prominent listed Grade II buildings in this view are:

Custom House, Custom House Quay. Custom house, dated 1862.

South Quay. 1817-19, built for Henry Harvey.

Carnsew Quay. Quay walls. Circa 1740, extended early 19th century.

East Quay. Quay walls. Early 19th century, built for The Cornish Copper Co..

(obscured by vegetation) Former Harvey's Timber Store and Drying Shed (Jewsons Builders Merchants) - Timber store and drying shed built circa mid 19th century for Harvey and Co; altered late 20th century.

For additional listed buildings on this view refer to Heritage Appendices – Appendix 5.

C.4. View 4 - From Penpol Terrace looking south-west

This viewpoint is taken from the northern end of the B3301 along Penpol Terrace.

It shows part of the road which is the main vehicular route through Hayle. The street runs adjacent to South Quay offering views over the proposed development. The derelict visual condition of the harbour is immediately apparent, in sharp contrast with the heightened activity that it once witnessed at the height of the industrial revolution (the period to which the OUV refers to), and beyond, until the 1977 when the commercial port activity ceased. The lack of built form on South Quay allows for more visual permeability at ground level than it was ever possible since the construction of the quay, giving much greater prominence to the railway viaduct. Some of the buildings in Foundry Square are seen beyond.

The most prominent listed Grade II buildings in this view are:

Premises Occupied by Whites, 25 Foundry Square, Warehouse. Late 19th century.

Former Offices and Remains of Foundry and Harvey and Co. , 24 Foundry Square. Foundry office and remains of foundry. Late 18th Century and early-mid 19th century. built by Harvey and Company; altered late 20th century.

Barclays Bank, 22-23 Foundry Square. Former emporium. Early 19th century built for the Harvey family.

The White Hart Hotel, 10 Foundry Square. Public house, ca. 1838., built for Henry Harvey, brother-in-law of Richard Trevithick.

There are 7 listed Grade II buildings (being one a Scheduled Monument) obscured by the railroad viaduct. Their setting would be potentially affected by the development.

(obscured by the railroad viaduct) Premises Occupied by R.M. Munday, 21 Foundry Square. Ca. early 19th century.

(obscured by the railroad viaduct) Premises Occupied by Homestead and Cornish Linen Service, 18,19 AND 20 Foundry Square. Former Corubia biscuit factory. Late 19th century.

(obscured by the railroad viaduct) Former Harvey's Timber Store and Drying Shed (Jewsons Builders Merchants) - Timber store and drying shed built circa mid 19th century for Harvey and Co; altered late 20th century.

(obscured by the railroad viaduct) Former Foundry at Foundry Lane. Pattern shop for iron foundry, early 19th century. built for Harvey and Co.

(obscured by the railroad viaduct) Former Pattern Shop for iron foundry, mid 19th century, built for Harvey and Co.

(obscured by the railroad viaduct) Memorial Arch, King George VI Memorial Plantation. Memorial arch adjoining ancient walled earthwork, 1844.

(obscured by the railroad viaduct) The Cunaide Memorial (Hayle inscribed stone), Kind George VI Memorial Plantation. Gravestone, 6th century. Inscribed granite slab reset with 19th century slate slab over.

Some of the distant views towards Foundry, the Iron Age Hillfort are disturbed by the landscape elements in the foreground.

For additional listed buildings on this view refer to Heritage Appendices – Appendix 5.

C.5. View 5 – From Carnsew sluice looking north-east

This view is taken from Carnsew Quay over one of the sluice gates. The channel is shown flanked by the listed walls of Carnsew Quay to the left and by South Quay to the right. The detritus infill and overgrown vegetation that cover the former slipways since the 1960's dominates the centre of the view. Both East and North Quay are seen beyond, with 19th and 20th century buildings. North Quay extends towards the estuary's mouth. Clifton Street is seen to the right and the greenery of the Towans crowns the view.

The most prominent listed Grade II buildings in this view are:

East Quay built in 1818-19, is contemporary to South Quay as it was built in direct competition with Harvey's quay.

South Quay, Including South East Side of Carnsew Dock. Quay walls. Circa 1819, built for Harvey and Company.

C.6. View 6 - From Foundry Square looking north

This view is taken from B3302 (Foundry Hill), near Foundry Square, looking north towards the quay. The railroad viaduct is the predominant feature in the skyline, flanked by listed buildings in Foundry Square.

The Foundry is one of the historic centres of Hayle, and is still a busy area with a mix of uses and lots of pedestrian and vehicular traffic especially along the B3301 (Carnsew Road).

The development in Foundry area of Hayle began in earnest in the early-mid 18th century and records indicate that industrial buildings built by Harvey's Co. started as early as 1779. Foundry Square has today several buildings that were associated with Harvey & Co.

The following listed Grade II buildings are seen in this view:

Barclays Bank, 22-23 Foundry Square. Former emporium. Early 19th century built for the Harvey family.

Premises Occupied by R.M. Munday, 21 Foundry Square. Early 19th century.

Premises Occupied by Homestead and Cornish Linen Service, 18,19 AND 20 Foundry Square. Former Corubia biscuit factory. Late 19th century.

C.7. View 7 - From the Iron Age Hillfort looking northeast

This view is seen from the Iron Age Hillfort looking towards Quay, Penpol Terrace and beyond. The historic walls presumed to be part of Harvey's Gas Works are seen in the foreground. Ca. 1843. The B3301 separates the proposed redevelopment of the Foundry car park and South Quay. The residential/commercial Penpol Terrace is seen beyond with the and St Elwyn's Church in the background. Towans and most of Clifton Terrace is obscured by vegetation to the left.

The most prominent listed Grade II buildings in this view are:

South Quay, Including South East Side of Carnsew Dock. Quay walls. CAa.1819, built for Harvey and Company.

Biggleston, 28 Penpol Terrace. Detached ironmonger's shop. Dated 1894.

Carnsew Gallery, 42 Penpol Terrace. Detached shop, formerly the butchers shop of John Runnals. 1893. Designed by Sampson Hill of Redruth.

Church of St Elwyn (GV II*). Parish church for newly-formed Peel parish. 1886-1888 by John Sedding (his last work).

C.8. View 8 - From the grounds of listed Grade II Lelant Church looking south-east*

This view is seen from the grounds of the listed Grade II* Lelant Church, near the West Cornwall Golf Club. The church was mostly built in the 15th century.

Much changed in this view. In the 18th century North Quay (ca 1740) was created. The growth of Hayle as a relevant port and the rivalry of the CCC and Harvey enterprises during the industrial revolution resulted in the extensive manipulation of the natural landscape in the early 19th century, with the creation of South Quay and East Quay in 1817-19.

As small section of North Quay (Riviere Quays) is seen to the left next to a small section of Custom House Quay, with the listed Grade II Custom House. The buildings on East Quay are visible followed by the 19th century Penpol Terrace and the railroad viaduct. Copperhouse is seen to the left of St Elwyn's Church along with the wider city development on the hill.

For listed buildings on this view refer to Heritage Appendices – Appendix 5.

Outside the site

A. Conservation Area

There is no Conservation Area Appraisal document as advocated by English Heritage guidance. Since the extent of the Hayle Conservation Area incorporates the whole of the visual influence upon the site, the characteristic elements have been grouped to facilitate the process of impact assessment as follows:

A.1 Pools and Sluicing

Carnsew Pool was constructed by Harvey's in 1834 after the new East Quay built by CCC in 1819 aggravated the silting of deep water channels to Harvey's quays. The sluicing and lock gates of the pool served to wash out the sand and silt that accumulated in the Carnsew Channel, reshaping the former channel and providing a new western profile to the southern portion of the South Quay. Carnsew Pool is perhaps the largest single surviving structure in the harbour. (Cahill 2000:39).

Although 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 were earlier structures in connection with the Penpol smelter from 1710 and shipping/trading from the shores; but there are no building remains but for some rubble left from the Gate House by the northern sluicing channels.

The Carnsew Quay may date from the first half of 18thC, erected by George Blewitt and his predecessors as part of his merchant trading company, is listed GII and includes the 1834 pool extension and sluices. The walls of the quay, partially dressed in granite, are specifically part of the listing.

A.2 Foundry

This area reflects the urban and industrial past of Hayle. Focused around Foundry Square, south of the site and viaduct, includes the remaining structures of the core of the Foundry site. The still standing large industrial buildings and villas are remainders of the dominant presence of the Harvey's enterprise in town.

The views into the quay and outwards were dramatically altered by the construction of the railway line in 1837, and later on when the present viaduct was rebuilt in stone in 1886.

The impermeable characteristics of the walled Isis Gardens and the imposing horizontality of the railway impair the connectivity between the Foundry area and the site.

The identified listed buildings within this area that may be affected by the development are the following:

Memorial Arch, King George VI Memorial Plantation, adjoining ancient walled earthwork with datestone, 1844

Hayle inscribed stone (Scheduled Monument)

Railway Bridge, King George VI Memorial Plantation, 1852

Former Foundry, Foundry Lane, circa early C19

Former Pattern Shop, Foundry Lane, circa mid C19

Premises Occupied by Whites, 25 Foundry Square, circa late C19

Former Offices and remains of Foundry of Harvey and company, 24 Foundry Square, Late C18 and early-mid C19

Barclays Bank, 22-23 Foundry Square, circa early C19

Premises occupied by R.M. Munday, 21 Foundry Square, circa early C19

Premises occupied by Homestead and Cornish Linen Service, 18,19 and 20 Foundry Square, circa late C19

The White Hart Hotel, 10 Foundry Square, circa 1838

Freemasons' Hall, 8 and 9, Foundry Square

Lloyds Bank, 3-4 Foundry Square, circa mid-late C19

Pratt's Hayle Market, 12, Chapel Terrace, 1845

No 8, including front garden walls and gate piers, 8, Chapel Terrace, circa mid C19

A.3 Penpol Terrace

Part of the middle ground between the two settlements of Copperhouse and Foundry, this area stands to the east and northeast of South Quay. Penpol Terrace was laid out on reclaimed land following the construction of the East Quay in 1819. The terrace was new element in the town, since it was clearly not intended for humble workers but for shopkeepers, school teachers, sea-captains, professional men and retired spinsters of moderate means. (Cahill 2000:31)

The built character consists generally of 2 storeys mid-19th century terraces built for professional classes. There are four listed Grade II buildings on the terrace:

28 Penpol Terrace, Biggleston, a detached ironmonger's shop dating from 1894

42 Penpol Terrace, Carnsew Gallery, a detached shop, formerly a butchers shop, dating from 1893

61 Penpol Terrace, The Royal Standard Inn, a public house including boundary stone dating from the early C19

63-66 Penpol Terrace, Bridge House, a house dating from the late C18 or early C19.

A.4 East Quay

The East Quay was built by the CCCo¹⁰ in 1819 as a result from the competition with Harvey's and its recently built South Quay, and also as the means to consolidate the shift in focus westwards from Copperhouse. (Cahill 2000:31)

19th century industrial buildings survive on the quay, which in itself keeps its form almost unaltered. Only the quay is listed Grade II.

A.5 The Towans

The Hayle Towans is an area of sand dunes and grassland separated from the beach and the estuary by a low and steep cliff line. *The Towans is the second largest area of sand dunes in Cornwall and is prominent when viewed from across the bay.* (Cahill 2000:19)

The Hayle Estuary and Towans provide a setting of rare natural beauty for the settlements of Lelant on the western shore, Phillack on the north, and the town of Hayle on the southern shore.

There is remaining evidence of industrial activity within the dunes close to the harbour of the once large industrial buildings located on the edge of North Quay and the Towans although not many remains of value survive compared to the scale of the original enterprises.

Previous uncharacteristic development has lessened the industrial character of the built environment in the area, now lacking overall coherence.

The Towans, from Hayle to Godrevy, are already the subject of a County Council Management Project designed to protect the habitat of the dunes, to prevent their erosion, and to manage the large number of visitors. (Cahill 2000:81).

A.6 North Quay

North Quay originally part of the Merchant Curnow's development with Copperhouse Pool and the later East Quay, was the harbour structure of the CCCo. At the time of the construction of the East Quay and the works to improve the sluicing capacity of Copperhouse Pool, the North Quay was

¹⁰ Cornwall Copper Co.

extended. The cliff was cut back and a road was built above the beach, which was occupied on one side by horses and row of small shops overlooking the harbour.

As in the Towans, not many remains of value survive in the North Quay compared to the scale of the original enterprises, although some evidence of the extensive network of rails and tramlines survives..

2.2.3 Intangible heritage assets

The intangible heritage assets of South Quay are strictly correlated with its historic and communal values. Accordingly to the Outstanding Universal Value, the Port of Hayle is an expression of the industrialised mining activity of Cornwall and Devon. In turn, the mining led to the foundation and progression of associated industries, technologies, and support services which influenced and shaped the pattern of human settlement in the area.

Hayle was not a mining centre itself, though there was at a certain time one mine within what are now the town environs¹¹. In the case of Hayle the exploitation of metalliferous minerals can be regarded as the catalyst activity, but it evolved over pre-existing patterns of landholding, which influenced the way industry spread its buildings, developed its wharves and housed its workers, and for being a safe harbour suitable for trading and shipping. The significance of Hayle lies in its origin as port serving the mining industry, and the associated industries that developed due to its topographical and geographical location. Transport infrastructures have been regarded as one of the key components imparting a singular character to the Cornish World Heritage Site because they were fundamental for the development of the mining industry and for the characterization of the landscape.

With the rapid expansion of mining came the demand for improved machinery, which brought to the town engineers and required a large number of workers. However, the pumping engines built in Hayle were not made only for draining the mines, but also for other uses in water supply applications, culminating in the largest steam engines ever built to drain the Dutch polders. This led to design and manufacture of other steam driven machinery including locomotives, marine engines etc. Therefore, the history of the town can be linked to the innovative use of the high-pressure steam and to the greater landmark of human history known as the industrial revolution.

Hayle was the home to two of the three largest early 19th century mine engine (steam) foundries in the world (Harvey's 1779-1903 and CCC Sandys, Carne, Vivian 1820-1869), and it was the workplace and meeting place of some of the most famous steam engine engineers like Richard Trevithick, William West and Arthur Woolf. It was the place where mine engines were constructed and sent to other parts of the world, and played a key role in the expansion of the industrial revolution abroad and to the growth of a global industrial society. It was therefore regarded a place of worldwide importance for innovation, quality and reliability in the field of steam engine production and heavy engineering.

However, the timespan of 1700 to 1914 set by the OUV, which also more generally refers to the period in which the industrial revolution took place, is not exclusively significant in relation to the heritage values of Hayle. The time scale allows for recognition of the best preserved remains over the entire

¹¹ See chapter 3.3 of the Heritage Statement and PPS5 for further information about mines nearby Hayle

world heritage site are but is not so relevant to the remains in Hayle, which has a timeline containing significant events beyond those dates.

Throughout the world heritage inscription period and before and after, one of the activities which remain constant in Hayle and have largely contributed to determine its cultural identity and contribute to its significance are port, harbour and merchant trading activities. In fact, the timeline chronology [12] shows that the other activities that have achieved recognition as contributing to the world heritage site OUV are all relatively short lived, although very influential in shaping Hayle character and significance. The trading of goods, beyond the needs of the mining industries represented a significant activity, employing workers, and keeping the harbour active and functioning for three centuries, and it is of great relevance for understanding the socio-economic and cultural changes of the Hayle society. The long history of commercial operations, including the shipping, distribution and delivery of raw materials, finished goods of the foundries, domestic supplies and ready made articles and of the explosive and chemical industries, ships and ship materials derived from ship breaking, and building materials among others largely contributed to the character, and identity of the town of Hayle and South Quay.

Another historical value, important for the socio-economic development of the town and South Quay is the presence of Harveys – the founders and engine builders, shipbuilders and merchants - and the entrepreneurs that established the Cornish Copper Company. The rivalry between the two merchant trading businesses contributed to its unique character, not only in the built form of Foundry and Copperhouse, but also in the development of the harbour and the management of the estuary. It was actually the dispute over waterfront rights - access and use – in respect of merchant trading that pushed Harvey & Co to undertake the work in the channel, create the Carnsew pool and construct the sluicing mechanism that maintained the harbour navigable for over 130 years.

The remembrance of a glorious communal past, which has provided the Port of Hayle with a place in world history, is probably the strongest communal value. Hayle - by virtue of its geographical location and the presence of two important entrepreneurs, as previously explained - achieved an historical importance much greater than a town of its size usually attracts, and this is past activity is vivid in the memory of its inhabitants.

Another communal value, which is strictly connected with South Quay, is the opportunity that the latter represents for the community, which perceives the quay as an underutilised and derelict space but full of potential benefits. This perception of regeneration potentiality is based on the fact that the quay is an important space in the centre of an urban context and a waterfront, which can offer the opportunity for recreational and communal activities, but also economic activities that have an affinity with merchant trading still prevalent that will contribute to revitalisation of the town.

3 ASSESSMENT OF IMPACT AND CHANGE

The intrinsic nature of the WHS nomination is that of a continuous process of evolution which led the Cornwall and West Devon Mining Landscape to hold an extraordinary position in the growth of industrialisation in the United Kingdom, and contributing to the industrialisation processes around the world.

¹² See the Annex B of the Heritage Statement and PPS5.

As described in 2.2.1 above, the existence of South Quay and the present area character are mainly the result of the service and support activities and progress of the Cornish mining industry. The relationship of the quay with the surrounding areas identified above goes beyond physical proximity and inter-visibility or aesthetical qualities; the affiliation of the South Quay with its environs also takes account of historic associations between the site and the heritage assets where these co-exist and communal values recognized by the Hayle community. Changes to the setting of a heritage asset are therefore considered in terms of their overall effect on the significance of the heritage asset.

The chart below describes the heritage assets that will be assessed in order to evaluate the impact of the proposed development of South Quay on the OUV of the Cornwall and West Devon Mining Landscape WHS and the Conservation area.

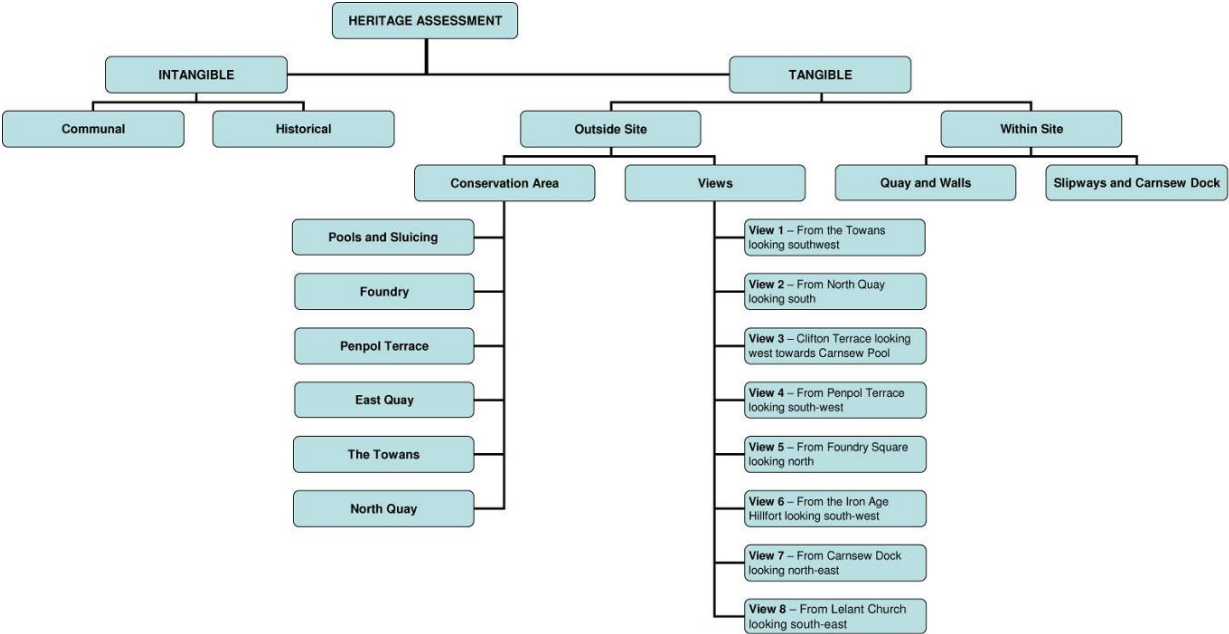


Fig. 2 Impact Assessment Chart

The following table addresses the baseline conditions, potential effects, mitigation and residual effects for each heritage asset that has been identified.

The baseline identifies the sensitivity of relevant heritage assets and establishes the role of the existing site as either part of the heritage asset or part of its setting.

Assets/Area	Baseline	Description of Effect	Potential Effect	Mitigation	Residual Effect
Inside the site					
Quay and walls	<p>The listed Grade II quay walls. (ca 1817-19) were built for Harvey and Co. in granite and killas rubble, granite ashlar, copper slag blocks and granite dressings. The east and north walls are fully exposed and a considerable section of the west wall (including Carnsew Dock, slipways and stone walls) have been obscured by recent debris infill. A section of the eastern wall has collapsed exposing (possible) construction stratification. The current surface consists of gravel and section of tarmac road with gravel pathways. Archaeological grade levels are found as close as 0.25m below grade. Aside from the walls with granite copings and iron cramps, the perimeter features historic furniture pertaining to the activities performed on the harbour.</p> <p>The harbour has been granted outline planning permission for a comprehensive scheme of redevelopment encompassing South Quay, North Quay, parts of East Quay and parts of the Towans. South Quay has the benefit of that consent to construct a high-density residential scheme covering the entire site area. In a series of parallel blocks running east-west up to 4.5 storeys in height.</p> <p>* The impact of the present proposals must be considered in the light of the impact of that consent, and any perceived harm should also be relatively considered.</p>	<p>The fulfilment of the tidal barrier requirement would have a large adverse impact on the quay</p>	<p>The listed harbour walls repaired or rebuilt (when required) would result in varied level of potential impact: large to very large beneficial at areas of loss or damage and slightly beneficial at areas of sound structure. Harbour furniture along the perimeter remains will be repaired if required with minor beneficial potential impact. The potential impact of the required tidal barrier plinth at the centre of the quay is moderate/large adverse. Reinstatement of built form near the viaduct would cause moderate adverse impact as the bulk mass and footprint are larger than the original buildings that occupied the site. The lack of continuity of built form at the centre of the peninsula avoids disturbance of below ground remains with a large beneficial potential impact on archaeology. The lack of built form at the centre and the taller components would cause large adverse impact. The linear development on the mid-north section of the quay (residential) would cause a slight beneficial impact.</p>	<p>Any development on site will require the tidal barrier plinth. The recessed disposition preserves the publicly accessed path at current grade level mitigating the impact, along with the creation of hard landscape features resulting in moderate adverse impact. Reinstatement of built form considers the historical layout with concentration of mass on the south areas of the quay, the use of industrial materials and the height subservient the historical development result in moderate adverse visual impact, which is balanced by a range of other benefits enumerated in the planning and PPS5 statements; including economic regeneration, restoration of sluicing, and urban permeability. These benefits give slight beneficial impact overall.</p> <p>The present proposal has a far lesser impact than the consented outline development proposals</p>	<p>The lack of built form at the centre of the quay protects the buried remains but breaks the continuity of built form, as historically seen. With a moderate slight beneficial residual impact. The proposed development will have a permanent, local, slight beneficial impact on the quay.</p>
Slipways, buried Remains and Carnsew Dock	<p>The slipways, most of Carnsew Dock and sections of stone quay walls, timber revetments along with other harbour remnants are buried under recent infill which consists of tipped material and debris, with asbestos, and possible with copper and arsenic contamination.</p>	<p>Exposure of part of Carnsew Dock and creation of a new quay wall adjacent to the infilled slipways, protecting the fragile archaeology. Access road from southwest approach and placement of carpark at the centre of development to avoid/reduce disturbance to buried slipways. The foundations of the new 4-storey structure at the centre of the</p>	<p>Exposure of part of Carnsew Dock and minimisation of construction over slipways are considered a large/very large beneficial impact. The preservation of the presently buried shipways does not alter the status quo and impact thereon is neutral.</p>	<p>The planned works are positive and do not require mitigation.</p>	<p>Exposure of part of Carnsew Dock and minimisation of construction over slipways will result on a permanent, local, large/very large beneficial residual impact.</p>

Assets/Area	Baseline	Description of Effect	Potential Effect	Mitigation	Residual Effect
		quay straddles over archaeological remains. Improved pedestrian access to the dock side and sluicing.			
Conservation Area					
Pools and Sluicing	The Carnsew Quay with its pool and sluicing are tightly correlated to the South Quay in physical and historical terms. The mitre lock gates at the dock and the sluicing tunnels and penstocks at the seaward end of Carnsew Pool are in a ruinous condition and require replacement to enable reintroduction of the historic sluicing process.	The regeneration of the area by the Development will enhance the bare characteristics of the adjacent Carnsew Channel while specific repairs to the sluicing system will enhance the listed structure. Improved access to the sluices will aid understanding and interpretation.	The potential effects on the Carnsew Quay will be permanent, international (WHS) and regional effects of very large beneficial significance as a result of the reinstatement of the historic sluicing process and the public benefit of the regeneration of the area.	The planned works to repair the sluicing structures and reinstate their operation are positive and do not require mitigation.	The residual effects on the Carnsew Quay will be permanent, international (WHS) and regional effects of very large beneficial significance as a result of the reinstatement of the historic sluicing process and the public benefit of the regeneration of the area.
Foundry	The present setting of Foundry Square the former corporate face of the prosperous Hayle, is in contradiction with the quality of the space and the buildings and lacking vitality and urban excellence.	The Development endeavours to outreach the site and encourage permeability through close interaction with Foundry Square. The redesign of Isis garden promotes direct access from and towards the site.	The potential effects on the Foundry area will be permanent, local effects of moderate/large beneficial significance as a result of the extended regeneration of the site.	The Development will enhance the area and will revitalise the town in general. The effects are considered as positive and do not require mitigation.	The residual effects on the Foundry area will be permanent, local effects of moderate/large beneficial significance as a result of the extended regeneration of the site.
Penpol Terrace	There is no apparent synergy between the street front of Penpol Terrace and the emptiness of the South Quay Site. The lack of built form in the quay does not reflect the historical or industrial activities of the port neither it helps to integrate the 19th century shopfronts and terraced houses. The present spatial arrangements have no historic precedent and are the result of wanton demolition.	The currently open area of the Quay will be substantially affected by the Development. The site, identified as an opportunity area for re- development, will house a supermarket with associated parking and residential terraces.	The effect upon the setting of Penpol Terrace would be permanent, local and moderate adverse . There will be a visual impact due to the major new construction in the townscape, with a possible wider impact upon more distant vistas and structures.	The design of the Development as a whole has been informed by the understanding of the significance and characteristics of the Penpol Terrace area and the historic values within. High quality design is not regarded as a benefit <i>per se</i> but outstanding design as a result of a comprehensive understanding and consideration of the historic environment is mitigation.	The impact on Penpol Terrace will be a permanent, local effect of moderate beneficial significance since the Development will revitalise and enhance the currently decayed area of the Quay, with very substantial economic and social benefits for the area..
East Quay	The East Quay relates very closely to the South Quay both historically and physically. The scale and basic infrastructure of the harbour has a high capacity to absorb change. The urban tradition of the site and the history of large scale buildings together with degraded character make change to the existing character acceptable.	The visuals from the East Quay will be substantially affected by the Development although this is not necessarily an adverse effect. Both quays used to contain structures associated with the activities of the harbour which is not reflected in their present spatial arrangement.	The potential effects on the East Quay will be permanent, local effects of moderate/large beneficial significance as a result of the extended regeneration of the site.	The Development will enhance the area and will revitalise the harbour area in general. The effects are considered as positive and do not require mitigation.	The potential effects on the East Quay will be permanent, local effects of moderate/large beneficial significance as a result of the extended regeneration of the site.

Assets/Area	Baseline	Description of Effect	Potential Effect	Mitigation	Residual Effect
The Towans	The natural beauty of the Towans	The prominent visuals from the Towans will be substantially affected by the Development although this is reduced by distance and is not necessarily an adverse effect since the historical built (architectural) environment of the South Quay is currently absent.	The potential effects on the Towans will be permanent, local effects of moderate/large beneficial significance as a result of the extended regeneration of the site.	The Development will enhance the area and will revitalise the harbour area in general. The visual impact from distance will not be dissimilar to the historic massing of built form on the site. The effects are considered as positive and do not require mitigation.	The potential effects on the Towans will be permanent, local effects of moderate/large beneficial significance as a result of the extended regeneration of the site.
North Quay	The North Quay also relates very closely to the South Quay historically and physically. As the other quays, it has a high capacity to accommodate change. Further development is approved for north quay and infrastructure works including raising of levels is in hand.	The visuals from the North Quay will be substantially affected by the Development although this is not necessarily an adverse effect. The historical activities are not adequately represented in the present spatial arrangement.	The potential effects on the North Quay will be permanent, local effects of moderate/large beneficial significance as a result of the extended regeneration of the site.	The Development will enhance the area and will revitalise the harbour area in general. The effects are considered as positive and do not require mitigation.	The potential effects on the North Quay will be permanent, local effects of moderate/large beneficial significance as a result of the extended regeneration of the site.

Assets/Area	Baseline	Description of Effect	Potential Effect	Mitigation	Residual Effect
Views Into South Quay					*The tangible impact of the development on significant views is considered to be local . However, given the WHS status of the site, it is acknowledged that the tangible impact might cause a similar impact on the intangible contribution of the site to the WHS OUV.
View 1 – From the Towans looking southwest	This view is taken from a path at the west of Hayle Cricket club. From this point, the quay walls delineate a barren flat surface with a randomly landscaped infill area which resulted from the recent demolition of the industrial buildings. The quay is seen in conjunction with East Quay and Penpol Creek (left, foreground) the Foundry development beyond the railroad viaduct and the Iron Age Hillfort and St. Elwyn’s church (together with listed buildings beyond the viaduct), Carnsew Dock and the Jewson’s site(right). The lack of site activity and absence of built form exposes the relentless horizontality of the railroad viaduct in the skyline and enhances the prominence of the buildings in the foreground. The un-built quay is a gap in the surrounding finer urban grain, breaking up the continuity between Foundry and the quay whilst disrupting the synergy between Penpol Terrace and South Quay, all factors to be regretted. Receptor sensitivity is low.	The open area of the Quay will be substantially affected by the Development. The required plinth is set away from the quay edges, retaining as much as possible the existing grade level. The new construction consists of 3 new blocks. The substantial rectangular 2-storey block is placed at the foot of the railroad viaduct where the historical development was bulkier and denser. The development advances north with a residential block proposed in industrial language, terminated by a taller apartment block. Separating the two there is a 2-storey volume running east-west and an un-built area at the centre, corresponding to the parking lot.	The major change in View 1 would cause a slight to moderate adverse potential impact There would be a visual impact due to the major new construction in the townscape, with a possible wider impact upon more distant vistas and structures.	The layout reflects (as much as possible, given the constraints) the historic disposition of the buildings on this site by concentrating the bulk of construction to the south and linear planform northwards. It proposes publicly accessible areas at current grade level throughout the perimeter and along most of the eastern side of the quay. The building’s heights are subservient to the predominance of the railroad viaduct as historically shown. The materiality of the composition reinterprets the materials used on site and associated with the site’s significance. The impact will be substantially less adverse than the consented outline proposal.	The impact on View 1 will be a permanent, moderate beneficial , creating built forms whose materiality make a reference to the historic development on the quay and with a planform that is informed by the historic development. Furthermore, the development offers an opportunity for the site’s revitalisation and enhancement of the townscape qualities by re-establishing a more balanced and historically inspired urban grain.

Assets/Area	Baseline	Description of Effect	Potential Effect	Mitigation	Residual Effect
View 2 – From North Quay looking south	The visual and physical permeability from South Quay into the Foundry is noticeable, revealing the imbalance between the surrounding densely built character areas of Penpol and Foundry and the barren quay. Similar to the conditions of view 1, the lack of site activity and absence of built form exposes and enhances the horizontality of the railway viaduct in the skyline and enhances the prominence of the buildings in the foreground. Receptor sensitivity is high.	The magnitude of impact on the Quay will be high. The development proposes a new 4-storey residential/restaurant block near the northern tip of the quay. Another 4-storey residential/commercial block across the middle section of the development creates another point of impact. The second block cantilevers over the remnants of the slipways and its foundations straddle the buried archaeology. [For further details on materiality, refer to View 1-Description of effect above]	The major change in View 2 would cause a moderate/large adverse impact. There would be a visual impact due to the major new construction in the townscape, with a possible wider impact upon more distant vistas and structures.	Except for the overall height and disposition of the 4-storey buildings (apartment and restaurant blocks), the proposal is inspired by the historic development in terms of layout, height and materiality. In spite of the overtly unapologetic disposition of the two taller structures, mitigation can be provided by the simplicity of form and harsh, industrial materiality, in keeping with the character of the quay. The impact will be substantially less adverse than the consented outline proposal.	The impact on View 2 will be a permanent, moderate adverse . The creation of taller buildings on the western, south-western side of the quay and at its northern tip could be overly dominant. The creation of new townscape markers and increased overall development height contrast with the vast majority of the development within the scale, height and massing parameters of its setting and which historic development.
View 3 – Clifton Terrace looking south	Little is seen of the quay itself together with some listed historic buildings on east quay (foreground), Carnsew Pool beyond (centre, background) and the Iron Age Hillfort (left). Both the industrial buildings of East Quay and the residential development along Carnsew Pool are marked by horizontality, without major visual markers in the skyline. Reception sensitivity is moderate.	The magnitude of impact on this view is minor . The residential component of the development is seen at the centre of this view, along with the 4-storey apartment block (right) and development over the taller Foundry Car Park (left).	The moderate change in View 3 could cause a moderate adverse potential impact on the setting, due to the addition of taller elements into the skyline. There would be a visual impact due to the major new constructions in the townscape, with a possible wider impact upon more distant vistas and structures.	The residential terraces reflect the scale, urban grain and horizontality of the residential development beyond and are subservient to the industrial character of East Quay. The impact will be substantially less adverse than the consented outline proposal.	The impact on View 3 will be a permanent, slight beneficial through a development that expresses the industrial character of the quay re-establishing the lost massing.

Assets/Area	Baseline	Description of Effect	Potential Effect	Mitigation	Residual Effect
View 4 – From Penpol Terrace looking south-west	The emptiness of the quay gives prominence to the railway viaduct and makes evident the lack of synergy between the quay and Foundry. High receptor sensitivity due to the importance of this road as a main road for both motorised and pedestrian traffic.	The magnitude of impact on this view is high . The currently open area of the Quay will be substantially affected by the Development. The open carpark area at the centre of the view is flanked by the foodstore (left) and by the proposed 4-storey residential/commercial development to the right, allowing for views of the Iron Age Hillfort beyond. The permeability of the view is retained above Penpol Channel which coupled with the recessed position of the foodstore promotes the reactivation of the waterfront and possibility and beyond towards Foundry. The volumetric composition of the proposed developments and the built form beyond horizontally fill the skyline.	Without mitigation, the major change in View 4 would cause a moderate/large adverse impact. There would be a visual impact due to the major new construction in the townscape, with a possible wider impact upon more distant vistas and structures.	The placement of the foodstore at the foot of the viaduct at a height subservient to the viaduct aims at the reconstitution of the historic urban density at this section of the quay. The presence of the 4-storey residential/commercial development is not overly dominant in this view. The predominant horizontality of the two new buildings is in accordance with the historic development on site and creates a consistency of view with the setting beyond. The 2-storey foodstore remains subservient to the height of the railroad platform. The impact will be substantially less adverse than the consented outline proposal.	The impact on View 4 will be a permanent, moderate beneficial by regaining a denser grain that emphasises the horizontality of built form on the quay as a counterpart for Penpol Terrace and enhancing the townscape connectivity with the Foundry beyond.
View 5 – From Carnsew Quay sluice looking north-east	The emptiness and the infill confer a particularly derelict aspect to the quay, disrupting the synergy and visual relationship between South Quay and surrounding quays. These contain industrial 19C and 20C buildings. In the background the residential Clifton Terrace and the greenery of the Towans remain virtually unaltered as the setting of the underutilised quay and redundant, obstructed Carnsew Dock.	The development will cause an impact of large magnitude in this view. New quay walls reshape the partially exposed Carnsew Dock. Set on the tidal barrier plinth, the mass and bulk of the 4-storey development are dominant, obscuring the views of the east quay beyond.	Without mitigation the major change in View 5 would cause a large adverse impact. There would be a visual impact due to the major new construction in the townscape, with a possible wider impact upon more distant vistas and structures. The partial exposure of Carnsew Dock is considered to be moderate beneficial .	The proposed 4-storey block running east-west is carefully sited to avoid disruption of the buried remains of the slipways. The placement of the open carpark at the centre of the site ensures that development heights can be retained to a minimum at areas of higher archaeological sensitivity. The impact will be substantially less adverse than the consented outline proposal.	The impact on View 5 will be a permanent, slight beneficial . Except for the 4-storey buildings, the development stays within the height, and bulk of the surrounding development and within the broad parameters of previous development on site. The sensitivity is acknowledged and respected.

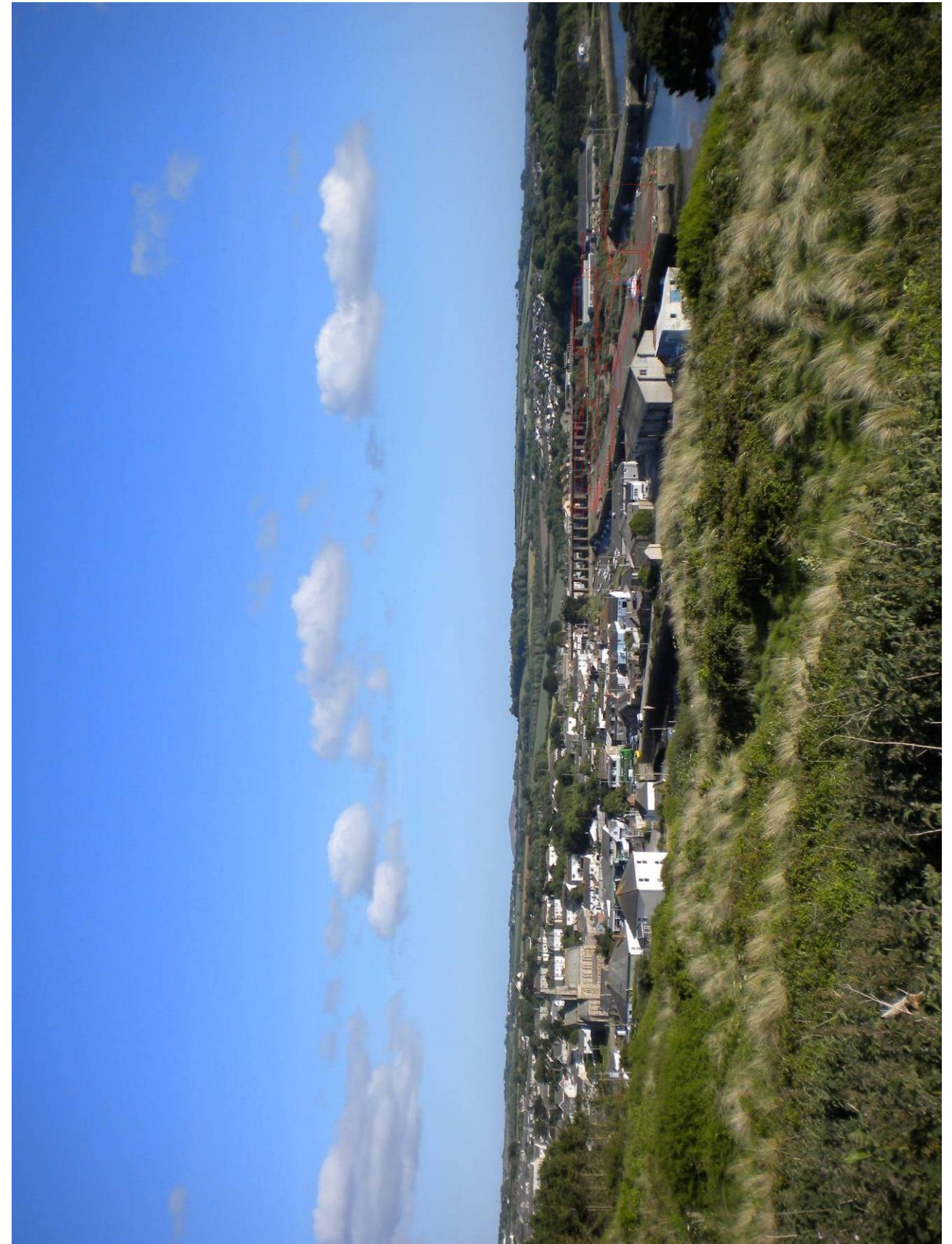
Assets/Area	Baseline	Description of Effect	Potential Effect	Mitigation	Residual Effect
View 6 – From Foundry Square looking north	The railway viaduct dominates the foreground. Traffic from the B3301 and Isis Gardens under the viaduct restricts views of the site. The low wall of the Gardens restricts connectivity between Foundry and South Quay. The receptor sensitivity is considered to be high .	The magnitude of impact on this view is moderate . The proposed foodstore is seen beyond the viaduct to the left and its height is subservient to the dominant height of the railway viaduct. The landscape treatment partially removes the walls of Isis Gardens to facilitate connectivity between the two areas and reinstates the harsh landscape character historically present on South Quay and Foundry Square.	The changes to View 6 are considered to be of minor magnitude. without mitigation, changes in View 6 would cause a minor adverse potential impact	The bulk of the proposal sited to the southwest of the site would house a commercial use, favouring the connectivity between Foundry and South Quay. The bulk, height and sitting of the structure is informed by the historic analysis and it is subservient to the dominant presence of the railway viaduct. The architecture would be expressed in an industrial language and the materiality inspired by materials historically used on South Quay or of an industrial character. The eastern side of the quay is left open as publicly accessed realm, treated as hard landscape. The proposal offers an interpretation of the historic appropriation of space and an opportunity for activation of the waterfront.	The residual impact of the proposal considered to be permanent, large beneficial . The impact will be substantially less adverse than the consented outline proposal.
View 7 – From the Iron Age Hillfort looking north-east	The lack of built form gives the site a derelict aspect. It is difficult to apprehend the scattered industrial remnants (Gas works and Quay) together, as part of the same historic narrative. The B3301 severs South Quay from the remainder of the site. The view is dominated by the horizontality and consistent frontage of Penpol Terrace. The receptor sensitivity of this view is low .	The magnitude of impact on this view is high . The proposed retail block at the former Gas Works predominant in this view is consistent with the scale of the propose foodstore on the Quay, both sympathetic to the heights of surrounding built structures, including Penpol Terrace beyond. The development also considers the view of St. Elwyn’s Church which remains unobstructed.	Without mitigation ,The major change to View 7 would cause a potential moderate adverse impact. There would be a visual impact due to the major new construction in the townscape, with a possible wider impact upon more distant vistas and structures within the harbour.	The development remains subservient to the heights of its setting, retaining the historical privileged viewpoint from the Hillfort. The new retail units aim at attracting public that will experience the former Gas Works site, the Quay and Foundry Square as a unified space. The bulk, mass and height of the development remains industrial, in formed by the historical evidence.	The changes to View 7 would cause a permanent, moderate beneficial impact. The impact will be substantially less adverse than the consented outline proposal.

Assets/Area	Baseline	Description of Effect	Potential Effect	Mitigation	Residual Effect
View 8 – From the grounds of Grade II* listed Lelant Church looking south-east	The synergy between South Quay and the surrounding harbour is impaired due to the demolitions. Horizontality is predominant, due to the presence of Penpol Terrace and the viaduct. The receptor sensitivity of this view is moderate .	The magnitude of impact on this view is moderate . Spread along the peninsula's length, the development is predominantly horizontal and subservient to the scale of the surrounding character areas. Most of active frontage to Penpol Terrace is recreated except for the presence of the carpark. The taller volumes of the apartment blocks are not overly dominant in this view. The distance considerably lessens any potential visual impact.	Without mitigation, the change to View 8 would cause a potential slight adverse impact. There would be a visual impact due to presence of the taller elements and the discontinuity of built form, along with the overall level of construction in the townscape.	The majority of the development remains subservient to the heights of its setting as informed by the heights of buildings historically on site. The interruption of built form expressed in the car park reduces the potential impact of building foundations over buried remains. The presence of the mixed used apartment/retail/ restaurant brings variety to the development, maximising continuity of use at all times of the day, facilitating the creation of active waterfronts.	The changes to View 8 would cause a permanent, slight beneficial impact. The impact will be substantially less adverse than the consented outline proposal.
Intangible/Historic					
	The intangible assets are represented by the historic association with: the importance of Hayle as port for the industrialised mining activity of Cornwall and Devon; the great contribution of the town to innovation in the field of high-pressure steam engines; the contribution to that great landmark of human history known as the 'industrial revolution'; the continuity in history of maritime and harbour activities and merchant trading on a large scale until recent time; the home of exceptional entrepreneurs and the rivalry between Harvey & Co. and CCC. These are well manifested in the recollection and recording of events in archives, publications, council documents and some number of heritage-related activities (e.g. Discover Hayle map, Oral History Project). However, the fragility and scarcity of 'living cultural heritage' such as oral traditions, story-telling, festivals (e.g. the Hayle Regatta and carnival established in 1837), skills, and rituals connected to this 'glorious past' contribute to devalue the appreciation and recognition of the heritage and of the OUV of Hayle by the public.	The outline planning application as well as the process related to the hybrid planning application, including the revision of the design, have contributed to take the heritage issues into the public domain. The statutory requirements for applications for consent affecting heritage assets has itself stimulated dialogues about the history of Hayle, increased the understanding of the historic assets and explored further historic association beyond the timeline set by the OUV. The development of the site includes: a landscaped public realm displaying interpretation panels and other features for the identification of heritage assets revealing the heritage values and establishing the relationship with the OUV of the WHS; the dedication of a site for a heritage feature (the Goonvean engine); and the creation of an independent Trust for the preservation, maintenance and coordination of the activities in the harbour.	The potential effects of the proposed development of South Quay on the historical assets will be temporary, very large and beneficial as a result of workshops, consultations, preparations of interpretation of panels, and their display, which will increase heritage awareness, appreciation and potentially protection. However, the very large beneficial effect may fade away in time if not sustained by other activities and events.	Not needed because the effect either temporary or permanent is positive	The residual effects of the proposed development of South Quay on the historical assets will be temporary, very large and beneficial as a result of workshops, consultations, preparations of interpretation of panels, and display. However, the very large beneficial effect may fade away in time if not sustained by other activities and events.

Assets/Area	Baseline	Description of Effect	Potential Effect	Mitigation	Residual Effect
Intangible /Communal					
	<p>Intangible assets are also expressed by two main interrelated communal values: the memory of a glorious communal past, which has placed the Port of Hayle in the world history, and the opportunity for regeneration in the development of South Quay. South Quay is perhaps the symbol of times gone by and the ever changing environment, and at the same time one of the perceived major opportunities of regeneration and acquisition of community benefits (employment, recreational activities and publicly accessed space). These two assets are the main elements helping to define the sense of place and identity of the people living in Hayle</p>	<p>The outline planning application as well as the process related to the hybrid planning application, including the revision of the design, have created expectation in the community. The opportunity for development of an ‘empty’ space in an already consolidated urban environment offers a unique occasion to recreate a currently lessened sense of place.</p>	<p>The potential effects of the proposed development of South Quay on the communal values will be temporarily very large and beneficial as a result of workshops, consultations, economic benefits, use of space for recreational and communal activities, and more generally for the regeneration of the city as a whole. However, the very large beneficial effect will need to be sustained by successive activities and events.</p>	<p>The Development will revitalise the area in general and contribute to a renovated sense of place for the community of Hayle. The effects are considered as positive and do not require mitigation.</p>	<p>The residual effects of the proposed development of South Quay on the communal values will be temporarily very large and beneficial as a result of workshops, consultations, economic benefits, use of space for recreational and communal activities, and more generally for the regeneration of the city as a whole. However, the very large beneficial effect will need to be sustained by successive activities and events.</p>



VIEW 1 - BASELINE



VIEW 1 – PROPOSED DEVELOPMENT WIRELINE



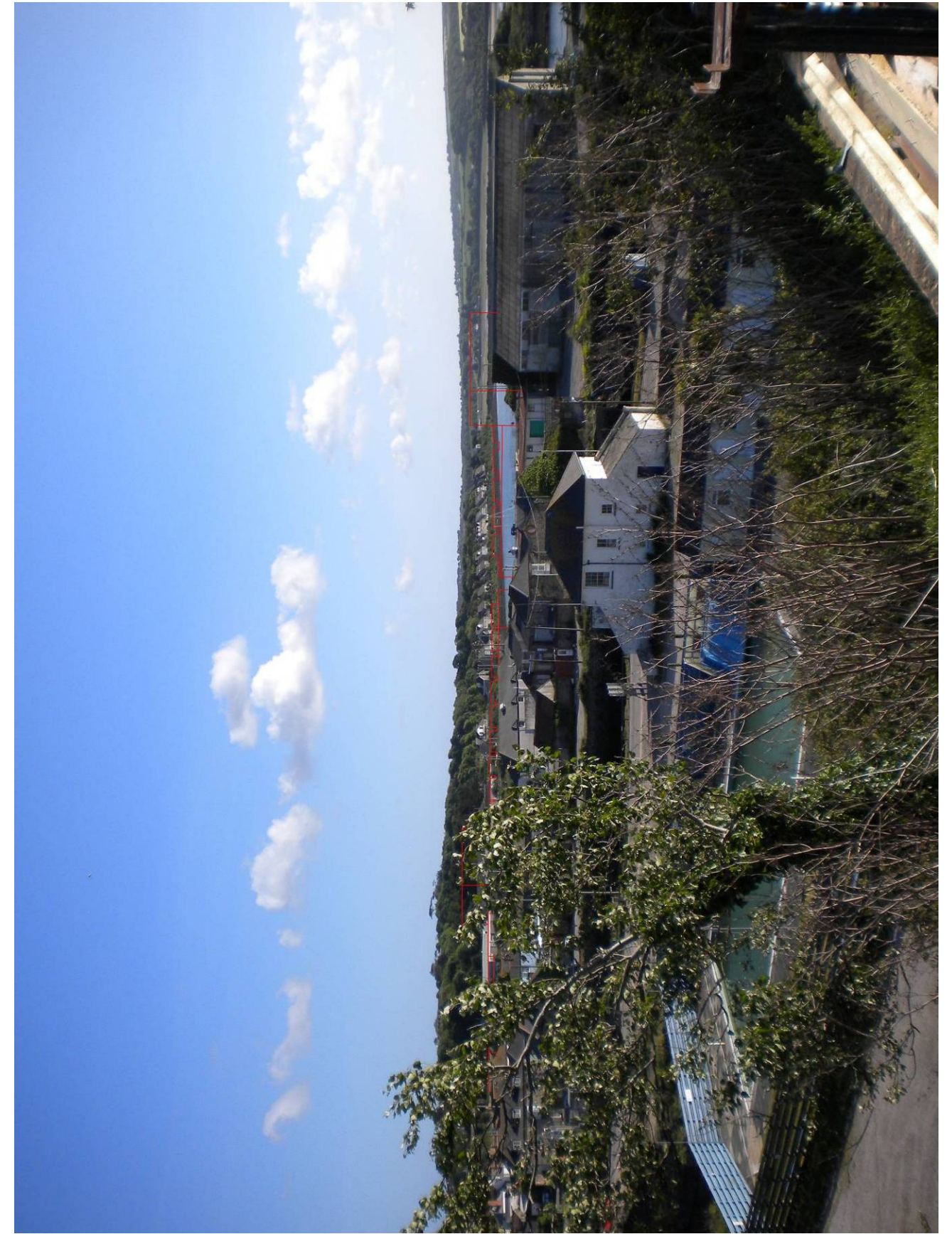
VIEW 2 - BASELINE



VIEW 2 - PROPOSED DEVELOPMENT WIRE LINE



VIEW 3 - BASELINE



VIEW 3 – PROPOSED DEVELOPMENT WIRE LINE



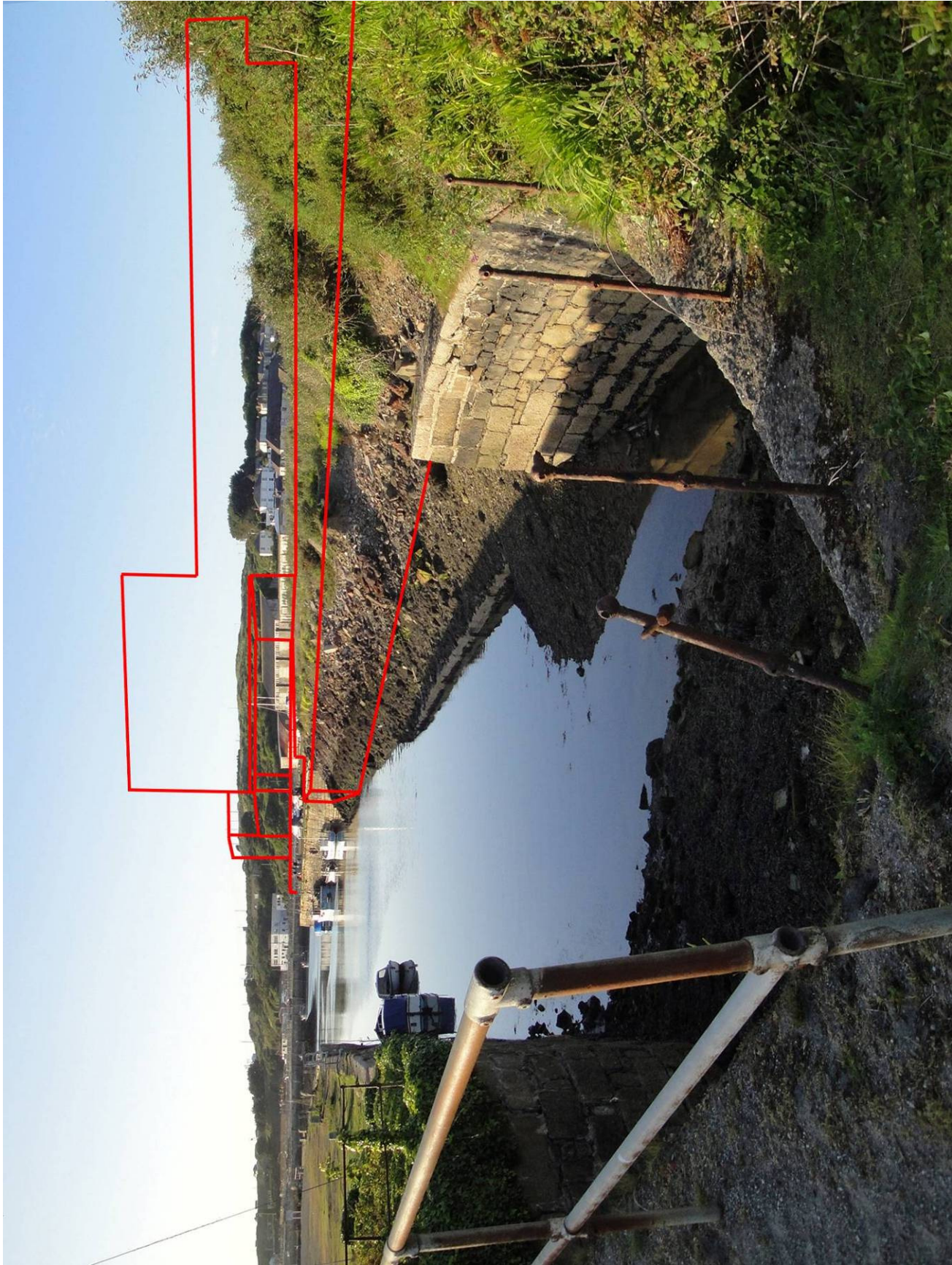
VIEW 4 - BASELINE



VIEW 4 – PROPOSED DEVELOPMENT WIRE LINE



VIEW 5 - BASELINE



VIEW 5 – PROPOSED DEVELOPMENT WIRE LINE



VIEW 6 - BASELINE



VIEW 6 – PROPOSED DEVELOPMENT WIRE LINE



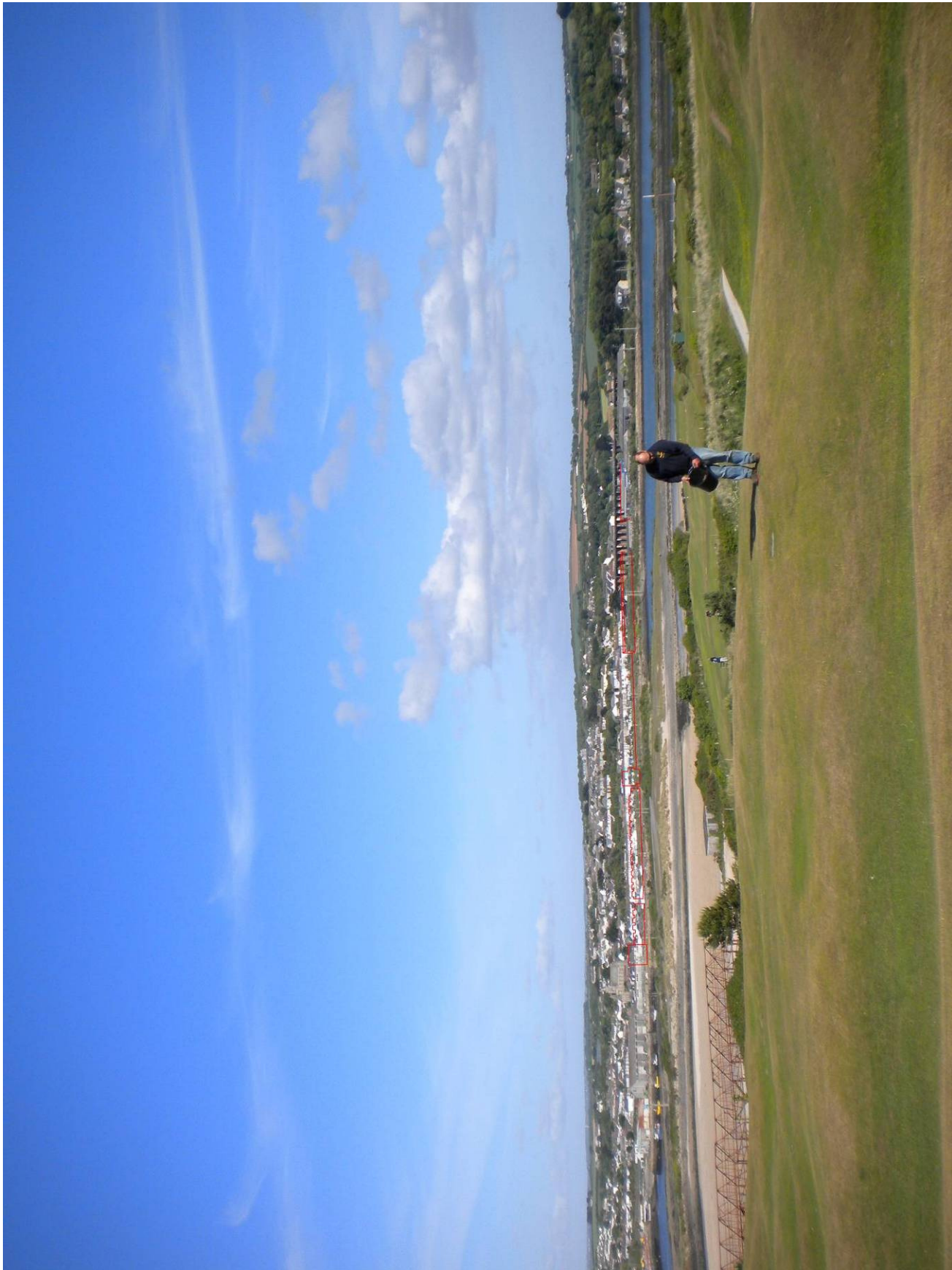
VIEW 7 - BASELINE



VIEW 7 - PROPOSED DEVELOPMENT WIRE LINE



VIEW 8 - BASELINE



VIEW 8 – PROPOSED DEVELOPMENT WIRE LINE

4 SUMMARY AND CONCLUSION

The impact appraisal of the proposed Development against relevant heritage policy confirms that the scheme is in accordance with the requirements and objectives of international guidelines, and national, regional and local planning policies. Indeed, current policy provides substantial support for the regeneration proposals, which would secure the comprehensive redevelopment of the South Quay area.

The status quo of the South Quay site and intrusive developments already in and near the World Heritage Site have not marred the Outstanding Universal Value of the Cornwall and West Devon Mining Landscape sufficiently to threaten its standing as a World Heritage Site. Yet any development will inevitably change the existing ecological and social dynamics of the area.