Case Study 5 - South-West Coast of England

5.1. Introduction

The south-west of England case study sites are contained within the counties of Dorset, Devon and Cornwall. They comprise the coastline of West Dorset and East Devon between West Bay (near Bridport) westwards to Sidmouth in East Devon, the short section of coast between Babbacombe and Torquay in Devon, the south Cornish coast from the village of Polperro westwards to Penzance, and the north Devon coast from Hartland Point to Clovelly. The West Dorset-East Devon site includes part of the Dorset and East Devon Coast World Heritage Site known as the Jurassic Coast. This part of the coastline of south-west England has provided inspiration for numerous artists over the last 200 years, and, in fact, the popularity of these counties for tourists, on account of the dramatic coastal scenery, has ensured there is rich resource of landscape paintings, drawings and prints dating back to the late eighteenth century. The varied geology and physical processes prevailing around the coastline of south-west England have resulted in the formation of a wide range of geomorphological features, and have created a coastline of enormous variety, scenic beauty and interest.

This case study draws on work undertaken for Historic England in 2016 (McInnes, 2016¹), which examined how historical imagery can illustrate risks to coastal heritage over time, and inform management; the support of Historic England is gratefully acknowledged. The author has expanded this work in respect of physical and environmental change.

5.1.1. Geology & Geomorphology

The coastal geology of West Dorset and East Devon comprises rocks of the Jurassic and Cretaceous Periods. In particular, the Lias Group which form the clifflines in the vicinity of Lyme Regis, which are capped by limestones. Extending eastwards from the town the dramatic coastline is subject to extensive landsliding. In East Devon and westwards in the vicinity of Torquay, the rocks are older and are of the Permian and Devonian Periods, including particularly the Old Red Sandstone Group. Near Torbay the geology is more varied with limestones, mudstones and slates, which have a varying resistance to coastal erosion. In contrast to the Dorset coast, the rates of cliff recession here are relatively slow.

Cornwall is dominated by its granite backbone, which was formed during the Variscan Orogeny. The coastline is exposed to the full force of Atlantic storm waves, however, for the most part the coast is composed of highly resistant rocks that, whilst susceptible to occasional rockfalls, are generally steep and form impressive coastal landscapes. The lower beaches, which lie below the cliffs, particularly in the sheltered bays, may be prone to beach lowering and coastal squeeze as a result of rising sea levels over the next century. Along the North Devon coast from Hartland Point to Clovelly, the coastline is largely composed of sandstones, mudstones and siltstones of the Carboniferous Period, which typically have low rates of erosion. However, from time to time, the clifflines are prone to massive rockfalls and landslides.

5.1.2. Coastal Processes

Along the East Devon-West Dorset coast, the general direction of sediment transport is from west to east, with the eroding cliffs contributing substantial amounts of material to the overall sediment supply. At Torbay, sediment is carried from south to north, up around the bay, with the slowly eroding or unstable clifflines contributing, giving the beaches a typical pink sand colour. In places along the coast ancient landslides have been reactivated and the combined effects of coastal erosion and high groundwater levels can result in substantial failures (Halcrow, 2011²).

The coastlines along the south Cornwall and north Devon frontages are generally composed of more resistant rock formations and the rate of change is much slower, although the frontages can be affected by massive rockfalls periodically. More widely, the natural hazards of coastal erosion, landsliding and flooding have significant impacts around the whole of the coastline of south-west England, depending on the highly variable coastal geology and exposure to the elements. The cost of emergency action, remediation, prevention and monitoring can often represent a significant burden to the affected communities, as well as to coastal landowners including local authorities (Royal Haskoning, 2011³).

5.1.3. The Coastal Environment

The East Devon-West Dorset coast is designated as a World Heritage Site on account of its outstanding geology and geomorphology. The spectacular cliffline, with its wide range of physical features, ranging from the chalk arch at Durdle Door to the massive landslides along the Undercliff to the west of Lyme Regis, has led to the designation of long sections of the coastline as Sites of Special Scientific Interest, National Nature Reserves (for example the Axmouth to Lyme Regis Undercliffs) and Special Areas of Conservation covering the coastal frontage from Sidmouth to West Bay (Natural England, 2014⁴).

The coastline in the vicinity of Torbay, particularly to the south of the town, is designated as the South Devon Area of Outstanding Natural Beauty, extending westwards from Berry Head to Plymouth. The whole of this coastline is dramatic with the high red sandstone cliffs of Watcombe to the north, past the beaches of Oddicombe, Babbacombe and Anstey's Cove, to Torbay itself. The coastline of south Cornwall, extending from Polperro past Lizard Point and into Mount's Bay, provides a dramatic contrast of rocky headlands and sheltered coves where the coastal geology is dramatically exposed (Natural England, 2014⁵). The whole of this coastline is extensively designated on account of its outstanding geological exposures, its nature conservation interest and, more widely, as an Area of Outstanding Natural Beauty (Natural England, 2014⁴).

Geodiversity is equally important along the North Devon coastal study area from between Hartland Point and Clovelly. This wild open landscape forms part of the North Devon Area of Outstanding Natural Beauty and is also extensively designated on account of the environmental qualities of the coastline and its Exmoor hinterland. This largely undeveloped coastline has a wild, natural and exposed nature where physical processes continue largely uninterrupted. For this reason, the coastline south of Hartland Point, eastwards past Ilfracombe to Linton, forms the North Devon UNESCO Biosphere Reserve where the objective has been to demonstrate sustainable development on a bioregional scale, including, in particular, conservation of ecosystems, habitats, species and genetic diversity (Natural England, 2014⁶).

5.1.4. Coastal Heritage

The coastline of the south-west has a rich cultural heritage, many examples of which are illustrated through a vast range of oil paintings, watercolours and prints (McInnes, 2016¹). Along the West Dorset and East Devon coast images depict, for example, the harbour at West Bay and the Cobb at Lyme Regis, as well as the clifflines, which are continuously re-exposed and changing through rapid coastal erosion and landsliding. At Sidmouth, there are numerous fine engravings and watercolours depicting the architectural quality of this historic town with its fine Regency hotels and villas and later nineteenth century properties, as well as ornate cottages. There are also ancient defended settlements such as High Peak on the cliffs to the west, Jacob's Ladder and other historic sites at Otterton Down, Bury Head and Littlecombe Hill (McInnes, 2016¹). The town of Torquay, which developed almost entirely in the nineteenth century, was painted and engraved by numerous artists, which allow the history of the town and its expansion to be plotted very clearly. At Babbacombe to the north, cottages ornés were built above the bay and along the coastal slopes; many of these feature in early engravings. Along the coast of South Cornwall the numerous fishing harbours and much visited parts of the coastline such as the Lizard, were also painted throughout the nineteenth and early twentieth centuries in particular, as was St Michael's Mount in Mount's Bay and the harbours of Newlyn and Mousehole to the west.

On the North Devon coast, between Hartland Point and Ilfracombe, early views were engraved by William Daniell RA on his 'Voyage Round Great Britain' (Daniell & Ayton, 1814-1825⁷) and, later, exceptionally fine views were produced of Ilfracombe throughout the nineteenth century. These include St Nicholas' Chapel and lighthouse on Lantern Hill overlooking the harbour, which is a Grade I Listed Building, and Hillsborough overlooking Ilfracombe, which is the site of a promontory fort (McInnes, 2016¹).

5.1.5. Coastal Art History

For the purpose of this site the extensive coastline of south-west England commences on the Jurassic Coast World Heritage Site of Dorset and East Devon, and then on westwards to the Lizard and Land's End. The region's coastal frontage continues along the north of Cornwall and Devon into Somerset to the Bristol Channel. The popularity of the West Country as a whole has ensured that there is a rich resource of landscape paintings, drawings and prints as well as illustrated literature accounts available for study. Some of Britain's topographical artists resided in or visited the region, including John Mogford RI (1809-1868), Samuel Phillips Jackson RWS (1830-1904) and George Wolfe (1834-1890); later artistic schools developed at Newlyn and St Ives.

During the early years of the nineteenth century, J. M. W. Turner painted numerous views in the west of England. For example, in c.1811 he painted 'Poole and the Distant View of Corfe Castle', 'Weymouth', 'Lulworth Cove', 'Bridport' and 'Lyme Regis', which was taken from Charmouth to the east, looking along the coastline towards the town of Lyme. Between 1811 and 1814 Turner also painted scenes along the Devon and Cornish coastlines including 'Teignmouth', 'Pendennis Castle', 'Falmouth Harbour', 'St Mawes', 'Boscastle', 'Clovelly' and 'Minehead'.

Between 1814 and 1825 William Daniell also produced aquatint engravings of many of these locations. His fine views are contained in his 'A Voyage Round Great Britain' (Daniell and Ayton, 1814-1825⁷). In Dorset his aquatints include 'Bridport Harbour' and 'Lyme Regis from Charmouth'. At Bridport Harbour (now called West Bay) Daniell wrote "it appeared in a deplorable state with the entrance being choked with sand" (Daniell & Ayton, 1814¹). He continued along the south Devon coast and into Cornwall where some of his finest plates were produced such as 'Mevagissy' and two views of 'St Michael's Mount'. He had travelled along the north Cornwall, north Devon and Somerset coasts at the start of his voyage in 1814 when he engraved the 'Longships Lighthouse at Land's End', 'Boscastle', 'Clovelly', 'Ilfracombe' and 'Lynmouth' before travelling along the coast of South Wales. Later, in the 1830s, the Finden Brothers' publication 'Ports, Harbours, Watering Places and Picturesque Scenery of Great Britain' (Finden, 1838⁸) portrayed 'Budleigh Salterton' and a 'View from Beach, Sidmouth' and numerous other engraved coastal scenes.

Edward Francis Drew Pritchard (1809-1905) painted along the Dorset coastline, for example, 'East Cliff, with Portland, Dorset in the Distance' and 'View towards Portland, Dorset', whilst Henry Joseph Moule (1825-1904) was a prolific local artist who "constantly painted the landscape" and his collection of works provides us with a "unique record of the Victorian countryside" (Dorset County Museum⁹). A fellow Victorian artist, Frederick Whitehead (1853-1938), was a naturalist painter who captured the Dorset landscape and coastline with remarkable detail. Other artists who accurately painted the coastal scenery in this area included William Callow (1812-1908), William Collins (1788-1847), Myles Birket Foster RWS (1825-1899) and Thomas Girtin (1775-1802), who painted a watercolour of Lyme Regis. One of Great Britain's leading sea painters, Charles Napier Hemy RA RWS (1841-1917), also painted the harbour of Lyme Regis, while the Pre-Raphaelite painter, Sir John E. Millais Bt. PRA, painted 'The Boyhood of Raleigh' (1870) in the nearby seaside town of Budleigh Salterton.

The geologically rich coastline of Devon and Dorset also drew many followers of the Pre-Raphaelite Brotherhood in the mid-to-late nineteenth century. Artists such as John Brett ARA (1831-1902), John William Inchbold (1830-1888) and the topographical and marine artist Edward William Cooke RA (1811-1880) produced fine paintings and drawings of the coastline. Brett explored the Dorset coast during the

summer of 1870, painting watercolours of locations including Swanage, Lulworth Cove, Lyme Bay, Charmouth and Lyme Regis.

The Lyme Regis and Charmouth coastlines were frequently painted and illustrated in books on account of the dramatic cliff scenery along the frontage and the history of instability. A set of twelve fine lithographs were produced by Conybeare and Dawson (Conybeare & Dawson, 1840¹¹) including a view of the great landslide at Bindon on Christmas Day in 1839. Later the Pre-Raphaelite follower, Charles Robertson RWS (1844-1891), painted a vignette view of the town looking south-westwards towards the Cobb. West to the mouth of the River Exe includes a number of historic towns, villages and fishing communities. Edward William Cooke RA (1811-1880) painted a view of Axmouth Harbour at low water with shipping and the harbour set below the red Devon sandstone cliffs. He also painted two striking geological views of 'Beer Beach' and 'Distant View of Beer Head and White Cliff at Low Water' in 1858. Moving westwards, Francis Towne (1740-1816) produced a pen and ink and grey wash watercolour of 'Peakhill, Sidmouth' and John Joseph Cotman (1814-1878) painted two scenes at 'Sidmouth' and the lost village of 'Hallsands, near Start Point' in 1872.

William Turner of Oxford OWS (1789-1862) painted one of his elevated, panoramic watercolours of the view from Mount Edgecombe looking out across Plymouth Sound and the Mew Stone. Frederick Richard Lee RA (1798-1879) painted Plymouth breakwater, showing masons repairing the structure in 1862. The rugged coastline of the Lizard peninsula was painted by John Mogford often as a backdrop for detailed paintings of fishermen at work such as 'Sea-faring Business, Cadgwith, Cornwall', a large work in oils; John Brett, and the master of paintings of breaking waves on the shore, David James (fl.1881-1892) also painted there. Frederick John Widgery (fl.1861-1942) produced delicate views of sandy beaches set against dark rocky coastlines in gouache such as 'Near the Lizard' and 'Mullion Cove'.

In Mount's Bay the island of St Michael's Mount was painted by many of our leading coastal artists including Charles Thorneley RBA (fl.1858-1898), James Webb (1825-1895), John Mulcaster Carrick (1833-1896), Myles Birket Foster RWS (1825-1899), and in vibrant colours by Samuel John Lamorna Birch (1869-1955).

The quality of the reflected light from the sea, the rugged coastal scenery and the coastal fishing communities led to the establishment of large colonies of artists at Newlyn, St Ives and Lamorna in Cornwall. The artist Charles Napier Hemy was a "constant and almost lifelong illustrator of Cornish scenery" (Hardie, 2009⁵) and he owned a house in Falmouth. The port of Penzance Harbour was described by Stanhope Alexander Forbes RA (1857-1947) as "active and picturesque...from the first time I was fascinated by those wet sands" (Hardie, 2009¹¹). The Pre-Raphaelite painter of coastal scenery, John Brett, is particularly renowned for his very detailed depictions of the Cornish coast, which he first visited Cornwall in 1870. Cornwall provided a "lasting source of inspiration, drawing him back time and time again over the course of three decades" (Brett et al., 2006¹²). The frequency of his visits have left a lasting legacy, capturing an astonishing number of views of the Cornish coastline.

The Cornish peninsula "appealed to the geologist in Brett" and he produced a significant number of sketches, watercolours and oils of the rocky coastline. In the summer of 1873 Brett and his large family travelled around Cornwall, visiting Penzance, Perranporth, St Agnes, Tintagel and Bude. It has been argued that this particular summer was "one of the most extended and ambitious [years] of Brett's career" (Brett et al., 2006¹²). A further visit, in 1876, saw Brett painting his beautiful view of the Lizard from the Rill above Kynance Cove. Brett was high up on the cliffs overlooking the Lizard Point, and has captured the rocks in the foreground with precision. This particular view is one that has not changed since Brett painted it in 1876.

Kynance Cove was also painted by the celebrated artist Edward William Cooke RA, whose coastal views have an accuracy sometimes of photographic quality. Cooke was drawn to paint the coastline of the south-west of England, in part due to a keen interest in geology. Cooke began his "series of highly-

finished pictures in oil to illustrate the chief geological features of the British coast" (Munday, 1996¹³). Cooke was fascinated with the geology of the coastline and he sought to depict the rocks, shingle and cliffs in the most accurate way possible, a technique advanced by the famous Victorian art critic and writer, John Ruskin (1819-1900).

Stanhope Alexander Forbes RA (1857-1947), along with Walter Langley (1852-1922), was a founder of the Newlyn School of artists, located in the small fishing village next to Penzance. Forbes has been referred to as the 'father of the Newlyn School' and was instrumental in the development of the area as an established artists' School. Forbes moved to Newlyn in 1884 after a period of time studying in Cancale, Brittany with Henry Herbert La Thangue (1859-1929). Forbes lived out his experience in the Breton colonies in Newlyn and, as such, described it as "an English Concarneau" (Newton, 2005¹⁴). In 1895 he established the Newlyn Art Gallery and was chairman and trustee. In 1899 he formed the popular Newlyn Art School.

The art colony of St Ives also flourished during the latter part of the nineteenth century. This may be in part due to its featuring in many London art and literary journals at that time. It may also be due to the fact that the sheer volume of artists attracted to Cornwall led, inevitably, to further suitable locations being 'discovered' by artists. In 1889 the *Daily Telegraph* noted that 'Louis Grier and Julius Olsson were building up what, one day, might be recognised as the St Ives School of painting" (Newton, 2005¹⁴). By the 1890s the local art club boasted over 100 members. Grier and Olsson began to take on students from 1895 and Olsson has been described as the driving force in the school. Olsson was described by Folliott Stokes as, "a big man with a big heart, who paints big pictures with big brushes in a big studio" (Newton, 2005¹⁴). It has been said that Olsson "did more than any other painter to stamp St Ives as a British outpost of Impressionism". Olsson lived in St Ives until 1912 and it has been argued that his influence as a teacher "spread over a generation or more of young painters from Britain and overseas" (Hardie, 2009¹¹).

The town of St Ives continued to grow and thrive as a creative community, attracting painters and also sculptors, potters and writers throughout the twentieth century. There were many friendships and working relationships that developed between the artists living and working in the towns of St Ives, Newlyn and Falmouth during this time. Ideas and techniques were disseminated between the art colonies and schools. For over one hundred and twenty years "there [was] a succession of influential role models living in and around St Ives" (Newton, 2005¹⁴). The topographical artist George Wolfe (1834-1896) painted watercolours of St Ives beach in Pre-Raphaelite detail. Along the north Cornish coast Benjamin Williams Leader RA (1831-1923) painted the cliff scenery at Tintagel in 1870, as did John William Inchbold in 1862. George Arthur Fripp RWS (1813-1896) produced a fine watercolour showing 'A Figure on the Cliff overlooking the Sea Below the Ruins of Tintagel Castle' in 1873.

The well-known marine artist and Pre-Raphaelite, Charles Napier Hemy (1841-1917) also painted 'Among the Shingle at Clovelly, North Devon' in 1864 and captured, in precise detail, the geological features of the beach and cliffs; he also painted a view looking over the village to the sea in 1866/67. Hemy was originally from Newcastle, but moved to Falmouth, Cornwall in 1881 and lived there until his death in 1917. In fact, Clovelly was a mecca for coastal artists with the Pre-Raphaelite follower, Charles Robertson RWS painted numerous watercolours there. Henry John Sylvester Stannard RBA RSA (1870-1951) painted the view from Hobby Drive. The village of Boscastle was painted in oils by John Holland Snr. (fl.1830s-1870s) and by Albert Goodwin RWS (1845-1932). On the coast seaward of Exmoor the small harbour and village of Lynmouth was also painted by numerous artists, often depicting stormy conditions. Fine paintings were produced by George Hillyard Swinstead RBA RI (1860-1926), James Holland RWS (1799-1870), Samuel Phillips Jackson RWS (1830-1904), John Mogford RI (1800-1868), Albert Goodwin RWS (1845-1932) and Paul Jacob Naftel RWS (1817-1891). Off the north Devon coast the Isle of Lundy, famous for its colonies of puffins and other sea birds was painted by John George Naish (1824-1905); his works there included 'The Puffins' Paradise, West Coast of Lundy Island' and 'The Birds at Lundy Island'.

Edward William Cooke RA produced some remarkably detailed paintings on the north Somerset coast including 'Triassic rocks, near Blue Anchor, North Somerset, looking towards Watchet' and 'The Breakwater, Porlock Wier, coast of Somerset' in the 1860s. Cooke was fascinated by the geology of the coastline and had a "Ruskinian enthusiasm for rocks and minerals", (Munday, 1996¹³) that is to say he sought to depict the rocks, shingle and cliffs in the most accurate way possible, a technique advanced by the famous Victorian art critic and writer, John Ruskin (1819-1900). Edmund John Niemann Snr. (1813-1876) painted a far-reaching view over the town of Dunster towards the coast in 1870 whilst John Syer (1832-1885) painted a 'Coastal View at Minehead'.

The late nineteenth and early twentieth centuries saw a steadily increasing number of tourists travelling to the south-west. This led to a greater demand for illustrated books and colour picture postcards depicting local scenes. Two artists, Henry Wimbush (1858-1943) and Alfred Robert Quinton (1853-1934), were particularly prolific in their production of attractive watercolours for postcard publishers J. & F. Salmon of Sevenoaks and book publishers A. & C. Black; together they produced over two hundred watercolours of the region.

5.1.6. Case Study Sites

Four case study sites have been selected around the coastline of south-west England; they are:

- South Dorset coast from West Bay (near Bridport), westwards to Lyme Regis to Sidmouth, East Devon;
- Babbacombe to Torquay, south Devon;
- Cornish coastal sites between Polperro and Penzance, Cornwall;
- North Devon coast from Hartland Point to Ilfracombe.

5.1.7. References

- 1. McInnes, R. G., 2016. 'CHeRISH Coastal Heritage Risk Imagery in Support of Heritage Planning and Management in South-West England'. Report No. 7145 for Historic England. 265pps. http://cherish.maritimearchaeologytrust.org/.
- 2. Halcrow, 2011. 'Durlston Head to Rame Head SMP2'.
- 3. Royal Haskoning, 2011. 'Cornwall to Rame Head SMP2'.
- 4. Natural England, 2014. National Character Area Profile No. 147. 'Blackdowns'.
- 5. Natural England, 2014. National Character Area Profile No. 152. 'Cornish Killas'.
- 6. Natural England, 2014. National Character Area Profile No. 145. 'Exmoor'.
- 7. Daniell, W. & Ayton, R., 1814. 'A Voyage Round Great Britain'. Private Press. London.
- 8. Finden, E. & Finden, W., 1838. 'Views of the Ports, Harbours and Watering Places of Great Britain'. Virtue and Co. London.
- 9. Dorset County Museum, 2013. 'Information on the Artist Edmund Francis Drew Pritchard'. Dorset County Council.
- 10. Conybeare, Rev. W. & Dawson, W., 1840. 'Memoir and Views of Landslips on the Coast of East Devon &c. John Murray. London.
- 11. Hardie, M. (Ed), 2009. *'Artists in Newlyn and West Cornwall 1880-1940'*. Art Dictionaries Ltd ISBN: 978 0 953260 96 6.
- 12. Brett, C., Hickox, M. & Payne, C., 2006. *'John Brett A Pre-Raphaelite in Cornwall'*. Sansom & Co. and Penlee House Gallery and Museum. ISBN: 1 904537 51 0.
- 13. Munday, J., 1996. E. W. Cooke RA FRS FSA, FLS, FZS FGS, A Man of his Time, Antique Collectors' Club ISBN: 1 85149 222 4.
- 14. Newton, L. (Editor), 2005. *Painting at the Edge British Art Colonies 1880-1930,* Sansom and Company Limited ISBN: 978 1 904537 26 7.

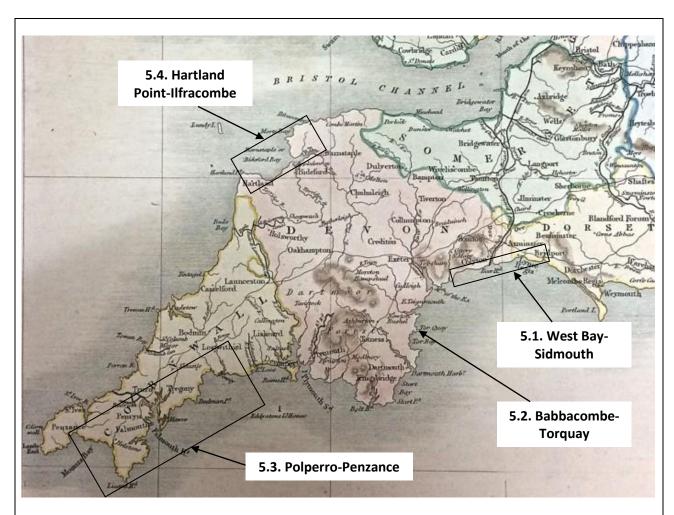


Fig. CS5.1.1 Location of south-west England case studies.

Fig. CS5.1.2. (below) 'Sidmouth, Devon – Distant View from the Cliffs to the West' by George Sidney Shepherd (1830s-1860). Watercolour. 1846.

Image courtesy of the Royal Collection Trust/© Her Majesty Queen Elizabeth II 2018/Watercolour World.



Case Study 5.1 – West Bay, Dorset to Sidmouth, Devon

1. Location

The case study site extends along the South Dorset and Devon coasts from West Bay in the east (to the south of Bridport), westwards past Lyme Regis, and the village of Beer to Sidmouth in East Devon, a distance of approximately 34km. The location lies within the East Devon-Dorset Jurassic Coast World Heritage Site.

2. Why was the Case Study Site selected?

This is a dynamic coastline affected by a range of erosional, instability and sediment transportation issues. This coastline contains a rich heritage in terms of both built and buried features. These include the historic harbour at West Bay (Bridport Harbour) and its Conservation Area, cliff top sites extending along the frontage past Seatown to Charmouth, and at Lyme Bay the historic waterfront and the harbour arm known as The Cobb. The picturesque nature of this coastline and the dramatic landslide processes attracted artists and geologists in the late eighteenth and nineteenth centuries and, as a result, there are numerous images of this frontage, which illustrate this changing coast over time.

In East Devon the village of Beer was a location chosen by many artists on account of its picturesque scenery. In particular, the cliffline was painted by the artist, Edward William Cooke RA (Munday, 1996¹). Cooke's portrayals of coastal cliff geology (Fig. CS5.1.17. & CS5.1.19.) are some of the most detailed produced by any artist during the Victorian period. Along the top of the cliffline at Beer there are prehistoric field systems abutting the cliff edge at South Down Common whilst, at Branscombe to the west, Bury Camp is located on the cliff top between High Peak, Sidmouth, and Beer Head.

At the western end of this case study site, the development of the town of Sidmouth typifies that of many small seaside towns in south-west England. There are numerous views of Sidmouth and its adjacent coastlines as artists were attracted on account of its scenic location with the dramatic red sandstone cliffs rising steeply on both sides of the town (Fig. CS5.1.25-CS5.1.32). Apart from the main town frontage, the coastline is unprotected and is susceptible to coastal erosion and flood events. Apart from the numerous Listed Buildings in close proximity to the seafront at Sidmouth, there are heritage assets at Connaught Gardens and Jacob's Ladder immediately to the west of the town, and at High Peak and on the cliffs beyond Otterton, a site which was identified in the late eighteenth century (Cornwall County Council, 2014²). The High Peak site is affected by coastal erosion and a significant proportion of the site has been lost over the centuries (Fig. CS5.1.40-CS5.1.42).

Apart from the many engraved views and paintings of the town of Sidmouth, (Butcher, 1820³; Creeke, 2014⁴) the contributions of the antiquarian and watercolourist artist, Peter Orlando Hutchinson (**Fig. CS5.1.32.-CS5.1.43.**), which are recorded in his illustrated journals and sketch books (1871-1894), form a detailed and fascinating record of both coastal processes and heritage discoveries over that time (Devon History Society, 2012⁵; Butler⁶).

3. Summary of the Geology, Geomorphology & Coastal Processes

The coastal geology of West Dorset is dominated by the famous Lias Group of mudstones and limestones of the early Jurassic epoch, which are overlain by the Chalk. The Lias forms the dramatic cliffs to the west of the town of Lyme Regis, with parts of the exposures being obscured by the extensive landslide systems at Bindon and Downlands (Conybeare & Dawson, 1840⁷).

The landslides along the coastal cliffs are composed of Jurassic clays and limestones with the tops of the cliffs at Black Ven, Stonebarrow and Golden Cap being capped by Upper Greensand. The combination of rapid coastal erosion and ground instability as a result of rainfall percolation and loss of support at the toe of the cliff has resulted in the dramatic coastal landscape.

The general direction of sediment transport is from west to east, as far as the harbour arms at West Bay. Here there is interruption to the sediment pathway and some transport movements both offshore and east to west before resuming an easterly direction on towards East Dorset. The eroding cliffs contribute substantial amounts of sediment to the overall system.

Moving westwards, Beer is located in a valley within Cretaceous rocks comprising the Upper Greensand overlain by the Chalk. The top of the cliffline is capped with more recent plateau Gravel deposits. The Chalk cliffs are well jointed and include horizontal bands of Flint, indicating the deposits are within the Upper Chalk. The sediment transport direction along this part of the coast is from west to east; there are no significant coastal defences along the Beer frontage (Halcrow, 2011⁸).

The Sidmouth frontage is composed largely of mudstones, siltstones and sandstones of the Triassic Period, with intermittent outcrops of the Gault Clay and Upper Greensand of the Cretaceous Period. Although the town frontage is defended with a seawall, rock groynes and breakwaters, the undefended cliffs on either side are subjected to aggressive coastal erosion and weathering, resulting in cliff instability. Although coastal defences were upgraded in the late 1990s with the provision of offshore rock breakwaters and groynes, further proposals aimed at reducing the risks along the Sidmouth frontage for the future are currently being developed.

4. How can the art imagery resources inform us of changes that have affected this coastal zone?

The artworks included within this case study frontage depict the highly varied coastline at various points in time. The images show the key structures such as West Bay harbour and the Cobb at Lyme Regis appear to have changed relatively little over the last 250 years, although the structures have been strengthened to meet coast protection needs. The case studies show how coastal heritage such as conservation areas including Listed Buildings can be protected where economically justifiable and environmentally sustainable. However, long sections of this coast are unprotected and will continue to erode, exposing the geology, palaeontology and cliff top heritage (McInnes, 2016⁹).

At Beer in Devon, close to the Dorset border, artworks by artists such as Edward William Cooke RA demonstrate how, alongside photographic evidence, art can provide detailed depictions of the state of the coastal frontage at various points in time with a high degree of accuracy. Such information can help inform both coastal risk management and understanding by countryside and heritage managers of the potential changes that are likely to affect cliff top land, looking ahead over the next century.

Views such as the rich resource of images available for the town of Sidmouth show how many coastal towns were often developed on the back of the beach, but also showing the extensive nature of such beaches prior to the construction of seawalls and esplanades, which often occupied much of the former beach area. The artworks also show a history of storm events and storm damage that have affected infrastructure and property over the last two centuries. Historical information of this kind can inform the planning of new coastal defences, taking account of the needs to improve standards of defence as a result of coastal and climatic change. Along the undefended or less defended parts of the coastline information on cliff retreat can be gained through making comparisons, for example, of cliff change since the late nineteenth century when compared to the present day. The town of Sidmouth benefits from the wealth of information in both written and illustrated form, in the diaries of P. O. Hutchinson. These provide an excellent example of how geological, environmental and archaeological knowledge can be enhanced through such detailed accounts by local antiquarians. Sidmouth is, therefore, one of relatively few locations where heritage sites themselves are actually illustrated rather than just views showing the locality of buried coastal heritage.

5. Key issues that can be learnt from this site.

The images show that key structures such as West Bay Harbour and the Cobb at Lyme Regis appear to have changed little over the last 250 years. The structures have been upgraded and strengthened to meet the coast protection needs, for example at West Bay between 2002 and 2004, and, progressively, works have been undertaken along the Lyme Regis frontage over the last fifteen years.

The case study site shows how heritage, such as coastal Conservation Areas including Listed Buildings, can be protected if measures required are economically justifiable and environmentally sustainable. However, on the long sections of this coast, the continuing erosion of the cliffline is likely to see the increased exposure and loss of cliff top heritage.

The artworks that are available of the Beer frontage by artists such as Cooke, demonstrate how, alongside photographic evidence, art can provide detailed depictions of the state of the coastal frontage at various points in time with a high degree of accuracy. This information can help inform both coastal risk management and understanding by heritage managers of the potential risk to cliff top sites, looking ahead over the next century. What these images do not show are the heritage sites themselves. Generally, such sites are best portrayed by aerial photography or LiDAR.

Views such as those available at Sidmouth show how many coastal towns were often developed on the back of the beach and also the extensive nature of such beaches prior to the construction of seawalls and esplanades, which often occupied much of the former beach area. The views also show that, even after the construction of the seawall along the town frontage, severe storms have caused damage through both erosion and flood events. Historical information of this kind can inform the planning of new coastal defences, taking account of the need to improve the standards of defence as a result of coastal and climatic change. Along the undefended or less defended coastlines information on cliff retreat can be gained through making comparisons, for example, of cliff change since the late nineteenth century when compared with the present day.

The town benefits from the wealth of information in both written and illustrated form in Hutchinson's diaries. The diaries provide an excellent example of how archaeological knowledge can be enhanced through such detailed accounts by local antiquarians. Sidmouth is, therefore, one of relatively few locations where heritage sites themselves are actually illustrated rather than just views showing the locality of buried heritage.

6. References

- 1. Munday, J., 1996. E. W. Cooke RA FRS TSA LS FZS FGS A Man of His Time'. Antiques Collectors' Club. ISBN: 1-85149-222-4.
- 2. Cornwall County Council, 2014. 'Rapid Coastal Zone Assessment for South-West England'. Report for English Heritage. Project No. 6673.
- 3. Butcher, Rev. E., 1820. The Beauties of Sidmouth'.
- 4. Creeke, J., 2014. *'Sidmouth's Long Print A Picture in Time'*. Publ. for Sidmouth Museum by The Sid Vale Association. ISBN: 978-0-97512704-7-9.
- 5. Devon History Society, 2012. *'The Diaries of P. O. Hutchinson'*. www.devonhistorysociety.org.uk/2012/08/peter-orlando-hutchinson-online.html.
- 6. Butler, J. 'Peter Orlando Hutchinson Diary of a Devon Antiquary Illustrated Journals and Sketchbooks'. Halsgrove. ISBN: 978-0-9512704-9.
- 7. Conybeare, Rev. W. & Dawson, W., 1840. Memoir and Views of the Landslip on the East Devon & c.
- 8. Halcrow, 2011. 'Durlston Head to Rame Head SMP2'.
- 9. McInnes, R., 2016. 'CHeRISH Coastal Heritage Risk Imagery in Support of Heritage Risk Planning and Management in South-West England. Report No. 7145. http://cherish.maritimearchaeologytrust.org/.



Fig. CS5.1.3. *'View of Lyme Regis from the East'*. Midnineteenth century lithograph.

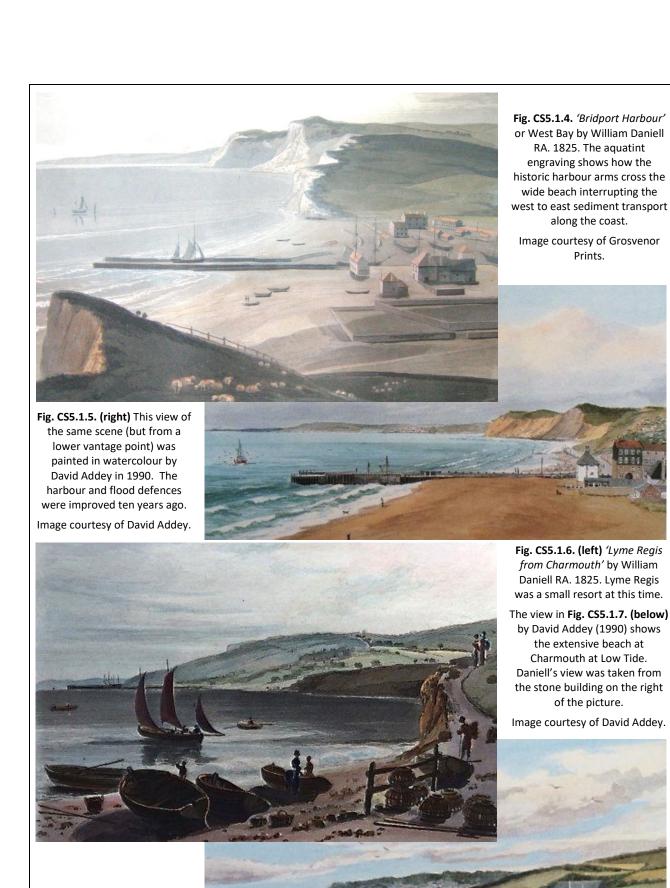




Fig. CS5.1.8. (top) & CS5.1.9. (middle) An extensive view along the cliff top from Charmouth looking eastwards by Alfred Robert Quinton, c.1920. The cliff tops contain numerous buried heritage sites, which are exposed through rapid coastal erosion and landsliding (e.g. Dog House Hill, Chideock MDO7655). Image courtesy of Salmon's.



Fig. CS5.1.10. (bottom) A panoramic view of the coast from above Lyme Regis past The Spittles, Stonebarrow Hill, Charmouth and Golden Cap by G. Hawkins, c.1830.



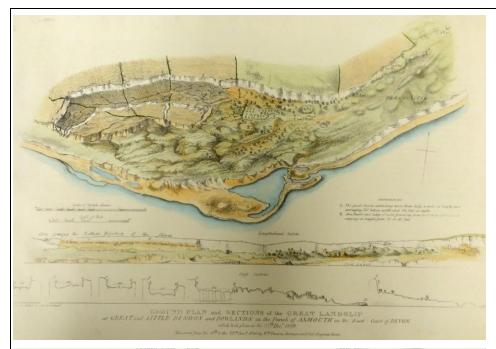




Fig. CS5.1.11. (top) The coastal geology and geomorphology was mapped and described by the Rev. W. Conybeare and William Dawson in 1840. They provided detailed maps of the landslips, as well as finely lithographed views of the major landslide events.

Image courtesy of Dorset County Museum and Heritage Service.

Fig. CS5.1.12. (middle) In addition to their maps and plates, Conybeare and Dawson produced detailed views of the coastline from the sea, which provide an accurate record of coastal conditions and developments along this part of the East Devon/West Dorset coast.

Image courtesy of Dorset County Museum and Heritage Service.

Fig. CS5.1.13. (bottom) 'Above Lyme Regis Looking Across Marshwood Vale, Dorset' by Thomas Girtin. Watercolour, c.1797. Girtin's view illustrates, in colour, the nature of the cliff top landscape of West Dorset 222 years ago.

Image courtesy of Christie's Images © 2014.





Fig. CS5.1.14. A fine lithograph of the beach at Lyme Regis by Daniel Dunster. Lithograph. c.1840. Image courtesy of Lyme Regis Museum.

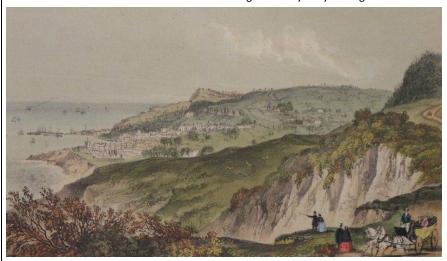


Fig. CS5.1.15. A mid-nineteenth century view looking over the developing town of Lyme Regis from the east side close to Black Ven. The unstable nature of the coastal cliffs can be seen in the foreground.

Fig. CS5.1.16. Lyme Regis has been protected progressively over the last 25 years with several phases of major coast protection and landslide stabilisation works. These have included the addition of rock armour at the end of the Cobb and, more recently, further works at the eastern end of the seafront below The Spittles.

Image courtesy of the Wight Light Gallery.



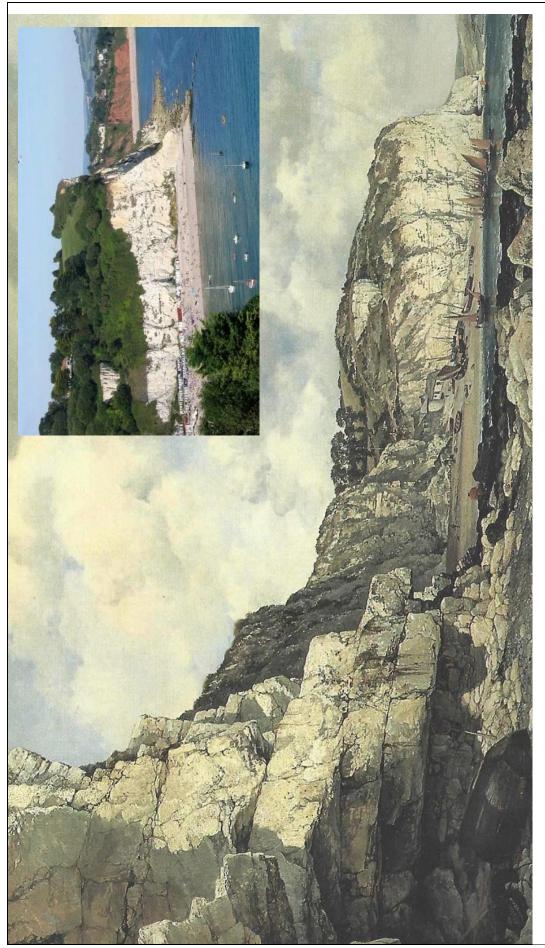


Fig. CS5.1.17. The Fishing Cove of Beer' (1858) by Edward William Cooke RA shows the coastline in Pre-Raphaelite detail. The eastern part of Cooke's oil painting can be seen in the photograph as Fig. CS5.1.18.

Image courtesy of the late John Munday/Private Collection and © Ian West.



Fig. CS5.1.19. 'Distant View of Beer Head and White Cliff at Low Water' by E. W. Cooke RA, 1858. This dramatic headland is captured well by Cooke and shows the end of the red sandstone cliffs, which extend eastwards towards Seaton on the right.



Fig. CS5.1.20. This photograph shows the headland on the left of Cooke's painting. The cliff tops contain heritage sites, which are being lost progressively as a result of coastal erosion.



Fig. CS5.1.21. In this photograph the striking red and white strata, that are obvious in Cooke's oil painting, can be seen in the centre.



Fig. CS5.1.22. 'Beer, Devon' by A. W. Perry, c.1900, showing the headland looking eastwards.



Fig. CS5.1.23. A similar vantage point was chosen by Alfred Robert Quinton for his watercolour painted ten years later. The depictions of the cliff geology are almost identical.

Image courtesy of Salmon's.



Fig. CS5.1.24. This photograph from about 1900 confirms the accuracy of these artists' works.

Image © Ian West.



Fig. CS5.1.25. An aquatint engraving of the 'Views from Salcombe Hill' by Havell, 1814, provides an early prospect over the developing town from the west.



Fig. CS5.1.26. 'High Peak Hill from Sidmouth' drawn on the spot by Peter Orlando
Hutchinson on 16th June 1849.
Hutchinson's fine watercolours, which are contained in his extensive diaries, are nearly always dated.

Image reproduced by kind permission of Devon Archives and Local Studies Service.

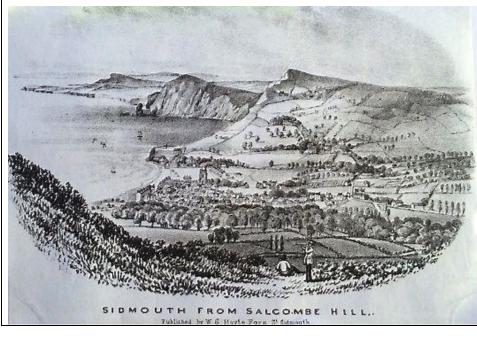


Fig. CS5.1.27. A fine midnineteenth century lithograph shows Sidmouth and the rugged coastline extending westwards. High Peak and the cliff tops beyond contain a rich buried archaeological heritage, which is being continuously eroded along this undefended coastline.

Details from Hubert Cornish's 'Long Print of Sidmouth', Aquatint engraving after 1815



Fig. CS5.1.28. This view looks east along the coast from the shore.

The seawall and Esplanade were yet to be constructed. The building on the left is Prospect Place with the York Hotel beyond.



Fig. CS5.1.29. A second eastward view shows Marine Place and Portland Place. The entrances to the properties appear level with the back of the beach, which appears to be very extensive at the time.



Fig. CS5.1.30. This detail from the 'Long Print' looks to the west and shows the thatched 'Fort Cottage' with the signalling mast on Peak Hill. The fishermen's cottages on the shore to the left were destroyed in the Great Storm of 1824.



Fig. CS5.1.31. The westernmost section of the 'Long Print' looks along the coast towards Brandy Head and Otterton. The unusual rock formed in the bay was known as 'Chit Rock'.

The 'Long Print' provides a fascinating, highly detailed, panorama of Sidmouth's historic seafront. The original watercolours, from which the print was taken, can be seen at Sidmouth Museum.

Images courtesy of Woolley and Wallis Auctions.

Coastal Erosion, Instability and Flooding at Sidmouth

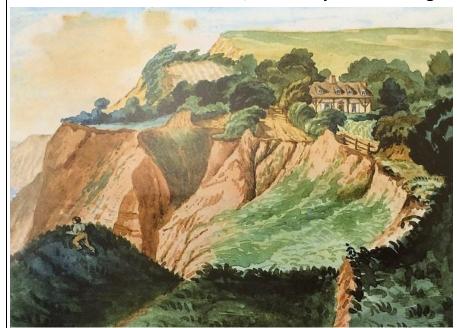


Fig. CS5.1.32. A failure of the cliff near Peak Cottage, Peak Hill, Sidmouth, on 31st August 1847. A watercolour painted on the spot by P. O. Hutchinson.

Image reproduced by kind permission of Devon Archives and Local Studies Centre.



Fig. CS5.1.33. Serious sea flooding affected Sidmouth on 3rd/4th December 1876. The scene was captured in watercolour by P. O. Hutchinson and described in his diary.

Image reproduced by kind permission of Devon Archives and Local Studies Service.



Fig. CS5.1.34. Sketch by P. O. Hutchinson showing repairing storm damage to the Esplanade near the bottom of Peak Hill, Sidmouth, in January 1873.

Image reproduced by kind permission of Devon Archives and Local Studies Service.

Depictions of Sidmouth's Coastal heritage by P. O. Hutchinson

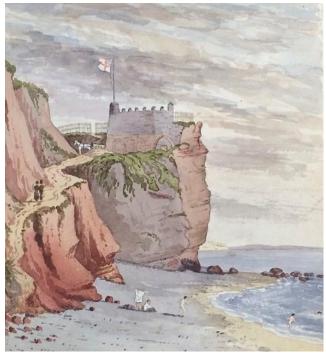






Fig. CS5.1.35, CS5.1.36 & CS5.1.37. These three views by Hutchinson depict the remains of the old lime kilns near the Chit Rocks at Sidmouth. The earliest view (top left) was painted on 4th December 1871, with a ladder providing access to the shore (top right). The view (left) was painted in May 1888 and, by now, the base of the cliff has been protected.

Fig. CS5.1.38. (below left) Jacob's Ladder can be seen in this watercolour by Alfred Robert Quinton, c.1920.

Image courtesy of Salmon's.

Fig. CS5.1.39. (below right) The view today of Jacob's Ladder.





Depictions of Sidmouth's Coastal Heritage by P. O. Hutchinson







Fig. CS5.1.40. (top left) 'High Peak from Peak Hill' painted on the spot on 7th September 1849.

Fig. CS5.1.41. (top right) 'View from the summit of High Peak Hill looking south-west towards Otterton Point and Bury Head'. The Signal Staff was erected in 1850 and was shattered by lightning. The conical mount was made by Ordnance Surveyors in 1857.

Fig. CS5.1.42. (left) The earthworks on High Peak Hill looking towards Sidmouth. Painted on 9th July 1851.

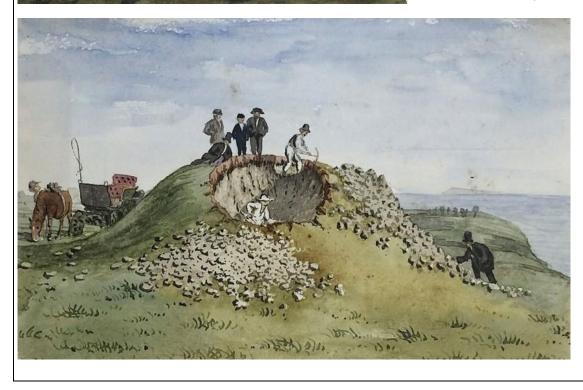


Fig. CS5.1.43.
(left) Opening
a stone heap
on
Littlecombe
Hill, Bury
Camp on 8th
September
1858.
All images
reproduced

reproduced
with the kind
permission of
Devon
Archives and
Local Studies
Centre.

Case Study 5.2 - Babbacombe to Torquay, Devon

1. Location

The case study extends from Oddicombe Beach to the north of Torquay, southwards along the Torquay frontage to Hope's Nose, a distance of approximately 4km.

2. Why was the Case Study Site selected?

This particular site was chosen as a case study on account of Torquay's importance as a seaside resort with a rich architectural heritage and, adjacent to it, a number of popular bathing beaches, including Anstey's Cove and Oddicombe Beach, which have contained an interesting array of seaside properties of architectural quality. On account of the numerous images of this coastal frontage, the approach to this case study has been to examine changes to the built environment since the late eighteenth century (both physical and human influences) and to illustrate how, over this time period, artworks can improve our understanding of changes to the built environment.

3. Summary of the Geology, Geomorphology & Coastal Processes

Much of the coastline and hinterland along this part of the South Devon coast consists of sandstones of the Permian Period. However, at Torquay itself, the headland is composed of the Old Red Sandstone Group of the earlier Lower Devonian epoch; in addition, there are outcrops of limestones, mudstones and slates of the Torbay and Tamar Groups. The Devonian limestones are resistant to erosion, whilst the softer mudstones and other outcrops form the recessed coastline of Torbay itself and extend southwards. The rates of cliff recession have been slow over the last 100 years although some eroded materials do contribute to beach-forming sediment, which is contained within the bays. The general direction of sediment transport is south to north around Torbay, with inputs from eroding or unstable cliffs, which give the beaches the typical reddish pink sand colour (Halcrow, 2011¹).

Although cliff erosion is slow, there is a wide distribution of relic or inactive coastal landslides along this part of the South Devon coast. Some of these ancient landslides are susceptible to reactivation following increased toe erosion or changes in groundwater; these might be anticipated to a greater extent as a result of climate change and sea level rise.

4. How can the art imagery resources inform us of changes that have affected this coastal zone?

The town of Torquay is almost entirely of the nineteenth century, the original hamlet having expanded rapidly at the time of the Napoleonic Wars and soon after. Artworks illustrate how Torquay expanded, with grand terraces and ornate villas extending along the coastal frontage of the bay. There are numerous images of Babbacombe, Babbacombe to the north, where cottages ornés were built above the bay and on the coastal slopes, many featuring in early engravings. A large number of images provided chronology of the development of locations such as Babbacombe and show how historic buildings have been adapted or lost over time. This case study is intended to provide assistance on how historical artworks, such as watercolours and engravings, can be utilised to provide a more complete record of the history, cultural heritage and environment of this part of the coast.

5. Key issues that can be learnt from this site.

Torquay is the largest seaside resort to be considered within a case study for the CHeRISH project (McInnes, 2016²). Because of its significance and popularity, together with the adjacent villages and bays, there is a rich art record which can be interrogated to describe patterns of development over the last 200 years. The best images could be usefully added to the Historical Environment Records in order to provide illustrations of heritage sites extending back long before the days of photography.

6. References

- 1. Halcrow, 2011. 'Durlston Head to Rame Head SMP2'.
- 2. McInnes, R. G., 2016. 'CHeRISH Coastal Heritage Risk Imagery in Support of Heritage Planning and Management in South-West England'. Report No. 7145 for Historic England. http://cherish.maritimearchaeologytrust.org/.
- 3. Cockrem, E., 1851. 'Plan of the Town of Torquay, from the Ordnance Survey, Being a Companion to the Torquay Directory' (see overleaf).

Interpreting Historical Artworks



Fig. CS5.2.1. 'Torquay' by William Daniell RA. Aquatint. Engraving. 1825. Image courtesy of Grosvenor Prints.

This attractive house was Marine Villa, which is present on John Wood's Plan of 'Torquay and Environs' of 1841, and was then occupied by a Dr Parkin. In 1853 it appears on the 'Plan of the Town of Torquay, from the Ordnance Survey, Being a Companion to the Torquay Directory'. Edward Cockrem's directory records the house was occupied by Sir Henry Bold Hoghton, Bart (Cockrem,18513).

On the First Edition Ordnance Survey Country Series, surveyed in 1861, it appears as Marina, which survived with extensions independently for a time, for it appears on the Second Edition County Series surveyed in 1904. It was finally subsumed into the ever-growing Imperial Hotel (which had opened in 1866 after the Marine Villa's neighbour The Cove was demolished in 1863 to make way for it) and as shown on the Third Edition County Series surveyed 1933. Elements of the ornate façade survived at least until the Second World War.

This view demonstrates Daniell's skill and accuracy as both a topographical and architectural artist and shows a scene that has changed dramatically over the last 200 years.

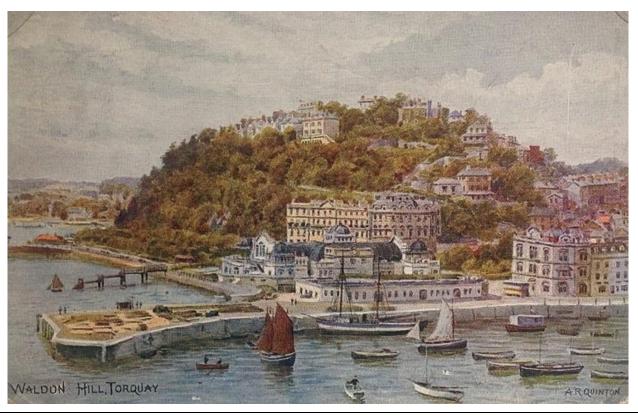


Fig. CS5.2.2. (above): A view of 'Vane Hill Torquay' by Alfred Robert Quinton in watercolour (c.1920). In the foreground is the Pavilion, which was first designed by E. Richards in 1897, adapted by the Borough Surveyor, H. A. Garrett, and opened in 1912. Quinton produced numerous detailed views for the postcard publishers, J. & F. Salmon, in the early twentieth century.

Image courtesy of Salmon's.

Fig. CS5.2.3. (below): 'Waldon Hill, Torquay' also by A. R. Quinton. The line of Rock Walk can be seen on the hillside; all the villas on the hill pre-date the Pavilion. Alongside the North Quay are the Coal Bunkers.

Image courtesy of Salmon's.



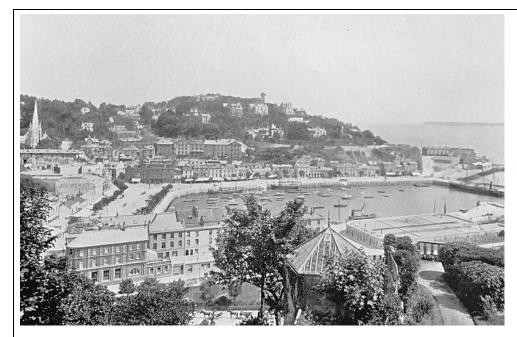


Fig. CS5.2.4. This photograph of 'Vane Hill', c.1910 is a similar view to that painted by Quinton in Fig. CS5.2.2.and illustrates his eye for detail.



Fig. CS5.2.5. In this hand-tinted colour postcard, c.1920, many of the details shown of the buildings in Quinton's postcard (Fig. CS5.2.2.) are visible here but in this view are in colour. (It should be noted that hand-tinted cards such as this do not have the reliability of original colour photographs)

Private Collection.



Fig. CS5.2.6. A present day view of the harbour and Vane Hill showing the developments that have replaced the Victorian villas





Fig. CS5.2.7. (above): 'Torre Abbey, Devon' by William Daniell, 1825. This aquatint engraving shows Torre Abbey, which is the Georgian-looking building to the left of the picture, showing the two side wings built 1741-42; trees obscure the medieval gatehouse, and the large medieval 'Spanish Barn', which should lie to the left (west) has been omitted. The New Inner Harbour in the foreground, built to Rennie's design, was completed c.1815, but Torbay Road was not cut at the bottom of the cliff face until 1840. The pedestrian Rock Walk rising from the harbour to cut across Waldron Hill is the diagonal visible up the cliff. The 'watchtower' lies to the south above Cary Parade.

Image courtesy of Grosvenor Prints.



Fig. CS5.2.8. (middle) shows David Addey's watercolour of Daniell's view painted in 1990. Torre Abbey appears to be obscured by foliage. A multi-storey car park now partially obscures the Pavilion. The present day view is shown in Fig.

Image courtesy of Alamy Stock Photo

CS5.2.9. (left).

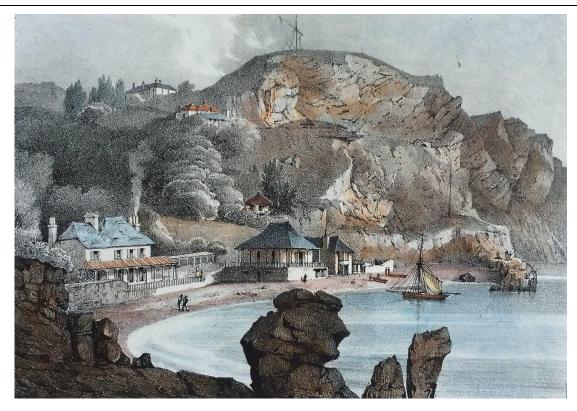
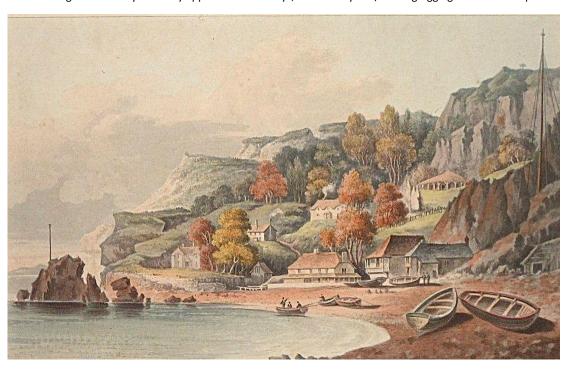
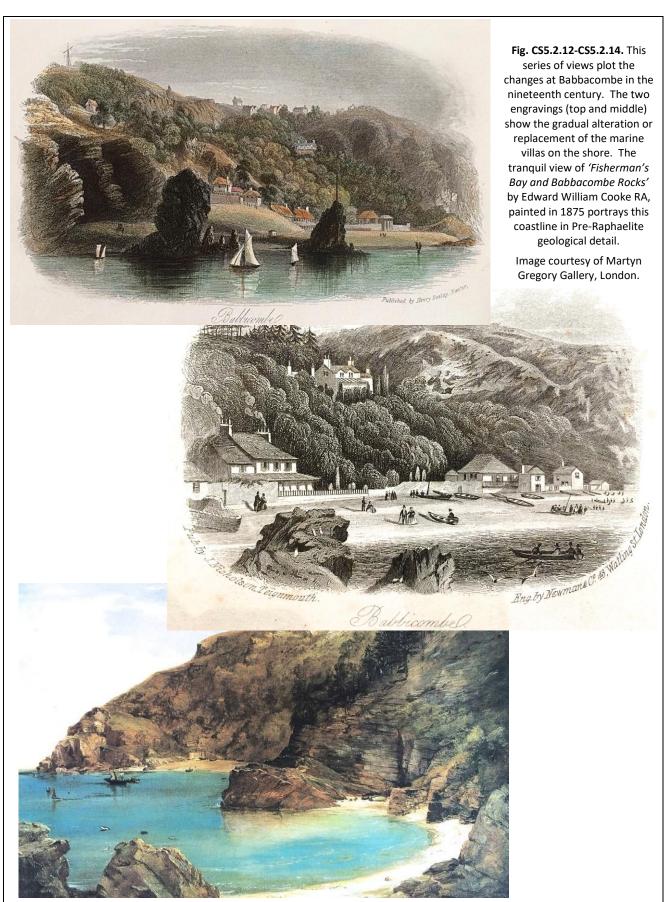


Fig. CS5.2.10. (above): 'Babbacombe' by George Rowe, c.1826. Sadly, most houses have gone, certainly along the beach. The high flagstaff, up on the downs, is certainly on the 1887 OS Map, though the lower one (on Half-Tide Rock) is not. Of the up-slope houses the lower one is probably The Vine, present in some form as Glen Sannox/Babbacombe Court until late twentieth century demolition. The upper one could, therefore, be the Babbacombe Cliff House Hotel (Babbacombe Cliff on the 1933 OS) which may have been built by William Nesfield in 1878.

Fig. CS5.2.11. (below): 'Babbacombe' by T. Fidlor, c.1830s. The leftmost building on the shore was a public house in 1887 and has been subsumed into the Cary Arms Hotel; the building above it is Beach Cottage. The middle building on the shore present in 1887, had gone by 1904. The one above with a smoking chimney is recognisably the listed Rose Cottage; it now has a slate veranda but it has been artistically 'moved' down slope. The cottages orné cannot be identified in this location. The flagstaff on Half-Tide Rock may have been a fishing aid at this location, having none of the visibility of the one on the downs, signalling shoals and tides by hoisting various buoys — it only appears to have stays, and no halyards/running rigging to the mast top.





Full details of the *'Babbacombe Downs Conservation Area – Character Appraisal'* (2005) can be found at: http://www.torbay.gov.uk/index/yourservices/planning/archaeologyandconservation/babbacombe_downs conservation area appraisal.pdf

The Changing Torbay Coast



Fig. CS5.2.15. This detailed watercolour of 'Oddicombe Beach' by Samuel Edward Kelly, c.1910, shows development beneath the precarious red sandstone cliffs. Debris from previous cliff falls litters the shore in the foreground.

Private Collection.



Fig. CS5.2.16. This postcard shows the beach and the cliff in about 1970. The jointing in the sandstone cliffs is clearly visible and suggests the potential for further cliff falls.

Private Collection.



Fig. CS5.2.17. The watercolour by artist David Addey (1990) shows development on the cliff top and coastal defences in the bay below.

Image courtesy of David Addey.





Fig. CS5.2.18. (top) A photograph of Oddicombe Beach c.1900 looking eastwards. A cliff fall has occurred from the face of the bluff in the centre of the view.

Image courtesy of Torquay Library.

Fig. CS5.2.19. (middle) The massive cliff fall onto Oddicombe Beach on 3rd April 2013 at Ridgemont House.

Image © Dr N. Csorvasi 2013.





The assistance of Hal Bishop and John Tucker of Torbay Council in the preparation of this case study is gratefully acknowledged.