

Art in Support of Improved Understanding of Changing Coastal Environments

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Foreword

Coastal habitats occur at the intersection between terrestrial and marine environments. In England, priority coastal habitats include:

- maritime cliff and slopes
- coastal vegetated shingle
- machair
- coastal saltmarsh
- coastal sand dune

Coastal ecosystems provide a suite of valuable benefits on which we depend, including providing natural coastal protection to the great number of people living on our coastline, providing food, supporting jobs and sequestering carbon. To protect this valuable resource much of the 4,422km length of the England coastline is designated due to its importance in terms of biodiversity or geology.

The challenges of biodiversity loss and climate change have resulted in a decline in these important habitats. The UK National Ecosystem Assessment (Defra, 2014) estimated that the overall extent of coastal habitat in the UK has reduced by 16% since 1945. In response the UK Government through both the 25 Year Environment Plan and the Environment Act, have outlined their commitment to habitat restoration with aims to be the first generation that “leave the environment in a better state than we found it.”

There are two approaches to restoring habitat; reducing the pressure on systems to allow natural recovery or taking positive action to restore habitats. To understand where habitat creation might be best focused, we need to understand where it was historically, as these sites are likely to have the environmental conditions present to sustain the habitat once pressures are removed. To understand what management might need to be put in place we need to understand what pressures have been introduced over time and what impact this has had on habitat decline. We, therefore, need a good understanding of the history of the coastline.

Much of the decline of coastal habitat extent resulted from activities during the industrial revolution between 1750-1900. It wasn't till the 1800s that the camera was invented and then till the late 1800s to 1900s that they became more accessible for common use. The change that occurred to our coastline prior to this time, therefore, was not documented by film but was documented through historic artwork. This study was commissioned to gain a more comprehensive understanding of the change in our coastline depicted by art to support work on habitat restoration and management.

Increasingly artists and researchers are working together to engage the public with research. Bad publicity and co-ordinated opposition can derail restoration projects so keeping the public informed and communicating the reasoning behind work is vital, especially in the context of large-scale management. This report shows how historic artwork can be used in public engagement on habitat restoration projects on the coast by

enhancing the storytelling of why habitat restoration may be needed and the potential outcomes of management.

Natural England commission a range of reports from external contractors to provide evidence and advice to assist us in delivering our duties. The views in this report are those of the authors and do not necessarily represent those of Natural England.

Glossary of terms

Environmental and Physical

Area of Outstanding Natural Beauty

An Area of Outstanding Natural Beauty (AONB) is land protected by the Countryside and Rights of Way Act 2000 (CROW Act). It protects the land to conserve and enhance its natural beauty. The CROW Act sets out the roles and responsibilities that different organisations must follow to manage the 34 AONBs in England.

Biodiversity

Biodiversity is the extraordinary variety of life on Earth — from genes and species to ecosystems and the valuable functions they perform. Biodiversity — short for biological diversity — is the variety of all living things and their interactions. Biodiversity changes over time as extinction occurs and new species evolve. There are three levels of diversity: species, genetic, and ecosystem diversity. Each is important, interacting with and influencing others. Changes at one level can cause changes at other levels.

Climate change adaptation

Adjustments made to natural or human systems in response to the actual or anticipated impacts of climate change, to mitigate harm or exploit beneficial opportunities.

Climate change mitigation

Action to reduce the impact of human activity on the climate system, primarily through reducing greenhouse gas emissions.

Coastal evolution

Coastal evolution varies greatly with respect to both time and location. Important variables include the geological setting, sediment supply, sea-level change, and the wave and tidal processes that characterize each particular coastal frontage. Generally, both erosion and deposition are associated with coastal evolution; the relative amount ranges widely.

Coastal change management area

An area identified in local plans as likely to be affected by physical change to the shoreline through erosion, coastal landslip, permanent inundation or coastal accretion.

Geodiversity

The range of rocks, minerals, fossils, soils and landforms.

Geomorphology

Geomorphology is the study of landforms and their development. The topic deals with the description of landforms, and the process and forces acting on the earth's surface to generate these landforms and landform changes.

Heritage Coast

Areas of undeveloped coastline which are managed to conserve their natural beauty and, where appropriate, to improve accessibility for visitors.

International, national and locally designated sites of importance for biodiversity

All international sites (Special Areas of Conservation, Special Protection Areas, and Ramsar sites), national sites (Sites of Special Scientific Interest) and locally designated sites including Local Wildlife Sites.

Natural Character Area Profiles (NCAs)

Natural England's NCA profile documents explain how you can access and use environmental evidence and information about places. NCAs divide England into 159 distinct natural areas. Each is defined by a unique combination of landscape, biodiversity, geodiversity, history, and cultural and economic activity. Their boundaries follow natural lines in the landscape rather than administrative boundaries.

Each profile contains a description of a landscape area and details of topography, geology and soils, rivers and coastal features, agricultural uses, species closely associated with the area, history of the area, information about change in the landscape and the main attributes of the landscape. The statements of environmental opportunity found in each profile helps to bring together this information and offers suggestions where action can be best targeted to conserve and improve the natural environment.

Natural flood management

Managing flood and coastal erosion risk by protecting, restoring and emulating the natural 'regulating' function of catchments, rivers, floodplains and coasts.

Priority habitats and species

Species and Habitats of Principal Importance included in the England Biodiversity List published by the Secretary of State under [section 41 of the Natural Environment and Rural Communities Act 2006](#).

Ramsar sites

Wetlands of international importance, designated under the [1971 Ramsar Convention](#).

Shoreline Management Plan (SMP)

Shoreline Management Plans (SMPs) set out a shared strategic approach for managing the coastline from coastal flooding and erosion risks. Their aim is to identify the most sustainable way to manage the coastline, taking into account the risks to people, the developed, historic and natural environments over the next century.

Special Areas of Conservation

Areas defined by [regulation 3 of the Conservation of Habitats and Species Regulations 2017](#) which have been given special protection as important conservation sites.

Special Protection Areas

Areas classified under [regulation 15 of the Conservation of Habitats and Species Regulations 2017](#) which have been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds.

Site of Special Scientific Interest

Sites designated by Natural England under the [Wildlife and Countryside Act 1981](#).

Art-related terminology

Agnew's (A)

Associate of the Old Watercolour Society (AOWS)

President of the Old Watercolour Society (POWS)

British Institution (1806-1867) (BI)

The Fine Art Society, London (FAS)

Flourished (The period during which the artist was active) (FL.)

Isle of Wight (IW)

New English Art Club (NEAC)

The New Watercolour Society (founded in 1832) (NWS)

New Society of Artists (NSA)

The Old Watercolour Society (founded in 1804, became RWS in 1881) (OWS) Private Collection

The Royal Society of Painters in Watercolours (RWS)

The Royal Academy (RA)

The Royal Society of British Artists, Suffolk Street (RBA)

Royal Cambrian Academy, Manchester (RCA)

Royal Society of Etchers and Engravers (RE)

The Royal Institution of Painters in Watercolours (RI)

Royal Institute of Oil Painters (ROI)

Sotheby's Belgravia (SB)

Sotheby's London (SL)

Society of British Artists, Suffolk Street (founded in 1824) (SS)

The Victoria and Albert Museum, London (V&A)

Woolley & Wallis Auctioneers, Salisbury (WW)

NB: The spellings listed in the titles of works are those provided by the artists or authors.

Executive summary

The remarkable variety, scenic character and natural environments of the English coast result from both its geological history and the physical processes acting upon it. The coastline, which varies considerably in terms of its durability, has been subjected continuously to the processes of weathering, coastal erosion, landsliding and flooding. The recognition of coastal change, and practical experiences of its impacts over the last three centuries in particular, has clearly demonstrated that the coastal zone is an area that is naturally dynamic and prone to significant changes over time and geographical extent. Climate change including a tendency for less predictable weather patterns, and risks from sea level rise bring increasing challenges for those involved in environmental management within coastal zones. In fact, many believe that meeting the challenges of coastal climate change is the most important issue to be faced by environmental scientists and decision-makers over the next decades.

It is now well established that sustainable management of our coastal environments, and the diverse range of habitats and species that they support, can only be achieved through a thorough understanding of long-term coastal evolution and natural processes. Alongside the technical tools that are currently available to inform us about the rate of coastal change, historical evidence, including artworks and other historical imagery such as old photographs, literature accounts and maps have allowed recognition of the nature, scale and rate of change over a much longer time-frame than is normally considered by coastal and environmental scientists.

The use of artworks, in particular, has been promoted by the authors through a series of studies supported by The Crown Estate and other interested stakeholders, more recently taking advantage of the significant increase in the availability of these art media online (McInnes & Stubbings, 2010, 2011; McInnes & Benstead, 2013a, 2013b; McInnes, 2016, McInnes & Stanford-Clark, 2018). The photographing of the nation's public collections of oil paintings, now held on the [ArtUK website](http://www.artuk.org) (www.artuk.org), and the [Watercolour World project](http://www.watercolourworld.org) (www.watercolourworld.org) are providing tens of thousands of images of the coastline to new audiences, many publicly available to view for the first time.

The focus for the authors' previous research has been particularly in the fields of coastal processes and cultural heritage although past study reports have noted the potential for practical application of a rich resource of currently under-used full colour art images that depict natural environments and habitats. These include hard and soft cliffs, coastal landslides, downlands, saltmarshes, mudflats, estuaries, shingle and dune coasts. These images allow a long-term perspective to be gained of our changing coastal environments utilising colour imagery that extends back 100 years before even the introduction of black and white photography.

This study, taking advantage of the author's extensive collection of coastal art imagery, together with images kindly made available by galleries, auction houses and image libraries, demonstrates how the national art resource can be utilised to benefit

management of often sensitive coastal habitats drawing on the wisdom of hindsight. The study results support Natural England's goal as set out in the government's 25 Year Environment Plan (Defra, 2018; HM Government, 2021) in terms of developing resilient landscapes and seas and can also support the linkage of marine conservation advice to habitat mapping and defining Favourable Conservation Status (Natural England, 2015). The preparation and updating by Natural England of its 'National Character Area Profiles', which include coverage of the whole of the English coast, represent a very valuable knowledge resource supporting Integrated Coastal Zone Management (Natural England, 2015-2021) and environmental, biodiversity and landscape management targets; their role has been highlighted in the report.

Through its case studies including coastal National Nature Reserves and a broad range of often designated habitat types this research provides an important opportunity to raise awareness of the benefits of utilising the valuable yet currently under-used art resource.



Fig: 'Low Tide, Tynemouth' by Thomas Sewell Robins painted in watercolour in 1866. This artist provides a detailed appreciation of this part of the English coast before Victorian coastal developments took place. The watercolour shows hay barges being loaded into coastal ships at Low Water from a gently sloping sandy beach. Image courtesy: Hall's Fine Art Auctioneers, Shrewsbury.

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Study objectives and approach

Introduction

What lessons can we learn from observations of changes that have affected British coastal environments over the last 250 years? How and to what extent have our coastal landscapes have been affected by both natural and anthropogenic influences over that time? Increasingly sophisticated technologies now allow us to observe and monitor changing conditions within our coastal zones, but such innovative approaches have been introduced relatively recently and there are few locations around the British coast where systematic monitoring has been undertaken for more than thirty years. Alongside these tools we can now also take particular advantage of a vast additional resource of historical imagery that is becoming increasingly available online, and which allows a much longer-term perspective to be gained of all aspects of coastal change; such insight can better inform future planning and management of environmentally sensitive coastal frontages and their hinterlands.

The importance of understanding the impacts of long-term coastal change has long been recognised, particularly since the development and establishment of the shoreline management planning process from the early 1990s (MAFF, 1993; Defra, 2006). Shoreline management plans, as they subsequently developed, helped to provide answers to the increasing need to adapt to long-term coastal change to help ensure successful planning and management of the coast looking ahead for the next century.

Risk management can be achieved most effectively by gaining an improved understanding of the nature and the extent of risk, and by building capacity to deliver solutions to support improved management (Defra & Environment Agency, 2021; Environment Agency, 2021; Moore & McInnes, 2021). However, risk reduction is just one component of a wider need to achieve an improved understanding of the nature and character of our coasts, which can be achieved through a discovery, identification and understanding approach (McInnes & Stanford-Clark, 2018). This study illustrates the multiple benefits to be derived from the use of historical artworks to improve understanding of long-term environmental change within England's coastal zones since the late eighteenth century.

Extending back a century before the introduction of black and white photography coastal art, in full colour, can provide a detailed record of the physical changes and human influences that have shaped England's coastal environments over the last 250 years. In particular often highly detailed artworks record physical and environmental changes over time, first in their natural, unconstrained forms and later often showing extensive developments and encroachments and particularly coastal defences. Sequences of such images provide a chronology of the physical, environmental, cultural heritage and social changes that have affected coastal zones over time. These currently under-used art resources allow us to take advantage of the wisdom of hindsight when planning for both

risk reduction and the management more widely of change at the coast and within its hinterland.

The art resource, including works by many of England's finest artists, can, therefore, inform consideration of and support:

- our understanding of the morphology of coastal zones;
- patterns of land use and development change over time;
- sustainable coastal risk management;
- opportunities for habitat restoration;
- the chronology of coastal development over time and its impacts, which can inform both planning policy-making and environmental management.

The study has utilised and refined a ranking system for confirmation of the topographical accuracy of artists and their works developed previously by the authors for 'The State of the British Coast' study (McInnes & Stanford-Clark, 2018).

Although many eminent eighteenth and nineteenth century scientists recognised the importance of coastal processes in shaping landscapes despite this "The arts have sometimes been perceived as having little practical application but, in fact, they can form valuable components of the wider study and comprehension of the complexities of landscapes if they are brought together rather than being considered as separate entities" (Koff, 1999). For example, in geography the visual arts can aid environmental problem solving because they integrate physical and human aspects of the discipline by offering interpretation of the human-landscape interaction. "Art can be used to reinvigorate interpretation of landscapes because art has generally been under-used by scientists compared with other art forms such as photography and cartography" (Koff, 1999).

Over the last fifteen years the Public Catalogues Foundation (PCF), a registered charity, in collaboration with public art galleries, museums and other owners of artworks arranged the photographing of all the nation's 212,000 oil paintings; these are now available for research and interrogation on the [ArtUK website](http://www.artuk.org) (www.artuk.org). In 2016 the founder of the PCF, Dr Fred Hohler, established a new charity, [Watercolour World](http://www.watercolourworld.org) (www.watercolourworld.org), which has created a visual online topographical record of the world through watercolours spanning the period from 1600-1900. Watercolour World displays watercolours recording, for example, topography, flora and fauna drawing on the estimated 6.5 million watercolours in public collections in the United Kingdom, as well as from some important private collections; these are being indexed geographically on its website. Watercolours represent a fragile art resource and their recording, preservation and dissemination in this way provides a new, unrivalled resource available for scientific purposes. In view of the fine detail of the watercolour painting technique this medium provides the opportunity to reappraise not just the physical changes that have affected the English coast but also changes to natural environments over the last two hundred and fifty years in particular.

Alongside other reference works such as illustrated topographical books, coastal change since the 1770s, (when coastal painting started to become more popular), can be observed in full colour commencing long before the introduction of both black and white and colour photography. Recognising that a thorough understanding of long-term coastal change is fundamental to sustainable coastal management, this study, using art imagery, has set out an approach for appraising changes that have affected coastal environments over the last 250 years. Alongside the wealth of publicly available artworks the study can take advantage of art images kindly loaned from private collections, art galleries, auction houses and local authority collections.

Certain key artistic tours of the English coast form a series of important benchmarks over time. These include coastal voyages and expeditions by some of our greatest topographical artists, as well as those who painted the developing coasts through Victorian and Edwardian times. Some of these artists returned to paint the same natural beauty spots many times, plotting changes as also the seaside watering places, towns and villages expanded rapidly.

The wealth of artworks produced in the nineteenth century, including particularly the often highly accurate 'en plein air' portrayals of coastal scenery by the Pre-Raphaelite Brotherhood and their many Followers means that, combined with their interest in the emerging science of geology, these artworks represented a particularly rich resource for this study. By comparing sequences of early views with present day photographs, it is possible to review changing coastal environments over this extended time period and to analyse and comment on the changes that have occurred. Such a review can support approaches to habitat conservation and management for the future.



Fig. 1: William L Wyllie RA 'Harvesting the Land and Sea. Gathering seaweed on a vegetated sandy coast at West Wittering, Sussex'. Watercolour 1873. Courtesy: Maas Gallery



Fig. 2: ‘St Catherine’s Point, Isle of Wight’ by Samuel McCloy painted in watercolour, c.1880. A follower of the Pre-Raphaelite Brotherhood, the artist has depicted the rocky coastline looking towards the lighthouse in photographic detail. Private Collection.

A key topic that has been explored through the past research and which has been continuously refined is the question of artistic accuracy. The author is satisfied that a robust methodology has been developed for artistic accuracy and this has been adapted as required to meet the requirements of coastal environments.

The aim of this new study is to improve our understanding of the impacts of long-term coastal change on habitats and species illustrated through a range of geomorphologically and environmentally interesting case studies. The results illustrate changes affecting the largely natural open coasts of the late eighteenth and early nineteenth centuries noting their impacts over time.

In some locations where removal of coastal defences may under consideration for environmental and sustainability reasons artworks can provide valuable records of how the coast may revert to over time. Through twelve case study sites the changes at these locations have been examined and illustrated through artworks and the findings analysed to help inform future management. Some of the very detailed artworks can allow both quantitative and qualitative assessments to be made of change, habitat gains and losses over such an extended time period.

Key study objective

The key study objective is to improve understanding, inform policy-making and site management by providing an additional, easily accessible tool for use by scientists and practitioners in the following ways:

- by providing a rich new source of data and evidence to help inform decisions made by Natural England and other nature conservation bodies and authorities at a range of spatial scales;
- by supporting nature-based solutions to coastal management problems drawing on artistic evidence of historical management practices;
- by providing new non-technical community engagement tools that easily illustrate processes of natural habitats over time.

Study Results

The results of this study are likely to be of value to a wide range of organisations and individuals with an interest in sustainable environmental management, planning and nature conservation and aim to:

- encourage an improved understanding of long-term climatic change impacts on vulnerable coastal habitats;
- support understanding of changing patterns of coastal land use and their effects over the last 200 years;
- Inform Landscape Character Assessments, Area of Outstanding Natural Beauty (AONB) Plans, Natural England's 'National Character Area profiles' and Biodiversity Action Planning.

In order to allow the most comprehensive use of the art resource the study has demonstrated how a wide range of topographical/geomorphological features have been illustrated over time and these will be compared with the present-day view. The selected case studies illustrate how such colour images can provide often the only record of coastal environments at that time. There are several reasons for the focus on art for this particular study. The medium of photography as a tool is far better recognised by the wide range of professionals involved with coastal management and because photographs largely represent a true record of past conditions, there are not generally issues relating to the accuracy of this medium.

However, partly because of lack of information on the breadth of the art resource and concerns about whether artworks represent true depictions of the coastal environment at the time they were painted, art has been much less used as a medium to explore the subject of changes affecting habitats and species over time within coastal environments. The issue of artistic accuracy is addressed through the art ranking methodology, which is set out on pages 36-51. Museums, art galleries, local authority collections, archives and

private collections throughout Great Britain contain a wealth of artistic images, whilst many others are contained in extensively illustrated topographical publications.



Fig. 3: ‘A Crab and Lobster Shore’ (Bonchurch, Isle of Wight). A highly detailed large oil painting of the cliffs and shoreline showing timber and stone coastal defences and a fishing boat by the Pre-Raphaelite artist John Brett ARA (1857), who was renowned for his ‘geological’ depictions of English coastal scenery. Image courtesy: Richard Green Gallery, London.

When this picture was exhibited at the Royal Academy in 1857 the Art Journal wrote “This picture has much of the appearance of having been painted from a photograph; but it surpasses photography because the detail of the shaded portions is as perfect as the light passages. The pitch of the picture lies in the wondrous painting of the shingle, every stone of which is represented”.

The wide range of art records can be interrogated alongside the ArtUK resource of oil paintings images (www.artuk.org) produced by some 40,000 painters held in over 3,000 collections, and now available for view online. Alongside ArtUK, Watercolour World (www.watercolourworld.org) currently holds approximately 150,000 images and is increasing its stock by 2,000 a month. This initiative is particularly important for those interested in all aspects of coastal management because, by their nature, watercolours tend to allow very detailed images to be produced.

The online art resources now available on these two websites have allowed access to thousands of oil paintings and watercolours, which were previously relatively unknown

except to specialists; they are now available for research by the full range of coastal professionals and the wider public who may have an interest in different aspects of coastal zones.

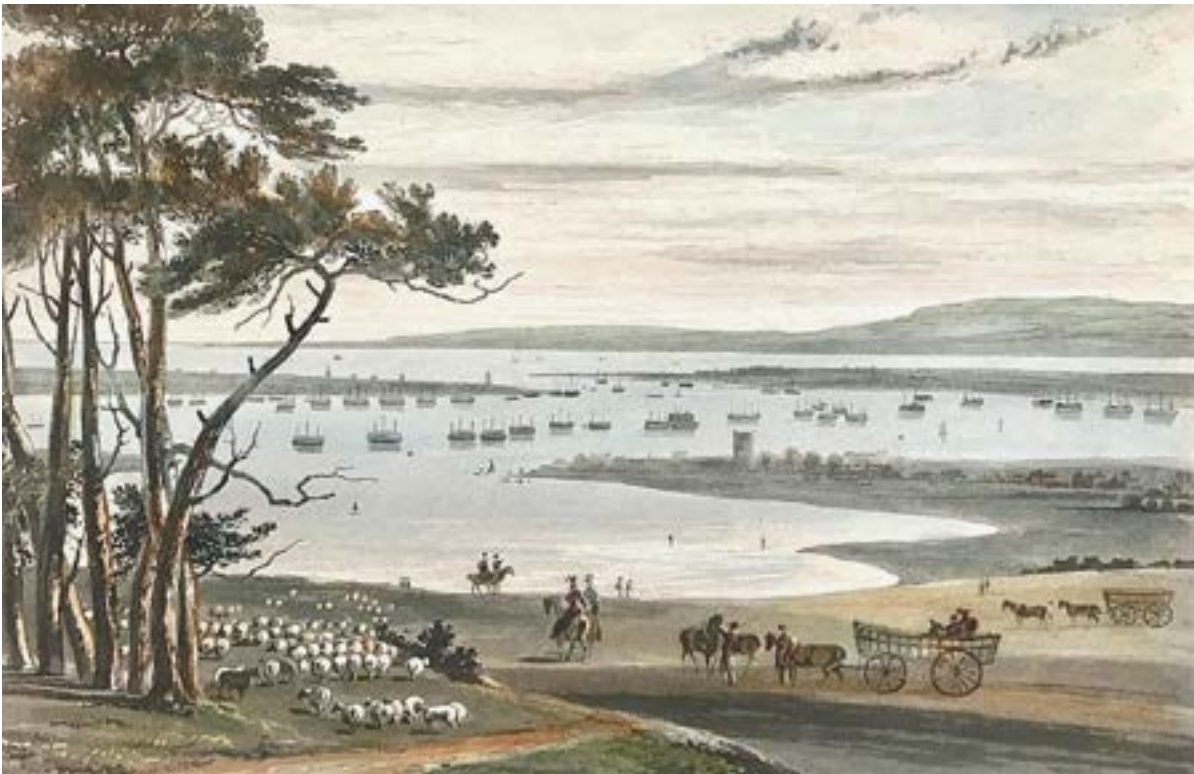


Fig. 4: Charles Robertson RWS 'On the Edge of the North Sea at Walberswick, Suffolk'. Watercolour. c.1885. Courtesy Christie's Images © 2022. This scene shows the grassy land of the edge of the River Blyth with Walberswick beyond.

Benchmarks

For the purposes of this study the English coastal environment has been explored and assessed highlighting changes affecting natural sites through study of the works of a number of key artists or artistic groups that form benchmarks spanning the study time period (1770-Present Day). These comprise:

- **William Daniell's 'Voyage Round Great Britain' (1814-1825)** comprised 308 colour aquatint engravings of British coastal scenery (Daniell & Ayton, 1814). William Daniell RA was a fine artist and many of his depictions, particularly of the coastal scenery, are accurate, showing the coastline before the Victorian development period and the construction of many of the coastal defences and esplanades. Prideaux (1909) said "such a succession of beautiful colour plates is scarcely to be found anywhere, and they are unsurpassed both in delicacy of drawing and tinting".



Figs. 5 and 6: Two of the 308 exceptionally fine aquatint engravings by William Daniell RA from his 'Voyage Round Great Britain' (1814-1825). His views illustrate many parts of the coast before the construction of defences and esplanades. They can help understand the undisturbed natural coast and can inform managed realignment proposals. 'View from Portsdown Hill, Portsmouth' (Above); 'Walmer Castle, Kent' (Below). Both views show the coastal geomorphology in great detail.



- **Works by Pre-Raphaelite artists and their Followers**, which were produced from the late 1840s through to the end of the nineteenth century. The Pre-Raphaelite Brotherhood (P.R.B.) was founded in 1848 by a group of young artists, poets and critics in London. The Pre-Raphaelites were greatly influenced by nature and these artists wished to depict the landscape in its truest form through laborious study of even the smallest detail. They were unrelenting in their quest for detailed realism and would spend the majority of their time working outside and not within the confines of the studio.

John Ruskin, a geologist and botanist by training, and one of the greatest art critics of the nineteenth century said in his Edinburgh lectures “Pre-Raphaelitism has but one principle, that of absolute, uncompromising truth in all that it does, obtained by working everything down to the most minute details, from nature and from nature alone” (Ruskin, 1853).

On account of their focus on truth of depiction and artistic accuracy, the short-lived Pre-Raphaelite Brotherhood but also particularly their Followers, who painted up until the last decade of the nineteenth century, provide a rich resource of detailed coastal views, painted in both oils and watercolours.



Fig. 7: Frederick Williamson RWS ‘On the Coastal Path, Luccombe, Isle of Wight’. 1877. A Pre-Raphaelite Follower, Williamson captures all aspect of the landscape in infinite detail. Extensive coastal landsliding and the reduction of grazing since the early 1900s has changed this view dramatically.

Many other nineteenth century artists specialised in painting coastal subjects and a full list of these artists is provided in Appendix 1 of this report.

- **Alfred Robert Quinton's Coastal Watercolours of England and Wales (c.1900-c.1934)** comprising over 3,500 watercolours, which were painted for reproduction as colour picture postcards by J. & F. Salmon Ltd of Sevenoaks, Kent. Quinton's watercolours are highly detailed and he re-visited many of the locations repeatedly as the coastal towns and villages expanded during the first three decades of the twentieth century. Images courtesy of Salmon's.



Figs. 8 and 9: Alfred Robert Quinton 'Cromer, Norfolk'. Watercolour. c.1910 (above). Alfred Robert Quinton 'Torcross, Devon'. Watercolour. c.1912 (below). Images courtesy: Salmon's. These watercolours of England's coast illustrate the value of Quinton's work in terms of the detail they provide on cliffs and shorelines.



- **David Addey's Watercolours - in the footsteps of William Daniell RA.** Between 1995 and 2002 the architect and distinguished watercolour painter, David Addey, retraced William Daniell's earlier tour and he painted the present-day view from the vantage points chosen by Daniell nearly two centuries before. Addey's tour provides a new dimension to Daniell's work with many interesting changes to be observed over the intervening time period (Addey, 1995; Addey, 1997; Addey, 2002).



Figs. 10 and 11: 'Lulworth Cove, Dorset' 1989 (above). 'Mullion Cove, Cornwall' 1990 (below).



Present Day Photographs bring the sequence of views up to date and allow comparisons to be readily made to inform the findings of this study.

Key project tasks

The five key project tasks were as follows:

Task 1. Confirm the choice of up to twelve case study sites. These were selected after a review of their interest from physical and environmental perspectives and taking account of the range of art images available.

The selected case study sites provide the opportunity to demonstrate the applications and value of art in support of our understanding of changes at these natural sites. Each case study follows a similar and concise approach in terms of layout with more detailed consideration of emerging key issues discussed in the 'Discussion' chapter. From this 'Conclusions' and 'Recommendations will be set out.

1.1. Northumberland Coast (Holy Island to Alnmouth)

1.2. North Norfolk (Cromer to Sea Palling)

1.3. Southwold to Orford Ness, Suffolk

1.4. East Kent Coast (Pegwell Bay to Sandwich)

1.5. Solent Shorelines - Hampshire Coast

1.6. Solent Coastlines - Isle of Wight Coast

1.7. Isle of Wight Undercliff Luccombe to Blackgang

1.8. Poole Harbour to Studland, Dorset

1.9. Lyme Regis to Axmouth, Devon

1.10. The Lizard, Cornwall

1.11. North Devon Coast Lynton to Porlock

1.12. Morecambe Bay, Cumbria

The case study locations listed include a wide range of designated sites displaying a rich variety of geological and geomorphological features including hard and soft cliffs, coastal landslides, saltmarshes, estuaries, shingle and dune coasts. The sites also benefit generally from a wide selection of art imagery, which illustrate the potential of the art resource to inform coastal environmental science. The main body of the report also includes images drawn from other English coastal locations of environmental significance.

Task 2. Image searches for oil paintings, watercolour drawings and prints depicting coastal environments.

This task involved searches at the websites of ArtUK (for oil paintings), *Watercolour World* (for watercolours), The Victoria & Albert Museum (for watercolours), The British Museum (for watercolours), the Courtauld Institute (for watercolours), the Witt Library, the auction catalogue archives of Sotheby's, Christie's, Bonham's, regional art galleries (for watercolours and drawings), local authority collections, picture libraries and personal collection(s).

Task 3. List and rank key artists in terms of the accuracy of their depictions of natural habitats subject to particular environmental change.

Task 4. Descriptions of the twelve case study sites where the potential of artworks to support the study objectives are clearly illustrated. The study sites were evaluated under the headings: Location; Why was this case study site selected? Summary of geology, geomorphology and processes; Biodiversity; How can the art imagery resources inform us of habitat change? What are the key issues that can be learnt from this study site?

Task 5. Preparation of a comprehensively illustrated technical report and poster display suitable for online and hard copy publication describing the results of the research and how art can be used in practice, and also how it fulfils the needs of a range of users.



Fig. 1: Sidney Percy 'Panoramic View at Grange-Over-Sands'. Oil Painting. 1874. Image courtesy: Willow Gallery, London



Fig. 2: 'Lynmouth, Devon'. A particularly fine and detailed lithograph by W Spreat published in c.1840 shows the nature of the environment surrounding the town including the cultivation of the steep hillsides and slopes.



Fig. 3: 'Slaughden Quay, Suffolk' by John Moore of Ipswich. Oil on canvas. 1883. Moore produced numerous detailed depictions in oils of the Suffolk coast illustrating the natural coastal environments in the late nineteenth century. Image courtesy: Colchester and Ipswich Museum Service.

Artistic depictions of the English coast

The origins of coastal landscape art

The word 'landscape' started to be used in the English language from the early seventeenth century and is derived from the Dutch word 'landschap', which means 'an area of cultivated land'. Those landscape paintings which depict specific subjects such as parts of the coastline, buildings and structures, are called 'topographical views' and are commonly seen in various types of prints (engravings, aquatints and lithographs) as well as in drawings, watercolour drawings and oil paintings.

Interest in art grew during the reign of King Charles I (1600-1649) when nobility across Europe started to become collectors of works of art. During the late seventeenth and eighteenth centuries wealthy gentlemen took the Grand Tour, gaining education and aesthetic inspiration from the classical remains and Renaissance art and architecture of Italy and Greece.

In the Netherlands Haarlem and Amsterdam were strong centres for painting at this time. The 'Golden Age' of paintings can be said to fall into the general period of European Baroque art, but with less emphasis on idealisation of love and more emphasis on detailed realism. This provided an excellent backdrop for the development of naturalistic landscape paintings.

Dutch art can be noted as being particularly influential on the Norwich Society of Artists (1803-33) or 'Norwich School', due to the history of strong trade links between Norwich and the Netherlands. The Medieval wool trade "resulted in large numbers of classic maritime and landscape paintings in merchants' manors" (Dudley Barrett, 2010) and it was not unusual for local gentry to have impressive collections of Old Masters by artists such as Jakob Van Ruisdael and Jan Van Goyen hanging on their walls. The Norwich School "carried on the landscape tradition, directly and indirectly, from the Flemish and Dutch Masters" (Dudley Barrett, 2010). In 1821, Joseph Stannard (1797-1830), of the Norwich School, visited Holland to study paintings and indeed, his "work tended to be highly finished like that of the Dutch masters" (Hemingway, 1979). The influential role of Dutch, Flemish and Belgian artists on the development of land and seascape paintings cannot be underestimated. In particular, the prosperity of the Dutch Republic created an opportunity for strong trade links with the rest of Europe and this in turn enabled works of art, and, therefore, artistic styles, to permeate into Great Britain.

In England, and indeed across north-western Europe, landscape painting was influenced, first, by collectors and artists returning from the Grand Tour, resulting in an Italianate style being regarded as the height of fashion, and second, by artists such as Thomas Gainsborough RA (1727-1788) who were starting, for the first time, to compose portraits of landowners, sometimes in the settings of their country estates. This approach was popularised by Van Dyck and other Flemish artists who were working in England, and in

this respect they influenced Gainsborough. In the nineteenth century travellers also perceived the wilder landscapes as sinister and dreadful. William Daniell and his colleague, Richard Ayton, toured the coast painting and describing its scenery. Ayton wrote "...here was the ocean in all its grandeur, ploughed up by a storm, and bursting with a continued and sullen roar against precipices of rock, awful for their vastness, black and dreadful, and exposing on their battered sides a combination of all rugged and horrid forms" (Daniell & Ayton, 1814).

Although English painting was influenced by collectors and artists returning from the Grand Tour, the notion of 'landscape' as a category with its own values had to root itself in English approval and understanding. The French Revolution and the Napoleonic Wars prevented travel across large parts of Europe from 1789 until after the Battle of Waterloo in 1815. This led to an increased interest in the exploration and discovery of the more remote landscapes of the British Isles. In fact, from the middle of the eighteenth century, a number of British writers and travellers such as William Gilpin (1724-1804), sought to define and categorise human responses to natural phenomena such as landscape scenery.

Gilpin was less concerned about the topographical accuracy of the scene than with capturing the atmosphere of a 'picturesque landscape' (Gilpin, 1786). An enlightened educationist, Gilpin defined picturesque as "that kind of beauty which is agreeable in a picture" and began to expand his principles of picturesque beauty through travels across the British Isles, to locations including the Scottish Highlands, the Lake District, South Wales and the Wye Valley and the New Forest in Hampshire and the Isle of Wight. Many other artists of that period including Thomas Rowlandson (1756-1827), Charles Tomkins and John Nixon produced watercolour drawings or publications richly illustrated with aquatinted plates (Christie's, 2002; Tomkins, 1796; Nixon, 1796). Such tours resulted in a new-found appreciation of the wild and open landscapes that existed outside the cities. In the eighteenth century watercolour drawing became a popular medium and something of a speciality of English artists. Artists including Paul Sandby RA (1725-1809), Francis Towne (1739-1816), Thomas Girtin (1775-1802) and Alexander Cozens (1717-1786) were leaders in the field of watercolour drawing, shortly to be joined by others including J. M. W. Turner RA (1775-1851), who continued the English tradition of taking tours around parts of the country, producing numerous drawings, some of which were subsequently worked up into major landscape paintings.

The desire for topographical subjects depicting the coastline had, therefore, arisen partly as a result of the growing appreciation of England's scenery by the aristocracy, and also through the publication of increasing numbers of books containing engravings, which brought the beauties of the coastline to the attention of a much wider audience. Artists such as Gainsborough, Cozens, Sandby and Farington, Girtin and Turner, were on close terms not only with friendly patrons of the middle classes but with many of the nobility. "It was an encouragement, too, for the artist that the Englishman, whether he travelled on the continent or in his own country, was taking a new interest in the prospect and meaning of natural scenery" (Hardie, 1966).

To bring their work to the attention of a wider public, artists such as Turner and Rowlandson travelled extensively, often in difficult conditions, whilst some of the more major publications took years to complete with views being published in parts, such as with William Daniell and Richard Ayton's 'Voyage Round Great Britain', which extended from 1814 until 1825 (Daniell & Ayton, 1814). These dedicated topographical artists and writers have left a remarkable legacy, which forms a comprehensive illustrated record of the state of the British coastline at the time they were published. Along the coastline artists who had been influenced by the work of marine painters such as Willem Van de Velde the Elder helped bridge the gap between marine paintings in their own right and coastal topographic views. Edward William Cooke RA (1811-1880) and George Chambers RWS (1803-1840) were two artists who followed the Dutch tradition of painting in an exceptionally accurate and meticulous form. Views by artists such as Chambers and also John Wilson Carmichael (1800-1868), which were often taken from the sea against a backdrop of the coastline, can be most informative when examining both physical changes over the centuries, and form a bridge linking with the more traditional coastal topographic artists based on land. The increasing interest in geology and, later, the work of the Pre-Raphaelite Brotherhood and the writings of John Ruskin encouraged a number of outstanding artists to capture the coastal geology and scenery in detail. Furthermore, naval officers were required to master the skill of drawing as part of their training and many ship logs and accounts of voyages form valuable records of the relatively undeveloped coastlines.



Fig. 1: A remarkably detailed depiction of 'The Fishing Cove at Beer, Devon', 1858, by E.W. Cooke RA. Paintings by Cooke are so precise they can allow both quantitative and qualitative assessments of change over time to be made. Courtesy: the late John Munday/Private Collection.

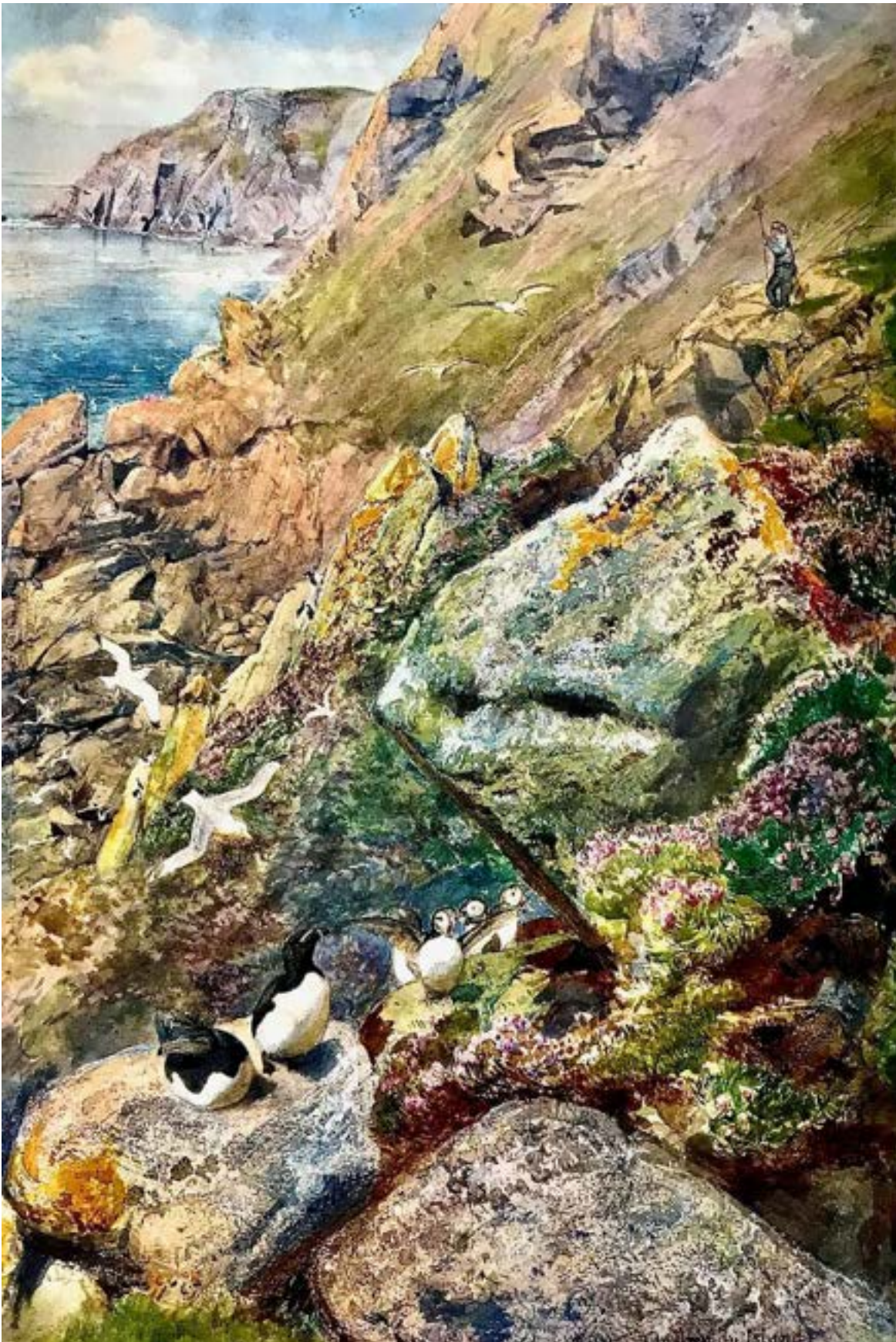


Fig. 2: 'On Lundy Island' by Henry Moore RA RWS. Watercolour. 1857. Courtesy: Christie's Images Limited 2022. Moore's detailed view shows razorbills, puffins and gulls on the steep, vegetated and rocky coast of Lundy.

All around the British coast fishing coves and hamlets were expanding into fashionable seaside resorts and spas. Artists were particularly drawn to certain locations, for example Hastings on the south coast, the Ventnor Undercliff of the Isle of Wight, and the dramatic coastal scenery of the West Country. Perhaps many of these artists had seen the earlier works of the great topographers such as Daniell, and his aquatints provided inspiration for artists to go to such locations and produce their own works.

Nearly all the famous landscape painters travelled to the coastline. Constable, Cotman, Cox, Turner, De Wint, Copley Fielding and many others painted the foreshore and the sea in their own distinctive styles. This era of coastal landscape painting relied not just on the skills of the original artists in the field, but also a number of remarkably fine craftsmen, engravers and colourists, who produced illustrations through a range of techniques such as aquatint and lithography.

John Ruskin (1819-1900), the celebrated English art critic, believed that landscape painting was the most important artistic creation of the nineteenth century, leading to an increased appreciation of the natural beauty of the countryside and coastline. In his book 'Modern Painters' (Ruskin, 1843) he argued that the principal role of an artist was to achieve "truth to nature" and to "observe the reality of nature and not to invent it in the studio". Ruskin also encouraged the development of a number of artists who became influential in the mid-nineteenth century and were known as the Pre-Raphaelite Brotherhood. These artists wished to capture nature in its precise detail and beauty, often through painting out-of-doors.

The works of the Pre-Raphaelites and their followers coincided with an increased interest and understanding of both the natural and earth sciences following the publication 'The Origin of Species' by Charles Darwin (Darwin, 1859¹) and the development of the science of geology. Many of the best geological exposures were to be found around the coastline, and this was one of a number of factors that started to attract important artists including Edward William Cooke RA (1811-1880), William Dyce RA HRSA (1806-1864) and John Brett ARA (1830-1902) to the shoreline to record the varied geology and topography.

The Pre-Raphaelite movement "fundamentally altered English approaches to landscape painting" (Tate Britain, 2004) in the mid-Victorian period through the introduction of uncompromising attention to detail. Up until the seemingly radical Pre-Raphaelite movement Victorian artists had opposed change and modernisation in the countryside and wished to make their pictures as "sentimental and pretty as possible" (Wood, 1997). The central pillar of Pre-Raphaelite landscape painting was, therefore, a new method of painting, "looking carefully at nature, without recourse to conventional modes of composition and expression" (Payne & Brett, 2010). John Ruskin played a prominent role in the development of Pre-Raphaelite landscape paintings, including coastal scenes, through his encouragement of the artists to "go to Nature in all singleness of heart...rejecting nothing, selecting nothing and scoring nothing" (Payne & Brett, 2010). John Everett Millais and William Holman Hunt were among the first of the Brotherhood to produce landscape paintings based on the influence of Ruskin's principles; they were striving for "total fidelity to nature" (Wood, 1997). It was within this canon that the

landscape paintings of John Brett ARA (1831-1902) developed, who soon became recognised as the “head of the Pre-Raphaelite school of landscape painting” (Payne & Brett, 2010).

From 1865 Brett spent a great deal of time painting coastal scenes particularly in England and Wales often showing beaches and cliffs in extraordinary detail. Brett and his large family spent many summers aboard their yacht and this enabled Brett to enjoy time sketching out of doors and devote the latter part of his career to painting seashores and the sea. Many of the wider circle of the Pre-Raphaelites also devoted their attention to “pure landscape” (Wood, 1997) or detailed realism, particularly William Dyce RA HRSA (1806-1864) and John William Inchbold (1830-1888).

Dyce only painted occasional landscapes throughout his career, but did so with such detail and precision that it was enough to class Dyce’s work “among the leading examples of Pre-Raphaelite detail and finish” (Staley, 2001). His detailed study of the geology, a developing science at that time, of the coastline in ‘Pegwell Bay, Kent – a recollection of October 5th 1858’ is a true example of meticulous realism in landscape painting.

Along with Dyce, John William Inchbold is also considered to be one of the most prominent Pre-Raphaelite painters of landscapes and was much praised by Ruskin for his detailed landscape paintings. Inchbold’s ‘Anstey Cove, Devon’ (1853-4) provides an example of Pre-Raphaelite detail of the coastline: “...the colours are bright throughout, and the foliage detail in the foreground is beautifully and delicately drawn” (Staley, 2001).

The ripples of the influence of the Pre-Raphaelites were felt throughout the art world, and many artists were inspired by their methodical approach to depicting the natural world. From Ruskin’s annual reviews of art, he declared that year on year more artists were beginning to emulate the detail used by the PRB. Ruskin and William Michael Rossetti (1829-1919), the longest surviving member of the PRB, even went on to claim, in 1862, that, “landscape came almost entirely into the domain of Pre-Raphaelitism” (Staley, 2001). Charles Napier Hemy RA RWS (1841-1917) was a follower of the PRB and his work ‘Among the Shingles at Clovelly’, dated 1864, clearly shows a very detailed study of the topography and geology of the coastline.



Fig. 3: 'The Lion, the Lizard and the Stag rocks' by John Brett ARA. c.1888. Brett, together with E.W. Cooke, was the ultimate practitioners of Pre-Raphaelite 'coastal and geological art'. Image courtesy: Bridgeman Images.

Edward William Cooke's paintings are now considered to be so accurate that in the twentieth century, his work took on an "archaeological (sic 'geological') importance". If Cooke painted or drew it, it is reliably correct" (Munday, 1996). Charles Robertson RWS (1844-91) is a further example of a Victorian landscape and genre artist influenced by the PRB who painted coastal views such as 'Lyme Regis', 'Clovelly' and 'Yarmouth, Isle of Wight' showing the estuary of the River Yar and the extent of the mudflats and reed beds in extraordinary detail.

The Pre-Raphaelite movement and its followers' deep fascination with the natural world and capturing every detail as precisely as possible were, arguably, as revolutionary in the art world as the achievements as the Impressionists in France (Tate Britain, 2004). Indeed, Staley (2001) argues that "Pre- Raphaelitism as a movement marked an almost complete break in the continuity of the English landscape tradition".

The artists were revolutionising the art world by taking their canvases out of doors and working directly from nature; the natural world was not being romanticised and the artists were unrelenting in their pursuit of detail. By looking carefully at nature and trying to portray it as truthfully as possible, the Pre-Raphaelite landscape movement provides an accurate representation of the natural world and the English coastline as it was seen at that time. It is for this reason that Pre-Raphaelite works can be of particular importance for those studying the chronology of physical and environmental change around the coast.



Fig. 4: 'Anstey's Cove, Devon' by John William Inchbold, 1854. His finely painted view of this picturesque cove is typical of the quality of his artworks. Image courtesy: Bridgeman Images/Fitzwilliam Museum, Cambridge.

Where the aristocracy explored the coastlines of the British Isles artists and engravers followed, recording images at the request of their masters, or producing their own publications, which were often lavishly illustrated. As early as the mid-eighteenth century visitors were being drawn to the seaside; these were principally those visitors in search of health, leisure and pleasure. The rapid expansion of the railway network and improved road communications linked industrial centres and cities to the coast. Main railway lines extended out towards the rapidly developing seaside towns, where fashionable seafront promenades, piers, hotels and marine villas were being built to cater for the increasing demand. The rapidly increasing popularity of both sea bathing and yacht racing, combined with better communications both on land and across the Channel were all important factors in the development of the Channel coastline.

By the early 1900s there were approximately 100 well-established seaside resorts around the English coast. Visitors, wished to have a record of the views of the coastline to take back with them to remind them of their vacation. Before the days of photography large numbers of artists painting in watercolour and oils captured the scenery of the coast and they found a ready market with these often relatively wealthy tourists. Purchasers were seeking images that provided an exact reproduction of the coastal views they had enjoyed so much. Even after the introduction of photography in the late 1850s works of art were

still required because it was to be many decades before the innovation of colour photography became widely used, and therefore, landscape paintings in full colour continued to fulfil an important role.

The relatively expensive guide books illustrated with steel engravings in the mid-nineteenth century could not be printed in sufficient numbers to meet the demands of increasing numbers of visitors. The invention of chromolithography in Germany and colour plate reproduction of paintings or watercolours to illustrate books allowed much larger print runs to be achieved. Publishers such as A. & C. Black in London commissioned authors and artists to write and illustrate books covering all parts of the European coast to meet the needs of the travelling public.

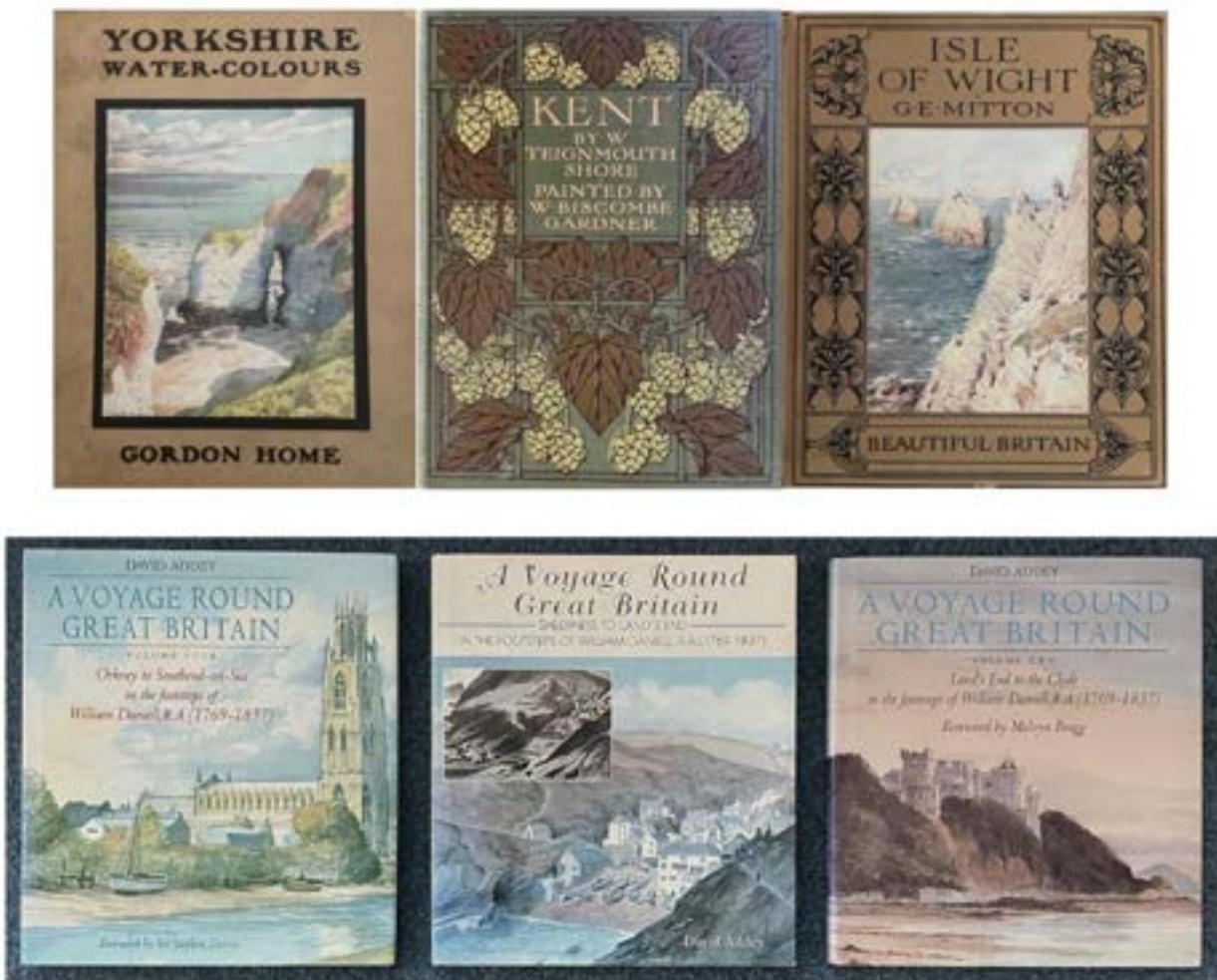


Fig. 5: Top: The publishers A. & C. Black produced numerous colour plate books in the early twentieth century that were illustrated by watercolour artists. These artworks form a rich source of imagery of coastal environments at that time. Bottom: In the late 1980s the distinguished architect and artist, David Addey, retraced the 'Voyage Round Great Britain' of William Daniell RA (1814-1825) painting the present-day views from Daniell's vantage points. These three volumes contain Addey's English coastal views.

In 1894, British publishers were granted permission by the Royal Mail to manufacture and distribute postcards, which could be sent through the post. Postcards produced between the 1890s and the 1930s often provided views of coastal scenery and the seaside resorts. Specially commissioned watercolour artists including William Wells Quatremain (fl.1890-1910), Henry Wimbush (fl.1888-1904) and the prolific Alfred Robert Quinton (1852-1934) fulfilled the demand for illustrations, some of which provide accurate portrayals of conditions on the coast at that time.

Further expansion of resorts and spas led to an ever-increasing demand for paintings of coastal scenery. Artistic 'Schools' developed, often centred on particularly attractive, aesthetic locations where artists enjoyed working together and collaborating and developing individual styles drawing on the beauties of the coastal scenery, as well as the impact of the meteorological conditions, such as the sunlight on the water.

The nineteenth century was, therefore, the great period of English coastal landscape painting with the cliffs, shores and dunes as well as the developing ports and seaside resorts being depicted. In addition to individual works of art numerous topographical books were written, often finely illustrated, with a range of art media including, first, copper and then, later, steel plate engravings, aquatints and lithographs. Alongside original works of art, these provide a rich source of information on changing and developing coastlines over a period of some 200 years.

Topographical books included William Daniell's 'Voyage Round Great Britain', Finden's 'Ports, Harbours and Watering Places of Great Britain' illustrated with steel engravings (Finden, 1838), and Clarkson Stanfield's 'Coastal Scenery' (Stanfield, 1847) provided comprehensive illustrated overviews of the coast.

Artists including John Wilson Carmichael (1800-1868), Alfred De Breanski (1852-1928), Edward William Cooke (1811-1880) and John Brett (1830-1902) produced accurate coastal paintings. Scenes along the shoreline were painted in watercolour by Thomas Miles Richardson Junior (1813-1890) and Edward Duncan (1803-1882), whilst Myles Birket Foster (1825-1899) and Charles Robertson (1844-1891) captured the same scenes in finely detailed watercolours.

Validating the accuracy of artworks

Introduction

The English coastline has been a significant source of inspiration for artists since the late eighteenth century, providing a wealth of artworks that can be examined and appraised in terms of improving our understanding of how they have been altered by natural physical processes and human intervention. Such works of art are of immediate interest to both those living adjacent to the coast and to visitors because they allow an immediate visual comparison to be made with the present-day situation. Artworks do not just describe physical impacts of change or lack of it but they also illustrate both the nature of the coastal environment and the progression of development particularly through the Victorian and Edwardian periods. In fact, works of art extending back to the late eighteenth century, may provide the only record of changes over time, depending on the accuracy of the work concerned. Art can, therefore, form a particularly valuable tool when assessing the nature, scale and rate of landscape evolution.

In order to test the validity of the concept of using art to inform us about landscape change the authors have developed a ranking system for the various types of artworks, which has allowed the creation of a list of those artists whose works prove to be consistently accurate in terms of their depictions. The objective of this was to develop a readily available tool for use by those professionals interested in both increasing their knowledge of coastal change and also supporting existing scientific approaches available for measuring environmental change. In order to achieve this, landscape art was considered against three criteria.

- **First, the accuracy and usefulness of the ‘artistic style’ of painting;** for example, caricaturist or genre works, picturesque Grand Tour style views or topographical paintings, drawings and prints.
- **The second category considered the ‘most advantageous medium’** in terms of achieving detailed depictions of the landscape. Categories appraised included copper plate engravings, oil paintings, steel engravings and aquatints, lithographs, and watercolour drawings.
- **The third category considered the ‘value of the subject matter’ depicted** by the artists, and included, first, general countryside or coastal views, second, more detailed views of coasts, cliffs and the hinterland, and, third, a very detailed appreciation of the landscape aiding understanding of physical processes and the resulting features, vegetation and development patterns.



Fig. 1: 'Rye from the River' by Myles Birket Foster RWS painted in watercolour, c.1885. Foster produced numerous accurate views of the English coast such as this during the second half of the nineteenth century. Image courtesy: Fine Art Photographic Library.



Fig. 2: 'Bawdsey Ferry, Suffolk' showing a hay field and marshland extending down to the coast by John Moore of Ipswich. C.1870s. Image courtesy: Colchester & Ipswich Museum Service.

Art Ranking Criteria

Accuracy of Artistic Style

Varying artistic styles contribute to the level of detail that paintings can provide in terms of their portrayal of the coast. Five ranking style sub-categories were considered; namely, Caricaturist and Genre works, Picturesque Scenery, Maritime and Yachting Subjects, Topographical Paintings, and, finally, Topographical Works with a Pre-Raphaelite influence.

1. For the Caricaturist/Genre category, including works by artists such as James Gillray (1757-1815), George Cruickshank (1797-1878), John Nixon (c.1750-1818) and Thomas Rowlandson (1756-1827) and for the Genre artists, for example some of the works of the Newlyn School artists, their interest often focused more on human and social subjects rather than views of coastal scenery. Informative as they are as social records, often these works do not contain enough detail to make a significant contribution to our understanding of the coastal conditions at that time; in view of this, such works scored one point out of a total of five in this category.



Fig. 3: 'Lyminster River' by Thomas Rowlandson RA. Watercolour. c.1795. Courtesy: Isle of Wight Heritage Service.

2. The second category relates to views of 'Picturesque Scenery' often depicting our coastlines in the manner of the Italian landscape that artists had observed on the Grand Tour. The picturesque views, such as those promoted by William Gilpin and produced by Thomas Walmesley, Francis Jukes, John Dennis and others, were aesthetically pleasing, but the artists exaggerated or otherwise adjusted the landscapes, with hillsides and cliffs

appearing more 'Alpine' and precipitous; the desire of the artist was to depict the local scenery in the manner of a classical landscape often to satisfy the tastes of their patrons. Whilst the Picturesque style is less concerned with topographical accuracy, it can provide at least some indicators of the general nature of the landscape at the time. For example, the proximity of development to the coast, the nature of the coastal topography, and the presence of features such as watercourses. These artworks can, therefore, inform coastal study in a broad sense. For this reason, the Picturesque works scored two out of the maximum of five points.



Fig. 4: 'Shanklin Chine', by Richard Bankes Harraden. Aquatint. 1814.

This work by Harraden depicts the landscape in the 'Picturesque' style that was fashionable at the time. The height of the cliffs and the romantic appearance of the image reflect the appearance of a continental landscape. These kinds of images score two points in the art ranking system.

3. Maritime and Yachting subjects depicting coastal shipping and craft form a significant component of coastal art. Many yachting, fishing and other shipping scenes include the coastal scenery as a backdrop. Whilst those paintings that are set further away from the coast are less interesting in this context, some works do actually contain a detailed topographical background. Often works produced by naval officers or others who had served on board ship prove to be particularly accurate as draughtsmanship formed part of their Naval training. Taking account of the contribution of these paintings a ranking of three points is allocated for this category.



Fig. 5: 'Shipping off Osborne, IW' by John Wilson Carmichael. Oil. 1857. Private Collection. Image courtesy: Richard Green Gallery, London.

4. The fourth and by far the largest category, Topographical Art, comprises coastal landscape paintings, watercolour drawings and prints. This is a rich resource and most of the English coast is very well illustrated in this respect. In fact, there was a great interest in the developing coastal towns and fishing villages located both on the open coast as well as on the tidal creeks, estuaries and harbours because artists could find a ready market for the sale of such subjects. There are, therefore, many works in this category that can inform us of what the coastal landscapes and environments were like at the time they were painted. So, such works were awarded four points out of a maximum score of five points.



Fig. 6: 'Harvesting at Shanklin' by Richard Burchett. Oil. 1855. Courtesy: V. & A. Images.

Topographical subjects such as these merit four points in the art ranking system on account of the detailed coastal information they provide.

5. The final 'Style Accuracy' category comprises Topographical Paintings, Drawings and Prints, which exhibit Pre-Raphaelite detail. Artists such as William Dyce RA HRSA (1806-1864), John Brett ARA (1830-1902), and Edward William Cooke RA (1811-1880), and Followers such as Charles Robertson RWS (1844-1891), Henry Moore RA RWS (1831-1895) and Frederick Williamson RWS (fl.1856-1900) have provided us with precise images of coastal scenery in the mid-to-late nineteenth century. On account of the detail and accuracy of the subjects, with artists seeking to depict nature in a very exact manner, these works form a particularly valuable resource, and are, therefore, awarded the maximum score of five points.



Fig. 7: 'The Lizard, Cornwall' by John Brett ARA. Oil on canvas. 1876. Courtesy: Bridgeman Images/Private Collection.

Most Advantageous Medium

The second ranking category considers the most advantageous medium used for illustrating coastal zones. Six categories were identified – first, 'Copper Plate Engravings'; second, 'Oil Paintings'; third, 'Aquatints and Steel Engravings'; fourth, 'Oil Paintings exhibiting a Pre-Raphaelite Influence'; fifth, 'Lithographs, fine Pencil and Watercolour Drawings', and, finally, sixth, 'Watercolours by Pre-Raphaelites and their Followers. By their nature each of these artistic techniques allow differing levels of detail to be achieved in the completed artwork.

1. Although some publishers and artists achieved remarkable success with copper plate engravings; for example, John Boydell (1719-1804), generally the softness of the copper plates meant that this technique was less suitable for recording fine detail. As a result, copper plate engravings are awarded a ranking score of one point. Some early engravers with an architectural training were able to successfully produce more detailed views of buildings and street scenes within the limitations of the copper plate medium – these examples are awarded two points.

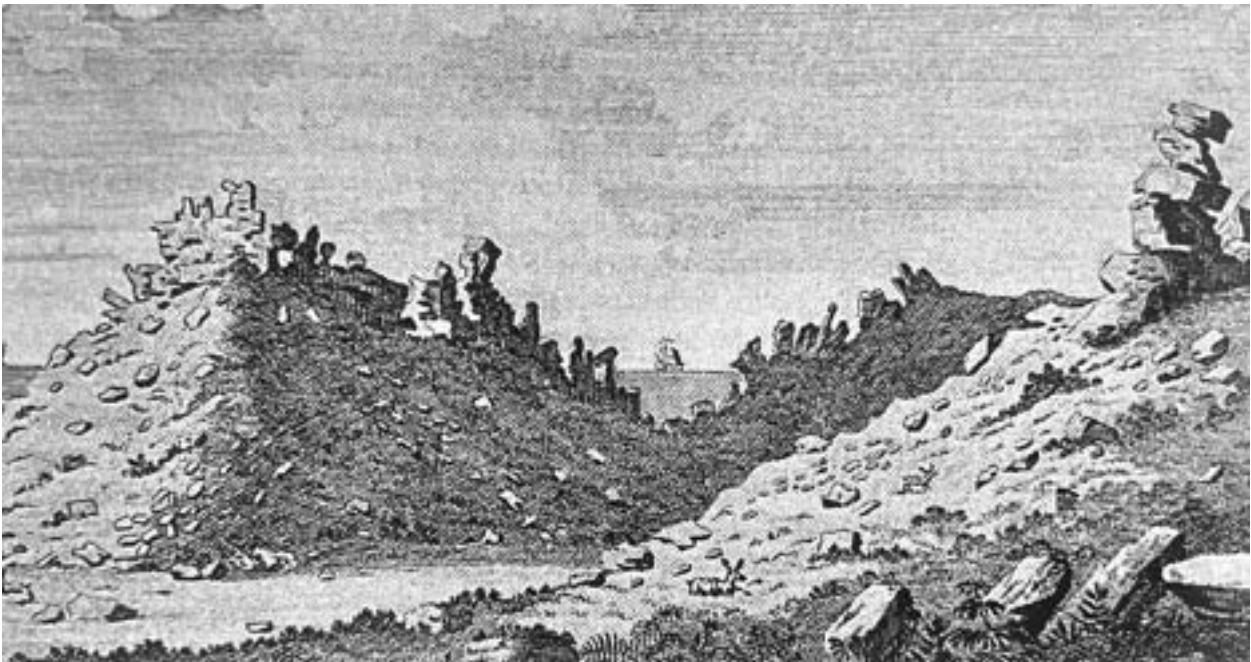


Fig. 8: 'Valley of the Rocks, Lynton, Devon'. Copper Plate Engraving. c.1810. Private Collection.

It is less easy to obtain fine detail when engraving on relatively soft copper plates. As a result, these engravings score one point in the 'Artistic Medium' category of the art ranking system.

2. Oil paintings are considered to be rather more helpful as they can provide a greater level of detail and are ranked with a score of two points.

3. Steel engravings and aquatint engravings were often published individually or as sets; others were contained in topographical books in the pre-Victorian period in particular. The British coast benefits from a wealth of such works, for example the views by Daniell (Daniell & Ayton, 1814), the Finden Brothers (Finden, 1838) and William Westall (c.1828). In view of the richness of this resource and the fine detail that could be achieved, combined with the benefits of colouring of some of the views, three points were awarded for this category.



Fig. 9: 'Reculver Church, Kent' by William Daniell RA. Aquatint. 1823. Private Collection.

Oil paintings by the Pre-Raphaelites and their followers, steel plate engravings and aquatints such as the views by Daniell are awarded a score of three points in this category as these media allow a greater level of detail to be achieved.

4. Oil paintings by Pre-Raphaelite artists and their Followers are ranked more highly on account of their precision and the level of detail captured, and, therefore, such works achieve a score of four points (e.g., 'The Lizard, Cornwall' by John Brett).



Fig. 10: 'Cromer, Norfolk' by John Moore of Ipswich. Oil on canvas. 1879. Courtesy: Mandell's Gallery, Norwich.

Topographical oil paintings such as this achieve a score of two points as they provide generally more detail than the copper plate engravings.

5. Lithography was a technique capable of achieving extremely fine detail. There are excellent examples produced by artists including George Rowe, Robert Carrick RI (fl.1829-1904), George Elgar Hicks RBA (1824-1914) and Michael Bouquet (fl.1840s-1850s). The quality of some of the hand-coloured lithographs equates almost to that of watercolour drawings; as a result, lithographs achieve a ranking score of five points, the same score as for watercolour drawings.



Fig. 11: 'Lynmouth, Devon' by George Rowe. Lithograph. c.1840. Private Collection.

Lithographs such as this view often provide very fine detail and are, therefore, awarded a score of five points (as are watercolour drawings – see overleaf).

There is an extensive resource of fine watercolour drawings covering most parts of the English coast. The detail that may be achieved using this technique can provide a wealth of information on cliff and slope geology, the nature of beach conditions, coastal vegetation patterns and the extent of coastal development more widely at the time the artworks were painted.

6. Those watercolours by Pre-Raphaelite artists and their Followers score a maximum ranking of six points on account of their often even more detailed contents.



Fig. 12: 'Brixham, Devon, looking towards Bury Head' by Charles Robertson. Watercolour. c.1890. Courtesy: Christie's Images Limited © 2022.

This is a detailed work and merits a score of six points.



Fig. 13: 'The Shoreline at Rye' by Herbert M. Marshall. 1860. Courtesy: Chris Beetles Gallery, London.

The watercolour by Marshall demonstrates the exceptional detail that can be achieved in watercolour drawings by the Pre-Raphaelite Followers and scores a maximum of six points.

The Value of the Subject Matter

This third art ranking category is obviously of prime importance to those interested in studying all aspects of the coastline. As a result, a Weighting Factor of x2 was applied over three categories.

1. First, 'General Coastal Views', which contribute to an overall appreciation of the coastal geomorphology and character of the landscape scored one point.
2. Second, 'More detailed works' providing information on the nature of the beach, the cliffline and hinterland, as well as information on land usage, heritage and environmental conditions, score two points.
3. Finally, the highest scoring category was for those 'Works Providing a Detailed Appreciation' of many aspects of the coastal zone, including the geology, geomorphology, environment and coastal development, which scored three points. As a result of the weighting in this category, a maximum of six points could be achieved.



Fig. 14: 'Tynemouth from the South' showing the beach, castle and lighthouse on the headland beyond by John Wilson Carmichael. Oil. 1840. Courtesy: Richard Joslin Fine Art.

This category of the art ranking system assesses the level of detail provided by coastal artworks. As this is such a significant aspect the scores in this category are weighted and are multiplied by two. Views such as this by Bouquet provide a general appreciation of the physical coastline and its environment and are awarded a score of one point (x2) = two points.



Fig. 15: 'St Michael's Mount, Cornwall' by William Daniell RA. Aquatint. 1824. Private Collection.

This view by Daniell provides a lot of information on the nature of the beach and the coastal defences and is, therefore, given a score of two points (x2) = four points.



Fig. 16: 'Dover from the East Cliff' by Thomas Charles Leeson Rowbotham. Watercolour and pencil, heightened with bodycolour. 1854. Photograph courtesy of Guy Peppiatt Fine Art, London.

This is a very detailed watercolour by Rowbotham. The artist provides a precise record of the cliffline and shore conditions at that time. Such works merit a total score of three points (x2) = six points.

1. Accuracy of Artistic Style (Max. 5 Points)	
1.1. Caricaturist/Genre subjects	1 point
1.2. Picturesque landscapes	2 points
1.3. Maritime subjects	3 points
1.4. Topographical/beach and coastal scenery	4 points
1.5. Topographical/beach and coastal scenery with Pre-Raphaelite influence	5 points
2. Most advantageous medium for illustrating coastal change (Max. 6 points)	
2.1. Copper plate engravings	1 point
2.2. Oil paintings; architectural copper plate engravings	2 points
2.3. Steel plate engravings/Aquatints	3 points
2.4. Oil paintings by Pre-Raphaelites and Followers	4 points
2.5. Lithographs, Fine pencil and watercolour drawings	5 points
2.6. Watercolours by Pre-Raphaelites and their Followers	6 points
3. Value of the subject matter in supporting understanding of long-term coastal change. (weighting x2 and Maximum score of 6 points)	
3.1. General coastal views which assist overall appreciation of the coastal geomorphology and landscape character of the coastal zone	1 point
3.2. More detailed views of the beach, backshore, cliff and hinterland including some appreciation of the natural environment and heritage	2 points
3.3. Detailed appreciation of shoreline position, beach profile, geology, geomorphology, coastal environment, coastal defences and heritage	3 points
Compiling the scores for ranking artists and their works	
1. Accuracy of artistic style	Max. 5 points
2. Most advantageous medium	Max. 6 points
3. Value of subject matter	Max. 6 points
Total maximum score	17 points

Table: Artists ranked by topographical accuracy.

Artist	Accuracy of Style	Most Advantageous Medium	Value of Subject Matter	Total Score
Myles Birket Foster	5	6	6	17
Charles Robertson	5	6	6	17
Frederick Williamson	5	6	6	17
John Brett	5	4	6	15
Robert Carrick	4	5	6	15
Edward William Cooke	5	4	6	15
William Daniell	4	5	6	15
Peter De Wint	4	5	6	15
Edward Duncan	4	5	6	15
William Dyce	5	4	6	15
George A. Fripp	4	5	6	15
William Gray	4	5	6	15
Charles Gregory	4	5	6	15
Charles N. Hemy	5	4	6	15
Alfred William Hunt	4	5	6	15
William Holman Hunt	5	4	6	15
Peter O. Hutchinson	4	5	6	15
John W. Inchbold	5	4	6	15

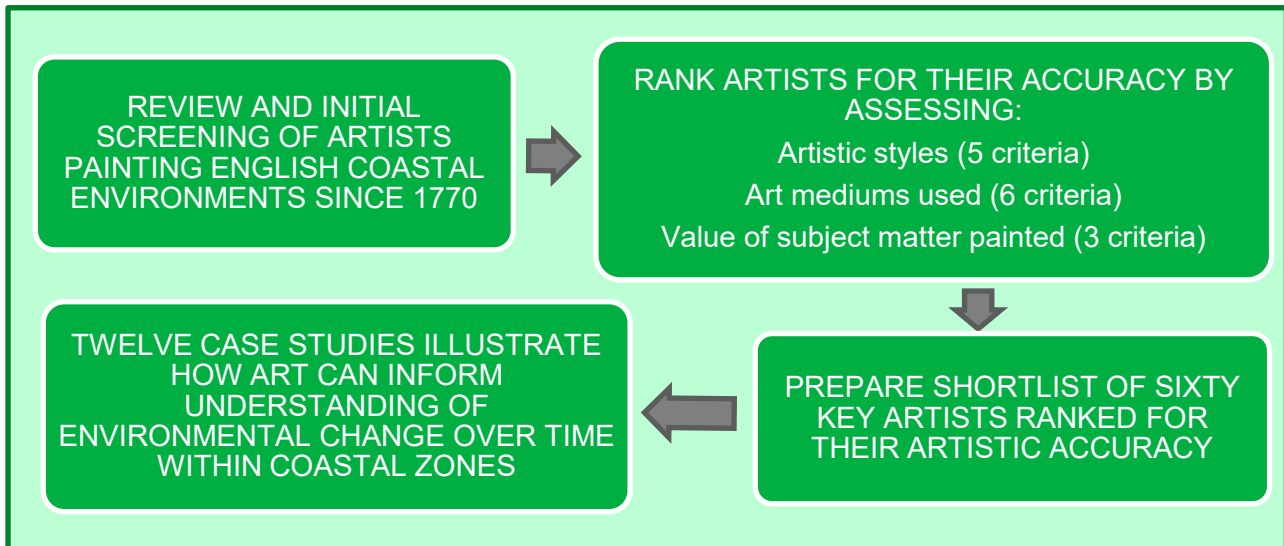
Artist	Accuracy of Style	Most Advantageous Medium	Value of Subject Matter	Total Score
G. J. Knox	4	5	6	15
Benjamin Leader	5	4	6	15
William L. Leitch	4	5	6	15
John Mogford	4	5	6	15
Henry Moore	5	4	6	15
Alfred R. Quinton	4	5	6	15
T. M. Richardson Jnr.	4	5	6	15
Thomas C. L. Rowbotham	4	5	6	15
W. Turner of Oxford	4	5	6	15
George Wolfe	4	6	6	15
Alfred W. Hunt	5	5	4	14
William H. Bartlett	4	5	4	13
Charles Bentley	4	5	4	13
Robert Brandard	4	5	4	13
William Carpenter	4	5	4	13
James F. Danby	4	5	4	13
A. V. C. Fielding	4	5	4	13
George Gregory	4	5	4	13

Artist	Accuracy of Style	Most Advantageous Medium	Value of Subject Matter	Total Score
William W. Quatremain	4	5	4	13
Paul Sandby	4	5	4	13
John 'Warwick' Smith	4	5	4	13
Clarkson Stanfield	4	5	4	13
Charles Tomkins	4	5	4	13
J. M. W. Turner	4	5	4	13
John Varley	4	5	4	13
William Westall	4	3	6	13
William H. Borrow	4	2	6	12
Alfred De Breanski	4	2	6	12
J. W. Carmichael	4	2	6	12
Alfred Clint	4	2	6	12
Alfred A. Glendening	4	2	6	12
J. Moore of Ipswich	4	2	6	12
Sebastian Pether	4	2	6	12
George Cooke	4	1	6	11
William B. Cooke	4	1	6	11
David Cox	4	5	2	11

Artist	Accuracy of Style	Most Advantageous Medium	Value of Subject Matter	Total Score
William A. Knell	3	2	6	11
John Nixon	2	5	4	11
William Payne	4	5	2	11
Henry Wimbush	4	5	2	11
Henry Bright	4	2	4	10
George Callow	4	2	4	10
John Callow	4	2	4	10
William Callow	4	2	4	10
William Collins	4	2	4	10
Frederick G. Cotman	4	2	4	10
John Sell Cotman	4	2	4	10
John Crome	4	2	4	10
Stanhope G. Forbes	4	2	4	10
Alfred Vickers	4	2	4	10
Sir Ernest Waterlow	4	2	4	10
Francis Nicholson	2	5	2	9
Henry Redmore	3	2	4	9
Thomas Rowlandson	1	5	2	8

Note 1: Where an artist paints in more than one medium the score is based on the most commonly used medium for coastal art.

Table 1: Summary flow chart of methodology for ranking and utilising artworks to inform study of environmental change within England's coastal zones.



Case studies



Case study sites:

1. Northumberland Coast (Holy Island to Alnmouth). 2. North Norfolk (Cromer to Sea Palling). 3. Suffolk Coast (Southwold to Orford Ness). 4. Kent Coast (Ramsgate to Dover). 5. Solent Shorelines (Hampshire Coast). 6. Solent Shoreline (Isle of Wight Coast). 7. Isle of Wight Undercliff. 8. Poole Harbour to Studland (Dorset). 9. Lyme Regis to Axmouth (Devon). 10. The Lizard, Cornwall. 11. North Devon Coast (Lynton to Porlock). 12. Morecambe Bay, Cumbria.

Case study 1 – Holy Island to Alnmouth, Northumberland

Location

This case study comprises a 15 km length of the Northumberland coast, extending from Holy Island south-eastwards to the port of Alnmouth, near Alnwick.



Why was this case study selected?

Lying within the North Northumberland Coastal Plain, the case study site is remarkable for its dramatic rocky coastal scenery, together with extensive sandy beaches, dune systems, mudflats and saltmarshes. This coastline includes some of the most complete sections of the Lower Carboniferous rocks in northern England, whilst the Whin Sill forms a nationally important and striking geological feature along this frontage (British Geological Survey/NERC, 2017). As a result of its diverse geology and geomorphology, this part of the Northumberland coast is of particular environmental importance also lying within the North Northumberland Heritage Coast. The natural beauty, together with its rich cultural heritage in the form of important castles and ruins, ensured that leading landscape painters of the eighteenth and nineteenth centuries were attracted to this coastal frontage. As a result, there is a rich resource of imagery allowing comparison of coastal change (McInnes & Stanford-Clark, 2018).

Summary of geology, geomorphology and coastal processes

Limestones, sandstones and mudstones of the Carboniferous Period, together with intrusive igneous rocks such as Dolerite, have led to the formation of dramatic headlands at Holy Island and the Farne Islands off Bamburgh. The rocky headlands separate sandy bays, which are often backed by dunes or slowly eroding glacial deposits that are trapped between the headlands of the more resistant rocks. The dominant wave climate from north to north-easterly directions transport sediment from north to south along the coast. The rate of coastal change is relatively slow with a relative rate often less than 0.1 m per year. Over the next century, therefore, coastal retreat is unlikely to exceed 20-40 m, even in the most vulnerable locations, whilst much of the coastline will see much slower rates of erosion (McInnes & Stanford-Clark, 2018).

Biodiversity

This coastal zone is of both national and international importance for its geology, coastal cliff and dune habitats, offshore islands and intertidal habitats, which support significant populations of birds, grey seals and scarce plants (Natural England, 2015).

Much of the coast is heavily designated, with Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites. The Farne Islands and Lindisfarne are designated as National Nature Reserves and the coastline is also designated as both Heritage Coast and an Area of Outstanding Natural Beauty.

Some of the intertidal mudflats, coastal saltmarshes and rocky foreshore habitats may be affected by coastal squeeze as a result of changing weather patterns and sea level rise; this could pose future risks to species that are depending on these. Elsewhere, accelerated erosion of the cliffs and slopes could lead to habitat loss, as well as man-made defences and other structures contributing to a loss of sand dunes where natural

rollback of the coast is prevented. For more information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

The combination of dramatic coastal scenery, together with major heritage features, including Bamburgh, Lindisfarne and Dunstanburgh Castles, proved a major attraction for artists painting in both watercolours and oils since the last decade of the eighteenth century. As a result, at some of these locations the nature of the coastal environment, including the rocky islands of Farne and Lindisfarne, as well as shorelines and hinterland adjacent to the castles, have been illustrated in sequences of views spanning the time period particularly from 1800 to the present day. Comparison of these images over this extended time period allow us to make assessments of the rate and scale of coastal change and any impacts, or otherwise, on the natural environment.

Key issues that can be learnt from this site

By utilising the artist ranking system it has been possible to observe change through the eyes of watercolourists who painted the vicinity of the Farne Islands, Lindisfarne, Bamburgh and Dunstanburgh Castles, in particular. The views provided form benchmarks from circa 1818, the 1850s, 2002, and today utilising present day photographs. Taking account of the undeveloped nature of this coastal frontage, and the many designations that afford it protection, together with effective countryside management arrangements, there does not appear to be significant observable change to the coastline and its natural environments over this time period.

Development has been largely confined to within existing town and village boundaries and there has been very little evidence of spread along the coast, compared with some other touristic locations.

The potential impacts of climate change and sea level rise may speed up processes and these are being observed, taking advantage of increasingly sophisticated monitoring programmes for both the rate of coastal change and its impacts on natural environments. This will provide the evidence to allow appropriate management measures in the future to be implemented and to accommodate coastal change.



Fig. 1.1: 'Distant view towards Bamburgh Castle' by Henry H. Emerson. C.1880. This view shows the general character of this part of the Northumberland coast over 140 years ago. The castle stands on an outcrop of the Igneous Whin Sill, which forms the majestic headlands and offshore islands along this coast. Courtesy: National Trust Photographic Library/Bridgeman Images.



Fig. 1.2: 'Bamburgh Castle with Holy Island in the distance' by John Varley. Watercolour. 1827. Varley's view shows the potential of watercolours to provide detailed information on the nature of beach and cliff conditions in full colour half a century before the introduction of even black and white coastal photography. Courtesy: Metropolitan Museum of Art/Public Domain.



Fig. 1.3: 'Bamburgh Castle from the north-west' by John Varley painted in 1812 shows the view of the shore and the castle headland from the opposite direction to the preceding view. Courtesy: John Spink.

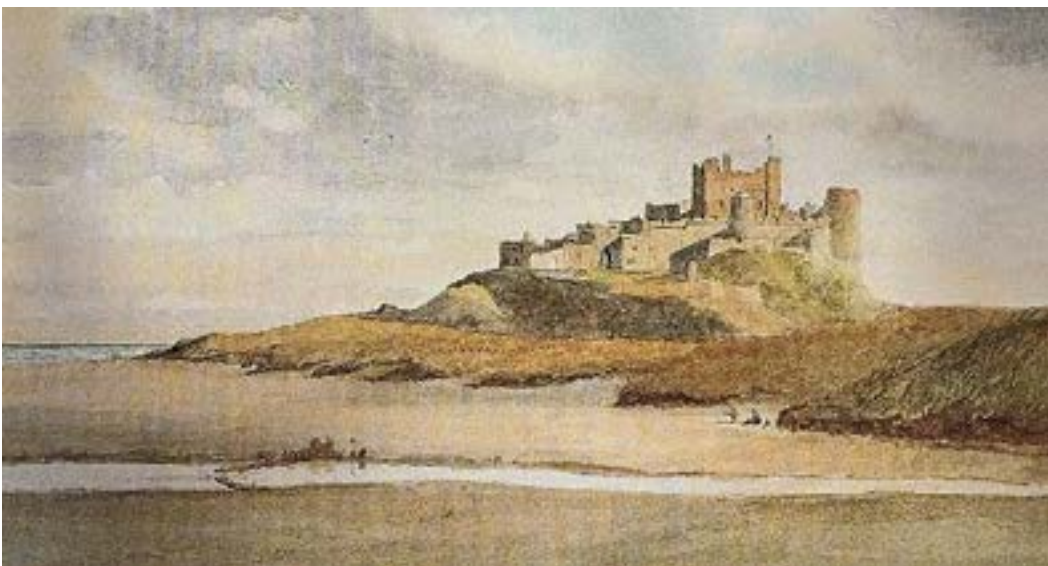


Fig. 1.4: The distinguished architect and watercolour artist, David Addey, revisited all the locations painted by William Daniell on his great 'Voyage Round Great Britain' (1814-1825). Here is his view of Bamburgh Castle painted in 2002. Private Collection.



Fig. 1.5 shows the present-day view which appears to have changed little since the 1820s. Courtesy: Shutterstock Images/Paul Broadbent, 2018.



Fig. 1.6: 'Bamburgh Castle' by Alfred William Hunt. Watercolour. c.1870s. Courtesy: The Moser Gallery at Shrewsbury School.



Fig. 1.7: The coastal sand dune systems and grasslands in the vicinity of the castle appear to have survived relatively unaffected over time when compared with this present-day view. Courtesy: Shutterstock Images/Dave Head.



Fig. 1.8: 'Castle on Holy Island' by William Daniell RA. Aquatint engraving. 1822. Private Collection. Taken at High Water, the view shows the grassy slopes below the castle.



Fig. 1.9 shows the scene at Low Water with more detail of the shore and ruins beyond. Painted in 1855 in watercolour by John Wykeham Archer, the artwork again shows the fine detail that can be achieved through the medium of watercolour. Courtesy: Duke of Northumberland/WatercolourWorld.



Fig. 1.10: David Addey painted the Castle in 2002 and his view shows evidence of erosion of the lower grassy slopes. The Castle itself was substantially remodelled by Sir Edwin Lutyens in 1903/4. Private Collection.



Fig. 1.11 shows a detailed view of Holy Island painted in oils by John Moore of Ipswich in 1877. The rocky Whin Sill outcrop provides the foundation for the Castle and the island itself. Courtesy: Colchester and Ipswich Museums.



Fig. 1.12 depicts the view today showing the nature of the shoreline and, again, the castle but reduced in height. Courtesy: Shutterstock Images/Michael Conrad.



Fig. 1.13: 'Castle on Holy Island' by John Varley (1809) shows a general view of the rugged landscape of Holy Island taken from the shore. Courtesy: Yale Center for British Art/Public Domain.



Fig. 1.14 was also painted by Varley in 1808 and shows the former Priory and other buildings on Holy Island, together with the remarkable geology exposed in the sea cliffs. Courtesy: Tyne and Wear Museums/Bridgeman Images.



Fig. 1.15: The remains of Lindisfarne Priory are extensive and are surrounded by a range of internationally important designated habitats, including sand and mud flats, and saltmarshes, which are extensively colonised by sea birds and grey seals. Courtesy: Shutterstock Images/Paul Thomas Curry.



Fig. 1.16: This highly detailed view of the Farne Islands painted by John Wykeham Archer in c.1850s shows extensive colonies of gulls, terns and guillemots occupying the rocky coast. Courtesy: Duke of Northumberland/WatercolourWorld.



Fig. 1.17 shows the present-day view and part of the puffin colony. Courtesy: Shutterstock Images/Francesco de Marco.



Fig. 1.18: Dunstanburgh Castle by Maria Grey, 3rd Countess Grey. Watercolour. 1858. This shows the much-painted ruins of the Castle and the grassy coastal slopes adjacent to the dramatic rocky cliffline. The castle is located towards the southern end of this case study frontage. Courtesy: WatercolourWorld.



Fig. 1.19: 'Howick Haven' by Maria Gray. Watercolour. 1850. Located just north of Alnmouth, Howick is a wild, natural frontage typical of the Northumberland Coastal Plain in character. Courtesy: WatercolourWorld.

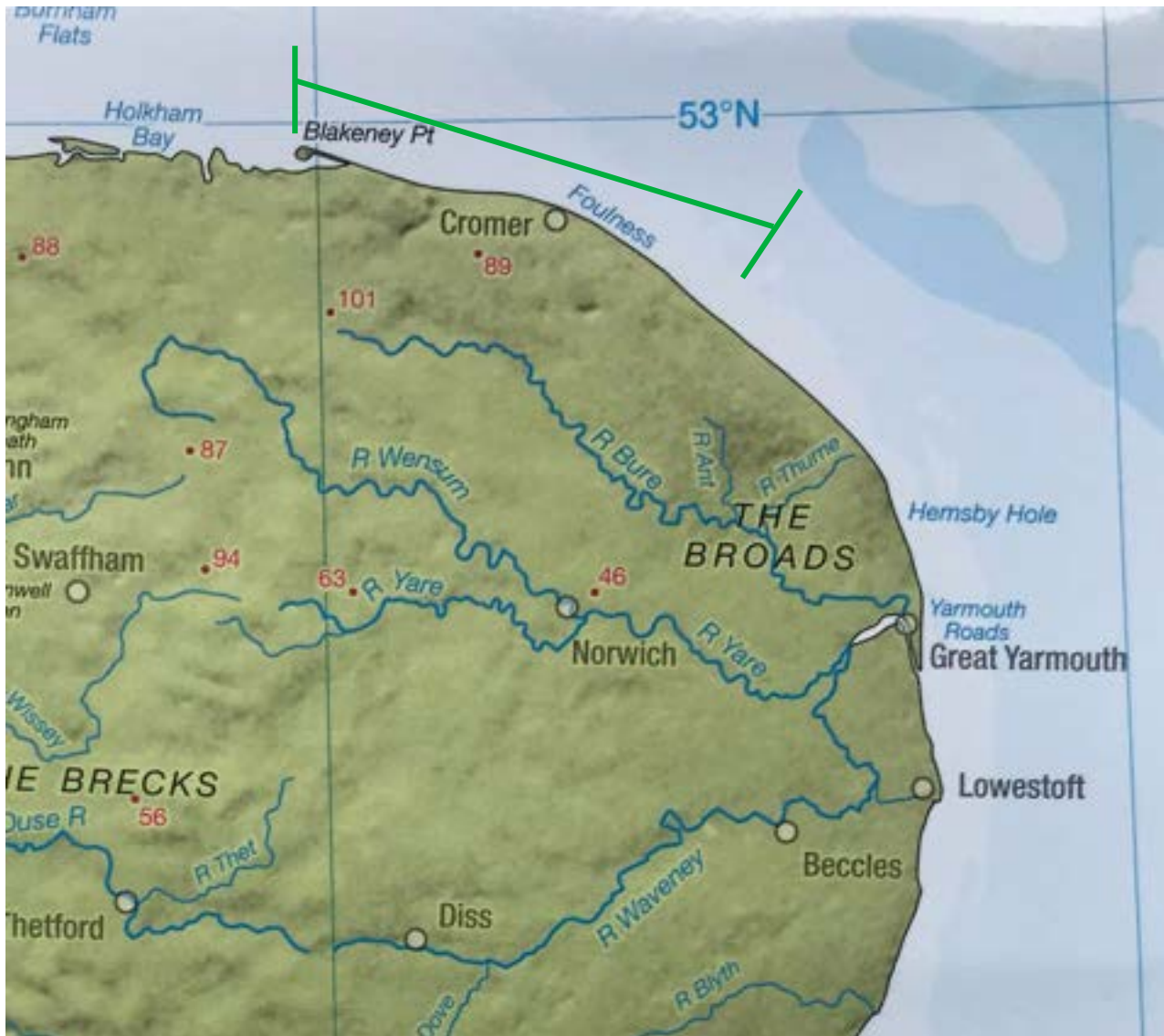


Fig. 1.20: The present-day view shows the cliffs in the foreground of Maria Gray's watercolour, with the rocky ledge extending out from the shore. The coastal environment seems virtually unchanged today. Courtesy: Shutterstock Images/Helen Hotson.

Case study 2 – North Norfolk coast (Blakeney to Sea Palling)

Location

The case study extends from Blakeney on the North Norfolk coast eastwards and southwards to Sea Palling; a distance of approximately 25 km.



Why was this case study selected?

This coastline is physically dynamic and of considerable geomorphological and environmental significance. Much of the coast forms part of the Norfolk Coast Area of Outstanding Natural Beauty and the eroding and sliding cliffs to the east of Cromer, in particular, form important maritime cliff habitats. This part of the Norfolk coast was a favoured location of artists from the mid-eighteenth century and there is, therefore, a rich art heritage, which can contribute towards illustrating the value of art in understanding environmental change over this extended time period.

Summary of geology, geomorphology and coastal processes

The geological history of North Norfolk extends back to the Cretaceous Period, although masked by more recent glacial deposits. In the Tertiary and the earliest Quaternary Periods there was deposition of shelly sands, known as the Norwich Crag (British Geological Survey/NERC, 2017).

The processes of coastal erosion, sediment transport and deposition are particularly active along this part of the Norfolk coastline, with an east to west longshore drift, transporting sediment eroded from the soft cliffs, and incoming sediment from the Lincolnshire coast contributing to the overall sediment budget. Coastal erosion has, historically, been particularly dramatic along the cliffed frontages in the vicinity of Cromer and Sheringham, which are both now protected by coastal defences. However, the adjacent frontages of weak cliffs composed of glacial tills, sands and clays are affected by erosion, landsliding and mudsliding. The coastline between Cromer and Mundesley is, therefore, part of the most physically active length of coast within the County, and it is the main provider of sediments for beaches to the south. This, in turn, is helping avoid accelerated erosion of the shoreline down-drift, and thereby providing better protection to towns and villages and wildlife habitats (McInnes & Stanford-Clark, 2018).

Biodiversity

The case study area is of considerable environmental significance, with the Blakeney frontage being a National Nature Reserve and numerous sites being designated as Sites of Special Scientific Interest (SSSI). Parts of the North Norfolk coast are also designated internationally as a Ramsar Site, as well as being a Special Protection Area (SPA) and a Special Area of Conservation (SAC); in particular, the Overstrand Cliffs, which form one of the best examples of unprotected, vegetated soft cliffs along the North Sea coast (Natural England, 2015). The maintenance and enhancement of such maritime cliff habitats, and encouraging the natural succession of plant communities through the erosion of the soft cliffs and protecting the spring-fed, species-rich characteristic flushes is particularly important (Natural England, 2015). The adjacent clifflines at Sidestrand, Trimingham and Mundesley are also important for these features. For more information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

Within this case study area there are more art images of the cliffed frontages than of the low-lying coasts because these were perceived by the artists as being more attractive and saleable subjects. There is a wide range of images in particular of the Cromer frontage, illustrating the changing soft rock coastline since the early nineteenth century. The images illustrate the cliff and beach conditions in their natural, unconstrained form, before the provision of coastal defence measures, including seawalls and groynes. Such images

suggest how the coastline might be affected if defences were not maintained in the future. Clearly, this would be likely to result in significant reactivation of instability processes along this whole coast.

Key issues that can be learnt from this site

Beach conditions today compare favourably with the extensive beaches that existed in the early nineteenth century. The range of artworks show the natural coastal processes that existed before more formal coastal defence measures were put in place later in the nineteenth century, and suggest how the coastline might respond in the event of a reduction in the standard of coast protection. Later artworks, such as those coastal views by the watercolour postcard illustrator, Alfred Robert Quinton, in the early twentieth century show clearly the nature of the historic waterfronts and patterns of development and how they have gradually affected the coastal environment in this part of Norfolk.



Fig. 2.1: 'Blakeney' by James Bulwer. Watercolour. c.1840. This watercolour provides a detailed panorama of this National Nature Reserve and Site of Special Scientific Interest (SSSI). Courtesy: © Norwich Museums Service.



Fig. 2.2: This view from Mariner's Hill, Blakeney looks out over Agar Creek and across the marshes to the sea. Saltmarshes and sand dunes lie sheltered behind Blakeney Spit, which was formed by longshore drift and is extending westwards. The site is important for its breeding Tern community, in particular, and the Seal population, which gathers at the end of the spit. Courtesy: Geograph Images/Rob Farrow.



Fig. 2.3: This view shows part of the extensive saltmarshes, which lie in the shelter of the spit. Courtesy: Creative Commons Licence/Hugh Venables.



Fig. 2.4: 'Cromer' by John Varley. Watercolour. 1802. Courtesy: © Norwich Museums Service.

This watercolour by Varley is of interest because it provides details of the condition of the beach at the beginning of the nineteenth century, as well as the state of the cliffline. The beach is composed of sand and appears to be in a healthy state with a slight crest towards the centre of the beach, witnessed by the pool of water trapped at the back of the beach in

the left foreground of the watercolour. The cliffs can be seen in their natural state before coastal defences were constructed and the proximity of the development to the cliff top is clearly visible. The level of the beach against the piles of Cromer pier can be seen to the right. Later, a seawall was provided along the foot of the cliffs to prevent erosion at their toe and groynes were constructed to control beach levels.

It is interesting to note that the artist, Varley, returned to Cromer and painted a view from the similar spot in 1830, which shows little apparent change to the cliffline or the beach. The weak cliffs along this part of the North Norfolk coast reach heights of up to 70 m but the seawall prevents coastal erosion. Where the cliffs are undefended the rate of retreat experienced can be of the order of 2-2.5 m a year. The construction of the seawall during the Victorian period would have had the effect of reducing the sediment supply to the beach so erosion could no longer take place. This would reduce sediment inputs with implications for Cromer beach and beaches to the south. Despite this, the beach at Cromer appears in a healthy condition.

The preceding watercolour by Varley shows us what conditions might be expected to look like along the Cromer town frontage if the seawall and groynes were not maintained in the future. There would be significant erosion and reactivation of the instability problems in the cliffs with subsequent risks to people, property and assets.



Fig. 2.5 'Cromer'. Courtesy: Creative Commons/Jim Osley.



Fig. 2.6 and 2.7: This fine pair of detailed oil paintings by John Moore of Ipswich show Cromer at sunrise and sunset. Painted in 1897, the views provide a detailed appreciation of the coastline at the time and allow an informed assessment to be made of the cliffline and the beach, in particular. The paintings show evidence of instability on the face of the cliffs, as well as detail of cliff vegetation and shingle ridges on the shore. Courtesy: Mandell's Gallery, Norwich.





Fig. 2.8-2.10: Alfred Robert Quinton (1853-1934) was a highly proficient watercolour artist who was commissioned by the postcard manufacturers, J. Salmon Ltd of Sevenoaks, to paint views of the towns and resorts around the coastlines of England and Wales. Between 1900 and his death in 1934 he painted over 3,000 artworks, which were printed onto postcards and they were very popular.

Quinton's watercolours are very detailed and they provide a wealth of information on the condition of beaches, seawalls and coastal environments over the first thirty years of the twentieth century. Because he frequently returned to paint the seaside towns on many occasions as they grew, his artworks form an invaluable record of coastal change.

Fig. 2.8 (top) and Fig. 2.9 (middle): Cliff top and slopes at Cromer. c.1910. Fig. 2.10 (bottom): Unstable, undefended cliffs at Sheringham. c.1920.



Fig. 2.11 shows the eastern beach and cliffs at Cromer looking towards Overstrand, painted by A. R. Quinton in 1920. The cliffs, which here are undefended, form very important habitats on account of their geomorphological processes with emergent spring waters, slumping and landslips. Courtesy: Salmon's.



Fig. 2.12: This present-day photograph shows the cliffs looking from Overstrand towards Cromer. Although a timber breastwork fronts the cliffs, it is evident that instability processes are still active, thereby maintaining the cliff habitats. Courtesy: © Christine Matthews/Creative Commons Licence.



Fig. 2.13: 'Trimingham Cliffs' in 1847 by the watercolour artist, James Bulwer. Here, the unstable cliff line is evident with landslip processes extending back into the hinterland. Lying south-east of Cromer, this whole frontage is notable for the special habitats that the coastal change processes provide. Courtesy: Norwich Museums Service.



Fig. 2.14: 2 km south-east of Trimmingham is the village of Mundesley, which also has a long history of coastal instability. A massive fall in December 2021 posed a risk to coastal residences. Courtesy: Norwich Museum Service.



Fig. 2.15: 'Palling Beach' by James Bulwer. c.1847. The dunes at Sea Palling and the landforms and associated plant communities are important nature conservation sites. The dunes have been eroding and retreating over time, although Marram grass has helped reduce the rate of change. However, ongoing erosion and the predicted impacts of climate change and sea level rise necessitated the provision of a line of offshore rock breakwaters and beach replenishment in 2015. Courtesy: Fig. 2.15 – Norfolk Museum Service; Fig. 2.16, below – Zorba the Geek/Creative Commons Licence.



Case study 3 – Suffolk (Southwold to Orford Ness)

Location

The case study site extends from Southwold in the north to Orford Ness in the south, a distance of 15 km.



Why was this case study selected?

This narrow strip of the Suffolk coast comprises a low, crumbling cliffline, which is actively eroding and, in places, accreting, and which is broken by inlets and estuaries, such as at Minsmere and the River Blyth. Since the middle of the nineteenth century the village of Walberswick to the south of Southwold, has been a flourishing art colony on account of its scenic beauty and wide, open vistas. As a result, the area has a rich art resource that is available for interrogation, displaying physical and environmental change, particularly since the middle of the nineteenth century. This part of the Suffolk coast is, therefore, ideally suited for investigation.

Summary of geology, geomorphology and coastal processes

The geology of this section of the Suffolk coast comprises recent drift deposits of sand and glacial tills overlying Cretaceous chalk, and clays of the Eocene period. Erosional processes in North Norfolk and beyond provide a constant supply of beach materials passing southwards by longshore drift, and this helps to maintain the beaches and dunes along the 'Suffolk Coasts and Heaths' coastal zone. This coastal frontage is broken, in particular, by the Rivers Blyth, Deben, Alde and Minsmere (McInnes & Stanford-Clark, 2018).

Ongoing coastal erosion poses a threat and will induce habitat change. At the southern end of the frontage, Slaughden on the River Alde is located on a massive shingle spit, which extends for some 16 km south of Aldeburgh to Orford Ness. The shingle spit is separated from the hinterland by the River Alde, which flows eastwards through Snape, before broadening into a wider estuary and then turning sharply south as a result of longshore drift. At Orford Ness the spit itself was formed almost entirely by waves through the same process. The main influence is storm waves throwing shingle over the top of the beach crest, where it is protected from the more usual wave action. Over the last 200 years historical evidence suggests that the spit has extended southwards by nearly 200 m. This has gradually led to the formation of stable shingle ridges, in places of finer material and swathes of coarse shingle, which may then be colonised by vegetation.

For the purposes of this study, three locations where there is considerable environmental interest but also a rich art heritage, have been selected. These are the coastal frontage from Southwold to Walberswick, including the Lower Reaches of the River Blyth, the vicinity of Slaughden Quay south of Aldeburgh, and Orford Ness Spit.

Biodiversity

The richness of coastal habitats along this frontage are recognised through designations, including Ramsar, Special Protection Area (SPA) and Special Area of Conservation (SAC). A National Nature Reserve at Minsmere and numerous Sites of Special Scientific Interest also highlight the importance of this frontage for both habitats and species. At Minsmere Nature Reserve, a range of priority and unusual species can be found including

birds such as the Stone Curlew, Nightjar, Dartford Warbler, as well as Bitterns, Avocets and many species of Geese and waders.

The numerous habitat types within a relatively short length of coast, including coastal and flood plain grazing marshes, reed beds, vegetated shingle and dunes, and saline lagoons, provide a rich diversity. Some of these habitats, however, are being progressively lost as a result of coastal erosion, with coastal squeeze leading to the loss of vegetated shingle and saltmarsh at some locations; this process is likely to continue as a result of predicted sea level rise. For more information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

The numerous portrayals of the shoreline at Southwold to the north of the River Blyth and in the vicinity of the village of Walberswick, provide sequences of oil paintings and watercolours that explain the degree of change affecting this coastline over time. At Slaughden Quay, paintings, such as that by John Moore of Ipswich, illustrate, in a general way, the nature of conditions at this site, which appears to have been relatively unchanged. At Orford Ness, the aquatint engraving by William Daniell RA, produced in 1822, allows comparisons to be made with beach levels against the lighthouse (subsequently demolished in 2021). The art record, therefore, does offer a further contribution to understanding of the rate and scale of coastal change along this part of the Suffolk coastline.

Key issues that can be learnt from this site

The quantity of artworks produced illustrating this relatively short frontage describe the history of change through, for example, the loss of historic buildings, such as Orford Ness lighthouse, but also show patterns of development change, which here have generally been very light. In particular, the art images show how the natural environment in the environs of Walberswick, along the Blyth and south of Aldeburgh, have changed little over the last 150 years, although the frontages are likely to be affected by increasing pressures from climate change and sea level rise. This is leading to the introduction of measures to try and encourage improved habitat management, taking account of the changes that are foreseen.



Fig. 3.1: 'Southwold from the shore' by Thomas Smythe. C.1860. Courtesy: Private Collection. This view, like the watercolour in Fig. 3.2, looks north towards the town from its wide sand and shingle beach.



Fig. 3.2, also painted by Thomas Smythe, c.1860, is of the shore at Southwold and shows the coastal defence measures that existed at the time. Private Collection.



Fig. 3.3: William Daniell RA produced this fine aquatint engraving of the entrance to the Blyth, with Southwold beyond, in 1822. Beyond the harbour can be seen an extensive beach with the town in the distance.

The Blyth has a long history of illustration by artists through the nineteenth and early twentieth centuries as a school of artists flourished at Walberswick with many of the great names of English landscape art painting there. At the same time, the Blyth is an example of a relatively short river flowing through the low-lying Suffolk countryside, passing through areas of outstanding environmental and nature conservation interest, and then alongside the historic village of Walberswick to the sea. The rich art heritage of the Blyth is illustrated here through an extensive range of artworks, which, alongside the present-day views, describe relatively limited changes that have taken place along the middle and lower reaches of this river.

The course of the Blyth passes through gravel and sand deposits of the relatively recent (in geological terms) Cenozoic Era. The river, initially, flows through agricultural land between Laxfield and Hailesworth, before passing through the estate of Heveningham Hall and the village of Walpole. East of Hailesworth the river has been canalised in places and has a clear floodplain, with land being used as grazing marsh. At Blythburgh, it is crossed by the A12 trunk road, before entering the estuarine section of the river. The estuary mouth forms the main harbour area of Southwold on the north side and is still an active fishing harbour; the lower section is a tidal estuary.

The quantity of artworks produced illustrating the lower reaches of the Blyth provide opportunities to examine change between 1822 and the present day. The river is a flourishing 'harbour' and has been a centre for the fishing and boat building industries for centuries and this, therefore, proved an immediate attraction to visiting artists. Their paintings show the gradual development of the waterfronts over time and the limited defensive measures to protect the communities on both sides from river erosion and flooding, with parts of the frontage still undefended today, although the river mouth and the most developed areas do benefit from a mixture of defence types. Equally, the images show the natural environments in the environs of Walberswick, which, today, are designated on account of their outstanding environmental and nature conservation interest. Sites such as this where artistic communities flourished can provide a source of information for a range of users, including those interested in managing the natural environment of the area.



Fig. 3.4: The village of Blythburgh, painted by Leonard R. Squirrell RSW RI RE (1893-1979), showing Blythburgh Church surrounded by the marshes and the River Blyth. Courtesy: Bonham's.

The Blyth is a site where there is a continuity of high-quality art images of a river frontage extending over 150 years. It allows the physical nature of the river to be viewed at various points in time as well as the defences and the riverside environmental conditions. It is a location where there appears to be relatively little change in the way that people have used the river and occupied the river banks since the mid-nineteenth century and can, therefore, help inform decision-making over future management requirements in the face of sea level rise.



Fig. 3.5 shows a scene at Walberswick marshes in 1889 by Thomas Benham. This fine, detailed painting was exhibited at the Royal Academy in 1889. It provides information on the natural environment and flood defence embankment at this readily identifiable location. Courtesy: Private collection.



Fig. 3.6: The extensive marshes in the vicinity of Walberswick appear relatively unchanged when compared with the 1889 painting in Fig. 3.7. Courtesy: Sylvia McInnes.



Fig. 3.7: 'On the Edge of the North Sea at Walberswick' by Charles Robertson. c.1883. Courtesy: © Christie's Images, 2022.



Fig. 3.8: This detailed watercolour by John Moore of Ipswich shows a scene close to the River Blyth. It is an open, wild landscape and the river banks are undefended. c.1880. Courtesy: Eastbourne Fine Art/Private collection.



Fig. 3.9 and Fig. 3.10: This fine oil painting by John Moore of Ipswich was painted in 1882 and looks up-river; the scene has changed little today except for the boatsheds which line the banks. Courtesy: Fig. 3.9 - Bonham's; Fig. 3.10 - Sylvia McInnes.





Fig. 3.11: A companion oil by J. Moore of Ipswich shows the view looking down-river towards the sea, with Walberswick to the right. Courtesy: Bonham's.



Fig. 3.12: This present-day view is taken towards the mouth of the estuary, which is defended on account of the strength of the tide. Courtesy: Sylvia McInnes.



Fig. 3.13 shows ‘Minsmere Cliffs’ painted by Walter Daniel Batley in 1897. This view past the crumbling, soft cliffline looks north along the coast fronting the Nature Reserve. In this view the cliff face is bare, whilst the present photograph (Fig. 3.14, below) shows the cliff covered with vegetation with the shingle foreshore also sparsely vegetated suggesting a more stable environment. Courtesy: Fig. 3.13 – Colchester and Ipswich Museums; Fig. 3.14 – © Roger Jones/Creative Commons Licence.





Fig. 3.15: 'Slaughden Quay near Aldeburgh' by John Moore of Ipswich. Oil. 1883. Courtesy: Colchester and Ipswich Museums.

Slaughden is a small community located to the south of the seaside town of Aldeburgh on the River Alde.

The site is typical of the low-lying saltmarshes and mudflats to be found on the southern part of the Suffolk coastline. This work by John Moore of Ipswich illustrates the coastal geomorphology and environment of the area.

Slaughden Quay is situated on a massive shingle spit, which extends for some 16 km south of Aldeburgh to Orford Ness. The shingle spit is separated from the hinterland by the Alde, which flows eastwards, through Snape, before broadening into a wider estuary and narrowing again and turning sharply south, as a result of longshore drift.



Fig. 3.16: The present-day view shows little apparent change, which, no doubt, is a result of its environmental designations and careful habitat management. Courtesy: © Peter Jeffery/Creative Commons Licence.



Fig. 3.17: This aquatint engraving by William Daniell shows the ‘Orford Ness Lighthouse’ in 1822, with its neighbour, the ‘Low Light’, about 1.5 km beyond. Daniell’s view shows a low shingle and sandy beach, with steps leading up to the entrance to the lighthouse. Comparison could be made with beach levels against the lighthouse structure until its demolition as a result of coastal erosion in 2020. Private collection.



Fig. 3.18: Orford Ness Lighthouse; demolished in 2020. Courtesy: © Ashley Dace/Creative Commons Licence.

Orford Ness is a very extensive cusped foreland vegetated shingle spit located at the southern end of this case study area, extending south from the seaside resort of Aldeburgh for a distance of 16 km. It is separated from the hinterland by the River Alde, which has been forced to flow southwards parallel with the coast as a result of the historical longshore drift and build-up of the Ness itself.

This is one of the most important geomorphological features of its kind in Great Britain and is a location where there is a coastal policy of ‘No active intervention’. Orford Ness is Europe’s largest vegetated shingle spit, covering an area of 900 ha, and includes a range of designated habitats. The spit itself is a National Nature Reserve, as well as forming part of the Alde-Ore Site of Special Scientific Interest (SSSI).

Case study 4 – Pegwell Bay and Sandwich, Kent

Location

This case study considers the Pegwell Bay and Sandwich Bay National Nature Reserve frontage, which extends from south of Ramsgate to seaward of Sandwich, a distance of approximately 7 km. The Pegwell Bay and Sandwich National Nature Reserve is located on the east Kent coast to the south and west of the seaside town of Ramsgate. The frontage faces south along the Kent coast and comprises chalk cliffs to the north, with extensive dune systems towards the south.



Why was this case study selected?

This part of the east Kent coast has a diverse natural environment with Sandwich Bay being designated as a Special Area of Conservation, as are the chalk cliffs of the Thanet coast; Sandwich Bay and Pegwell Bay are also designated as a National Nature Reserve. Pegwell Bay is famous in terms of art history for the painting by William Dyce RA, entitled 'Pegwell Bay – Recollections of 5th October 1858'. Dyce was an artist of the Pre-Raphaelite Brotherhood who wished to capture nature in every detail as precisely as possible. This particular painting is remarkable for its almost photographic quality, and proved fascinating to Victorians at the time on account of the emerging science of geology, but also the conflicts it posed in relation to the biblical account of the Creation. The study site shows a chalk cliff frontage affected by coastal erosion and weathering, together with a detailed portrayal of the foreshore, which allows a comparison with the present-day situation.

Summary of geology, geomorphology and coastal processes

Pegwell Bay is located at the southern end of the chalk cliffline at Ramsgate, and north of the Minster Marshes and Ash Level, which form the floodplain of the River Stour; this flows northward from Sandwich to emerge into Pegwell Bay. The bay itself is backed by a rugged well-jointed chalk cliff with a wave cut platform and a rocky foreshore, whereas, to the south, there are extensive sand dunes and a shingle foreshore forming part of the Sandwich Bay Nature Reserve (McInnes & Stanford-Clark, 2018).

Within the floodplain of the Stour there are also extensive saltmarshes and dunes. The sand dunes at Sandwich Bay are particularly vulnerable to sea level rise due to their fixed state and inability for the habitat found here to be established elsewhere.

Biodiversity

The 615 ha nature reserve at Sandwich and Pegwell Bay is a National Nature Reserve and includes a Geological Conservation Review Site. Prince's Beachlands Local Nature Reserve and two Special Areas of Conservation (SAC) are designated for Sandwich Bay and the Thanet Coast. These sites also form a Ramsar Site and Special Protection Area (SPA).

This site has the only ancient dune pasture in the country, and other habitats, including inter-tidal mudflats, saltmarshes, shingle beaches, sand dunes and chalk cliffs, make this location of international importance and renowned also for its bird life. A particular feature of interest along the chalk cliff frontage at Pegwell Bay are the chalk reefs and submerged or partially submerged sea caves. For more information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

Low-lying coasts tended to attract less attention from artists, rather than the more dramatic clifflines, such as at Pegwell Bay. The oil painting by William Dyce is a particular interest on account of the extraordinary detail that has been achieved. In terms of the cliffline, the structure of the cliffs, including the jointing, is particularly well-defined, as are the details of the caves running along the foot of the cliff.

Along the foreshore one can see the wave cut platform, which extends out into the inter-tidal zone, and in the foreground details of a groyne forming a rudimentary coast protection structure can be observed. At the time this view was painted it coincided with the emerging art of photography, and many people thought this painting had been copied from a photograph, which was incorrect. However, it demonstrates the almost photographic quality that could be achieved through art by the Followers of the Pre-Raphaelite ethos, capturing nature in precise detail.

Key issues that can be learnt from this site

Paintings exhibiting this kind of detail can inform both coastal risk management and provide a valuable record of environmental change, or lack of change over time. From the same spot estimates can be made of cliff retreat because it's possible to identify sections of cliff that have fallen away as a result of undercutting of the toe by the sea, and weathering over the last 160 years. Such imagery can, therefore, advise coastal scientists and environmental officers of the rate and scale of coastal change over a very long time span.

Whilst, generally, artworks may provide a qualitative tool in support of the understanding of environmental change, for certain artists, such as Dyce, Edward William Cooke RA and others, it may be possible to make quantitative assessments of change on account of their accuracy. If such an approach can be investigated, it will allow an understanding to be made of the rate of natural change in a very beneficial way as it will provide data extending back far beyond traditional methods of appraising the rate of coastal retreat in such locations.



Fig. 4.1: 'Pegwell Bay – Recollections of 5th October 1858' by William Dyce RA. Dyce has achieved photographic detail in this depiction of the chalk cliffs and the shore. Courtesy: Creative Commons Licence.



Fig. 4.2: The same view photographed by the author showing the line of caves along the foot of the cliff. Courtesy: Robin McInnes.



Fig. 4.3: 'Pegwell Bay, Kent' by E. W. Cooke RA, one of our finest coastal artists, produced this engraving of the bay in 1830. Private collection.



Fig. 4.4: 'No Man's Land, Margate' adjacent to the designated cliffs and caves of Pegwell Bay shows the detailed way in which artists such as William Parrott (1869) could portray the geology. Courtesy: Christie's Images © 2022.



Fig. 4.5: 'The Kent coast near Sandwich' by Henry Gastineau. Watercolour. c.1850. Courtesy: The Keepers and Governors of Harrow School.



Fig. 4.6: Distant view of Pegwell Bay chalk cliff line from the shore at Sandwich. Courtesy: David Mills/Geograph Images.

Case study 5 – North Solent shoreline (Hampshire coast)

Location

The case study comprises that part of the Hampshire coast bordering the Solent, between Langstone Harbour in the east and Lymington in the west, a distance of 23 km.



Why was this case study selected?

The cities of Portsmouth and Southampton have been of vital military and strategic importance since the Middle Ages and in addition they have developed strong maritime links as ports for commerce and tourism; as a result, parts of this frontage are heavily developed. Portsmouth is the only city in the United Kingdom where the population density exceeds that of London. The western part of the Hampshire coast bordering the Solent, to the west of Southampton water, is less developed and abuts the New Forest National Park. The waters of the Solent and some of the creeks and harbours themselves are of considerable environmental importance and are highly designated. The maritime activity with shipping in the Solent, both commercial and recreation, including yachting, attracted many artists, often setting shipping and regatta events against the backdrop of the coastline. In addition, some locations, such as Portsdown Hill at Portsmouth, offer panoramic views across the coast and give insight to what the area was like from the early 1800s when there was much less development. The low-lying parts of this coastline attracted fewer artists, however, there are still sufficient artworks to illustrate the quality of the natural environment along this frontage.

Summary of geology, geomorphology and coastal processes

The Solent itself and the adjacent harbours and creeks are drowned Pleistocene river systems of mainly Eocene age. The Solent was an eastward flowing river, extending past the eastern end of the Isle of Wight at a time when sea levels were much lower than the present. Eventually, the chalk ridge between the Needles and the Isle of Purbeck broke through, separating the Isle of Wight from the mainland. The harbours, including Portsmouth and Langstone, are, in fact, short river systems and are backed by the Cretaceous chalk geology of the South Downs. The Solent frontage is prone to wave attack from the English Channel, as well as from storm waves generated within the Solent itself. With sea levels predicted to rise by up to 1 m by 2100, this low-lying region is particularly vulnerable to an increased risk of flooding. This is likely to have a significant effect on fragile inter-tidal saltmarshes and mudflats that are located particularly to the west, such as within Lymington River (McInnes & Stanford-Clark, 2018).

Biodiversity

The Solent itself and the less developed or undeveloped creeks and harbours are of considerable environmental importance. The Solent Marine Sites (SEMS) is a collective name which covers these internationally important locations within the Solent. These include areas designated as Special Areas of Conservation (SAC), Special Protection Areas (SPAs) and areas designated as Ramsar sites for the protection of wetlands. The Solent Forum has developed management plans and projects that seek to manage and enhance the environmental quality of this important part of the coast.

In terms of this case study the focus is between Langstone Harbour in the east and Lymington in the west. The North Solent coastline shores that are of environmental significance are interspersed with frontages that are heavily developed. Whilst Langstone Harbour is a relatively tranquil location, Portsmouth Harbour itself is intensively developed, as is the western side of Southampton Water. There is environmental interest on the eastern side of Southampton Water, towards the Solent in the vicinity of Netley and Hamble and along the open New Forest coastal frontage between Calshot and Lymington, including the Beaulieu River. Some of these environmentally important sites are depicted in the artworks that follow. For more information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

Perhaps the most interesting artworks along this case study site frontage are those painted from Portsdown Hill, overlooking the developing city of Portsmouth over time. For artists travelling to the south coast from London this was an obvious vantage point where visitors gained their first sight of the Solent and looking across to the Isle of Wight, which was often their ultimate destination. As a result, we have a sequence of views from the

late eighteenth century. There are many views of the eastern side of Southampton Water, in the vicinity of Netley, because of the importance of the ruins of Netley Abbey and Castle to antiquarians and artists. Views are also painted from this spot looking north-westwards up towards the waterfront at Southampton, which is fronted by the city walls and over the last century has seen progressive development and encroachment into Southampton Water to gain development space.

The western side of Southampton Water is largely occupied by the Fawley oil refinery and other developments, although, at the north-western end, Dibden Bay is an important 230 ha biological Site of Special Scientific Interest (SSSI), located between the towns of Marchwood and Hythe. Most of this site was formed by deposition of material dredged from Southampton Water itself. The site was designated as an SSSI because it has a nationally important collection of invertebrates, including 21 species which are nationally rare and a further 67 which are nationally scarce. The site is also important because of its nesting Lapwings and its occupation by wildfowl, such as wigeon, teal, pintail and mallard. To the west of Calshot Spit towards Lymington, a distance of approximately 14 km, the New Forest meets the coast. This frontage has been mainly occupied by large estates, such as those of Cadland, Exbury, Beaulieu and other marine residences. Much of this frontage was, therefore, not accessible to visiting artists and paintings tend to be architectural rather than landscape in nature. There are some views, however, which depict the Lymington River and the saltmarshes and mudflats at its entrance.

Key issues that can be learnt from this site

This is a complex frontage with intense commercial, tourism and residential development alongside more limited areas of considerable environmental importance, together with the marine environment of the Solent itself. The subject matter for most artists along this frontage has proved to be shipping and yachting subjects set against the background of the Solent shores. Some of these views do provide topographical and environmental information, however, this is limited. Perhaps the most interesting views are those taken from higher ground, such as the views looking over the harbour from Portsdown Hill, which show the Portsmouth frontage in its natural, largely undeveloped state and such artworks indicate what conditions might be like if, at some time in the future, defences were removed or inundated.

It can be noted that low-lying coasts generally attracted fewer artists because the grandeur of coastal scenery, such as cliff frontages, provided a greater source of inspiration. Along the North Solent shore (as opposed to the Isle of Wight Solent shoreline, which has more detailed environmental artworks) the prime subject of interest has proved to be maritime and yachting paintings in this particular case.



Fig. 5.1: 'View from Portsdown Hill overlooking Portsmouth' by Dominic Serres, c.1778, shows the relatively undeveloped harbour with the Solent and Isle of Wight beyond. Courtesy: Hampshire County Council Fine Art Collection.



Fig. 5.2: The view by William Daniell RA, produced in 1823, is typical of his meticulous observation and eye for detail and he described the location in his famous publication, 'A Voyage Round Great Britain' (Daniell & Ayton, 1814). Private Collection.



Fig. 5.3: This fine watercolour by William Turner of Oxford shows the view again from Portsdown Hill, across the harbour to the Isle of Wight. This artist is known for his topographical accuracy. Works such as this illustrate the open, undefended coast and in locations where coastal change policies such as ‘managed realignment’ are proposed it is possible to see how the coastline might revert to its natural form. Courtesy: Bonham’s.



Fig. 5.4: The present-day view from Portsdown Hill shows dense development across the whole of this coastal landscape. Courtesy: Sue Lowry.

The Solent Dynamic Coast Project (SDCP) was conducted in 2008 to inform development of the North Solent Shoreline Management Plan (SMP) to identify where shoreline management decisions may impact sites protected under the European Union Habitats and Birds Directives and where potential habitat creation could be undertaken. Solent Dynamic Coast Project – Shoreline Management Plan (www.northsolentsmp.co.uk).

The focus was on mudflat and saltmarsh habitats as these form the largest expanse of coastal habitats across the north Solent that are immediately under threat from climate change and coastal management decisions. From analysis of aerial photography, it was found that between 1946-2002 there was an 83.9% loss of saltmarsh including the impact of reclamation.

As can be seen below, the image from the art collection supports the conclusion of extensive habitat loss across Portsmouth and could have been used in terms of engagement to show the habitat restoration possibilities and the extent of habitat loss across the estuary.



Fig. 5.5: 'Haslar Creek, Portsmouth' by Martin Snape. c.1900. This oil painting shows the Creek in its natural state at that time. The location is now occupied by an extensive marina development. Courtesy: Hampshire County Council Fine Art Collection.



Fig. 5.6: 'The Hard at Gosport' by Martin Snape. 1919. This detailed oil painting shows the busy Gosport waterfront in the early twentieth century. Courtesy: Hampshire County Council Fine Art Collection.



Fig. 5.7: 'Lord Lansdowne's Tower and the waterfront, Southampton' by Sebastian Pether. 1817. Here the old walls can be seen on the shore with the developing city behind. The waterfront has now been extended out into the water along the whole frontage. Courtesy: Haynes Fine Art, Broadway.



Fig. 5.8: The waterfront at Netley on Southampton Water by William Westall. Steel Engraving. 1836. The Castle and ruined Abbey form a picturesque scene at this point with only a low seawall now protecting the frontage. Private Collection.



Fig. 5.9: 'Lymington River' by Thomas Rowlandson RA. c.1793. At this time the river was a peaceful undeveloped spot. Today the environmentally sensitive saltmarshes and mudflats are relatively undisturbed, whilst nearer the town there are extensive moorings for yachts. Courtesy: Isle of Wight Council Heritage Service.



Fig. 5.10: 'Entrance to Lymington River' by Wilfred W. Ball. Watercolour. 1913. Private Collection. The river follows a meandering course banked by saltmarshes and mudflats, much as shown in this view. The low-lying shores of the Solent are affected by sea level rise and 40% of these inter-tidal habitats could be lost by 2050.



Fig. 5.11: 'Lepe' between Calshot and the Beaulieu River' by Ernest W. Haslehurst. c.1920. This lies within an 'Area of Outstanding Natural Beauty'. In winter Brent Geese and many wading birds feed on the mudflats. Private collection.



Fig. 5.12: 'Shipping between Hurst Castle and the Needles' by William Daniell RA. 1823. Private Collection. The mouth of the Western Solent remains virtually unchanged today. The Needles Lighthouse was built in 1858, replacing the one on High Down. Hurst Castle was severely damaged by a coastal storm in February 2021.

Case study 6 – Solent shoreline (Isle of Wight coast)

Location

This case study considers two locations on the Solent coast of the Isle of Wight. First, the Western Yar river, which flows out at Yarmouth on the north-west coast, and second, the Eastern Yar, which emerges at Bembridge Harbour on the north-east coast.



Why was this case study selected?

The two study sites illustrate the potential for certain highly detailed artworks to inform us of physical and environmental change within river mouths and estuaries. They demonstrate the level of detail that could be achieved through the medium of watercolour, particularly by the Pre-Raphaelite Brotherhood of Artists and their numerous Followers, who painted on the Isle of Wight from the mid-nineteenth century until the early twentieth century. The Eastern Yar, in particular, has a rich art heritage, extending back to the late eighteenth century, together with numerous topographical maps, written accounts and a long history of human intervention. More recently, detailed studies have been commissioned by the Environment Agency, the Royal Society of Protection of Birds and others, to improve environmental management following nature-based and other approaches.

Historical artworks form valuable records as they can illustrate river mouths and estuaries in more natural, largely unconstrained forms before extensive nineteenth and twentieth century riverbank and in-channel developments, encroachments and modifications took

place. Such images can collectively provide a chronology of change where rivers meet the coast. This information can inform consideration of land-use development within flood plains, riparian habitats and morphology, the storage capacity of river flood plains before later developments took place, as well as opportunities for rivers restoration.

Summary of geology, geomorphology and coastal processes

The Western Yar emerges as a stream immediately to the north of Freshwater Bay. Over time, it has cut a northern path through the Upper Chalk and overlying Eocene and Oligocene strata over its short length. The underlying geology is masked by extensive deposits of alluvium along the whole course of this river/estuary. The Western Yar, like most of the creeks and estuaries bordering the Solent to the north, has been gradually silting up. The Solent coastlines are facing increasing challenges from sea level rise, with over 50% of the intertidal saltmarsh and mudflats expected to be lost by 2050.

The Eastern Yar is longer at 24 km; the water body is composed of two tributaries and the main Eastern Yar river. The lower part of the water body flows through Brading Marshes, which are designated as a Site of Special Scientific Interest together with numerous other designations. This area has been extensively modified over time. In the sixteenth century, the expanse of Brading Harbour was a port of some importance serving the ancient town. Over 300 ha of Brading Haven was reclaimed in 1882, and the art record clearly shows the changes that has taken place over time (McInnes & Stanford-Clark, 2018).

The river now follows a meandering course across the reclaimed lands of the Yar Valley, with an interesting range of geomorphological features, although significantly modified through historic channel straightening and dredging and river bed lowering, together with land use change. The acquisition of a substantial part of the marshes by the Royal Society for the Protection of Birds (RSPB) and subsequent management measures to improve the habitat for bird species, provide a marked contrast with the touristic and more commercially orientated Bembridge Harbour itself, which is separated from the marshes by an embankment running between St Helens and Bembridge, which formerly carried the railway line to Bembridge. The river Yar flows out into Bembridge Harbour, depositing silt which, together with coastal processes, is, like many of the creeks and harbours of the Solent, becoming increasingly silted up.

Biodiversity

The Western Yar Estuary is a Site of Special Scientific Interest (SSSI) and a large part of the adjacent Freshwater Marshes are a Local Nature Reserve, known as Afton Marshes. The Western Yar is also designated as a Special Protection Area (SPA) and a Ramsar Site, whilst the coastal frontage is a Special Area of Conservation (SAC). These multiple designations attest to the environmental significance of this site. The headwaters of the Western Yar are protected from inundation by the Freshwater Bay seawall, which would otherwise lead to the creation of an Island at the western tip of the Isle of Wight. For more

information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

Of equal importance is the Eastern Yar at Brading Marshes and Bembridge which bears the Ramsar, SPA and SAC designations.

How can the art imagery resources inform us of environmental changes within this coastal zone?

The towns of Yarmouth and Bembridge and the Western and Eastern Yar themselves have received considerable attention from artists since as early as the 1790s. Of greatest interest, however, are some of the highly detailed watercolours, such as the watercolour painted of Yarmouth by Charles Robertson in 1891, which provides an almost photographic view of the lower reaches of the Western Yar at Low Water. This watercolour shows the extent of the saltmarshes and mudflats at that time, which, as has been explained, are becoming increasingly at risk as a result of sea level rise. Such highly detailed artworks can, therefore, provide information on long-term physical and environmental change, particularly since the 1850s.

There are very few environmental monitoring programmes that extend back for more than half a century and, therefore, artworks such as these, which can provide a long-term perspective of change, in full colour, can form a particularly useful additional tool for a range of scientists and practitioners who wish to understand environmental change in support wise planning and management into the future.



Fig. 6.1: The mouth of the Western Solent between Fort Albert (bottom left) and Hurst Castle, Hampshire. Courtesy: Wight Light Gallery.



Fig. 6.2: Contrasting landscapes with the cliffline of Upper Chalk in the foreground at Freshwater Bay and immediately to the north of the Bay the headwaters of the Western Yar, which flows north into the Solent beyond. Courtesy: Wight Light Gallery.



Fig. 6.3: The Western Yar after several weeks of rainfall; the ancient town of Yarmouth appears to be almost surrounded by water. With sea level rise the designated inter-tidal saltmarshes and mudflats are likely to be increasingly at risk. Courtesy: Andy Butler.



Fig. 6.4: For a copperplate engraving from 1813 this early view of Yarmouth from the western side of the harbour is exceptionally detailed. The scene is taken at High Water and shows the ancient sand hut in the river where the white sand from Alum Bay used in making ceramics was stored prior to shipment. A bridge was constructed across the river in the 1850s and a harbour arm was built to shelter craft in the harbour from Solent storms. Private Collection.



Fig. 6.5: An oil painting by William Gray showing the harbour at Yarmouth in c.1855. Courtesy: Martin Beisly Fine Art, London.



Fig. 6.6: This detailed watercolour by Charles Robertson of Yarmouth Harbour and estuary from the west was painted in 1891. Robertson was a Follower of the Pre-Raphaelite Brotherhood of Artists whose philosophy was to paint nature truthfully and accurately down to the finest detail. As a result, their works, in particular, provide an important record of past river conditions. Private Collection.



Fig. 6.7: The present-day oblique aerial view shows the estuary at High Water with the extensive saltmarshes and mudflats largely obscured; a situation that is becoming increasingly common across the river mouths and estuaries bordering both sides of the Solent. Image courtesy: Visit IW.



Fig. 6.8: The upper reaches of the Western Yar are shown in this steel plate engraving by William H. Bartlett in c.1830. The engraving shows a view at The Causeway bridge from the southern side looking north-west towards Freshwater Church.



Fig 6.9: The view with the open water upstream of the bridge contrasts markedly with the present-day view, which is covered with Ash and reedbeds, now a protected habitat. Courtesy: Robin McInnes.

Key issues that can be learnt from this site

Some artworks, such as the view by Robertson described above, can provide detailed, almost photographic information on the river environment at the time they were painted. Through this study a large number of such artists, who specialised in painting English coastal scenery, have been ranked in terms of their topographical accuracy. This initiative saves researchers the need to undertake time-consuming investigations on the question of artistic accuracy and truthfulness, thereby enabling them to search with confidence on art websites, such as ArtUK and Watercolour World, in order to identify those art resources existing for their particular area or location of interest.

The Eastern Yar study site illustrates how, in locations where there is a good selection of artworks, these can be arranged chronologically to inform the history of change and, in some cases, past management practices, in order to help provide solutions to current problems, particularly in the face of changing climatic conditions, sea level rise. In some locations, the consequences of removing defences for economic or environmental reasons can be better understood and explained to stakeholders through such historical art imagery.



Fig. 6.10: This map of the Isle of Wight by Sir Henry Englefield (1816) shows the extent of the Eastern Yar catchment, emerging as springs from the Gault Clay spring line behind Wroxall and Whitwell, before joining to cross the Arreton Valley, and then subsequently forming a cutting through the Chalk Downs to emerge at Brading Harbour. Private Collection.



Fig. 6.11: This fine aquatint engraving by William Daniell (1823) is taken from Nunwell Down, and looks across Brading towards the harbour (then at its full extent before subsequent drainage). William Daniell RA produced numerous aquatint engravings of the British coast between 1814 and 1825; he is regarded as one of the finest early topographical artists. This view of 'Brading' was made before the harbour was reclaimed for agricultural use. A railway link was provided across the harbour together with a tidal embankment in the 1950s.



Fig. 6.12: A further view of Brading Haven, from the south looking northwards, with the Windmill on the right and St Helens in the distance. This oil painting by Alfred Vickers (c.1842) shows the nature of the landscape around the harbour in the mid-nineteenth century. Private Collection.



Fig. 6.13: This detailed engraving by George Brannon (c.1828) is taken from St Helens Duver and looks eastwards, across the mouth of Bembridge Harbour, towards the developing village. The engraving shows the extent of the Duver sand dune system, and dunes on the eastern side of Bembridge Harbour at that particular time. Since then, there has been significant encroachment and sedimentation within the harbour, as well as the provision of a seawall along the St Helens Duver frontage to protect development behind. Private Collection.



Fig. 6.14 shows the present-day view but from a more distant vantage point; the view is taken at High Water. Courtesy: K. Hicks.



Fig. 6.15: This watercolour by Charles Tomkins (1809) provides a panoramic view looking across Bembridge Harbour from the Duver southwards. The town of Brading with the church spire can be seen (centre right) and the true extent of this waterway, before drainage took place, can be fully appreciated. Extending to some 800 acres, the harbour was able to accommodate a significant number of men of war from the Armada Fleet. Private Collection.

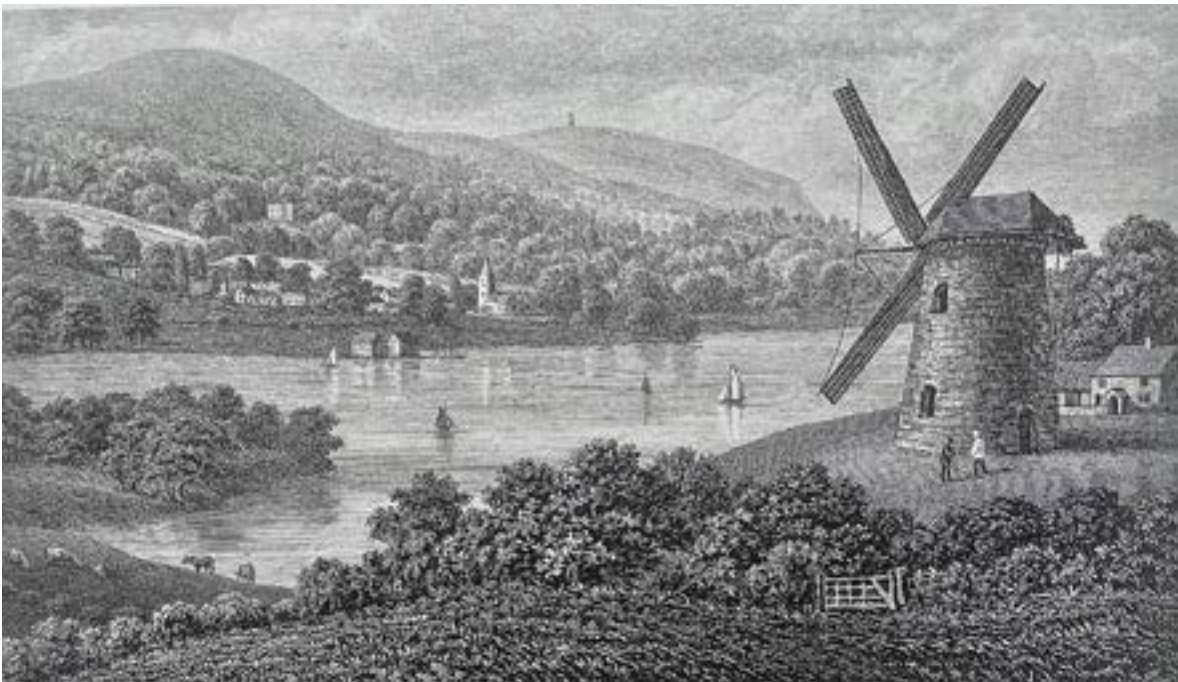


Fig. 6.16: This view looks across Brading Marshes at High Water from Bembridge windmill to Brading in 1840. Private Collection.



Fig. 6.17: This watercolour by David Addey was painted in 1995. The harbour itself, now largely devoted to leisure, is partly obscured by the road embankment connecting St Helens and Bembridge.



Fig. 6.18 shows the present-day view of Brading from the downs, looking north. Beyond the town can be seen the East Yar valley with the marshlands, which are now a RSPB Nature Reserve, with Bembridge Harbour in the distance. Courtesy: K. Hicks.

The study site illustrates how, in locations where there is a good selection of artworks, these can be arranged chronologically to inform the history of change and, in some cases, past management practices. Such works may help provide solutions to current problems, particularly in the face of changing climatic conditions and sea level rise. In some locations, the consequences of removing defences for economic or environmental reasons can be better understood and explained to stakeholders through such historical art imagery.

Some artworks, such as the view by Robertson in Fig. 6.6, can provide detailed, almost photographic information on the river environment at the time they were painted. Through this study a large number of such artists, that specialised in painting English coastal scenery, have been ranked in terms of their topographical accuracy. This initiative saves researchers the need to undertake investigations on the question of artistic accuracy and truthfulness, thereby enabling them to search with confidence on art websites in order to identify those art resources existing for their particular area of interest.

Case study 7 – Isle of Wight Undercliff

Location

This case study site comprises the Isle of Wight Undercliff on the south coast of the Isle of Wight, between Luccombe in the east and Blackgang in the west, a distance of 12 km.



Why was this case study selected?

The Undercliff is a 12km long coastal landslide complex extending between Luccombe and Blackgang on the south coast of the Isle of Wight. The remnants of ancient landslides also extend a significant distance offshore and up to 700m inland of the shoreline, where they comprise steep slopes and terraces of up to 120m in height. The site is of considerable geological and environmental importance, as well as having a rich cultural and artistic heritage and is the largest urban landslide complex in north-western Europe.

Summary of geology, geomorphology and coastal processes

The coastal cliffs of the Isle of Wight Undercliff are formed within the Lower Cretaceous sequence of sedimentary rocks, comprising Chalk, Upper Greensand, Carstone and Sandrock. The sequence of strata is strongly bedded with a two degree dip seaward, which exposes the succession to large-scale landsliding. The sea cliffs are mostly cut into landslide debris, and erosion rates are typically 0.3m per annum. In situ soft sandstones (Sandrock) form the high sea cliffs at the eastern and western ends of the Undercliff at Luccombe and Blackgang, where erosion rates can be much higher at between 1-3m per

year. The Undercliff has experienced a relative increase of sea level and winter rainfall over the historical period, promoting toe erosion and excess groundwater levels, both of which promote ongoing instability (Moore & McInnes, 2021).

Climate change poses a significant challenge to the future stability and management of the Undercliff. Site investigations, continuous monitoring of weather, groundwater levels and ground movement rates are of particular importance. Reliable assessment of the hazards and risks within large, pre-existing coastal landslide complexes can only be achieved through detailed studies, which are needed to inform effective planning and management, such as that being undertaken at this site. Most of the developed parts of the Undercliff have a high standard of coast protection particularly between Bonchurch and Steephill and at Castlehaven, Niton. However, extensive coastal frontages are also undeveloped and here the natural landslip processes continue uninterrupted such as between Steephill and Blackgang along the western half of the Undercliff (McInnes, 2007).

Biodiversity

This coastline predominantly consists of medium to high sandstone, clay or chalk debris cliffs that are important for their geomorphological, ecological and entomological interest. The cliffs are fronted by narrow sand and shingle beach, boulders or rocky reefs, with the subtidal area comprising of reefs that support kelp and diverse red algal communities. The actively eroding open cliffs and slopes support a complex mosaic of habitats and species, particularly invertebrates (e.g., bees, crickets and wasps).

There is only one international designation within the Undercliff, the South Wight Maritime SAC, which includes both intertidal and subtidal habitats and species. The designation covers the entire length of the Undercliff and is of biological importance for its reefs, maritime cliffs and submerged caves. There are four SSSIs along this coastline, two of which cover the coastal cliffs and intertidal zone, the Bonchurch Landslips SSSI and Compton Chine to Steephill Cove SSSI, and two at the top of the cliffs, the Ventnor Downs and Rew Down SSSIs. Bonchurch Landslips SSSI is biologically important because of the maritime cliffs and slopes and is a BAP priority habitat and broadleaved native woodland, and is geologically important because of the Undercliff, coastal landslips and mud flows. Compton Chine to Steephill Cove SSSI is a nationally important geological site, which supports outstanding invertebrate assemblages. For more information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

In recent years researchers have sought to understand more about the formation and development of the Undercliff landslide complex, in order to support effective planning and risk management (Lee & Moore, 1991; McInnes & Moore, 2014). A fundamental need was to investigate how the landslide complex was formed and its extent seawards. These

issues were investigated using both field geomorphological mapping, as well as interpretation of historical evidence, including old maps, artworks and photographs. The engraved view by William Westall (Fig. 7.1) was particularly useful because it showed the town of Ventnor before the coastal frontage was extensively developed from the 1830s onwards. The planting of the Holm Oak on the downs behind Ventnor during the early 1900s had led to a rapid spread of the species; this, together with coastal developments, masks the coastal geomorphology today. However, it is possible to identify some of the main components of the Ventnor Undercliff landslide complex, including back-tilted blocks of Upper Greensand strata, which, historically, have detached from the rear escarpment behind and above Ventnor Cove, periglacial deposits of landslide debris that were washed down from the hills behind to form a mantle over the lower slopes, and areas along the foot of the landslide at beach level that have been affected by toe heave.

The small steel engraving by Rock & Co. (Fig. 7.2) dated 1863, is also particularly significant. It shows the relic of a former cliffline lying seaward of the existing sea cliff. When the Undercliff geomorphology was being interpreted between 1988-1991 as part of a government funded study of coastal landslips and impacts on development (Lee & Moore, 1991), there was uncertainty as to whether the existing sea cliff actually represented the seaward extent of the Undercliff landslide complex as a whole. However, this image confirmed that a succession of clifflines were likely to be present seaward of the existing Ventnor Esplanade, and this was confirmed through such historical imagery alongside offshore scientific investigations.

Key issues that can be learnt from this site

Alongside the historical information that artworks provide in support of geomorphological studies, as described above, the selection of images illustrated in this case study also highlight physical and environmental changes over the last two centuries. A selection of oil paintings by the artist, Edward William Cooke RA, who painted in the Undercliff for nearly forty years from the 1830s, provide a rich record of the changing coastline along this frontage by a 'geological painter', who followed the ethos of the Pre-Raphaelite artists by painting nature in an exact and truthful fashion. Such artworks provide a very reliable record of conditions, for example, before coastal protection structures were put in place.

Artworks also illustrate changing natural environments. A significant change in the Undercliff landscape occurred from the early 1900s and after the First World War, when grazing of the coastal fields and slopes effectively stopped. This led to the growth of scrub and trees throughout the Undercliff, which changed the character of the landscape from an essentially open area backed by the dramatic rear cliff of the Undercliff escarpment, into a heavily wooded coastal zone.

VENTNOR UNDERCLIFF – INTERPRETING PHYSICAL CHANGE



Fig.7.1: This steel engraving by William Westall (1842) shows the developing town of Ventnor before the coastal slopes became covered by houses and hotels. It allows an appreciation of the key geomorphological units of the landslide complex. A major government-funded study of coastal landslip at Ventnor (1988-91) used such historical images to improve understanding of the causes and mechanisms of ground movements (Lee & Moore, 1991; McInnes, 2007). Private Collection.

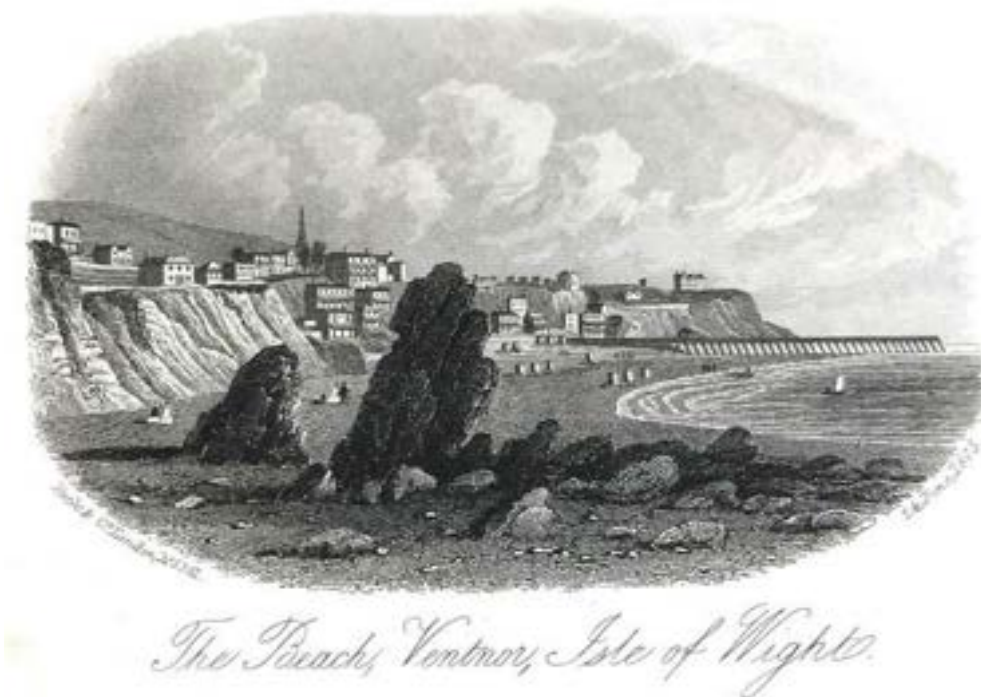


Fig. 7.2: A steel engraving from 1863. The image shows projecting rocks on the foreshore that indicate the location of a past coastline, long since eroded. Again, the image supports understanding of coastal change within the largest urban landslide complex in north-western Europe. Private collection.

VENTNOR UNDERCLIFF – GEOLOGICAL PAINTINGS



Fig. 7.3: ‘The Undercliff near Blackgang Chine’ by William Gray. Oil. 1862. Private Collection.



Fig. 7.4: ‘Bonchurch Shore’ by Edward William Cooke RA. Oil. 1896. Courtesy: Peter Johnson.

Gray, Cooke and John Brett were three artists who painted Undercliff scenery in precise detail. Their works (often described as ‘Geological Pictures’) provide invaluable records of the coastal environment between 1830s-1870s.

GEOLOGICAL PAINTINGS



Fig. 7.5: 'The Undercliff coast near St. Catherine's Point' by Samuel McCloy. Watercolour. c.1880. Private Collection. McCloy describes the coastal frontage in infinite detail. Coastal erosion and a wartime mine destroyed the seawall here and was not replaced.



Fig. 7.6: 'Blackgang Chine' by William Westall ARA. Steel engraving. 1838. Through the natural processes of coastal erosion and landsliding this frontage has retreated by nearly 200 m since 1830. Private Collection.

ENVIRONMENTAL CHANGE



Fig. 7.7: 'Old Blackgang Road, Niton' by George J. Knox. Watercolour. 1866. Private Collection. This picturesque route was closed after the great cliff fall here in July 1928.



Fig. 7.8: This watercolour of Niton Undercliff c.1855 by William Gray shows the scenery when the coastal land was open and grazed. After grazing gradually died out c.1900, the Undercliff became covered by trees and undergrowth, which masks the striking cliffline. Image courtesy of Isle of Wight Council Heritage Service.



Fig. 7.9: At Luccombe the open prospects enjoyed in this watercolour by Frederick Williamson (1878) are now largely obscured by tree growth. Private Collection.

ENVIRONMENTAL CHANGE



Fig. 7.10: This extensive view of Niton Undercliff to the west of Ventnor was painted by Susan Kirkpatrick in 1864. Beauchamp House (centre right) was destroyed by a landslip in 2001. The lighthouse at St Catherine's Point is shown at its original height and was later reduced because the light was obscured by sea mists. In the distance can be seen the Buddle Inn and, beyond, the Royal Sandrock Hotel, which was destroyed by fire in 1984. Private Collection.



Fig. 7.11: 'Luccombe Fishing Village' by William Gray. 1855. Watercolour with Bodycolour heightened with white. The village was destroyed by a landslide in 1910. Courtesy: IW Council Heritage Service.

UNDERCLIFF ENVIRONMENTS TODAY



Fig. 7.12: Aerial view of Ventnor and Bonchurch. The Evergreen Oak forest on St. Boniface and Bonchurch Downs is clearly visible. To the right is 'The Landslip', which was grazed until c.1900 and is now covered by mature trees. Courtesy: Wight Light Gallery.



Fig. 7.13: The Undercliff looking east from St Catherine's Point at Niton. The open landscapes depicted in nineteenth century watercolours are now almost completely covered by mature trees. Courtesy: Wight Light Gallery.

ANALYSING COASTAL CHANGE THROUGH ART – VENTNOR FROM THE WEST

This series of views show the progressive recession of the soft cliff line between Steephill and Ventnor Bay as a result of coastal erosion. This has led to the regular diversion upslope of the popular coastal footpath (see Figs. 7.15 & 7.17). In those coastal zones where there is a rich art resource the study of change can be observed through such sequences of images. Since 1992 coastal erosion (and reduced landslide risk) result from construction of a substantial rock revetment between Ventnor and Steephill Cove in 1992.



Fig. 7.14: 'Steephill'. George Brannon. Copper Plate engraving. 1822. Private Collection.



Fig. 7.15: 'Ventnor from Flower's Brook'. Fanny Minns. Watercolour. 1898. Private Collection.



Fig. 7.16: 'Ventnor from the West'. Alfred Robert Quinton. c.1900. Image courtesy: Salmon's.



Fig. 7.17: 'Ventnor from the West'. Henry B. Wimbush. c.1900. Image courtesy: IW Council Heritage Service.



Fig. 7.18: 'Ventnor'. Randolph Schwabe. 1933. Private Collection.



7.19: Present day view for comparison. Courtesy: Robin McInnes.

HUMAN INTERVENTION



Fig. 7.20: 'The Undercliff at Bonchurch' by Edward William Cooke RA. 1858. Oil on Canvas. Private Collection/Michael Appleby.



Fig. 7.21: The coastal frontage between Bonchurch and Ventnor is protected by a seawall for property and assets upslope. The photograph shows the seawall today. Courtesy: Andy Butler.

Case study 8 – Poole Harbour to Studland (Dorset)

Location

The case study site comprises Poole Harbour and Studland Beach in East Dorset. Poole Harbour is located to the south-west of the Bournemouth – Poole conurbation with Studland beach extending south towards Old Harry Rocks.



Why was this case study selected?

This case study site was selected because parts of Poole Harbour and its hinterland are of international environmental importance and both the harbour itself and Studland beach are facing the challenges of climate change; this has necessitated innovative approaches by one of the major landowners, the National Trust. As this is a low-lying coast it did not attract many topographical artists. However, there are sufficient works available to illustrate the key points of interest in support of this study.

Summary of geology, geomorphology and coastal processes

Poole Harbour lies on weak clays and gravels bounded by the more resistant chalk of the Purbeck Hills to the south and the Dorset Downs to the north. In terms of sediment transport the prevailing direction is from west to east between Poole Harbour and Bournemouth, although there is some movement in the opposite direction (anticlockwise movements). Within Poole Harbour, again the general trend is from west to east, with

inputs from the Wareham Channel and Lytchett Bay in the west. Sediment circulates general from west to east along the south coast of Brownsea Island whilst erosion around the shores of the harbour contributes sediment to the overall system.

The approach to coastal management at Brownsea Island represents an example of the National Trust's national planning policy for coastal change and a locally focussed adaptation strategy for the future management of the Island based on the Shoreline Management Plan recommendations (Royal Haskoning, 2011).

For this case study two sites were considered in more detail – Brownsea Island and Studland Beach. Brownsea is an island located within Poole Harbour. This small (202 ha) island attracts over 100,000 visitors each year. Its interest lies in its exceptional wildlife and heritage value and the tranquillity of the location. In the 1970s and 1980s the National Trust sought to reduce the rate of coastal erosion by construction of a line of defences along a 2.5 km length of its southern shoreline. Defence measures included sections of wooden palisade defences, gabion rocks or baskets and sheet pilings which, over the years, have become increasingly unsightly and ineffective in terms of coastal protection. The coastal policy for this frontage recommended 'no active intervention', and after extensive consultations it was agreed that the 'ad hoc' and failing defences should be removed and the works were completed in 2011. The works undertaken have provided a positive improvement to the visual and natural environment of Brownsea Island and have provided valuable experience for assessments of other Trust sites facing similar problems with aging coastal defences (Flux, 2012).

Biodiversity

Although much of the northern side of Poole Harbour is developed its west and south sides form part of the Purbeck Heritage Coast and the harbour itself together with its five islands form important wildlife havens including for the endangered Red Squirrel. The harbour itself is designated as a Ramsar site designated for the protection of wetlands. The harbour is bordered by three National Nature Reserves including Studland and Godlington Heath and non-statutory reserves run by the National Trust and the RSPB, notably Arne.

Poole Harbour, which is very shallow in places, has extensive mudflat and saltmarsh habitats as well as muddy and sandy shores and seagrass meadows. Three bird species occur in internationally significant numbers – the common shelduck, avocet and bar-tailed godwit. Other visitors include spoonbill, sandwich tern, Eurasian whimbrel and little egret. For more information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

The sequence of images provided illustrate the changing face of Poole Harbour, including Brownsea Island, and Studland Bay through a series of benchmarks - 1825, the late Victorian period, the 1920s, the 1990s and present-day photographs. William Daniell's view looking across Poole and the Harbour, produced in 1825, shows Poole itself as only a few cottages, with a distant prospect across the harbour to as far as Corfe Castle in the distance on the left. The distinguished architect and watercolour artist, David Addey, retraced William Daniell's Voyage Round the British Coast in the 1990s, and his watercolour shows a highly developed Poole in contrast, with much development on the edge of the harbour itself. Beyond can be seen Brownsea Island and in the distance Hurst Castle and the Purbeck Hills beyond. Fig. 8.3 shows a view from the Studland Heath, looking out across the harbour, painted in the 1920s and gives a general picture of the nature of the landscape that borders the harbour, particularly on its western side.

There are a number of views of Brownsea Island, but perhaps one of the most detailed is that by the Pre-Raphaelite Follower, William Buck, who produced this view of the waterfront in c.1870. The images of Brownsea Island, such as Fig. 8.6 taken from Constitution Hill, Poole, provides, again, an impression of the setting of Brownsea Island within the harbour.

A similar coastal erosion situation exists within the second study site at Studland Beach, where a series of watercolour postcards, produced by the prolific, Alfred Robert Quinton, in the 1920s show views of the frontage looking north towards Poole and south towards the Old Harry Rocks. These views show the nature of the shoreline and the gorse-covered coastal strip behind, as well as depicting a healthy sandy beach, which at that time appears relatively stable. However, the southern section of the beach, in particular, has been affected by ongoing erosion and in view of the limited economic justification and the environmental importance of the site, the National Trust has implemented a policy of managed realignment here. Brownsea Island and Studland, therefore, illustrate the sensible approach that can be adopted in such locations, as set out in the Trust's policy document 'Shifting Shores – Adapting to Change' (National Trust, 2014).

Key issues that can be learnt from this site

The artworks show a largely undeveloped coastline along the western and southern frontages of Poole Harbour. Here, rivers entering the harbour meant that these areas were less suitable for development compared to the cliff frontages extending west towards Poole from the Victorian resort of Bournemouth.

At Studland, artworks show an open, natural and stable beach frontage, looking both north and south with no indication of the significant coastal erosion problems now being experienced, perhaps as a result of long-term sea level rise and more frequent storm

events. The watercolours of heathland and other low-lying environments also show little evidence of long-term change, indicating successful approaches to habitat management.



Fig. 8.1: 'Poole Harbour' by William Daniell RA. Aquatint engraving. 1825. This extensive view from what is now Constitution Hill in Poole looks across the virtually open waterfront to the harbour, with Corfe Castle and the Purbeck Hills beyond. Private Collection.

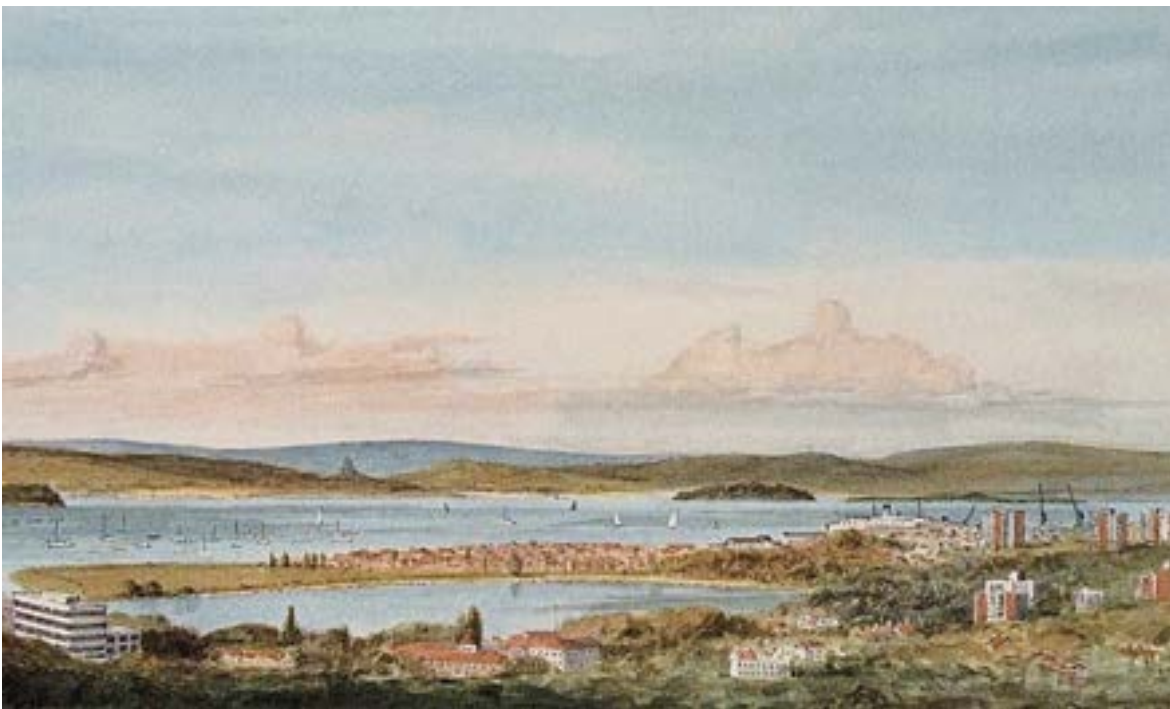


Fig. 8.2: The artist, David Addey, retraced Daniell's tour of the south-west coast of England and painted this watercolour from the same spot at Constitution Hill in 1990. This view shows the extensive harbourside development that has taken place.



Fig. 8.3: 'Studland Heath – Poole Harbour in the distance'. A watercolour painted in c.1913 by Walter Tyndale. Private Collection.

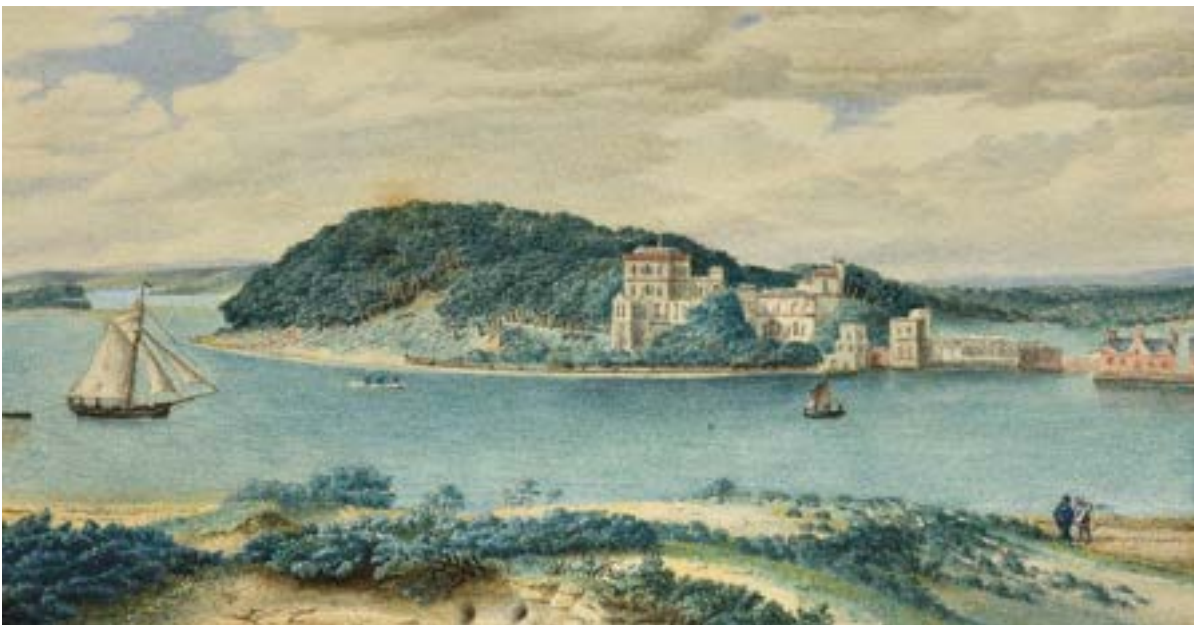


Fig. 8.4: A detailed watercolour of 'Brownsea Island' by the Pre-Raphaelite Follower, William Buck, c.1870s. Buck was renowned for his detailed and accurate observations of the coastlines of the Isle of Wight, Hampshire and Dorset. Courtesy: Russell Cotes Museum and Art Gallery, Bournemouth.



Fig. 8.5: 'Poole Harbour from Constitution Hill' by the postcard artist Alfred Robert Quinton, painted in watercolour in c.1920. Courtesy: Salmon's.



Fig. 8.6: The shoreline of Brownsea Island, looking out towards the mouth of Poole Harbour. Courtesy: Shutterstock Images/David Young.



Fig. 8.7: This watercolour by Alfred Robert Quinton was painted c.1920 and looks north along Studland Beach. Here the beach has been accreting towards Poole Harbour entrance. The present-day view is shown in Fig. 8.8, below.



Fig. 8.8: Studland Beach, Dorset, looking north. Courtesy: Shutterstock Images/Suxxes Photo.

Studland Bay lies to the south-west of the popular seaside resort of Bournemouth. Despite some protection from storms by a headland, which terminates at the famous Old Harry Rocks at the southern end of the bay, this coastal frontage has experienced rapid rates of change over the last decade; this has made the maintenance of defences at this location impractical and unsustainable. The Trust recognised that a number of the coastal defences were reaching the end of their life and were having a detrimental effect on the beach itself. After detailed consultations with the local community and beach users, an adaptation plan was agreed in 2017. It was recognised by the National Trust that whilst northern parts of the bay accumulated large quantities of sandy sediment, continuing erosion of the cliff and beach to the south presented an ongoing and increasing threat to the bay's temporary built environment, including beach huts, a visitors' centre and car park, as well as the amenity value of the beach itself. Some buildings are being relocated further inland, whilst continued monitoring of the frontage in the face of increased sea level rise and storm surges will be essential.



Fig. 8.9: In this view, looking south along Studland Beach by Quinton, Handfast Point can be seen in the distance. The beach here has been subject to significant coastal erosion and has necessitated changes in future management by its owner, the National Trust. Courtesy: Salmon's.



Fig. 8.10: Coastal erosion damage at Studland Beach in 2020. Ongoing erosion has led the National Trust to implement a policy of managed realignment at Studland. Courtesy: Sandy Gerrard/Creative Commons Licence.

Case study 9 – Lyme Regis to Axmouth (Devon)

Location

The location lies within the East Devon-Dorset Jurassic Coast World Heritage Site. The study site extends along the South Dorset and Devon coasts from Lyme Regis in the east to the village of Beer in East Devon to the west, a distance of approximately 9 km.



Why was this case study selected?

This is a dynamic coastline affected by a range of erosional and instability processes. The wild character of this coastline and the dramatic landslide frontages attracted artists and geologists in the late eighteenth and nineteenth centuries. As a result, there are numerous images available depicting this coast highlighting its changing physical and natural environments 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 whose portrayals of cliff geology are some of the most detailed produced by any artist during the Victorian period.

Summary of geology, geomorphology and coastal processes

The coastal geology of West Dorset is dominated by the famous Lias Group of mudstones and limestones of the early Jurassic Period, 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. The landslides along the sea 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 instability as a result of rainfall percolation, and loss of support at the toe of the cliff has resulted in this dramatic coastal landscape. The general direction of sediment transport is from west to east, as far as the harbour arms at West Bay; 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 East Devon coast is from west to east; there are no significant coastal defences along the Beer frontage (Halcrow, 2011).



Fig. 9.1: A view looking eastwards along the Lyme Regis Dorset frontage. Photograph courtesy of Wight Light Gallery.

Biodiversity

This dramatic study area coastline has a remarkable geodiversity including nationally and internationally important sea cliff and undercliff habitats. It lies within one of the most spectacular coastal landslide complexes in Europe and within the Jurassic Coast World Heritage Site, celebrated for its unique geology and natural environment. The cliff top coastal zone is a landscape of high, open, undulating or rolling plateaux with windblown vegetation such as Blackthorn fronted by crumbling cliffs and slides and often narrow shingle

or pebble beaches (Natural England, 2021). The Axmouth to Lyme Regis Undercliff is a National Nature Reserve (NNR) and the sea caves at Beer to the west are a Special Area of Conservation (SAC).

Over time the cliff instability and erosion processes have resulted in the loss of farmland, three coastal roads and a number of properties. The whole frontage has been the subject of detailed study and investigation over many years and the frontage presents serious challenges looking ahead to the future in terms of managing coastal change and striking a balance between the protection of people and the built environment through sympathetic civil engineering schemes, which embrace and celebrate the natural landforms, geology and processes that attracted the World Heritage status. For more information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

The artworks included within this case study frontage depict highly varied coastal environments at various points in time. At Beer in Devon, close to the Devon/Dorset border, paintings by artists such as Edward William Cooke RA demonstrate how, art can provide detailed depictions of the state of coastal environments with a high degree of accuracy. Such information can help inform both coastal management and understanding of the potential changes that are likely to affect cliff top land, the cliffs and slopes looking ahead over the next century.

The case study has assessed the value of various artworks in terms of informing us about natural change through a combined approach of a desk-based research, museum and gallery searches and a field visit. These have confirmed the added value of art from the period 1770-1920 to support other coastal surveying and monitoring technologies (e.g., Space-borne, air-borne, ship-borne and terrestrial). It is important to remember that artists in the late Georgian and Victorian eras worked for very demanding, wealthy clients who often sought exact views of the coastal landscape to remind them of their visit. Before the days of photography precise images were, therefore, a prerequisite in most cases. The examination of the works of many artists painting the geologically fascinating East Devon and West Dorset coasts testify to their considerable artistic skills in capturing accurately the coastal environments and processes.

Key issues that can be learnt from this site

The East Devon-West Dorset art case study site illustrates the processes of coastal change along the frontage including particularly the impacts of landsliding. This part of the English coast was painted by numerous artists and their output provides a chronological succession of works available for study, such as those views of the village of Beer, East Devon. The artworks demonstrate the level of detail that could be achieved by some the leading British nineteenth century artists. Artworks of the East Devon – West Dorset coast can, therefore,

be used to support understanding of the dramatic physical changes that have taken place along this frontage since the early nineteenth century.



Fig. 9.2: An extensive view along the cliff top from Charmouth looking eastwards by Alfred Robert Quinton, c.1920. Image courtesy of Salmon's.



Fig. 9.3 shows the present-day view. Courtesy: Sylvia McInnes



Fig. 9.4 (above): A panoramic view of the coast from above Lyme Regis past The Spittles, Stonebarrow Hill, Charmouth and Golden Cap by G. Hawkins, c.1830. Private Collection.



Fig. 9.5: 'Lyme Regis from Charmouth' by William Daniell RA. 1825. Lyme Regis was a small resort at this time. Private Collection.

Daniell's view is taken from the western side of the beach at Charmouth at High Water, looking along the coastline past the Black Ven landslide complex towards Lyme Regis. In his view the cliffline in the middle distance appears exposed (rather than vegetated), although there is no obvious evidence of cliff failure. He does, however, depict the lower part of the cliff in the middle distance in a darker colour, perhaps indicating the Blue Lias strata. The hillside beyond shows scattered development with the town of Lyme Regis round the headland. The image shows no obvious signs of instability and although Daniell refers to the fact that 'the cliffs in the neighbourhood contain peculiar attractions for the geologist' (Daniell & Ayton, 1814) he does not mention cliff or slope instability. This suggests that perhaps the landslides were activated or reactivated during the nineteenth century as a result of changing climatic conditions, sea level rise and human activity.



Fig. 9.6 by David Addey (1990) shows the extensive beach at Charmouth at Low Tide. Daniell's view was taken from the stone building on the right of the picture. Image courtesy of David Addey. Private Collection.



Fig.9.7: 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.

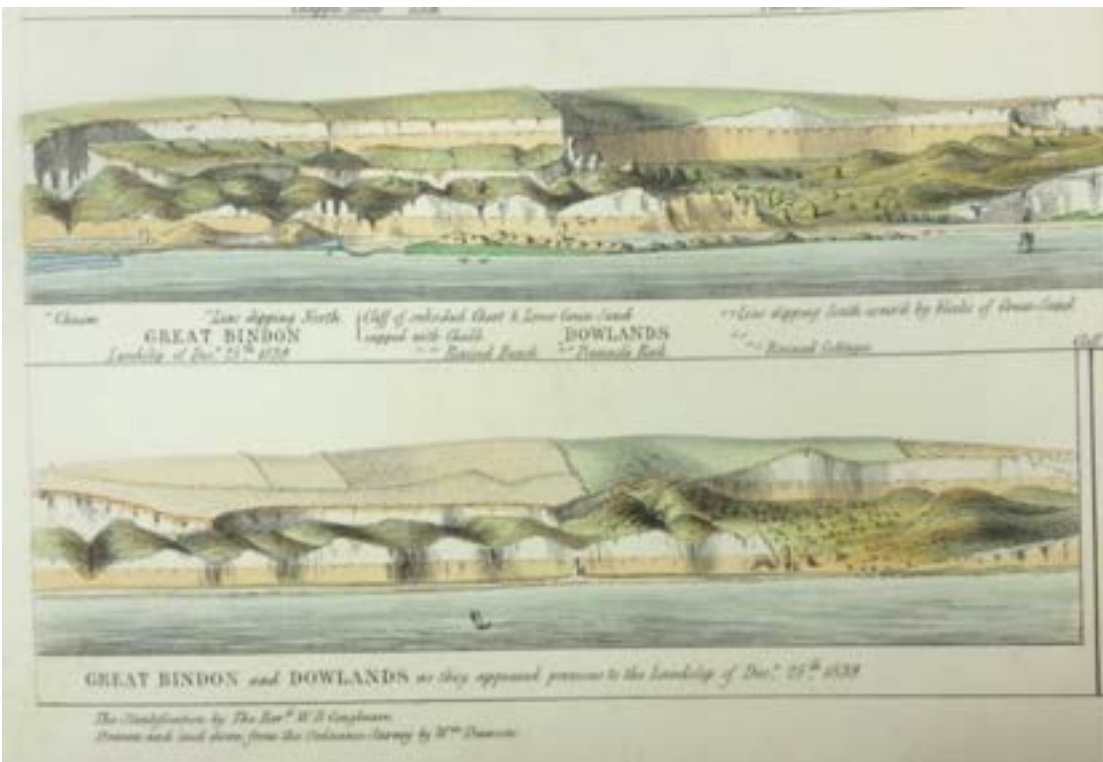


Fig. 9.8: In addition to their maps and plates, Conybeare and Dawson produced detailed views of the coastline from the sea, which provide an accurate record of coastal conditions and developments along this part of the East Devon/West Dorset coast. Image courtesy of Dorset County Museum and Heritage Service. (Conybeare and Dawson, 1840).



Fig. 9.9 shows a view of the great landslide that took place at Bindon and Dowlands to the west of Lyme Regis on Christmas Day 1839. Private Collection.



Fig. 9.10: A view of the Bindon landslide by the prolific watercolourist Alfred Robert Quinton, c.1900. Courtesy: Salmon's.



Fig. 9.11: 'Fishing Cove of Beer' by Edward William Cooke RA; 1858. Cooke was very interested in geology and stated that he would have become a geologist were he not an artist. His oil paintings are remarkable for their clarity as well as the attention to geological detail. This view looks eastwards towards Dorset. Image courtesy of J. Munday/Private Collection.



Fig. 9.12: This photograph shows the right-hand section of Cooke's painting with the distinctive chalk outcrop in the upper cliff now surrounded by trees. Courtesy: © Ian West.



Fig. 9.13: A detailed watercolour of Beer beach and cliffs by Arthur W. Perry (c.1900). Image courtesy: Private collection.

The views of Beer are each looking at the chalk headland from the west. The artworks are very similar in terms of subject matter. The very detailed oil painting by the 'Pre-Raphaelite Follower' and geological artist, Edward William Cooke RA, provides the most extensive view looking eastwards. Cooke also painted a view from the opposite side showing Beer Head in the distance (1858). The watercolour by Arthur W Perry, painted c.1900, depicts a closer view of the headland. As in the work by Cooke the geological formations are painted in careful detail. The third and most recent view, a watercolour by Alfred Robert Quinton, was painted in the early twentieth century.

What these artworks show is a remarkable similarity in terms of the shape of the cliffline, the jointing in the cliff face, and the form, profile and nature of the beach. These paintings were all produced by artists who were known for their topographical accuracy, and visual comparisons of this kind help to provide confidence in artworks amongst professionals interested in coastal management in support of their understanding of geomorphological change along their particular frontage.

These artworks indicate, first, that the cliffline at Beer is subjected to extremely slow change as a result of coastal erosion and cliff weathering. Second, the beach has remained relatively static over a period of some 70 years, even though there may have been fluctuations over the intervening period. Finally, the vegetation patterns also seem very similar over time. Images which confirm that the coastal frontage has changed very little over time are equally important to those which show more dramatic changes, and help to build up a long-term perspective of coastal change along any particular frontage.



Fig. 9.14 and 9.15: The present-day photograph below (Fig. 9.15; Courtesy Ian Woolcock) bears close comparison with the watercolour by Alfred Robert Quinton painted c.1900 (Fig. 9.14, above). Courtesy Salmon's.



Case study 10 – The Lizard, Cornwall

Location

The Lizard is a rocky peninsula in southern Cornwall and is the most southerly point of the British mainland.



Why was this case study selected?

The focus of the case study is Lizard Point and Kynance Cove on the western side of the Point. The Lizard was selected as a case study site because of its considerable geological interest, its dramatic range of geomorphological features and its outstanding natural environment. The Lizard is designated as a National Nature Reserve and contains three Sites of Special Scientific Interest (SSSI). Across The Lizard peninsula some of the most specialised flora of any area in Great Britain can be found, including many Red Databook plant species.

Because of the outstanding and dramatic coastal scenery, The Lizard was one of the most painted locations in Cornwall and was visited by some of our greatest painters, including artists of the Pre-Raphaelite Brotherhood, who's ethos was to capture nature totally truthfully in exact detail. Taking account of all these factors The Lizard represents an ideal case study for the wider project.

Summary of geology, geomorphology and coastal processes

The peninsula is composed of Devonian rocks and is the best known example of an exposure of Ophiolite in the United Kingdom, Ophiolites are a suite of geological formations which represent a section of the ocean crust that has been thrust, in geological terms, onto the continental crust. The Lizard Formations include the serpentinites and other metamorphic rocks. Since Victorian times and earlier, serpentine has been skilfully crafted into ornaments for the tourist trade (British Geological Survey/NERC, 2017).

The coastal cliffs include fine examples of sea stacks, caves and blow holes. The exposed nature of the location projecting out into the western approaches, results in dramatic seas, which crash against the resilient cliffs. There is a significant tidal range at this point and this is illustrated in some of the artworks to follow.

Biodiversity

The Lizard is designated as a Special Area of Conservation (SAC) on account of its diverse site character. Designated features include the shingle beaches, sea cliffs and islets, as well as bogs, marshes and water-fringed vegetation to be found on the headland, alongside heath and scrubland. The Lizard peninsula is designated as a National Nature Reserve and includes three main Sites of Special Scientific Interest (SSSI) noted for their endangered insect and plant species, as well as for the geology. It is inhabited by one of England's rarest breeding birds, the Cornish chough. The flora of The Lizard is also unique in terms of its diversity, with over 600 species of flowering plants having been recorded, representing nearly a quarter of all species to be found in the United Kingdom. The richness of the flora is on account of a number of factors including the very mild maritime climate but a location also prone to severe weather. Alongside this, the waterlogged and boggy soils on the headlands and their tendency to dry out in the summer creates contrasting conditions, thereby encouraging a broad range of species to be found here. For more information on

the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

The richest period of topographical painting of The Lizard was from the middle of the nineteenth century until 1900. Pre-Raphaelite artists, including John Brett, who is one of the finest painters of English coastal scenery, and William Holman Hunt, one of the founder members of the Pre-Raphaelite School, both painted precise oils of this coast. Because of their attention to detail, they form reliable benchmarks of the physical and natural environments at the time they were painted, and allow comparison with conditions that exist today.

Key issues that can be learnt from this site

Physical evidence of change over time appears to be quite minimal and many of the rock formations located even at those points where wave attack would be greatest, appear similar today. Natural change, taking account of the limited human intervention, also appears much as during the Victorian period. The lack of change can often be a result of good management in locations such as this, which is cared for by Natural England, the National Trust and Cornwall Wildlife Trust.



Fig. 10.1: 'The Lizard Peninsula' by John Brett ARA. Oil. 1876. This extensive view over England's most southerly point shows the distinctive rocks of Kynance Cove, including Asparagus Island in the centre and Steeple Rock, a pillar to its left. Brett was an artist of the Pre-Raphaelite Brotherhood whose ethos was to capture nature truthfully and accurately. Courtesy: Maas Gallery.



Fig. 10.2 is also painted by John Brett in oils. Dated 1889 it is entitled 'The Lion, the Lizard and the Stags'. The rocky headland depicted here can be seen also mid-left in the painting in Fig. 10.1. Courtesy: Private Collection/Bridgeman Images.



Fig. 10.3: 'Asparagus Island' at The Lizard painted by another leading Pre-Raphaelite artist, William Holman Hunt, in 1860. Courtesy: Private Collection/Bridgeman Images. Named for the growth of asparagus on this rocky islet, its grassy slope faces away from the prevailing winds and storms. To its left Steeple Rock can be seen.



Fig. 10.4: This further view of Kynance Cove also shows Asparagus Island. This watercolour was painted by the prolific postcard artist, Alfred Robert Quinton, in c.1920. The scene appears to have changed little since 1860. Courtesy: Salmon's.

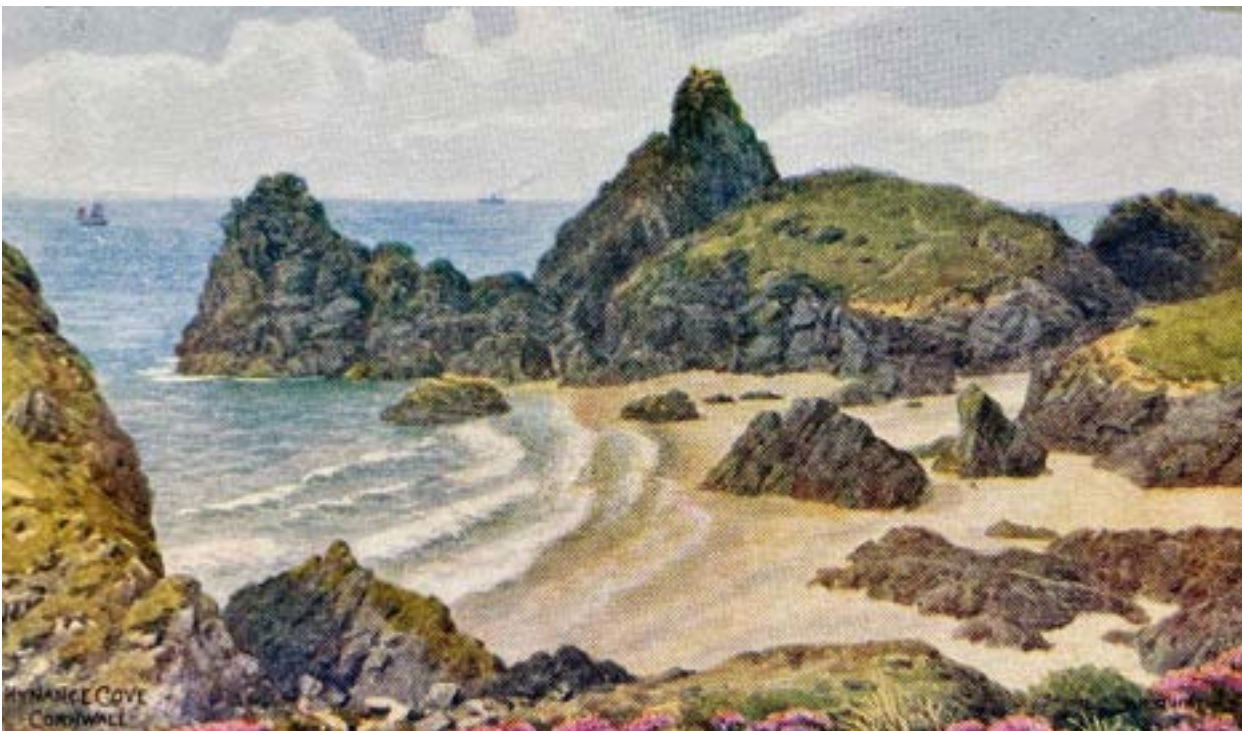


Fig. 10.5: This watercolour by A.R. Quinton, c.1920, shows the view looking north-east towards Asparagus Island with its extensive sandy beach exposed at Low Water. Courtesy: Salmon's.



Fig. 10.6: This present-day photograph shows an extensive view of Kynance Cove and the general character of The Lizard, which is one of England's most important habitats for flora and a diverse range of other species. The site is also noted for its outstanding geological and geomorphological interest. Courtesy: Shutterstock Images/Skowronek.



Fig. 10.7: This highly detailed watercolour of Lizard Point was painted by the Pre-Raphaelite Follower, Anna E. Blunden, in 1862. She has achieved an extraordinary level of geological and vegetation detail in this artwork. The painting is also notable for the richness of colour. Courtesy: The Whitworth, University of Manchester/WatercolourWorld.



Fig. 10.8: This closer view by A. R. Quinton in c.1925 shows the boathouse and slipway added and the lighthouse on the headland. Courtesy: Salmon's.



Fig. 10.9: This further watercolour by A.R. Quinton, c.1920, shows the view of The Lizard from the other side of the headland at Housel Bay. Courtesy: Salmon's.



Fig. 10.10: Despite the severity of the storm waves at this point, the angular rock on the headland has survived a century and is still there today, as shown in this photograph. Courtesy: Shutterstock Images/Geograph, Mike Lobb.



Fig. 10.11: ‘Kynance Cove’ painted by Colin Richens in 2020 in oils. Richens is one of the finest painters of the British coast today and his works are as good as a photograph. Being a member of the Society of Miniaturist Artists, he also follows the Pre-Raphaelite ethos of topographical accuracy. The tidal range at the cove is clearly indicated on the faces of the cliffs and islets. Private Collection.

Case study 11 – North Devon coast (Lynton to Porlock)

Location

This case study extends along much of the Exmoor coastal frontage, from Lynton and Lynmouth in the west to Porlock in the east, a distance of 29km. It is broken by wooded coastal combes and cleaves such as at Lynmouth, and by farmland and marsh at Porlock Bay to the east. This is a dramatic coastal frontage with high, steep cliffs backed by heather-clad moorlands with gorse and coastal grasslands. The shoreline comprises rocky promontories and bays, which provide extensive exposures of the distinctive coastal geology.



Why was this case study selected?

This important section of the Exmoor National Park coastal frontage represents a distinct 'Landscape Character Type', one of nine such zones within the National Park and which, with coastal combes and cleaves, contribute to the remarkable scenic character of the coastline of North Devon. Artists were attracted to the subject matter here and, as a result, the extensive range of artworks allow comparisons to be made between past and present environments. The coast at Porlock is unique along the Exmoor National Park coastline in that it provides an example of a frequently illustrated low-lying marsh and shingle shoreline, separated by steeply rising headlands to the west, to the east and hills to the south.

Summary of geology, geomorphology and coastal processes

The geology comprises sandstones, siltstones and slates of the early Devonian Period, together with later outcrops of the Torbay and Tamar Groups. The undefended sections of coast are generally resilient, although weathering, coastal erosion and cliff instability have resulted in limited retreat over time. Coastal defences are in place at Lynmouth and substantial improvements have been made to flood defences at the mouth of the Lyn following the disasters in 1952 and the 2013/14 storm event (British Geological Survey/NERC, 2017).

To the west of Lynmouth the Valley of Rocks at Lynton is a dry valley that runs parallel to the coast. The Lynton Formation here are the oldest Devonian rocks in Devon. The Valley is also noted for its periglacial features formed when the area was at the limit of the glaciation during the last Ice Age.

At the eastern end of this study site is Porlock Vale, which is formed within the Mercia Mudstone and Penarth Groups of the Triassic Period. These younger rocks are covered by more recent fluvial deposits and are fronted by a shingle shoreline. The shingle ridge, which straddles the bay and has historically provided protection for property and assets behind, has proved increasingly difficult to maintain in recent years and the privately owned frontage, following storm events, introduced an adaptation strategy allowing nature to take its course. Porlock Bay is a site notified for its nationally important active geomorphological processes and is an SSSI.

Biodiversity

This coastal case study frontage is designated for its geological, environmental and heritage significance, including a Special Area of Conservation (Exmoor Heaths), Sites of Special Scientific Interest, a Marine Conservation Zone and Heritage Coast.

The breaching of the shingle bank has led to the creation of a new landscape that is unique to the National Park, with a significant expansion of the saltmarsh area and the creation of an important habitat both rich in maritime flora and an important habitat for breeding birds. At Porlock a large part of the site is saltmarsh which is dominated by common glasswort (*Salicornia europaea*) and sea blite (*Suaeda maritima*); also found here is the nationally rare Babington's Leek. There is a diverse ornithology along this coast and at Porlock grey heron, little egret and shelduck can be seen and a wide range of migratory species. For more information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

There is a rich art resource depicting the North Devon coastline since the late eighteenth century. Although there are fewer images of the open coast, there are numerous views of

the fishing villages that expanded to become popular seaside resorts by the mid-nineteenth century, in particular Lynmouth and Combe Martin. The dramatic coastal frontage, including the Valley of Rocks at Lynton, is richly illustrated and, whilst changes can be perceived in terms of expanding coastal development over time, the artworks demonstrate how well managed much of this case study area has been in the face of physical, environmental and socio-economic pressures.

This case study is the most illustrated location within Exmoor National Park. The dramatic coastal scenery incised by south flowing romantic and picturesque river gorges, together with the popularity of the resorts of Lynmouth and Lynton all contribute to this rich art resource. This particular location attracted numerous artists and a chronology is provided by their works, running from the 1790s until the 1920s when Alfred Robert Quinton produced watercolour views for the postcard manufacturers J. & F. Salmon of Sevenoaks. The attractively located tea rooms adjacent to the river at Watersmeet drew many Victorian and Edwardian visitors, as indeed the site does today, and this encouraged the production of more artworks for sale to customers.

George Rowe and William Spreat produced exceptionally fine lithographs of this part of the Exmoor coastline. Lithography allows fine detail to be drawn and this includes the patchworks of cultivated slopes behind Lynmouth, which, today, are largely covered by trees or by development. Lynmouth itself has an exceptional range of art images, again spanning a period of nearly 250 years. A number of these are illustrated in this case study.

The topographical engravers from the 1830s and 1840s have provided us with a rich legacy of coastal artworks, particularly looking eastwards from Lynton, including, for example, views of the Valley of Rocks Hotel towards Countisbury Hill and the coastline further to the east; the steep winding coastal road up the hill is a prominent feature in many of these early views. Similarly, these lithographs show the nature of the countryside looking down onto Lynmouth and Lynton from across the valley sides, showing rocky outcrops, the extent of woodland and the location of areas devoted to agriculture, often distinctively bounded by hedges (McInnes & Stanford-Clark, 2021).

Key issues that can be learnt from this site

The case study comprises largely a natural wild and beautiful cliff top frontage, affected by relatively little development. Whilst there have been some tourism impacts over time, comparisons between historical artworks and present-day observations and photographs show that the natural landscape has been particularly well preserved.

The wide range of images available for this case study produced over the extended time period from the 1790s until the 1920s illustrate and help us understand change as a result of physical processes, both coastal and fluvial, as well as landscape change as a result of changing farming practices, and the gradual expansion of development at Lynton and Lynmouth over time. Observable changes are an apparent increase in tree growth within the valley of the Lyn, the spread of gorse at the expense of heather in some of the uplands and the cultivation of the upper slopes, which have now often reverted to woodland. The

influence of tourism development and the pressures it has imposed over time, include the expansion of the built environment and the road network.

The main focus for artists in Porlock Bay has been the coastal frontage and, in particular, the lines of timber groynes that have long been such a dominant feature of the shoreline. The groynes appear rudimentary in the early nineteenth century but, by the 1850s, no doubt as a result of a clearer understanding of coastal processes and the need to provide improved levels of protection, these structures became more substantial and are illustrated in the magnificent oil painting by Edward William Cooke RA. The mouth of the bay also features groynes supporting banks of cobbles in the painting by the Pre-Raphaelite Follower, Charles Napier Hemy. The case study benefits from a rich art resource including works by some of the artists ranked most highly for their topographical accuracy thereby offering valuable records of this changing coastal frontage.



Fig. 11.1: A fine lithograph of the imposing 'Valley of the Rocks Hotel' at Lynton taken from the garden front and looking eastwards over Lynmouth to Countisbury Hill and to Foreland Point beyond. Private Collection.



Figs 10.2 & 10.3: Contrasting views of Countisbury Hill, Lynmouth, over time. A. R. Quinton painted this view in c.1920; the coastal slopes were covered by trees as they are today. Courtesy: Fig. 10.2 – Salmon’s; Fig. 10.3 – Sylvia McInnes.



VALLEY OF THE ROCKS, LYNMOUTH (LOOKING WEST)



Fig. 10.4: G. Rowe 'Lee Bay from Duty Point' c.1840. Private Collection.



Fig. 10.5: G. Townsend 'Lee Abbey' c.1838. Private Collection.



Fig. 10.6: 'Valley of the Rocks' by William Henry Millais captured in watercolour in 1857. The exceptional detail obtained by the artist allows comparison with later and present-day images. Despite some limited developments and tourism pressures the character of this fascinating site remains largely unchanged. Courtesy: Maas Gallery

VALLEY OF THE ROCKS, LYNMOUTH (LOOKING EAST)



Fig. 10.7: 'Castle Rock, Lynton' by A.R. Quinton. 1925. Courtesy: Salmon's.



Fig. 10.8: 'Valley of Rocks' by A.R. Quinton. 1925. Courtesy: Salmon's.



Fig. 10.9: The eastern frontage of the valley is depicted in Millais' panoramic view. Image courtesy: Maas Gallery.



Fig 10.10: Valley of Rocks today; Photo: Sylvia McInnes



Fig. 10.11: 'Mother Meldrum's Cave' by J.T Linnell c.1885. Courtesy: Maas Gallery



Fig. 10.12: W. Spreat, both c.1840s, provide extensive and detailed views of Lynton and Lynmouth showing their development in this spectacular coastal setting. Lithography allowed a high level of detail to be obtained, offering insight into the nature environment, agriculture and cultural heritage here in the mid-nineteenth century. Private Collection. Fig. 10.13 shows the shore and the Rhenish Tower, a prominent local landmark.



Fig. 10.13: 'Lynmouth' by Albert Goodwin from the shore at Low Water in 1877. Courtesy: Chris Beetles Gallery, London.



Fig. 10.14: 'Porlock Weir' captured in Pre-Raphaelite detail by Edward William Cooke RA in 1862. Courtesy: Martyn Gregory Gallery, London.



Fig. 10.15 shows a view looking across the Bay by Charles Napier Hemy, painted in oils in 1891. Courtesy: Maas Gallery/Bridgeman Images.



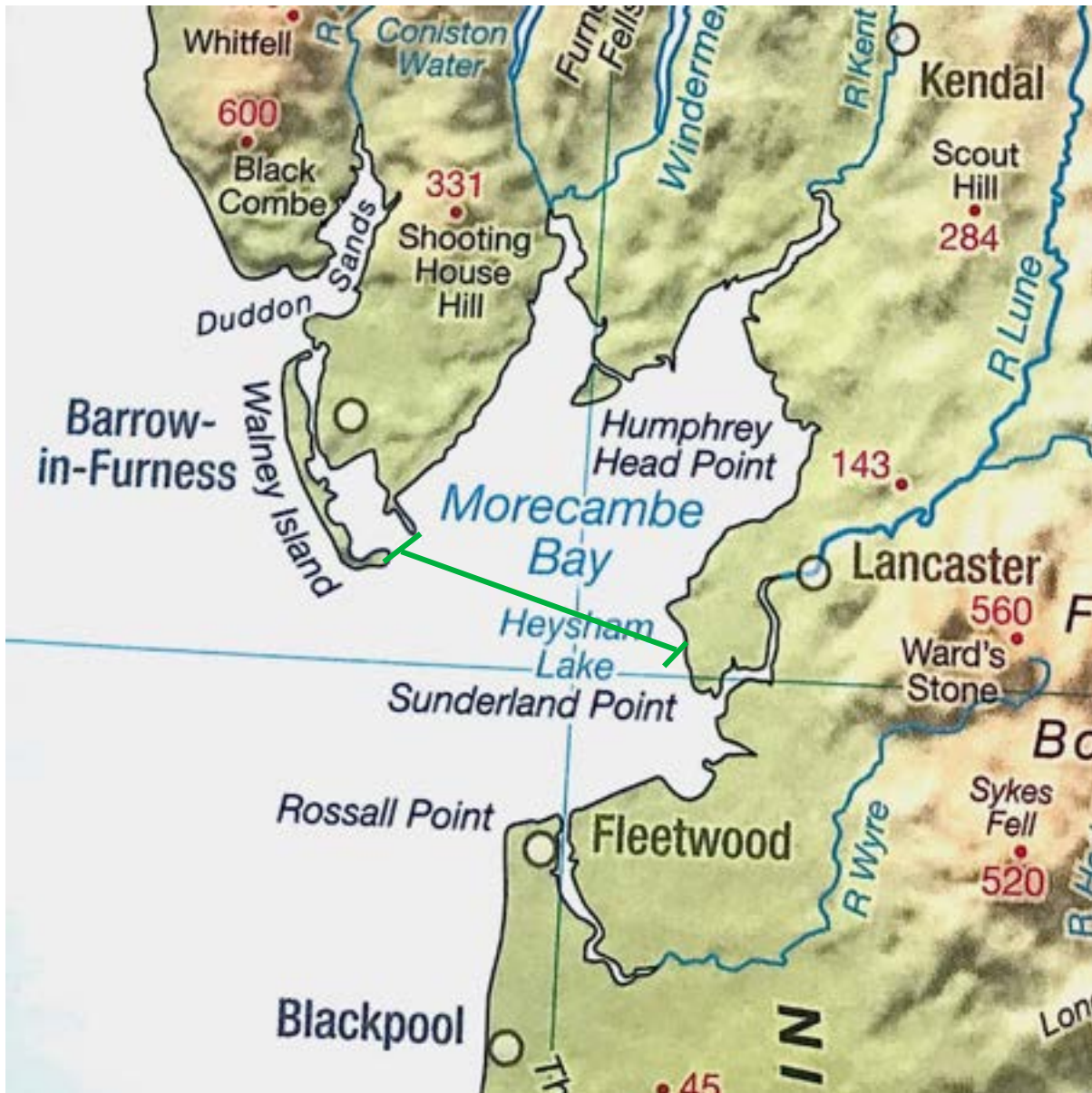
Fig. 10.16 & 10.17: Panoramic views over Porlock Bay between Hurlstone Point and Porlock Weir on the coast of the Bristol Channel. The extensive shingle ridge shoreline is clearly visible together with its saltmarsh hinterland. A storm in October 1996 breached the shingle bank, which had previously formed a coastal defence, leading to inundation of the marshland behind. The National Trust subsequently adopted a ‘managed realignment’ approach to this frontage. Images Courtesy: James Johnstone/Geograph Images.



Case study 12 – Morecambe Bay, Cumbria

Location

The case study comprises the coastline of Morecambe Bay, extending from Grange-over-Sands in the north to Heysham in the south, a distance of 18 km.



Why was this case study selected?

Morecambe Bay comprises a diversity of habitats, including coastal and floodplain wetlands, saltmarshes and species-rich grasslands. The bay itself is a large estuary located just to the south of the Lake District National Park and is in fact the largest expanse of intertidal mudflats and sand in the United Kingdom. A number of artists painted the bay looking out from the high ground to the east, as well as views of Morecambe and the developing resort of Grange-over-Sands.

Summary of geology, geomorphology and coastal processes

The bedrock geology in the vicinity of Morecambe Bay comprises largely Lower Carboniferous limestone where the sedimentary rocks have been exposed following volcanic uplift on the periphery of the Lake District Fells, which lie to the east. The limestone is exposed as distinct blocks rising up through the overlying drift geology (Natural England, 2010). The bay itself covers a total area of 310 sq. km. with the rivers Leven, Kent, Kerr, Lune and Wyre draining into the bay, with their own various estuaries making a number of peninsulas within the bay itself. Much of the land around the bay is reclaimed, forming saltmarshes.

Within the bay itself there are seven main islands, of which Walney is substantially larger than the others. The effects of tidal erosion and deposition result in significant changes to the pattern and balance of the bordering saltmarsh, sands and river channels, particularly of the rivers Leven and Kent. The coastal fringing saltmarshes around these two rivers act as a natural tidal defence. From Morecambe, moving northwards along the coast, particularly between Carnforth and the mouth of the River Kent, dunes and rocky outcrops, such as near Silverdale and Arnside Knott, show low rocky cliffs within what has been designated as an Area of Outstanding Natural Beauty.

Biodiversity

The coastal frontage of Morecambe Bay is a dynamic, generally low-lying landscape which consists of extensive intertidal sandflats, open marsh and muddy and sandy beaches backed by low cliffs of limestone. A particular feature is the overall character of the landscape with its wide grey sandy bay and the colour and light on the surface of the water providing a particular and ever-changing character; this aspect is particularly well represented in some of the following artworks. The Bay is a Ramsar on account of the exceptional value of the natural environment and its contribution towards biodiversity. The area around Arnside and Silverdale and at Humphrey Head support an exceptional diversity of 'oceanic limestone' specialist plants (Natural England, 2021). The diverse range of species found within the case study area include a number of national importance, including limestone butterflies, the bittern, marsh tit and lady's-slipper orchid. For more information on the environmental and landscape designations within this case study site visit <https://magic.defra.gov.uk> where these can be easily found.

How can the art imagery resources inform us of environmental changes within this coastal zone?

Apart from an aquatint engraving, produced by William Daniell RA, of Heysham in 1821, depicting a view looking out to sea from a coastal heritage site (Fig. 12.1), this frontage was not painted until Victorian developments started to appear in the mid-nineteenth century. One of the first of these was a view of Heysham by Edmund J. Niemann in 1853 (Fig. 12.2), which offers a panorama from the higher ground behind the town, looking out westwards across the southern section of the bay.

The important topographical artist, Sidney Richard Percy, painted a number of views of Morecambe Bay in oils, often on a grand scale. Most of his views are painted from the higher ground behind Grange-over-Sands but also a delicate view of Lancaster Sands, which shows the extent of the mudflats at that time (Fig. 12.3). His further view of Grange-over-Sands (Fig. 12.5) shows, again, an extensive view over Morecambe Bay but in this case at High Water.

The beautiful scenery near Silverdale to the north is captured by James Peel in his oil painting (Fig. 12.7) and appears to show remarkably little change when the present-day view is compared (Figs. 12.7 and 12.8).

The prolific watercolour artist and postcard illustrator, Alfred Robert Quinton, visited Grange-over-Sands in the 1920s and shows the developing town with its Victorian and Edwardian villas and coastal defences and promenade. It also shows the nature of the foreshore with limestone boulders and the sandy beach fronting the seawall.

The art imagery seems to suggest relatively little change along the wider frontage and the overall character of this beautiful landscape has been preserved without significant intrusion.

Key issues that can be learnt from this site

This part of the coast of north-west England was painted by few artists as the subject matter of Morecambe Bay tended to attract less attention than the scenic majesty of the Lake District to the east. However, the case study illustrates that even in more remote and low-lying locations there are artworks available for interrogation, which, even if not providing specific detail, illustrate the wider landscape character of sites as important as this one.



Fig. 12.1: 'Heysham' by William Daniell RA. Aquatint. 1821. An ancient burial site on the cliff edge which has been affected by significant coastal erosion. Private Collection.



Fig. 12.2: 'Heysham, Lancashire' by Edmund J. Niemann. Oil. 1863. A panoramic view of the coastal zone by this highly regarded Victorian painter. Courtesy: Bridgeman Images.



Fig. 12.3: 'Lancaster Sands' by Sidney Richard Percy. Oil. c.1870. Another dramatic landscape by this artist showing a tranquil scene across the sands at Low Water. Courtesy: Bridgeman Images.



Fig. 12.4: 'Seaweed Gatherers – A Grey Day' by Henry Moore RA. Oil. 1874. Courtesy: Maas Gallery, London.



Fig. 12.5: 'View near Grange-over-Sands' by Sidney R. Percy. Oil. 1874. This fine painting shows the hinterland to Morecambe Bay at High Water. Courtesy: Willow Gallery, London.



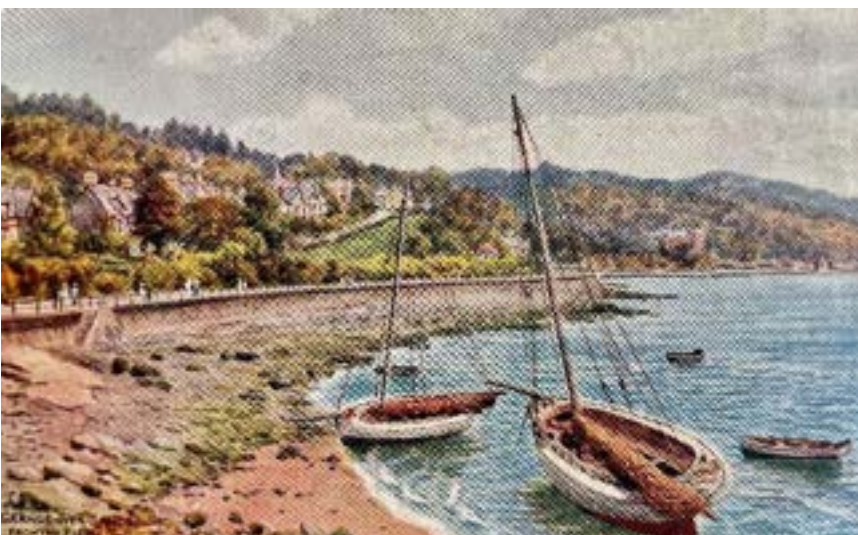
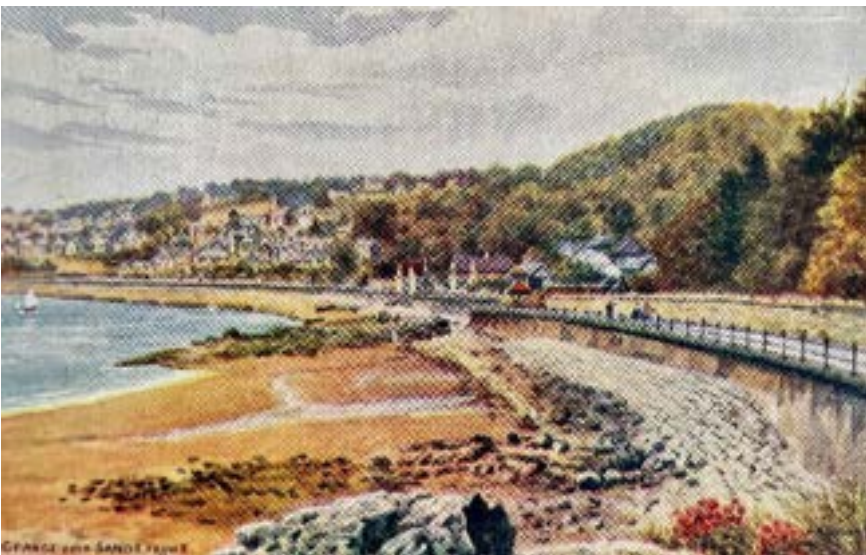
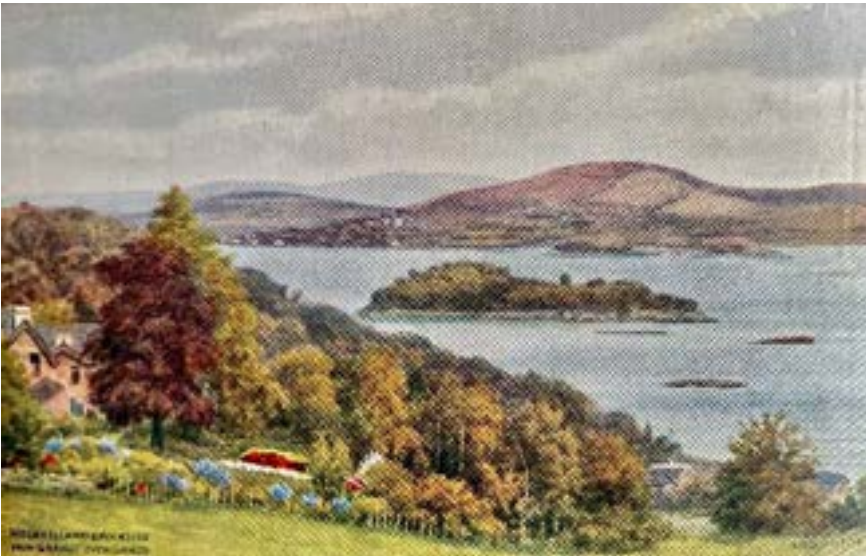
Fig. 12.6: 'Morecambe Bay from Grange-over-Sands'. 2015. Courtesy: © Phil Platt/Creative Commons Licence.



Fig. 12.7: 'Near Silverdale on Morecambe Bay' by James Peel. Oil on canvas. c.1860. Courtesy: Woolley and Wallis Auctions. This beautiful location seems to have changed little since the 1860s when compared with the present-day view in Fig. 12.8. Courtesy: John Roberts/Shutterstock Images.



Figs. 12.9-12.11: These three watercolours by the Edwardian postcard artist, Alfred Robert Quinton, c.1920, show coastal views at the developing resort of Grange-over-Sands. By this time the town frontage was defended with a stone seawall fronting a rocky and sandy shore. Courtesy: Salmon's.



Analysis and Discussion

Introduction

England's coastal zones and the natural environments that they contain are of enormous variety, scenic beauty, geomorphological and ecological interest on account of their diverse geology. The geological history, including the impacts of mountain building phases, have caused the rocks to be compressed, folded and faulted and, subsequently, they have been subjected to the processes of weathering and erosion over millions of years. Later, the impacts of glaciation and changes in sea level have led to the evolution and shaping of the coastline as we know it today.

Since the mid-nineteenth century geologists, geographers, environmental scientists and archaeologists have provided evidence of long-term coastal change; this includes records of lost villages, coastal structures such as lighthouses, fortifications and churches, other important archaeological sites, as well changing natural habitats. Some of these important assets have been lost or obscured through sea level rise or coastal erosion, whilst elsewhere, sea ports have been stranded from the coast following the accretion of extensive mudflats and saltmarshes. This study has sought to advance our understanding of the scale and rate of change affecting natural environments of coastal zones by utilising artworks dating back to the 1770s.

All those involved in coastal management have a requirement for high quality data and information including a thorough understanding of the physical processes at work around our coastlines. An appreciation of the impacts of past and potential evolutionary processes is fundamental if we are to understand and manage our coastal environments in the most effective and sustainable way.

The preparation of shoreline management plans (SMPs) over the last two decades together with the comprehensive data and information provided in Natural England's 'National Character Area Profiles (NCAs) have also highlighted the importance of taking a long-term prospective of coastal evolution in order to inform effective decision-making (Defra, 2006; Natural England, 2015). In many locations coastal monitoring is a relatively recent innovation and there are few locations where systematic monitoring has been in place in for more than twenty years. It has, of course, been possible to make use of photographic images and these can provide coastal information, albeit mainly in black and white, dating back to the 1850s. However, by making use of the art imagery resource it is possible to take advantage of the wisdom of hindsight by reviewing detailed paintings of our coastlines, extending back as far as the 1770s, and in full colour.

Brief Resume of Study Approach

This purpose of this study has been to illustrate the multiple benefits to be derived from the use of historical artworks (1770-1950) as a tool to support understanding of long-term

environmental change, or lack of change, across England since the late eighteenth century. Extending back a century before the introduction of black and white photography art, in full colour, can provide a detailed record of the physical and environmental changes and human influences that have shaped England's coastlines over the last 250 years. In particular, often highly detailed artworks record change over time, first coastal zones, in their natural, unconstrained forms, and later, often showing extensive human intervention with, encroachments and other modifications for commercial or touristic purposes.

The study demonstrates how such images provide a chronology of changes that have taken place over time. This report explains and illustrates how art, as an additional, currently under-used resource may allow us to take advantage of the wisdom of hindsight when seeking to understand, manage and preserve these environments most effectively in the face of a changing climate.

The study seeks to show, therefore, how paintings, watercolours and prints, including works by many of England's finest artists, can inform consideration of:-

- our understanding of the morphology of coastal zones;
- patterns of land use and development change over time;
- sustainable habitat restoration and management;
- the chronology of coastal change over time and its impacts, which can inform both planning policy-making and environmental management.

The study has utilised a ranking system for confirmation of the topographical accuracy of artists and their works building on an approach developed by the authors for 'The State of the British Coast' study and earlier research (McInnes & Stanford-Clark, 2018). For the first time a list has been prepared of artists who painted England's coastal environments most accurately.

At a time when local authorities and nature conservation bodies are examining increasingly any environmental gains that may be derived from altering or removing coastal defence structures art provides the opportunity to review the coastline in its natural condition since the 1770s. This could prove to be an invaluable tool to inform wise decision-making and aid designs.

The popularity of the seaside, particularly during the nineteenth and early twentieth centuries, has meant that there is excellent coverage of most parts of the British coastline through the medium of art. This includes original paintings in both oil and watercolour and also many kinds of engravings, which were often included in illustrated topographical travel books and guides. The same artists would often return to the spot many times to re-paint or update a particular view as the coast changed and expanded over that time period. Where one is confident of the accuracy of the artist, it is, therefore, useful to examine sequences of their works or to group artists' works together to help increase our understanding of change at a particular location.

Study Tasks

This Art and the Coastal Environment Study comprised five main Tasks

TASK 1: Confirmation of the choice of up twelve case coastal study sites from across England.

These were selected after a review of their interest from environmental perspectives and after taking account the range of art images available. The sites investigated were:-

1. Holy Island to Alnmouth, Northumberland
2. Cromer to Sea Palling, Norfolk
3. Southwold to Orford Ness, Suffolk
4. Ramsgate to Dover
5. North Solent Shoreline
6. Isle of Wight Solent Shoreline
7. Isle of Wight Undercliff
8. Poole Harbour to Studland Bay, Dorset
9. Lyme Regis to Axmouth, Dorset and Devon
10. The Lizard, Cornwall
11. Lynton & Lynmouth to Porlock, North Devon
12. Morecambe Bay, Cumbria

TASK 2: Image searches for oil paintings, watercolour drawings and prints depicting England's coastal environments.

This task involved searches on the websites of ArtUK (for oil paintings) and WatercolourWorld (for watercolours). The research identified 3,240 river images from within the 19 case study sites prior to screening through other Internet searches, The National Archives, Victoria & Albert Museum, the British Museum, Tate Britain, the Courtauld Institute and the Witt Library, the auction catalogue archives of Sotheby's, Christie's and Bonham's, regional art galleries, local authority collections, picture libraries and personal collections.

For the purposes of this study England's coastal environments were explored and evaluated through study of the works of a number of key artists or artistic groups that form benchmarks spanning the study time period (1770-Present Day). These comprised:

1. **William Daniell RA**, who, between 1814 and 1825, toured the whole of the British coastline producing 308 aquatint engraved views, which were contained in his publication 'A Voyage Round Great Britain' (Daniell & Ayton, 1814-1825).
2. **For the nineteenth century** there is a rich resource of landscape paintings, many of which were exhibited at the Royal Academy and other principal London exhibitions, as well as more local works often produced by amateur artists. One important group that contributes in particular to this study is the Pre-Raphaelite Brotherhood that flourished from the late 1840s to the early 1850s, who sought to paint nature out of doors and in a truthful and highly accurate manner. Although the Pre-Raphaelite Brotherhood was relatively short-lived, its Followers continued to paint in this highly detailed manner until nearly the end of the nineteenth century.
3. In the early twentieth century **postcard manufacturing companies** commissioned artists to paint colourful watercolours of the coastal towns and villages as they expanded in order to fulfil the popular demand for sending postcards and also to meet the demand of those who wished to collect cards. Artists including Alfred Robert Quinton, who alone painted particularly between 1900 and 1934 and produced several thousand watercolour views of coastal towns and villages in England and Wales; these represent a valuable resource.
4. **From the late 1980s until 2000** the distinguished architect and watercolourist, David Addey, took on the monumental task of revisiting nearly all of the coastal vantage points painted by William Daniell on his 'Voyage Round Great Britain' and the results are a series of watercolours which provide a very important record depicting the extent of coastal change (or lack of change) some 160 years after Daniell's initial voyage. Combined with present day images, these sequences of artistic works have been used to assess the state of the British coast and to comment on change that has taken place over time (Addey, 1995; 1997; 2002).
5. **Present-Day Photographs** will bring the sequence of views up to date and allow comparisons to be readily made to inform the findings of this study.

TASK 3: List and rank key artists in terms of the accuracy of their depictions.

The accuracy evaluation criteria utilised were:-

1. Accuracy of Artistic Style (Caricaturist/Genre subjects; Picturesque Scenery; Topographical Art);
2. Most Advantageous Medium (Copper Plate Engravings, Oil paintings; Steel Plate and Aquatint Engravings; Lithographs; Watercolour Drawings);
3. Value of the Subject Matter (General Topographical Artworks; More Detailed Artworks; Highly Detailed Artworks).

Ranking scores were then calculated for sixty artists in terms of their accuracy. This list of artists, many of whose works are illustrated in this report, provides, for the

first time, a starting point for those wishing to undertake further study of natural coastal environments and can help avoid otherwise time-consuming research.

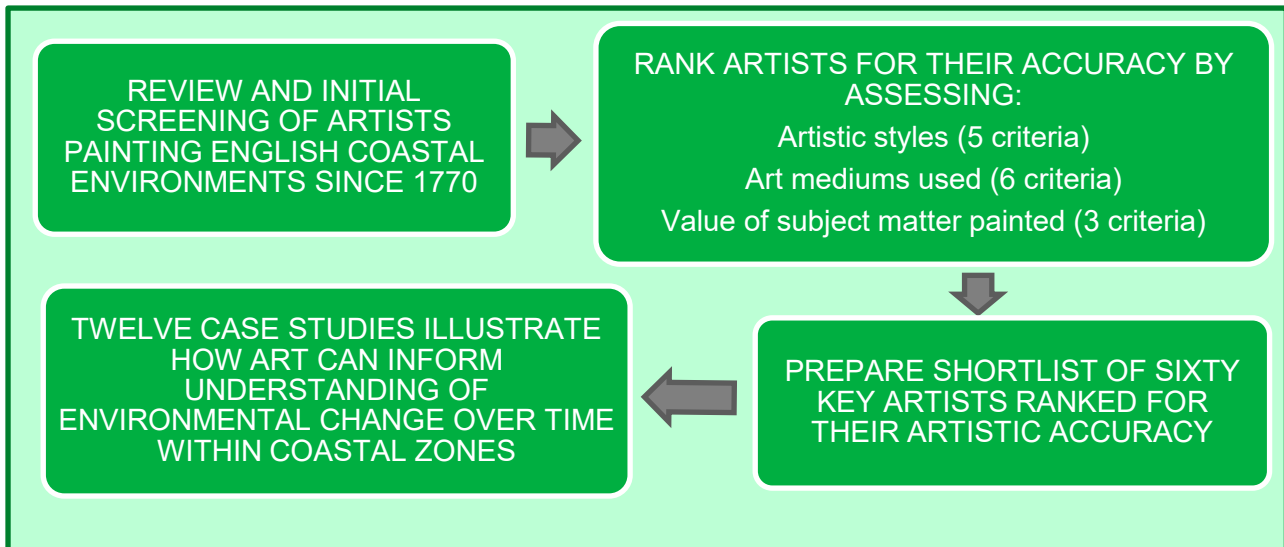


Table 1: Summary flow chart of methodology for ranking and utilising artworks to inform study of environmental change within England's coastal zones.

TASK 4: Descriptions of a diverse range of case study sites where the potential of artworks to support the study objectives are described and illustrated.

The study sites were evaluated under the headings: Location; Why was this case study site selected? Summary of geology, fluvial geomorphology and processes; Biodiversity; How can the art imagery resources inform us of environmental change? What are the key issues that can be learnt from this study site?

The Case Study Descriptions are followed by sequences of artwork images arranged chronologically and matched as closely as possible with the present-day view. Captions provide supplementary information on observable changes or apparent lack of changes over time.

TASK 5: Preparation of a comprehensive, well-illustrated Technical Report suitable for online and hard copy publication describing the results of the research and how it can be applied in practice.

Accuracy and Confidence in the Ranking of Artists and their works

As part of this study an art ranking system, refining an earlier study (McInnes & Stanford Clark, 2018), has been provided to establish a robust methodology for identifying those artists who have depicted coastal scenery most accurately since the late eighteenth century. The study has compiled a shortlist of sixty artists some of whom painted almost photographic images of the coastline over this study time period.

Accuracy in art was important for a number of reasons and originated from the demands of the Army and the Navy for detailed views of coastal locations, ports and harbours for military and navigational purposes. From the mid-eighteenth century the Duke of Cumberland and others commissioned artists to paint topographical views and a wealth of images were also commissioned by the Board of Admiralty from the 1790s onwards; these are held in collections such as those of the National Archives.

The purchasers of artworks, including wealthy Victorian and Edwardian customers on holiday at the coast, required accurate depictions of scenery in full colour. These were deemed preferable to the recently invented black and white photographic images becoming available. The Victorians particularly appreciated the hours and days of effort involved in creating the best artworks. Some of these artists, such as the Pre-Raphaelites and their Followers, had been influenced by the Victorian art critic, John Ruskin, who promoted the ethos of painting 'out of doors'.

In his Edinburgh lecture in 1853, Ruskin stated that "Pre-Raphaelitism has but one principle, that of absolute, uncompromising truth in all that it does, obtained by working everything down to the most minute details from nature and nature alone" (Ruskin, 1853). The emerging science of geology in parallel with Pre-Raphaelitism resulted in a growing interest in depicting geological coastlines, which, by necessity, required artistic accuracy (Holmes, 2018). This report has been illustrated extensively with works by those artists who were ranked most highly for their accuracy.



Fig 1: 'View over Brede Levels, Winchelsea, Kent' by Alfred A. Glendenning. Oil. 1892. Courtesy: Burlington Paintings. This artist was able to paint the lowlands near Winchelsea in great detail even through the medium of oil paint.



Fig. 2: 'Tynemouth from Cullercoats' by Myles Birket Foster. Watercolour. c.1860. Courtesy: Tyne & Wear Museums/Bridgeman Images. Foster was a master of fine watercolour art in the Pre-Raphaelite tradition.



Fig. 3: 'Babbacombe Bay, Devon' by Samuel Edward Kelly. Watercolour. c.1910. Private Collection. Kelly achieves almost photographic detail in his depiction of the striking red sandstone cliffs and the fallen rocks in the foreground.



Fig. 4: 'Cliffs near Southend, Essex' by John Henry Mole. Watercolour. 1860. Courtesy: Derek Newman Fine Art. This coast is affected by instability problems, as can be seen in this detailed view.



Fig. 5: 'Under the Cliff, Bonchurch, Isle of Wight' by E. W. Cooke RA. 1857. Private Collection. Cooke was a master of such highly detailed cliff and shoreline scenes and showing the fishing activities taking place.



Fig. 6: 'Among the Shingles, Clovelly, North Devon' by Charles Napier Hemy. Watercolour. 1864. Courtesy: Laing Art Gallery/Bridgeman Images. Hemy has painted every stone on the beach in Pre-Raphaelite detail.



Fig. 7: 'Horseshoe Bay, Bonchurch, Isle of Wight' by Thomas Miles Richardson Jnr. Watercolour. 1861. Courtesy: IW Heritage Service. Such detailed views help us understand the chronology of coastal defences and beach management over time.



Fig. 8: 'Polpoer Cove, The Lizard, Cornwall' by John Brett. Oil. c.1880. Courtesy: Government Art Collection. In the Pre-Raphaelite style Brett, alongside E.W. Cooke, was the master of cliff and sea painting such as this.



Fig. 9: 'Across Shipload Bay to Lundy Island' by Henry Moore RA. Oil. 1859. Another sea and cliff painter, Moore's oils are precise depictions that form invaluable records of coastal environments such as this.



Fig. 10: 'St Agnes, Isle of Scilly' by E.W. Cooke RA. Watercolour. c.1848. Courtesy: Martin Gregory Gallery, London. Showing the town from the sea in Pre-Raphaelite detail, Cooke was equally precise working in watercolour and oil paints.



Fig. 11: This highly detailed watercolour of 'Wheeler's Bay near Ventnor, Isle of Wight' by William Gray, 1855, was exhibited at the Royal Academy in that year. This section of coast was protected by a seawall to reduce landslide risk. At the back of the seawall below the cliff colonies of Glanville fritillary flourish.



Fig. 12: 'Triassic Rocks near Blue Anchor, Somerset looking towards Watchet' by Edward W. Cooke RA. 1866. Courtesy: Bridgeman Images/The City of London Corporation. A fine example of one of Cooke's highly detailed Pre-Raphaelite 'Geological Paintings', which provides a precise record of this cliffline at the time.



Fig. 13: 'Combe Martin, North Devon' by George Wolfe. Watercolour. 1855. Courtesy: Crown Copyright/UK Government Art Collection. Like Cooke, Wolfe produced highly finished scenes such as this working in watercolour.



Fig. 14: 'The Fishing Cove of Beer' by E. W. Cooke 1858. The Upper Chalk exposure of Annis' Knob in the upper cliff is visible, as is the extensive Middle Chalk exposure in the main cliff below. Cooke's painting also shows the nature of the landscape before the extensive tree and vegetation growth that masks the cliff top today. Courtesy: J Munday/Private Collection.

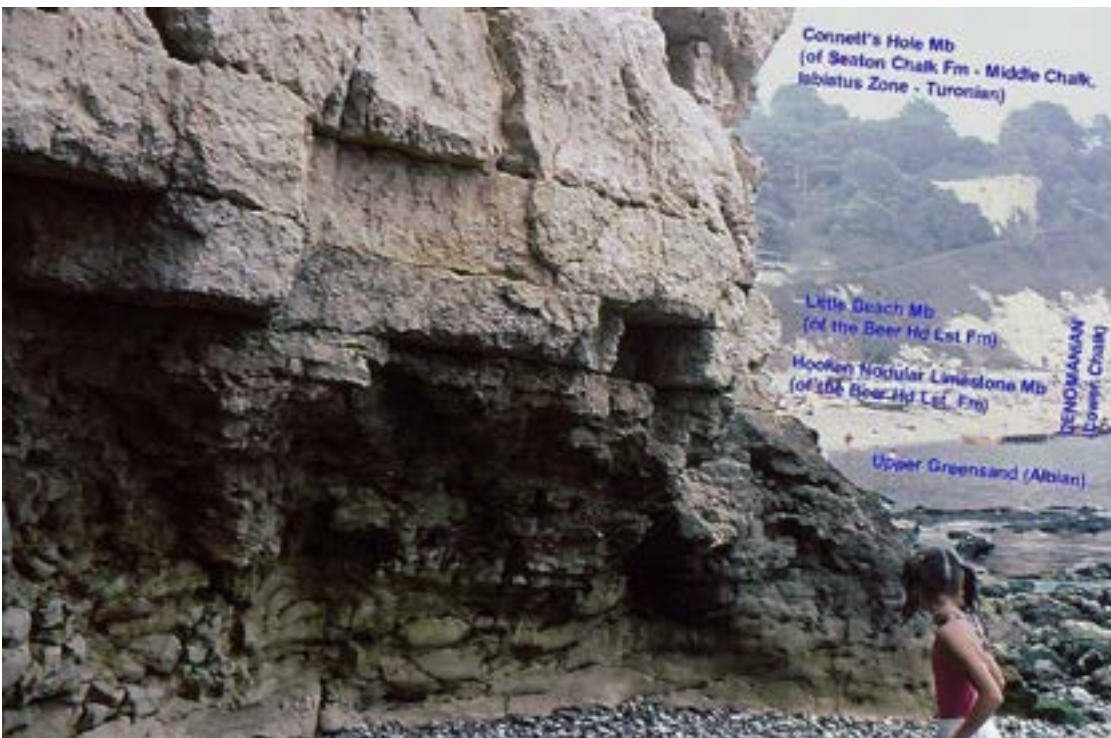


Fig. 15 shows the Upper Greensand-Lower Chalk junction on the south side of Small Point, Beer. Cooke has captured this exactly in the bottom left corner of his painting. Photograph courtesy of © Ian West.

The clarity and detail achieved by artists point to the truthfulness and reliability of their works. Of particular note is Edward William Cooke (1811-1880) who was more than just a distinguished landscape painter. He was elected a Fellow of the Linnaean Society in 1857, a Fellow of the Geological Society in 1862 and his election as a Fellow of the Royal Society, an uncommon distinction for a painter, came in 1863 shortly before he was made an RA. Cooke's father, George Cooke, had engraved copper plates for Sir Henry Englefield Bt. that appeared in his 'A Description of the Principal Picturesque Beauties, Antiquities and Geological Phenomena of the Isle of Wight and adjacent Coast of Dorsetshire (Englefield, 1816). Englefield had stated that 'in no instance has accuracy been sacrificed to the effect of the engraving'.

This ethos underpinned E. W. Cooke's work throughout his life with him receiving highly favourable comment from John Ruskin the great Victorian art critic (Ruskin, 1853). On Cooke's election to the Royal Academy in 1863 the Illustrated London News said of him "The prime characteristic of Mr Cooke's art is literal fidelity to nature. He is probably the most scientifically accurate painter we possess. His pictures provide exact reproduction of the outward aspects of the natural world satisfying the geologist, botanist, meteorologist, architects and shipbuilder" (Illustrated London News, 1863).



Fig. 16: 'Ventnor Cove, Isle of Wight'. A fine steel plate engraving produced by Cooke on his first visit to the Undercliff in July 1831. He returned almost every year until 1876. In the foreground are the ancient fisherman's huts on the back of the shore, later replaced by a promenade and hotels. Private Collection.

The added value of colour art images over Black and White Photography

The use of colour washes, together with pen and ink, started to become available from the mid- seventeenth century. Watercolour art became very popular with paint boxes providing an easy means of depicting landscapes in colour in the field. Art, both oils and watercolours, has continued to be an effective colour illustration medium through to the present day.

Photography emerged in the 1840s but the use of this medium for portraying the landscape only became popular from about 1860 onwards as portraiture had been the prime interest before that time. Paintings of landscape scenery in colour were very much favoured by Victorian and Edwardian customers over black and white photography, because art provided a more complete record of the scenery that they had visited and enjoyed on their holidays. In fact, when photography first emerged as a potential competitor to art, many critics were dismissive of the notion that photography could be considered an 'art' in its own right. This was because artworks in colour were able to display the splendour of real life as the viewer could actually see it, and thereby provide a permanent record and visual reminder of the landscapes and scenery enjoyed by visitors when they returned to their homes inland or in the large cities (Jacobi & Kingsley, 2016).

Colour photography started to emerge in the early twentieth century, but it is recognised that initially the quality was very poor and, in fact, it could be argued that it was not until the early 1990s that the quality of colour photographs was sufficient to make a real difference in terms of usage of colour for scientific purposes such as environmental monitoring and archaeological studies and investigations.

Artworks do, therefore, provide a permanent, enduring colour record extending back at least to the 1770s. The addition of watercolour paint to aquatints and other engravings practiced by leading art galleries and distributors such as Ackermann's of London, has provided us with a unique and often accurate record of past conditions. Tours to various parts of the country by artists such as William Daniell RA and others allow us to inspect landscapes such as coastal and river scenery with the benefit of full colour some 50 years before the evolution of black and white topographical photography, and over 150 years before colour photography became more widely available.

As part of this study evidence has been sought as to the perceived added benefits of colour photography over black and white, but no published research has been found on the subject to date. Coastal monitoring using aerial photography undertaken by the Environment Agency and later by the Channel Coast Observatory moved from black and white to colour in the early 1990s and there is no doubt that the added dimension of colour enhances interpretation from the air. Colour artworks, therefore, extending back to the late eighteenth century, provide us with the opportunity to examine change over a very long time period in as realistic a medium as possible, and the applications of this have been illustrated in the numerous case studies contained in this report.

This study has sought to highlight the potential of such historical artworks to inform us of the impacts of change over time. Those studying environmental topics are often familiar with both the interpretation of old photographs, and use of new technologies such as high-resolution aerial photography and Lidar rather than art. The findings of this study recognise the significance of the art resource and consultees have helpfully highlighted a range of potential uses for art images.



Fig. 17: A black and white postcard (c.1900) the old Blackgang Road from Niton, Isle of Wight.



Fig. 18. This shows the same view in the watercolour drawing by A. R. Quinton, c.1910. The route was destroyed by a rockfall in 1928. Image courtesy of Salmon's.



Fig. 19 (above) and 20 (below): Two views of Ventnor, Isle of Wight, showing the contrasts between black and white and colour images. The photograph dates from 1900 and the watercolour by Randolph Schwabe was painted in 1933.



Availability of Art Images

The French Revolution and the Napoleonic Wars prevented artists and gentlemen taking the Grand Tour of Europe. This situation continued from the commencement of the French Revolution in 1789 until after the Battle of Waterloo in 1815. This led to an increased interest in the exploration and discovery of the more remote landscapes of the British Isles. In fact, from the middle of the eighteenth century a number of British writers and travellers, such as William Gilpin (1724-1804), sought to define and categorise human responses to natural phenomena such as landscape scenery (Gilpin, 1786).

Gilpin's publications resulted in artists travelling to the more remote parts of the British Isles, including the Scottish Highlands and Islands, the Lake District, Snowdonia, the South Wales coast, the New Forest and Hampshire and the Isle of Wight. The invention of the paint box enabling artists to carry their paints easily with them whilst they were on their journeys led to a proliferation in the painting of watercolours out of doors as opposed to oils, which were generally painted in the studio.

The nation's rich resource of art images were for many years confined to exhibitions and archives of national and regional museums, galleries and study rooms. The invention of the internet and the publication of art images online developed rapidly following an initiative by Dr Fred Hohler, who established a charity 'The Public Catalogues Foundation'. With his team he arranged the photographing of 212,000 oil paintings in public collections by 37,000 artists. Following a publication of a large number of well-illustrated catalogues the artworks were placed on a website called 'BBC Your Paintings'. Subsequently, these were transferred to the ArtUK website (www.artuk.org/).

In 2016 Dr Hohler established a new charity, the Watercolour World (www.watercolourworld.org/) under the joint patronage of HRH the Prince of Wales and HRH the Duchess of Cornwall, which is creating a visual online topographical record through watercolours spanning the period from 1600-1900. Already nearly 100,000 watercolours can be viewed on this website and these are continuing to be supplemented with additional images. The availability of the wealth of artworks on these two sites, both oils and watercolours, has provided thousands of additional views of the coast, many of which had never been seen publicly before.

The most painted locations over the last few centuries have tended to be either sites of dramatic coastal scenery and the developing coastal towns and villages, their ports and harbours. A repetition of the same views of these towns and villages over this time period provides a valuable chronology of development and change as a result of both natural and human influences. Other artists painted views looking out to sea from the clifftops or looking along the cliffs, and some of these captured sites of existing and past importance by illustrating physical processes such as coastal erosion and landslip, as well as environmental changes and losses affecting heritage sites and other kinds of development.

Accessing images of artworks

A wealth of historical artworks, including oil paintings, watercolour drawings and prints, are held in national, regional and local museums and local authority archives alongside those of charitable foundations and private collections. Many institutions holding works of art have chosen in recent years for their art to be displayed and made available through two image charities – ArtUK (for oil paintings) and WatercolourWorld (for watercolours and drawings). Both these sites are easily accessible and details are provided on the succeeding pages.

Topographical books from the late eighteenth and nineteenth centuries are often beautifully illustrated with colour aquatint engravings or black and white steel and copper plate engravings. A further valuable source are the watercolour postcards of topographical artists including Alfred Robert Quinton, William W. Quatremain and Henry Wimbush, produced between 1890-1934; original postcards can easily be sourced from the internet.

There are some other limitations in terms of the use of artworks. For example, artists often chose to depict the more dramatic cliffed coastlines rather than low-lying frontages such as estuaries, creeks and saltmarshes. This is an important issue because low-lying locations are likely to be particularly vulnerable to flooding and sea level rise. However, for the purposes of this study, some examples of artworks for low-lying coastal zones have been included. Other artists like to produce paintings showing the coastline at High Water as they felt this offered a grander vision rather than the painting of waves breaking on the lower foreshore. However, for most of the case study locations there has proved to be a sufficient selection of images to include those which, importantly, show the nature of beach conditions.

Websites

ArtUK (www.artuk.org). This charity provides the point of access to the nation's collection of 212,000 oil paintings where works by some 40,000 painters, held in over 3,000 collections, are available for view online.

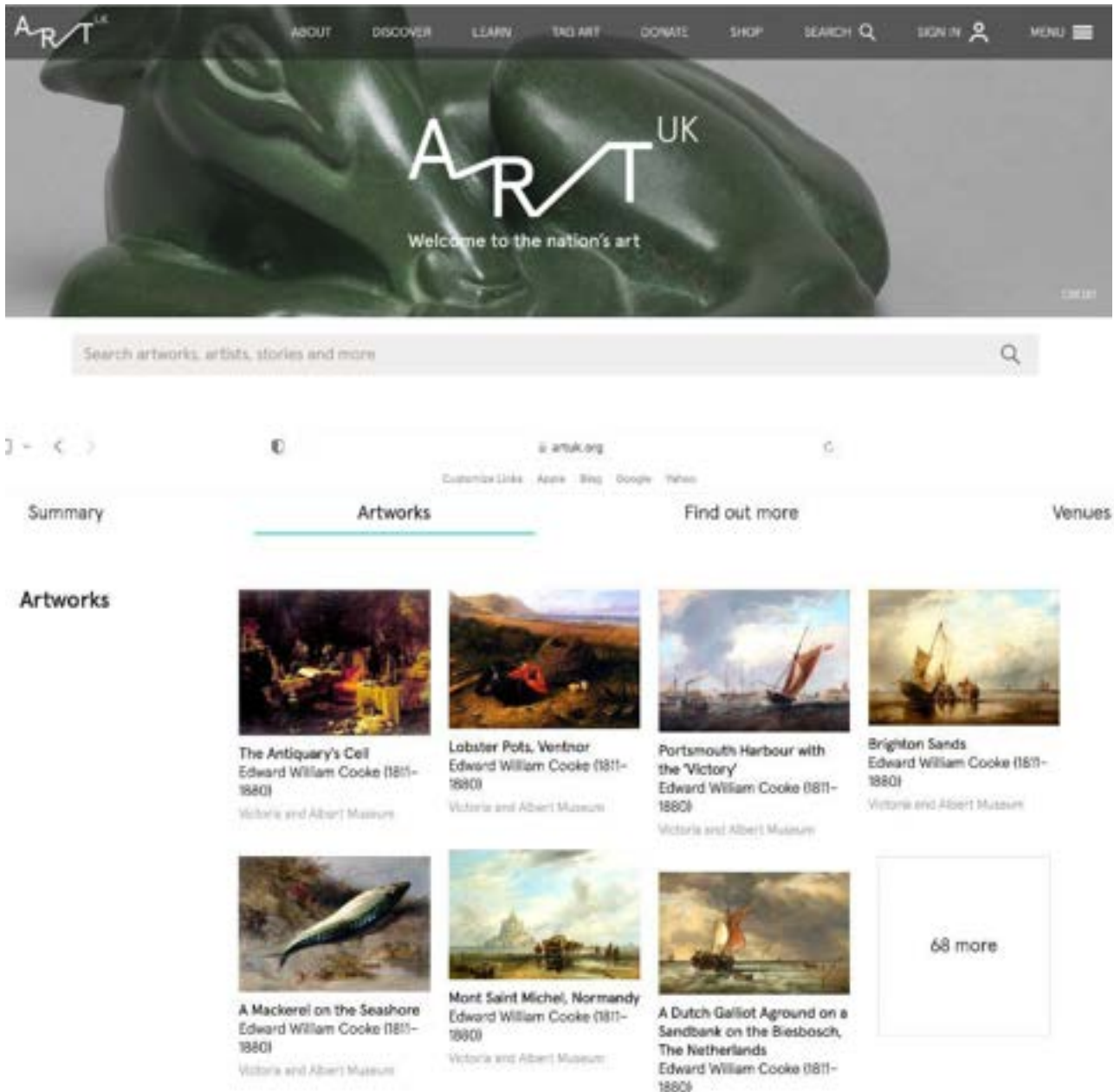


Fig. 1: Home page from ArtUK and an example of some of the 75 oil paintings by E. W. Cooke on the website.

Following the creation of ArtUK for the nation's oil paintings, a new charity was established in 2016, 'WatercolourWorld' (www.watercolourworld.org/), under the joint patronage of the former HRH The Prince of Wales and HRH The Duchess of Cornwall. WatercolourWorld is a registered UK charity established to create a visual record of the world before photography by aggregating digital images of watercolours created up to the year 1900 on a single geographically indexed website.

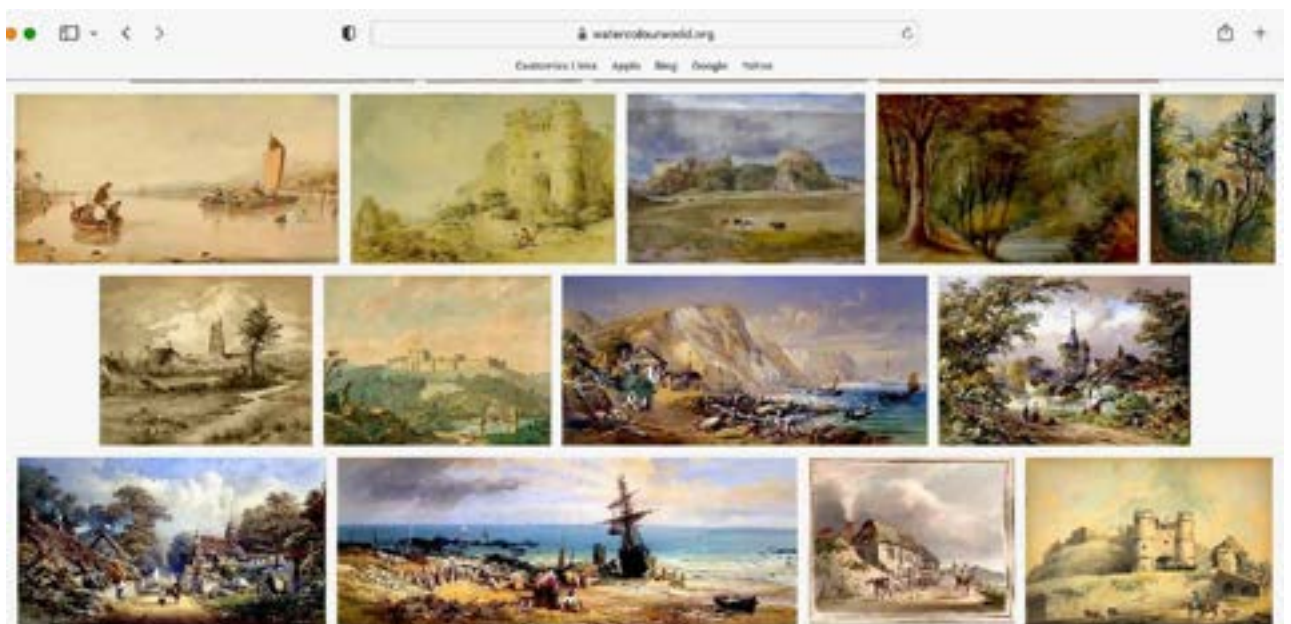


Fig. 2: Watercolour World home page and a selection from the wealth of Isle of Wight images loaded on the site.

William Daniell's 'Voyage Round Great Britain' (1814-1825) comprising 308 colour aquatint engravings of British coastal scenery (Daniell & Ayton, 1814). William Daniell RA was a fine artist and many of his depictions, particularly of the coastal towns, are accurate, showing the coastline before the Victorian development period and the construction of many of the coastal defences and esplanades.

A Selection of views from 'A Voyage Round Great Britain' by William Daniell RA (1814-1825)



Southend-on-Sea, Essex



Southwold, Suffolk



Deal, Kent



Rye, East Sussex



Reculver, Kent



Brading, Isle of Wight



West Bay, Dorset



Mevagissey, Cornwall

David Addey's Watercolours – in the footsteps of William Daniell RA. Between 1994 and 2002 the architect and distinguished watercolour painter, David Addey, retraced William Daniell's earlier tour and he painted the present-day view from the vantage points chosen by Daniell nearly two centuries before. Addey's tour provides a new dimension to Daniell's work with many interesting changes to be observed over the intervening time period. Here are examples of Addey's views.



Hastings, East Sussex



Lulworth Cove, Dorset



Plymouth, Devon



Conwy, North Wales



Bamburgh Castle, Northumberland



Charlestown, Gairloch, West Coast of Scotland



Poole Harbour, Dorset



Broadstairs, Kent

Alfred Robert Quinton's Coastal Watercolours of England and Wales (c.1900-c.1934) comprising over 2,500 watercolours, which were painted for reproduction as colour picture postcards by J. & F. Salmon Ltd of Sevenoaks, Kent. Quinton's watercolours are highly detailed and he revisited many of the locations repeatedly as the coastal towns and villages expanded during the first three decades of the twentieth century hundreds of his colour postcards can be found easily on the internet. Images courtesy of Salmon's.

Views of the Coastline of England and Wales by Alfred Robert Quinton (1900-1934)



Whitby, Yorkshire



Skegness, Lincolnshire



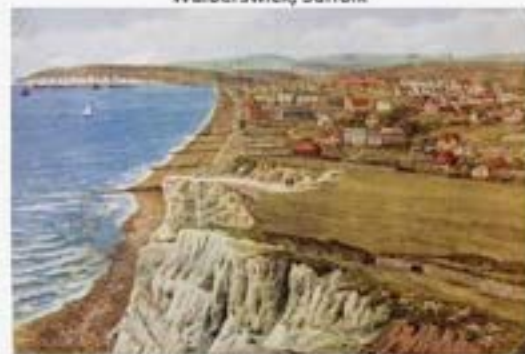
Sheringham, Norfolk



Walberswick, Suffolk



Seaford, East Sussex



Westcliffe-on-Sea, Kent



Bournemouth, Dorset



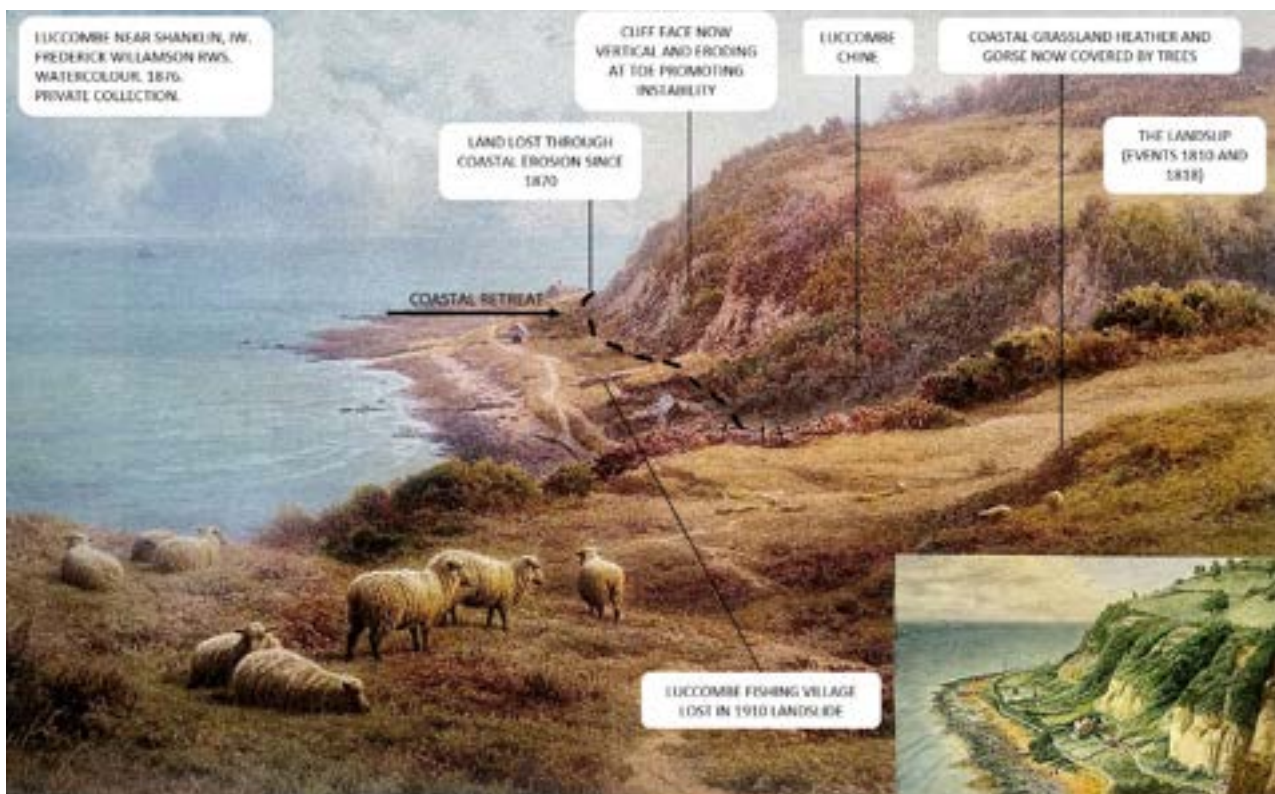
Lyme Regis, Dorset

Interpretation of historical artworks

The next pages of this study report provided annotated images of paintings drawn from this project's case studies and more widely. For each artwork some of the key landmarks, indicators of coastal and/or environmental change have been identified. Depending on the specific interests of the reader there are, no doubt, other features contained in the paintings that may provide useful information on change or lack of change.

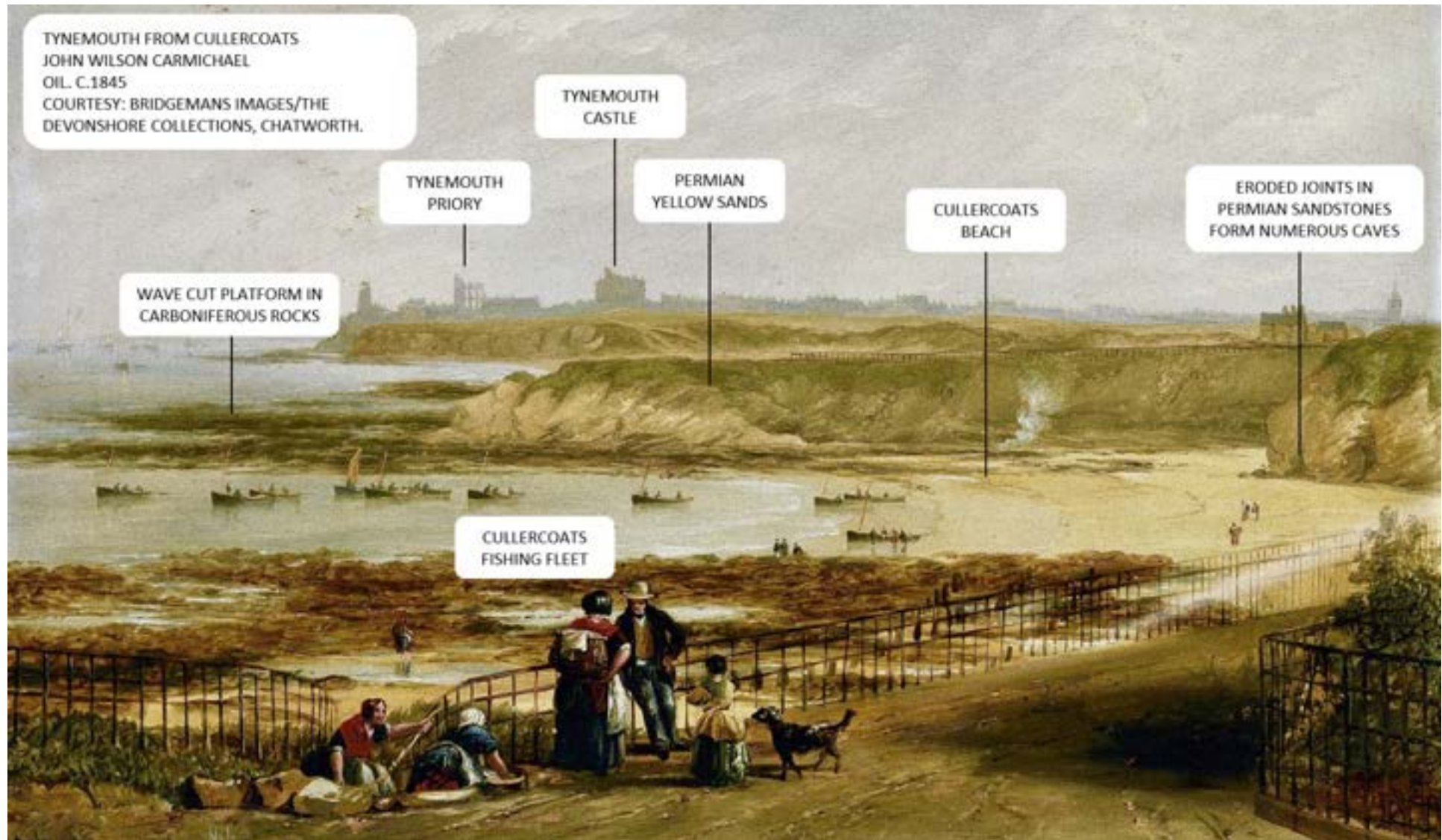
Because artists tended to paint some of the most beautiful or culturally important locations around the English coast, many of which have been subsequently designated for their landscape or environmental importance they have often been carefully and sensitively managed over time. As a result, they are likely to have experienced less human intervention and possible deterioration.

This sequence of views illustrate the works of traditional artists painting in oils and watercolours, Pre-Raphaelite artist who captured coastal scenery in remarkable detail including 'geological' pictures, and early twentieth century watercolour postcard art.

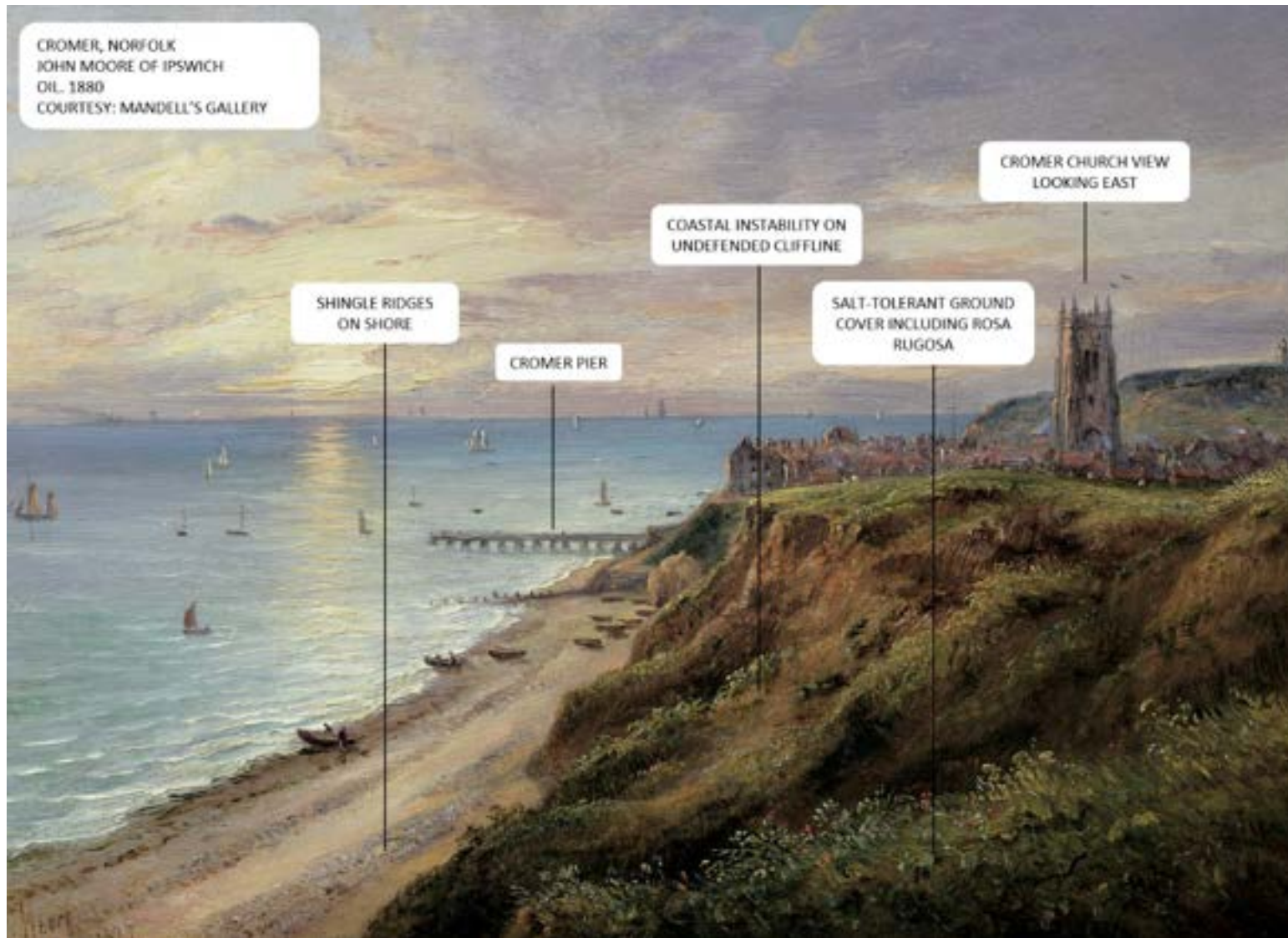


'LUCCOMBE'. 1876. W. BUCK.
COURTESY: TRUSTEES OF CARISBROOKE CASTLE MUSEUM.

A1: 'Luccombe near Shanklin, Isle of Wight' in 1876 showing physical and environmental change.



A2: ' Tynemouth from Cullercoats, Northumberland' illustrating coastal geology and scenery.



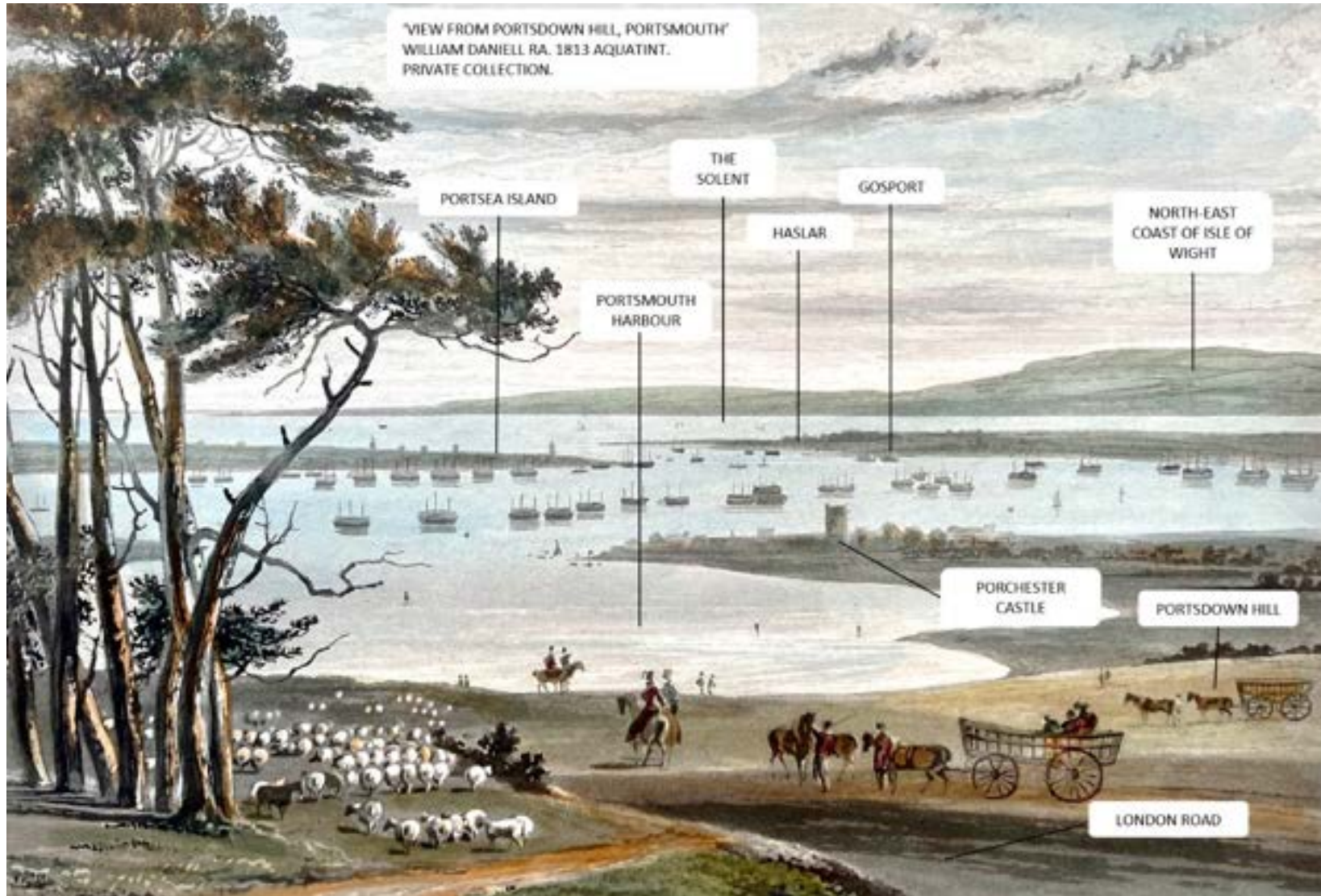
A3: ' Cromer, North Norfolk' illustrating cliff instability processes.



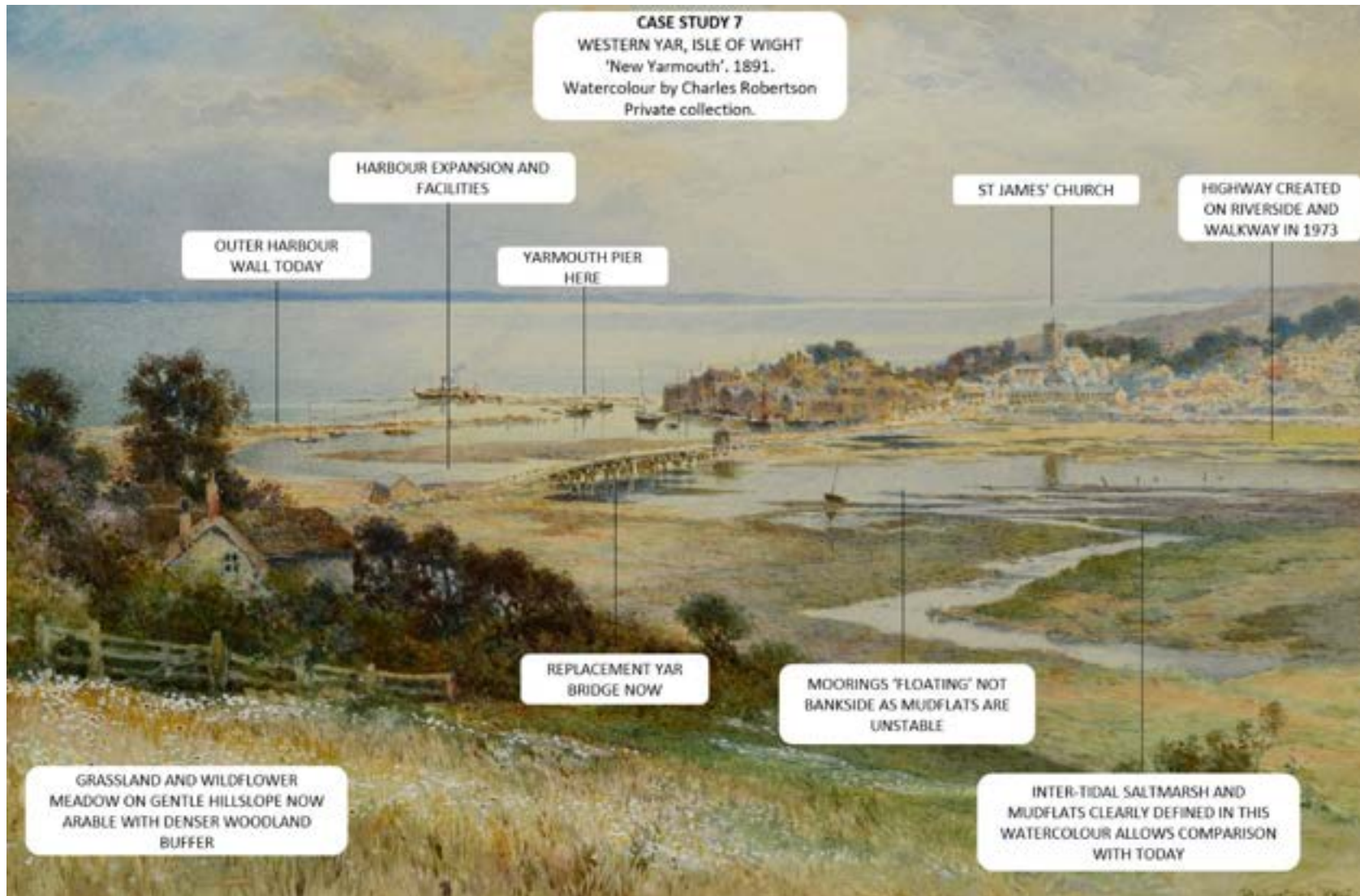
A4: ' River Blyth, Suffolk' describing the coastal estuary environment in the 1880s.



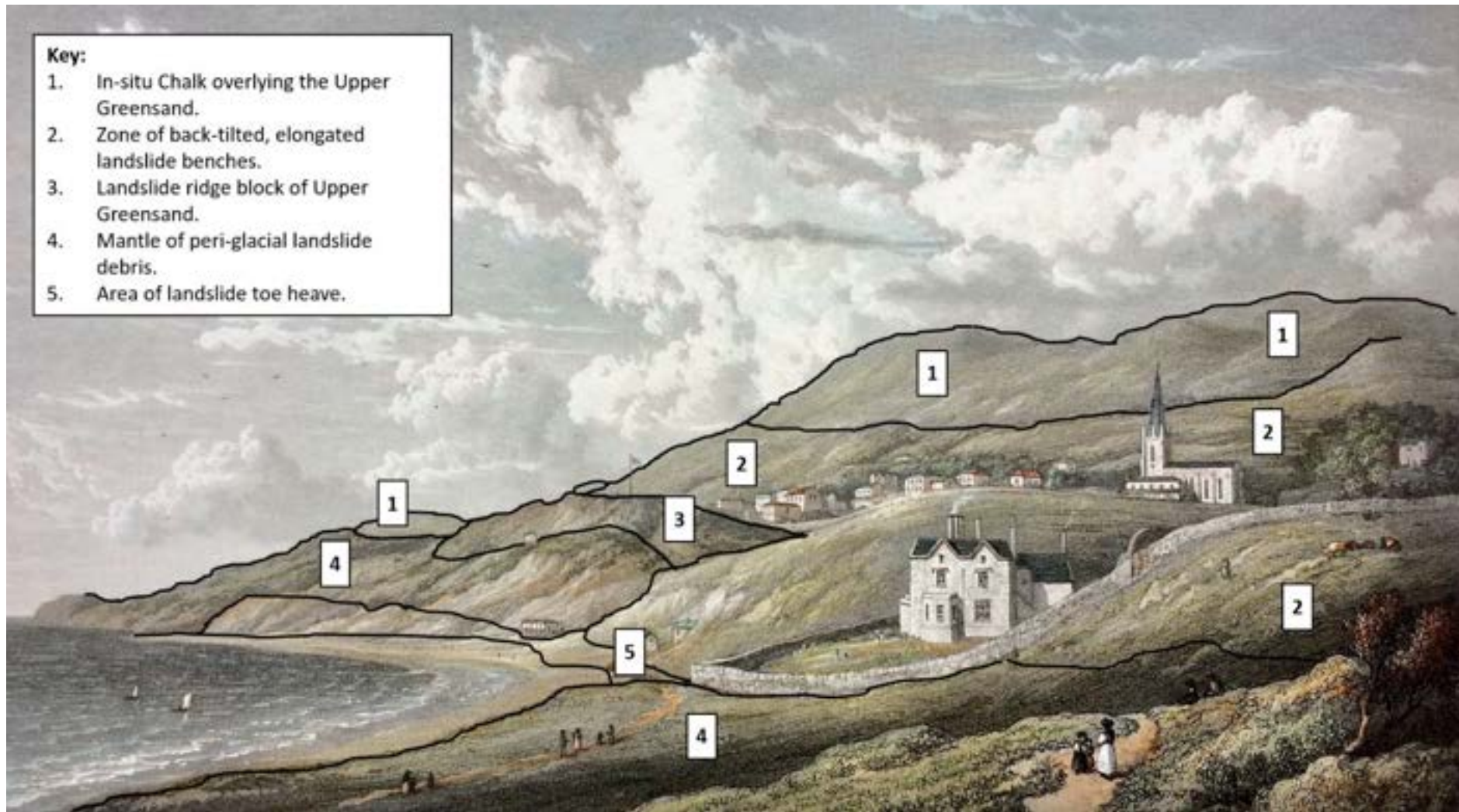
A5: ' Slaughden, Suffolk' describing the character of this low-lying coastal frontage.



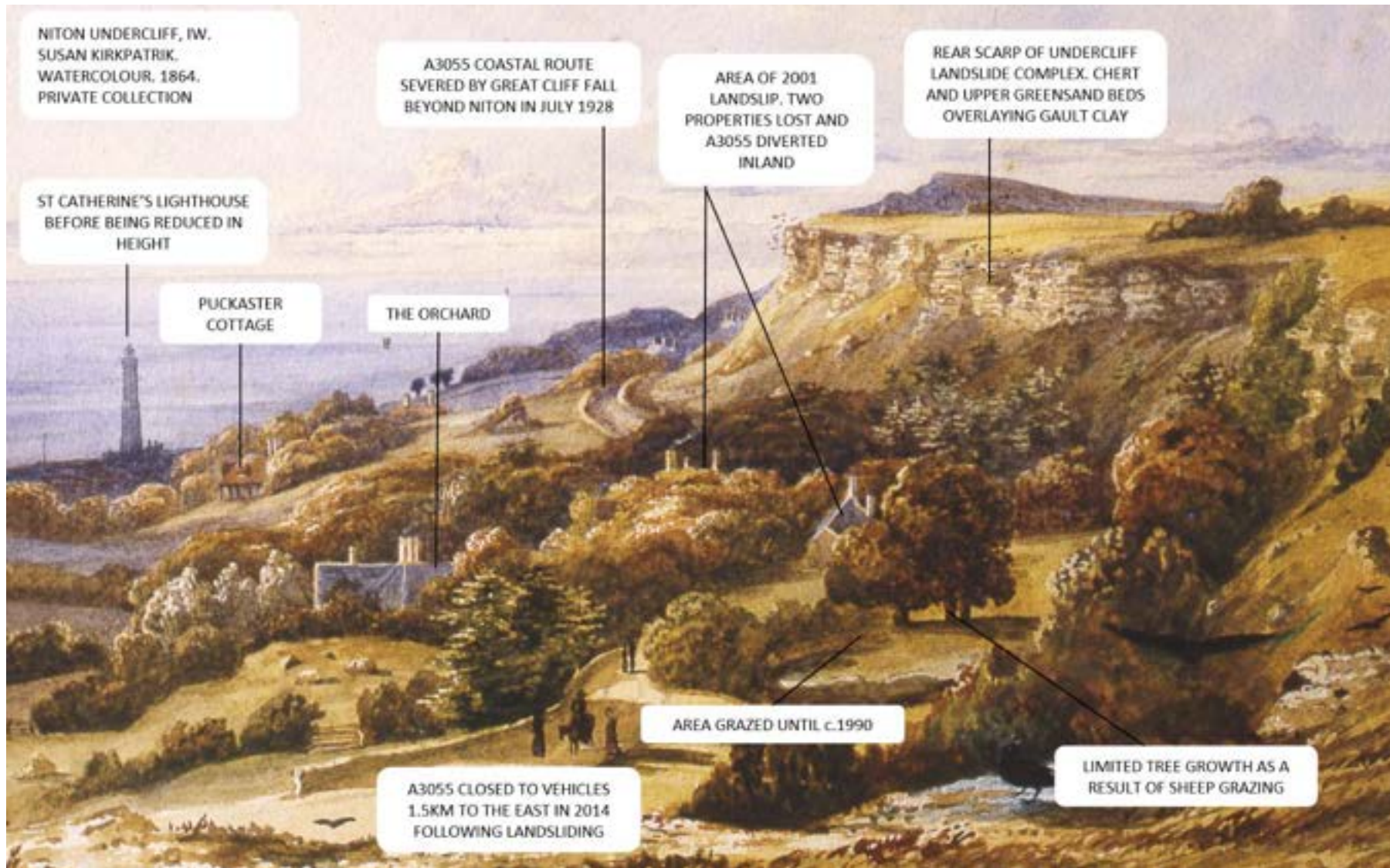
A6: ' View from Portsdown Hill, Portsmouth, before the intense development took place.



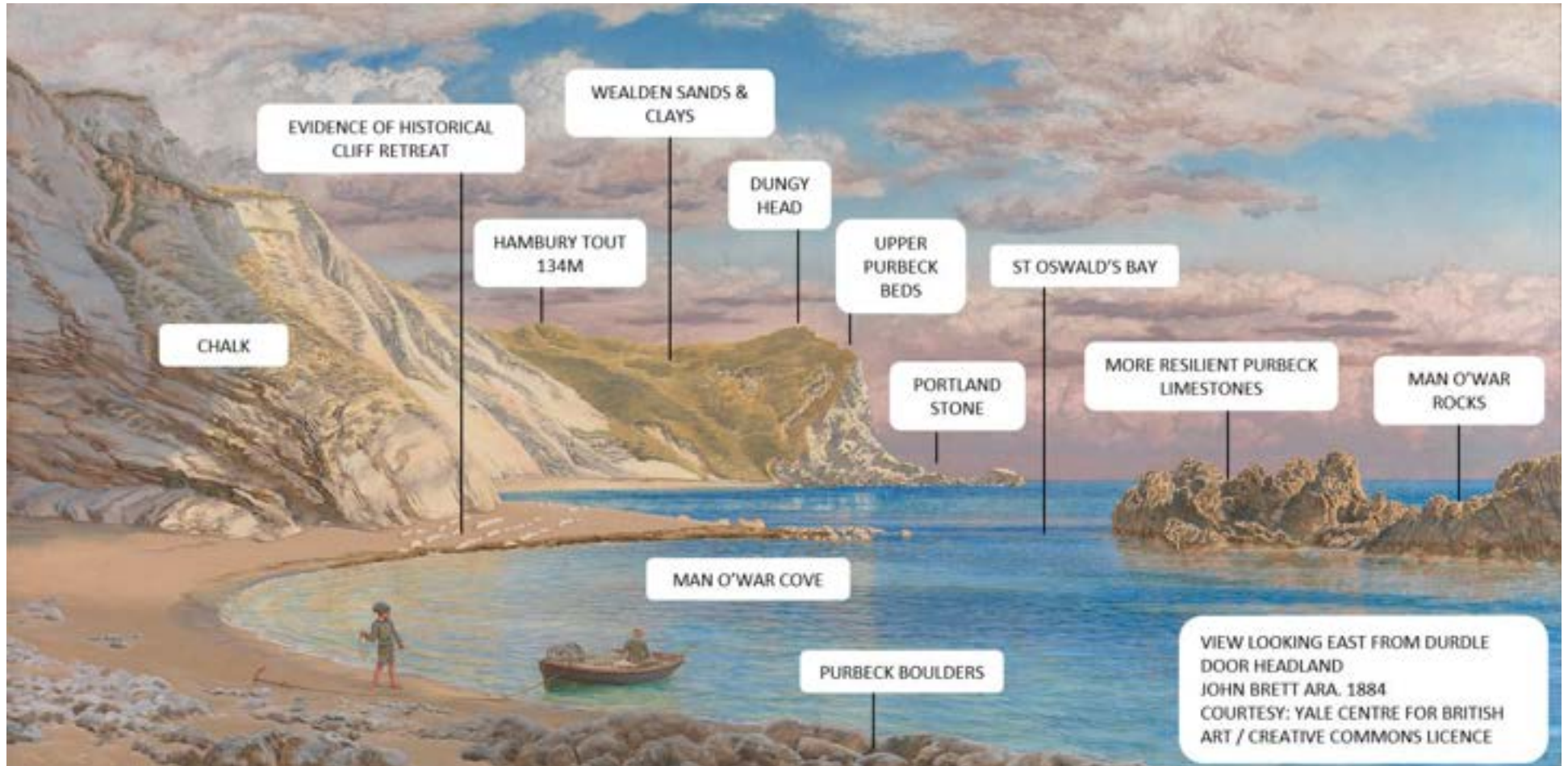
A7: 'The Western Yar, Yarmouth, Isle of Wight' illustrating the potential for plotting environmental change.



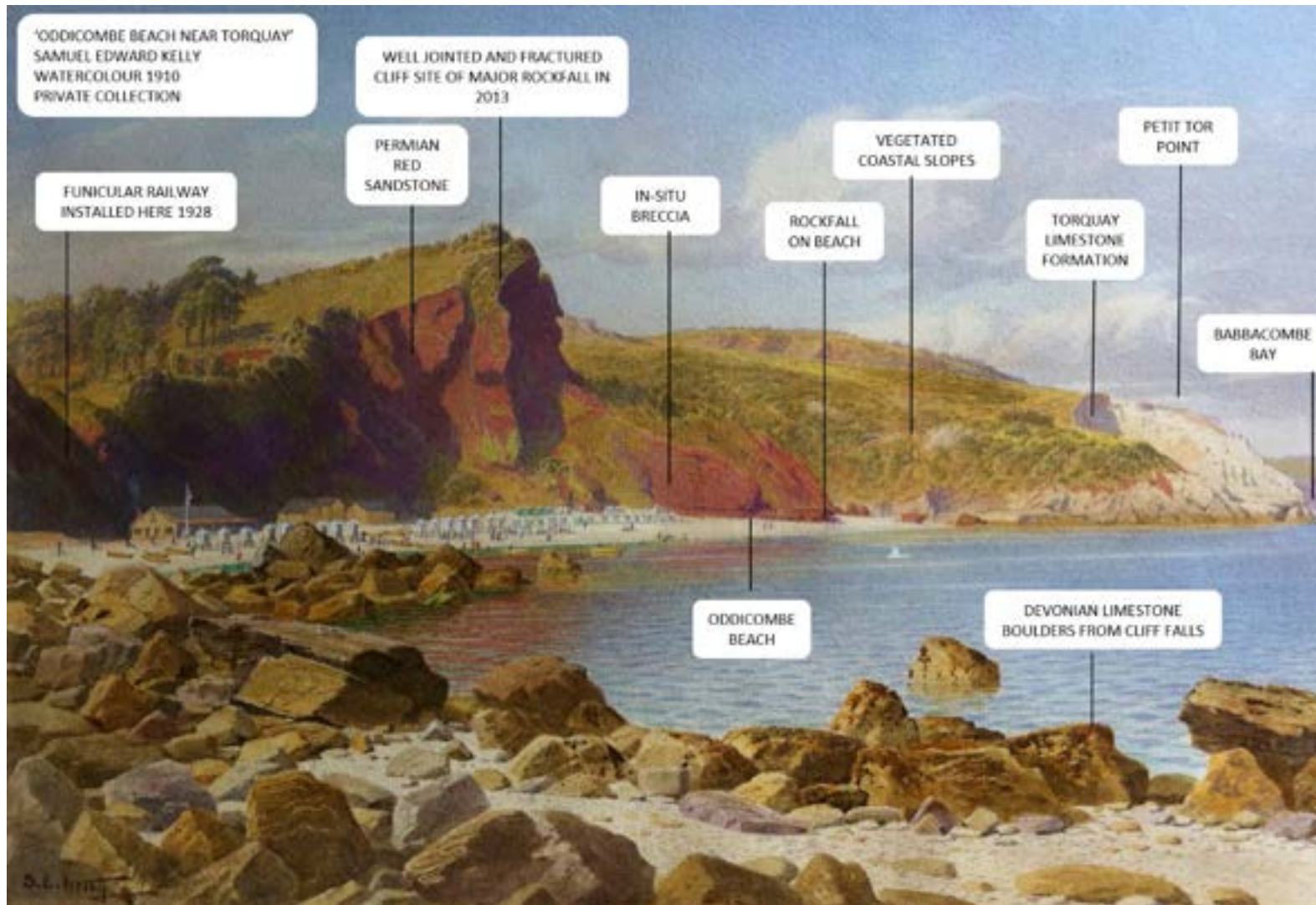
A8: ' Ventnor, Isle of Wight' by William Westall. 1838. Interpreting geomorphology to aid understanding of landslide potential.



A9: ' Niton Undercliff, Isle of Wight' . Understanding landscape change since the 1860s.



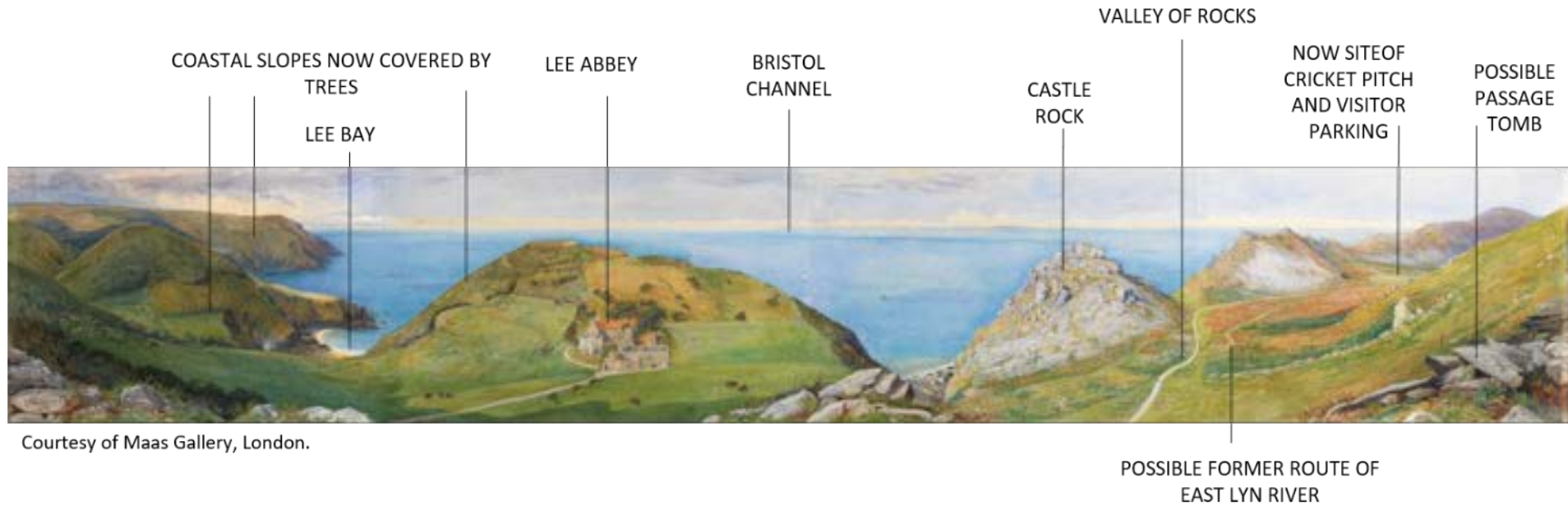
A10: 'Man O' War Cove, Dorset' . Art illustrating geology and geomorphology by Pre-Raphaelite ' geological' painter, John Brett.



A11: ' Oddicombe near Torquay' – Artwork depicting coastal geomorphology.

ART ILLUSTRATING DEPICTION OF COASTAL TOPOGRAPHY

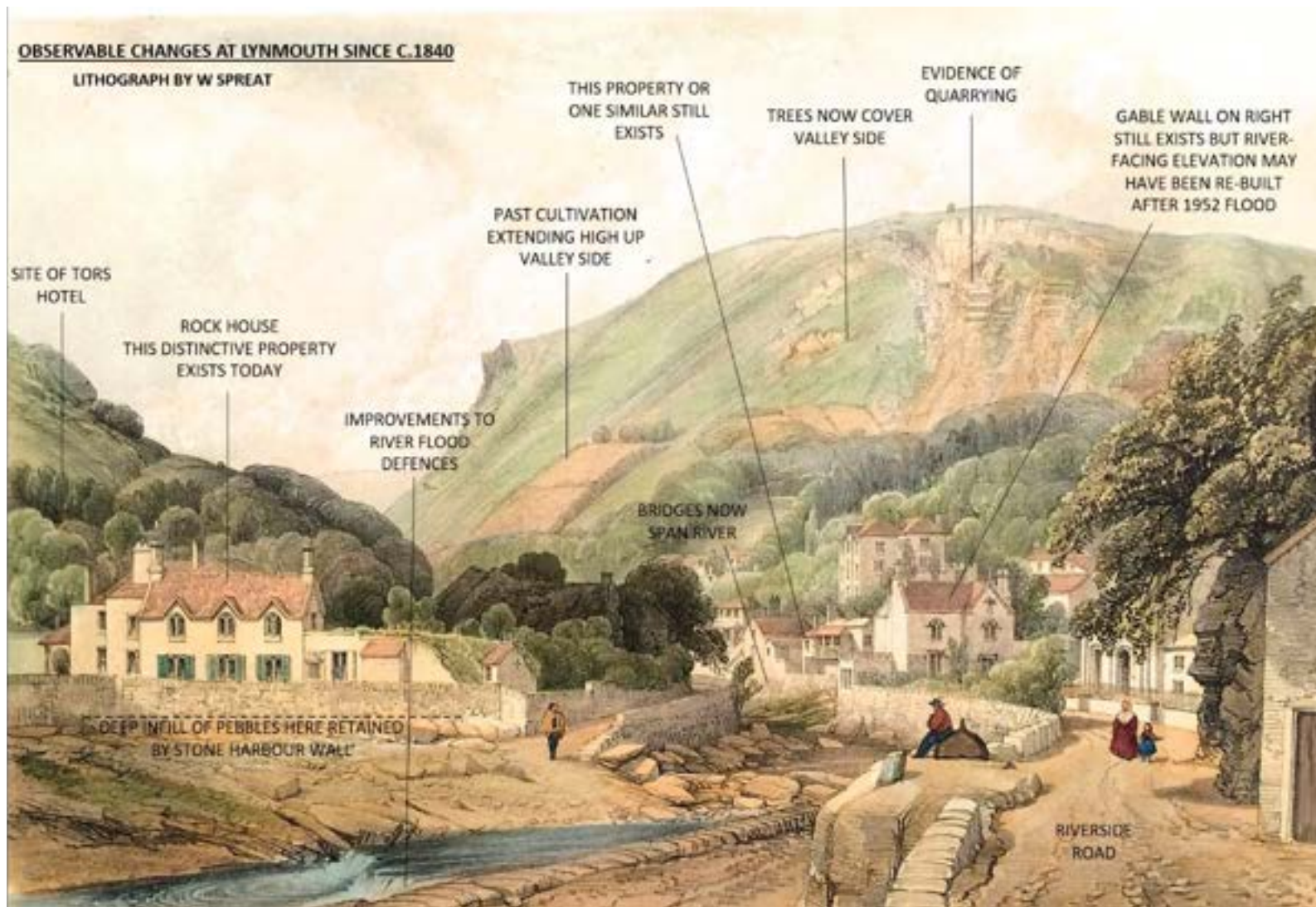
'Valley of Rocks' By William Henry MILLAIS. WATERCOLOUR 1857.



Courtesy of Maas Gallery, London.

A12: ART ILLUSTRATING DEPICTION OF COASTAL TOPOGRAPHY

' Valley of Rocks' by William Henry Millais. Watercolour. 1857.



A13: Art depicting changes in a river mouth coastal zone setting.



A14: 'Lundy off North Devon'. Art depicting cliff environments and species by Pre-Raphaelite painter, Henry Moore RA.

Utilising the case study findings to inform habitats management

The twelve case studies and the thirteen annotated art images on pages 208-220 can help managers understand the opportunities and constraints to undertaking habitat restoration around the English coast. They will help to highlight:

- the presence of habitats historically and where these are more likely to be able to be restored;
- where development pressures require managing, for example where coastal defences may have reduced sediment supplies. At such locations re-evaluating coastal management approaches with the support of updated refreshed Shoreline Management Plans can play a key role here;
- sites where the impacts of climate change including sea level rise, increased rainfall and more aggressive coastal erosion may require adaptation to be implemented.

The following Table A1 seeks to summarise the key features of each of the case studies and will support the work of local nature conservation officers by:

- providing the names of key artists who painted views of each of the twelve case study frontages in a concise manner. Their names can be searched on the ArtUK and WatercolourWorld websites for further helpful images.
- highlighting key management implications at each of the case study sites. In respect of this artists were, of course, drawn sites of great landscape beauty such as the Northumberland, East Anglian and Cornish coasts. Many of these beauty spots are already protected by a hierarchy of environmental or landscape designations and as a result have a high standard of protection and site management which is very evident in the present-day photographs.

Table A1: Summary of key features of the twelve case study sites.

Case Study	Designated Sites	Topic of Paintings	Artists	Key Conclusions	Management Implications
Northumberland Coast (Holy Island to Alnmouth)	SAC, SPA, Ramsar, SSSI, AONB, Heritage Coast, National Nature Reserve	Vicinity of the Farne Islands, Lindisfarne, Bamburgh and Dunstanburgh Castles	Henry H. Emerson, John Varley, David Addey, Alfred William Hunt, William Daniell, John Wykeham Archer, John Moore, Maria Grey	Not significant observable change to the coastline, remains undeveloped. Indicates effective management through many designations and effective countryside management.	Shows effective management in place.
North Norfolk (Cromer to Sea Palling)	SPA, SAC, SSSI, National Reserve, AONB	Blakeney, Cromer, Sheringham, Trimmingham, Sea Palling. Low-lying coasts and cliffed instability frontages.	James Bulwer, A. R. Quinton, John Moore	Show cliff and beach conditions in natural, unconstrained form, before coastal defences installed. Images suggest how the coastline might be affected if defences were not maintained in the future.	Habitat restoration potential through review of coastal management.
Southwold to Orford Ness, Suffolk	SPA, SAC, National Nature Reserve,	Low-lying coastal and estuary change.	Thomas Smythe, William Daniell, Thomas Benham, Charles Robertson,	Minimal change but challenges from Sea Level Rise and coastal erosion.	Need for further adaptation measures in the future and ongoing

Case Study	Designated Sites	Topic of Paintings	Artists	Key Conclusions	Management Implications
	SSSI, AONB, Ramsar		John Moore, A. R. Quinton		habitat management.
East Kent Coast (Pegwell Bay to Sandwich)	SAC, SPA, National Nature Reserve	Chalk cliff geomorphology.	William Dyce, E. W. Cooke, William Parrott	How art can support quantitative and qualitative assessments of coastal change	Continue with existing approaches to management of these important habitats and features.
Solent Shorelines – Hampshire Coast	SAC, SPA, Ramsar, SSSI	Coastal geomorphology. Development impacts on biodiversity.	Dominic Serres, William Daniell, Martin Snape, William Westall, T. Rowlandson, W. W. Ball, E. W. Haslehust	Complex interactions between intensive development and natural environments.	Implications of sea level rise on this low-lying coast.
Solent Shorelines – Isle of Wight Coast	SAC, SPA, National Nature Reserve, SSSI	Art describing long-term coastal changes	William Gray, Charles Robertson, W. H. Bartlett, William Daniell, Alfred Vickers, George Brannon, Charles Tomkins, David Addey	Illustrates how a chronology of artworks can describe 250 years of coastal change	Management and adaptation to consequences of sea level rise and increased rates of coastal erosion.

Case Study	Designated Sites	Topic of Paintings	Artists	Key Conclusions	Management Implications
Isle of Wight Undercliff Luccombe to Blackgang	SAC, SSSI, AONB	Coastal instability. Environmental changes.	William Westall, William Gray, E. W. Cooke, S. McCloy, George J. Knox, F. Williamson, Fanny Minns, A. R. Quinton, Henry B. Wimbush, R. Schwabe	Art as a tool to inform understanding of coastal instability change and the rate of environmental change.	Potential increases in rate and extent of coastal instability and impacts on property, assets and key habitats.
Poole Harbour to Studland, Dorset	Ramsar, National Nature Reserves	Environmental change. Coastal erosion and its management	William Daniell, David Addey, Walter Tyndale, William Buck, A. R. Quinton	Artworks describing the limited extent of coastal change. Introduction of change management at Studland Beach.	Continue on-going successful management approaches.
Lyme Regis to Axmouth (Devon)	World Heritage Site, National Nature Reserve, SAC, SSSI	Coastal instability and cliff features.	A. R. Quinton, G. Hawkins, W. Daniell, D. Addey, E. W. Cooke, A. W. Perry	Art illustrates chronology of coastal landsliding but resilience of chalk frontages.	Potential increases in rate of cliff instability. Continue with existing effective management approaches.

Case Study	Designated Sites	Topic of Paintings	Artists	Key Conclusions	Management Implications
The Lizard, Cornwall	SAC, National Nature Reserve, SSSI	Detailed depictions of cliff geology and habitats.	John Brett, William Holman Hunt, A. R. Quinton, Anne Blunden	Art shows minimal cliff changes since the 1850s. Habitats also similar to today taking account of local expert advice.	Continue with present effective management regime.
North Devon Coast, Lynton to Porlock	SAC, SSSI, National Park, Heritage Coast	Coastal Gemorphology, habitats and environments on coasts and river mouths.	A. R. Quinton, W. H. Millais, G. Rowe, J. T. Linnell, W. Spreat, Albert Goodwin, E. W. Cooke, Charles W. Hemy	Artworks show environmental changes on coastal cliffs and estuary mouths. Coastal change management practices over time.	Effective environmental management is in place under auspices of the National Park.
Morecambe Bay, Cumbria	AONB, SAC, SPA, Ramsar, SSSI	Morecambe Bay coastal frontage environments	William Daniell, Sidney R. Percy, Edmund J. Niemann, Henry Moore, James Peel, A. R. Quinton	Artworks describe the general nature of the Bay's environments	Continue with current management approaches.

Conclusions

1. The natural environments of England's coastal zones are subjected to significant changes as a result of coastal erosion, landsliding, weathering, flooding and human intervention. These processes and impacts will become increasingly severe over the next decades as a result of climate change and sea level rise.
2. A thorough understanding of long-term coastal evolution is essential to support coastal planning and to introduce adaptive management. Whilst increasingly sophisticated approaches and more systematic monitoring of change within coastal zones have been introduced the use of such tools only extend back over the last thirty years or so.
3. However, the art record provides a continuity of full colour images for most frontages around the coast of England with some artworks dating back to the 1770s. It was a further 80 years before the wider introduction of landscape black and white photography and 150 years before the introduction of colour photography. Use of art images allow coastal scientists and practitioners to view the coast in colour before development took place in many locations, and thereby take advantage of the wisdom of hindsight when setting coastal policies for future environmental planning and management.
4. Whilst photographic images, both terrestrial and aerial, are familiar aids used by researchers and practitioners, for example in the preparation of Shoreline Management Plans, landscape assessments and action plans the rich art resource has been much less used. This has been partly because of a lack of awareness of the range of art images available but also due to uncertainty about their accuracy.
5. As part of this study an art ranking system has been refined and has been suitably tailored to the needs of those wishing to study the environmental change. A list of over sixty artists who painted coast zones most accurately has been provided in this study report.
6. The study has confirmed the rich art resource held in public collections and some private collections and thousands of coastal images are available for view on the [ArtUK](http://www.artuk.org/) (www.artuk.org/) and [Watercolour World](http://www.watercolourworld.org/) (www.watercolourworld.org/) websites and elsewhere.
7. The most accurate artistic depictions of coastal environments are those completed by artists with architectural, topographical or geological backgrounds. Artists of the Pre-Raphaelite Brotherhood and their many Followers, in particular, produced numerous finely detailed coastal views many of which are illustrated in this report.
8. Artworks form an additional, very valuable and currently under-used resource available to a wide range of environmental scientists, practitioners and other stakeholders. The more popular subjects painted tend to be locations with dramatic coastal scenery, coastal castles, mansions and monuments, harbours and fishing villages, whilst low-lying coastlines were painted less frequently. Whilst most locations around the English coastline

were painted, current gaps are likely to be filled as more artworks become available through the ArtUK and Watercolour World websites.

9. Some of the artworks produced over the last 200 years are so topographically accurate that they can support both qualitative and quantitative studies of cliff and beach change over time; for example, the works of E. W. Cooke RA and John Brett ARA.

10. Compared to the nineteenth and twentieth centuries up to 1930 there are very few detailed topographical artworks for the study timeline between 1935-1960. This was a result of changing public tastes away from the traditional landscapes of the Victorian and Edwardian eras, the effect of two World Wars and the advent of new styles of modern art. Since the 1960s there has been a strong revival of traditional landscape painting.

11. Through the case studies this project has adopted a sequential approach to the use of images through time. Four artists or artistic groups have produced numerous and often detailed views of the coast. They are William Daniell, RA and his 'Voyage Round Great Britain' (1814-1825), the Pre-Raphaelite Brotherhood and their Followers (c.1850-1890s), Alfred Robert Quinton (fl.1910-1934) and other postcard artists, and the architect and watercolour artist, David Addey who retraced William Daniell's original voyage (1990s-2002). Combined with present day photographs these artists provide a number of benchmarks over time and comprise an illustrated 'State of England's Coastal Environment' over a 200-year period.

12. Numerous early coastal artworks depict the open coast before defences were constructed and seafronts started to develop. In some locations where consideration is being given to removal of existing defences for environmental and other sustainability reasons an examination of these early art images is recommended, as they may assist understanding of the implications of proposed changes to coastal management on the frontage concerned.

13. Extensive lengths of England's natural coastline remain in a pristine condition and appear to show little change since they were visited and painted by late 18th century artists. These conditions have been sustained through a robust planning framework, a co-ordinated approach to coastal environmental management supported by an excellent range of coastal policy, guidance and strategy publications such as Natural England's 'Natural Character Area Profiles' reports.

14. The case studies and annotated art images provided in this report suggest locations where habitat management has proved to work very successfully and also sites where climate change and development pressures pose existing or potential challenges. At such locations further adaptation measures are likely to be required and supported by policy statements in updated shoreline management plans and strategy studies.

15. Artworks (together with old photographs) are images that coastal residents and other stakeholders are familiar with, and which they often trust. They form excellent visual aids to support engagement and presentations on coastal policy, for example where difficult decisions have to be made over future management in the face of climate change.

16. The approach to the use of art described in this study can fulfil an important role by bridging the disciplines of the arts and science. It offers the opportunity for school pupils as well as researchers studying art, science and geography to engage more closely taking advantage of the image resources that are becoming increasingly available online.

17. The completion of this study could not have been achieved without the keen support of a wide range of environmental and fine art bodies, organisations and individuals; their kind assistance is most gratefully acknowledged.

Recommendations

1. Historical artworks produced since the 1770s can provide detailed records over of physical and environmental changes affecting the English coast. Greater use should be made of these resources to inform sustainable environmental management within coastal zones.
2. The study has benefitted from the photographing of 212,000 oil paintings from UK public art collections, which are available to view online through the ArtUK website. The Watercolour World website already hosts nearly 100,000 watercolours and is proving to be an invaluable resource for those interested in studying changing coastal environments. It is strongly recommended that coastal scientists and practitioners take advantage of these digital art image collections.
3. The preparation of a list of English coastal artists, ranked for accuracy, as part of this study will reduce the need for time-consuming research and allow website users to source artists who painted their particular locations of interest most easily.
4. It is recommended that in locations where removal or realignment of existing coastal defences is being considered the art record be searched in order to examine the coastline concerned in its original, natural condition.
5. Art can be used to update understanding of long-term coastal and environmental change. Through this report a new tool and an expanding resource in terms of art imagery can be utilised in updated policy and management practices.
6. It is recommended that a library of historical art images for each of the key nationally important natural coastal sites should be built up and stored in an accessible way for future reference; this task would suit student researchers in the arts or natural sciences disciplines or volunteers.
7. Artworks are images that coastal residents and other stakeholders are familiar with, and which they often trust. They form excellent visual engagement aids to support presentations on coastal policy changes where difficult choices over future management in the face of climate change may require careful explanation. It is recommended that art should be built into presentations to improve stakeholder engagement and understanding.
8. It is recommended that art images should be incorporated into interpretation/information boards at nature reserves and other important sites.
9. The 260 pages of data and information provided in this report could be supported by a succinct four to six page online 'User's Guide' on how to access art imagery and support environmental interpretation in the field.
10. The approach to the use of art described in this study can fulfil an important role in bridging the disciplines of the arts and science. It offers the opportunity for school pupils, as well as researchers studying art, geography and science, to engage more closely

taking full advantage of the image resources that are becoming much more widely available online. These approaches also offer wide transferability value in terms of other subjects, disciplines and geographical regions across Great Britain.

11. The results of this study can be disseminated widely through a range of initiatives such as a National or Regional Coastal Art Competition where photographers, artists or pupils can visit sites and record present day views and describe change or lack of change at the sites chosen. This can be followed up with exhibitions providing further engagement opportunities.

12. Artworks can raise interest and awareness of visitors to the coast allowing them to observe for themselves how coasts and coastal habitats may be subject to change. The authors would like to suggest how art could, for example, provide increased enjoyment and understanding at key locations around the English National Coastal Park.

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Appendices

Appendix 1: List of Abbreviations used in ‘List of Artists’

Agnew’s (A)

Associate of the Old Watercolour Society (AOWS)

President of the Old Watercolour Society (POWS)

British Institution (1806-1867) (BI)

The Fine Art Society, London (FAS)

Flourished (The period during which the artist was active) (FL.)

Isle of Wight (IW)

New English Art Club (NEAC)

The New Watercolour Society (founded in 1832) (NWS)

New Society of Artists (NSA)

The Old Watercolour Society (founded in 1804, became RWS in 1881) (OWS) Private Collection

The Royal Society of Painters in Watercolours (RWS)

The Royal Academy (RA)

The Royal Society of British Artists, Suffolk Street (RBA)

Royal Cambrian Academy, Manchester (RCA)

Royal Society of Etchers and Engravers (RE)

The Royal Institution of Painters in Watercolours (RI)

Royal Institute of Oil Painters (ROI)

Sotheby’s Belgravia (SB)

Sotheby’s London (SL)

Society of British Artists, Suffolk Street (founded in 1824) (SS)

The Victoria and Albert Museum, London (V&A)

Woolley & Wallis Auctioneers, Salisbury (WW)

NB: The spellings listed in the titles of works are those provided by the artists or authors.

Appendix 2: List of Some Key Coastal Artists

ABLETT, Thomas Robert – 1849-1945. Yorkshire landscape painter. Art Master at Bradford Grammar School. Founder and Art Director of the Royal Drawing Society, 1888. 'Walberswick from the Marsh' exhibited at the RA in 1899.

ADAMS, Albert George – Fl.1860-1878. He exhibited nine Isle of Wight works at the BI, SS and RA. 1860 (BI 269) 'On the Sands, Bonchurch'; 1860 (SS 635) 'At Luccombe Chine'; 1861 (RA 915) 'Ventnor'; 1862 (BI 373) 'Early Morning at Bonchurch'; 1862 (RA 755) 'Boats at Luccombe Chine'; 1862 (SS 919) 'Cliff Path, Ventnor'; 1864 (BI 633) 'Undercliff'; 1867 (BI 62) 'Coast Scene near Luccombe Chine' and 1876 (RA 852) 'Ventnor'.

ANDREWS, Capt. J. W. – Fl.1860-1865, London. A painter of marine subjects, e.g., 1865 (BI 26) 'A calm – The Solent from the Esplanade, Ryde', oil.

ANDREWS, James Petit – Fl.1860. He exhibited four works of cliff scenes on the Freshwater coast, IW at the Free Society of Artists. 1767 'A shipwreck in the IOW'; 1767 'An inside view of a cave near the Needles'; 1767 'An outside view of a cave near the Needles' and 1768 'A view of the Needles'.

ARNALD, George ARA – Fl.1807-28. Painter of views of Southampton and Portsmouth. 1807 (RA 267) 'Southampton'; 1819 (RA 311) 'Portsmouth from Portsdown Hill'; 1820 (BI 125) 'View of Portsmouth from Portsdown Hill' and 1828 (BI 80) 'Portsea Ferry looking into Portsmouth Harbour'.

BAKER, W. J. – Fl.1840-55. He exhibited a number of views of the Solent coasts including: 1841 (SS 703) 'Off Alum Bay'.

BALL, Wilfrid Williams – Fl.1880-1898. Watercolourist and illustrator for late nineteenth century colourplate books (e.g., A. & C. Black's 'Hampshire').

BARBER, Thomas – Fl.18302-1840s. Steel plate engraver and author of 'Picturesque illustrations of the IOW' (1830) with forty steel engravings and map by Simkin & Marshall and 'Wales Illustrated' (publ. Jones, 1830-31).

BARNARD, George – Fl.1830-90. London landscape Painter and watercolourist. He painted views in Devon and on the IW including: 1837 (SS 850) 'Bonchurch and St Boniface Down'; 1837 (SS 867) 'Steephill Cove' and 1837 (SS 911) 'Bonchurch, IW'.

BARRET, George Jnr – 1767-1842. A number of the following works were exhibited at 'The IW in Georgian and Regency times' at Carisbrooke Castle Museum in 1966: 1774 (RA 5) 'A view of the village of Steephill at the back of the IOW'; c.1820 'Undercliff from Old Park Common'. Pen and brown ink and pencil with wash. Sotheby's 18.11.88, lot 118. Drawings include: 'St Lawrence', 'Near the Church Shanklin', 'Freshwater', 'Ventnor', 'Carisbrooke Castle from Mount Joy', 'Carisbrooke Castle', 'Shanklin Chine' (1788), 'Shanklin beach and cliffs' and 'Shanklin Chine'.

BARROW, J. C. – Fl.1796-1802. A London painter of views of Southampton and IW including: 1796 (RA 433) and 1796 (RA 519) (two versions) 'South East View of Southampton' and 1797 (RA 747) 'Southampton Water Gate'.

BARRY, Frederick – Fl.1826-60. Painter of marine and coastal views particularly in the Solent off Ryde and Cowes, e.g., 1849 (RA 1142) 'Off Norris Castle – Ryde Pier in the distance'; 1849 (SS 161) 'Oyster Boats off Cowes, IW' and 1853 (BI 247) 'A strong breeze in Cowes Roads'.

BARTH, J. S. – Fl.1790s. With J. King he published twelve fine large copperplate views of IW in 1813. Engraved coastal views include: 'St Helens Seamark', 'Brading', 'Sandown Bay', 'Yarmouth', 'Steep Hill'.

BARTLETT, William Henry – 1809-1854. A prolific, well-travelled topographical artist and engraver who illustrated many early-to-mid-Victorian guidebooks. His Welsh coastal views were engraved in Finden's 'Ports & Harbours'. He produced numerous drawings for his 'The Scenery of Ireland' as well as for Barber's 'Picturesque Illustrations of the IW' (1830s).

BATLEY, Walter Daniel – 1850-1936. A landscape painter from Ipswich. His work 'Sole Bay, Suffolk', was exhibited at the RA in 1897. His painting 'Minsmere Cliff' is displayed at the Ipswich Museum.

BEECHEY, Sir William RA – Fl.1810-30, London. 1810 (BI 268) 'A view in the IW'; 1818 (BI 289) 'A view of the Sandrock Chalybeate Spring lately discovered in the IW' and 1830 (SS 209) 'Blackbury (?Blackgang) Chine in the IW'.

BEECHEY, Capt. Richard Bridges – 1808-1895. Painter of marine, shipping and coastal scenes often in rough conditions.

BENHAM, Thomas – 1856-1911. Landscape, portrait and genre painter. Exhibited at RA from 1878, (also at RI, ROI, RHA and Tooth's). '*Stranded*' – a large painting depicting fisher-girls at Walberswick shown at the RA, 1889.

BEVERLEY, William Roxby – 1811-1899. Painter of landscapes and coastal scenes in north-east England and on the Sussex coast.

BIRCH, Samuel John 'Lamorna' – 1869-1954. A painter of the coast and country life, born at Egremont, near Birkenhead. He was brought up in humble circumstances in Manchester. As a self-taught landscape painter, he studied briefly in Paris. He was much involved with Newlyn artists and lived for a while in the nearby Lamorna Valley; he also painted at Walberswick in Suffolk.

BOIS, Miss – Fl.1860s. London-based landscape painter. She produced views of the IW, e.g., 1865 (SS 994) 'Luccombe Chine'; 1865 (SS 1005) 'Steephill Cove near Ventnor'; 1867 (SS 924) 'Study of rocks at Ventnor' and 1867 (SS 750) 'A misty day on the Isle of Wight'.

BORROW, William Henry – Fl.1860s-1890s. A painter of coastal scenery in oils from Hastings. Hastings Museum & Art Gallery hold several of his views of the adjacent coast; he also painted in the West Country.

BOWKETT, Miss Jane Maria – Fl.1860-85. Her subjects were often mothers with young children at play. 1875 (SS 211) 'On the sands at Shanklin'.

BRADSHAW, Samuel – Fl.1840-56. Extremely fine engraver who produced many of the views in W. H. Davenport Adams', 'History, Topography and Antiquities of the IW' (1856).

BRANDARD, Robert – 1805-1862. Predominantly an engraver but also a watercolourist, he produced engravings for Turner's 'Picturesque views in England and Wales' (Turner, 1838).

BRANNON, Alfred – Fl.1840s-70s, Wootton, IW. Alfred contributed seven engravings to the total of nearly 200 views produced over a fifty year period for 'Vectis Scenery', which he published intermittently until at least 1876.

BRANNON, George – 1784-1860, Wootton, IW. Engraver, author and publisher of a series of Isle of Wight guidebooks between 1821-60. His most famous work 'Vectis Scenery', was produced annually from 1821 until his death in 1860. His early copper engravings produced in the 1820s were charming but primitive. Under the influence of his sons, Alfred and Phillip, he switched to steel engravings in the 1830s. Brannon's work has a picturesque charm showing the Island scenery to its best advantage occasionally from a 'birds' eye' perspective. On his death in 1860 his son, Alfred, took over the family business.

BRANNON, Philip – Fl.1840s-70s, Wootton, IW. Like his brother, Alfred, Phillip was a skilled engraver producing fine quality steel engraved plates for 'Vectis Scenery' from 1837. His views of 'Bonchurch' (1843) and 'The Needles rocks and lighthouse' (1858) are particularly striking. Later he left the Island to produce guides to Bonchurch, Dorset, Southampton and Netley Abbey.

BREANSKI, Alfred De. Snr. – 1852-1928. Painter of Highland, Lakeland and coastal scenery e.g., 'Carnarvon Castle' (31" x 47", Soth).

BRETT, John ARA – 1830-1902. A follower of the Pre-Raphaelites, Brett was a painter of landscapes, particularly geological coastal views in south-west England, Wales and the Scottish Isles. Most of his earlier works are in watercolour but he worked mainly in oils after 1870. Fine examples of his works are held in the National Museum of Wales. 'John Brett – Pre-Raphaelite Landscape Painter' (Payne, C., 2010) He painted also on the Isle of Wight (e.g., 'February in the Isle of Wight').

BREWTNELL, Edward Frederick RWS RBA – 1846-1902. London painter of genre and landscape subjects e.g. 'At Cley-next-the-Sea, Norfolk' (1902).

BRIGHT, Henry – 1814-1873. Important Norwich School landscape painter and watercolourist; he studied with J. B. Crome and J. S. Cotman. He exhibited at the RA from 1843-1876 and at many other exhibitions. His East Anglian coastal subjects include 'North Beach, Great Yarmouth', 'Shore scene', 'Orford Beach', 'Orford Castle' (1856) and 'On Yarmouth beach' (1848).

BROWN, Sir J. Arnesby – 1866-1955. Studied in Nottingham under Andrew McCallum and in Bushey, Herts, under Sir Hubert von Herkomer. For some years he spent summers in St. Ives and winters in Chelsea before developing East Anglian links particularly from 1905. Elected RBA 1896, RA 1915. President, Nottingham Society of Artists, from 1913. Knighted in 1933 with W. F. Crittall's Sole Bay Group (Southwold and Aldeburgh). 'The Saltings, Southwold from the Blythburgh Road' was shown at WE, Ipswich, 1994; he also painted 'Yarmouth' and 'Blakeney'.

BURCHETT, Richard – 1815-75. An art teacher and landscape painter his most important work is 'Harvesting above Shanklin' (a scene in the IW) in the Victoria and Albert Museum.

BURKE, Augustus – 1838-1891. Landscape, genre and portrait painter. Elected RHA 1871. Showed 'The Fisherman's Quay, Walberswick, Suffolk' and 'The Close of a Wet Day, Suffolk' at the RA, 1884.

CALLCOTT, Sir Augustus Wall RA – Fl.1811-1827. London artist exhibited: 1811 (RA 112) 'Itchen Ferry' and 1827 (RA 291) 'Dead calm, boats off Cowes Castle'.

CALLOW, George D. – Fl.1860s. A competent painter of coastal scenes, e.g., 1861 (BI 32) 'Near Luccombe Chine, IW' and 'Bonchurch Shore, IW' Phillips (L) 1988 lot 121, oils.

CALLOW, William RWS – 1812-1908. Painter of landscapes and sea pieces he accompanied his friend, Charles Bentley, on an IW tour in 1837.

CALVERT, Frederick – Fl.1820-50. A painter and Engraver of topographical subjects. His book 'The Isle of Wight Illustrated' (1846) contains twenty finely aquatinted plates.

CARMICHAEL, John Wilson – 1800-1868. A prolific painter of grand shipping and coastal scenes from Newcastle-Upon-Tyne. He was one of the leading marine painters of the Victorian era. His subjects include numerous views of the north-east coast and elsewhere; e.g., 'Off the Needles' (1848); 'Shipping off Osborne' and 'Ships of the line in the Solent' (1860). His works are usually large canvases, a number of which are illustrated in this book.

CARPENTER, William – Fl.1840s. Carpenter's Repository of Arts published an important series of lithographs of IW scenes in the mid-1850s. Subjects often included the prominent hotel of the area in the view. His coastal works include 'Bonchurch'; 'Ventnor'; 'Blackgang Chine'; 'Shanklin Chine'; 'Ryde from St Johns'; Plumley's Hotel Freshwater Bay' and 'Alum Bay'.

CARRICK, Robert RI – 1829-1904. Genre and landscape painter and lithographer of note. In the 1840s he published a series of excellent lithographs of IW scenes including 'Bonchurch Pond'; 'Bonchurch Waterfall' and 'Ventnor'.

CATTON, Charles R. A. – Fl.1770s. His coastal views include two of the IW: 1773 (RA 40) 'A view of the Needles at the west end of the IW' and 1774 (RA 32) 'A view of the Needle rocks, west end of IW'.

CHAMBERLIN, Mason Jnr – Fl.1790-1805. Painter of IW coastal scenes. 1797 (RA 751) 'View of Steephill Cove, IW'; 1797 (RA 771) 'View of Bonchurch, IW'; 1802 'Ventnor Mill' and 1804 (RA 619) 'View of Steephill, IW'.

CHAMBERS, George Jnr – Fl.1850s. Son of George Chambers (below) he painted in a similar style and chose similar subject matter, e.g. 'A fresh breeze off Cowes' (National Maritime Museum); 1853 (SS 441) 'View from upper part of Portsmouth Harbour' and 1861 (SS 503) 'Portsmouth Harbour'.

CHAMBERS, George RWS – 1803-40. An important painter of marine subjects from Whitby. His Naval upbringing is reflected in the accuracy of his work. He painted numerous views in the waters around the IW, the bulk of his local work being exhibited in the 1830s. 1829 (RA 336) 'Off Ryde, IW'; 1830 (BI 493) 'A fresh breeze, Portsmouth in the distance'; 1833 (BI 389) 'A line-of-battle ship off Culver Cliff'; 1833 (SS 361) 'A Portsmouth ferry-boat crossing to the IW'; 1834 (SS 125) 'Off Bembridge Point, IW' and 1837 (SS 31) 'The Camilies, West Indiaman, leaving her fleet off Bembridge, IW'.

CLARKE, Helen SWA – Fl.1880s. She painted a watercolour of Southwold beach and cliffs, Suffolk in 1889.

CLENNELL, Luke – 1781-1840. Northumberland watercolourist of coastal and figurative subjects, e.g., 'Fishermen's huts at Ventnor, IW'.

CLINT, Alfred – 1807-1883. An important and prolific painter of coastal scenes who exhibited for over forty years; he was President of the Society of British Artists. His favourite subject was views of Sandown Bay and Culver Cliff, IW, which he captured on canvas, often on a large scale. An important work was his rendering of 'The Salvage of HMS Eurydice in Sandown Bay' which so impressed Queen Victoria that she requested a copy of it. Other exhibited works include: 1834 (BI 153) 'Luccombe Chine, IW'; 1834 (SS 651) 'Blackgang Chine, IW'; 1834 (SS 700) 'Luccombe Chine, IW'; 1848 (BI 66) 'View near Yarmouth, IW'; 1848 (SS 305) 'Sandrock Bay, IW'; 1876/7 (SS 77) 'Portsmouth from Southsea' and 1877/8 (SS 341) 'View from Portsdown'.

COLEKETT, Miss Victoria S. – Fl.1860-85. Painter of coastal scenes on the South coast of the IW, e.g., 1867 (SS 1040) 'Sandown Bay from the beach at Shanklin'; 1869 (SS 1061) 'Cliffs at Bonchurch, IW' and 1870 (SS 835) 'High Port, Ventnor, IW'.

COLEMAN, William Stephen – 1829-1904. He painted two views entitled 'At Luccombe'.

COLLINS, William RA – 1788-1847. An important painter of coastal, landscape and genre subjects. He received lessons from George Morland, who also painted on the IW. Collins in turn influenced William Shayer, the most prolific genre painter on the Island. His coastal works include: 'Undercliff near Ventnor, IW' possibly also entitled 'Samphire gatherers, Undercliff, Ventnor' sold by Christie's 20 November 1964 Lot 142. 'Fisher boys on the cliffs' (at Blackgang) oil on panel.

CONNING, George J. – Fl.1890. He exhibited a picture entitled 'The Sands, Yarmouth' at the RA in 1890.

CONSTABLE, John RA – 1776-1837. A leading British landscape painter. He produced several oils of the Sussex coast but mainly painted landscapes of Suffolk.

COOKE, Edward William RA – 1811-1880. Son of George Cooke, the engraver, he made an outstanding contribution to British coastal art. His detailed knowledge of shipping and rigging gives his work great authenticity. Apart from exhibiting outstanding work at the RA and elsewhere between 1837-77 he also contributed drawings for W. H. Davenport-Adams' 'History, Topography and Antiquities of the IW' (1856); Thomas Roscoe's 'Summer Tour of the IW' (1843) and his 'Shipping and Craft'. The definitive work on E. W. Cooke is the publication by John Munday 'E. W. Cooke – A man of his time' (Antique Collector's Club ISBN: 1 85149 222 4; 1996). Cooke visited the IW on numerous occasions and his greatest British output was views of the south-east coast between Ventnor and Shanklin. He also painted in the West of England.

COOKE, George – 1781-1834. Engraver and father of E. W. Cooke. An engraver after Turner he produced plates for his 'Views of the south coast of England' (1826) as well as for Sir Henry Englefield's 'Geology and antiquities of the IW' (1816).

COOKE, W. B. – 1778-1853. Artist and engraver. He produced a number of the copper plate engravings for 'A New Picture of the IW' (1808 and 1813) with George (above).

COOPER, Alfred Heaton – 1864-1929. He studied at Westminster School of Art and became an extremely prolific landscape painter and illustrator. Mainly associated with the Lake District, where he settled, he travelled widely in Britain producing watercolours for publication in regional guides; e.g., Norfolk and Suffolk (A. & C. Black Ltd., 1921) and the IW.

COTMAN, Frederick George – 1850-1920. A landscape and genre painter from Ipswich, nephew of John Sell Cotman; he studied at the RA Schools. Cotman exhibited several Suffolk paintings at the RA, including 'Departing Ray of Sunshine, Blythburgh in 1900'.

COTMAN, John Sell – 1782-1842. A leading member of the Norwich School of Artists his works tended to be of architectural and countryside subjects rather than coastal scenes, although important coastal works include 'Dutch hoys-Yarmouth' (1808), 'The Mars riding at anchor off Cromer' (1808), 'Boats at Cromer Beach' (1809), 'Boats on the shore at Blakeney' (1809), 'Fishing boat off Cromer' (1829) 'Sea view with fishing boat off

Yarmouth' (1834) and 'Yarmouth beach with figures' (1834); he also painted a view of 'The Needles, IW'.

COTMAN, Miles Edmund – 1810-1858. Eldest son of John Sell Cotman and close follower of his style. His works are in both oils and watercolour with coastal views including 'Beach scene at Great Yarmouth' (1838), 'Yarmouth beach after a gale' (1841) and 'North Beach, Yarmouth' (1855).

CRANE, Walter RWS – 1845-1915. A watercolourist; he painted a watercolour of 'Below East Cliff, Southwold Beach' in 1886.

CRISTALL, Joshua POWS – 1767-1847. A distinguished self-taught artist of the early school, he made regular excursions to the IW where he was captivated by the coastal scenery of the Undercliff coast. His patron was James Vine, who lived in the elegant marine cottage residence of Puckaster at Niton. Mr Vine commissioned a number of major works from Cristall, particularly scenery of the rugged Undercliff and the fishing cove at nearby Puckaster. Many of Cristall's best IW works were sold by Sotheby's on 10 July 1980.

CROME, John – 1768-1821. In 1803 John Crome, with Robert Ladbrooke, formed the Norwich School of Artists which held exhibitions almost continuously between 1805-1833. Crome produced a large number of detailed coastal paintings including 'Yarmouth Pier and jetty' (1807), 'Yarmouth beach and jetty' (1808), 'A scene on Yarmouth Quay' (1809), 'Yarmouth Jetty' (1817), 'Yarmouth Beach seen from the Pier' (1818), 'Yarmouth beach looking north – morning' (1819) and 'Yarmouth beach – jetty in the distance – evening' (1819).

CROME, John Berney – 1794-1842. The eldest son and pupil of John Crome and a member of the Norwich School of Artists of which he became President in 1819. He painted landscapes and coastal scenes including 'Boathouses at Cromer – evening' (1818) and 'View of Yarmouth from Gorleston' (1818).

CROPSEY, Jasper Francis – 1823-1900. Leading exponent of the Hudson River School. He painted on the IW, e.g., 1860 (RA 394) 'Roadside at Bonchurch'; 1860 (RA 479) 'Sea coast at Bonchurch'; 1860 (RA 481) 'Under the cliff Bonchurch' (Monks Bay) and 1861 'Luccombe Chine' (High Museum of Art, Atlanta).

CUBLEY, Henry Hadfield – Fl.1880-1905. A landscape painter in his own right, he was also employed by the postcard publisher, Raphael Tuck & Sons, to paint IW scenes for reproduction as colour postcards.

DADE, Ernest – 1864-1935. Dade was born in London and brought up in Scarborough. Studied at l'Académie Julian in Paris in the mid-1880s. Settled in Chelsea, on return in 1887 where the artist community may have precipitated his visits to the Blyth Estuary (and Lowestoft) in the ensuing two years. Re-settled, later, in Scarborough, becoming an active member of the Staithes Group where he painted coastal and fishing scenes.

DANBY, James Francis RA – 1793-1861. A prolific painter of Island scenes in Wales, North-east England and around the IW, which he visited on at least seven occasions; e.g., 1851 (BI 241) 'Storm off the Needles'; 1855 (BI 332) 'Ventnor' and 1855 (SS 234) 'Luccombe Chine'.

DANIELL, William RA – 1769-1837. A coastal and marine artist he studied under his Royal Academician father. He produced eight volumes of aquatints on his 'Voyage Round Great Britain', which took eleven years c.1814-1825; he was elected RA in 1822.

DAVY, Henry – 1793-1865. Topographical artist. Assistant to, and pupil of, John Sell Cotman. He published a vast collection of etchings of Suffolk churches, country houses and architectural antiquities over a 25 year period ('Walberswick Church', 1826), as well as detailed coastal drawings (e.g., 'Southwold', 1840, and 'The piers, Southwold', 1824).

DAY & Sons – Fl.mid-19thC. Publishers of fine lithographers, some with Catherall & Pritchard of Chester, e.g., 'Llandudno from the Parade', 'Llandudno from the hill behind the baths' and 'Aberystwyth'.

DE LOUTHERBOURG, Phillipe Jacques RA – 1740-1812. His romantic plates from 'Picturesque scenery of Great Britain' includes 'Carisbrooke Castle', 'The Needles', he also published an aquatint of 'Cowes Castle'.

DE WINT, Peter – 1784-1849. An important watercolourist and member of the OWS. He was an associate of Dr Monro and John Varley. His Welsh works include 'Caernarvon Castle and the Menai Straits' (V. & A.589-1892). He also painted coastal views at Blackgang Chine and Ventnor, IW, and many other fine English coastal scenes.

DENNIS, John – Fl.1795-1810. Landscape Artist. He published a series of picturesque aquatints, e.g., 'View near Bonchurch, IW' and 'Ventnor Cove, IW'.

DEVIS, Anthony – 1729-1817. Watercolourist whose works include: 1792 'Lymington from the Buckland Rings' and 1792 'View of the Needles from the Hampshire coast'.

DEXTER, Walter – 1876-1958. Fine painter of Norfolk landscapes mainly in oils including many views in vicinity of King's Lynn (e.g., 'Lynn from the south-west' in King's Lynn Museum collection).

DIXON, Robert – 1780-1815. A painter of landscapes and rural scenes, which he exhibited at the RA and Norwich Society. In 1810/11 he published 36 views entitled 'Norfolk Scenery'.

DODGSON, George Haydock – 1811-1880. He painted 'The coast of Gower, South Wales' in 1879 (V. & A. 1772-1900)

DUNCAN, Edward RWS – 1803-82. An important and meticulous painter of coastal scenes. "Duncan's work typifies the development of marine watercolour in the Victorian era. Less dramatic than Turner or Stanfield he appealed to the landsman's interest in the British coast. 'Spithead from Ryde Sands with part of the Baltic Fleet' is a celebrated

example of his best work showing his skill in drawing, and in the use of bright, fresh colours, and varied effects of light and shade” (S. Wildman, Birmingham Art Gallery). He also exhibited: 1832 (SS 274) ‘View of Shanklin’; 1855 ‘Spithead, with part of the Baltic Fleet from Ryde Sands’ 14’ x 21”, Birmingham Art Gallery; 1857 (OWS 169) ‘Spithead from the IW’ – another watercolour with this title was sold by Christies on 21 November 1978, Lot 109; 1859 ‘The Baltic Fleet leaving Portsmouth, seen from the IW’ (V&A). This picture is also illustrated in Cornish’s ‘Isle of Wight’; 1859 ‘Fishermen off Culver Cliff’ was offered for sale by Christie’s on 9 April 1992, Lot 95; 1867 ‘Off Culver Cliffs – after the wreck’, Christie’s 30/6/1981, Lot 148; 1870 (RA 637) ‘Culver Cliff, Whitecliff Bay’ and 1870 ‘Landing sheep on Ryde Sands, IW’ 13½ x 20¾” was offered for sale by Sotheby’s on 1 April 1993, Lot 112.

DYCE, William ARSA ARA HRSA – 1806-1864. A painter of a limited number of landscapes influenced strongly by a Pre-Raphaelite approach. His oil of ‘Pegwell Bay – a recollection of October 5th, 1858’ initiated the concept of the ‘Art and Coastal Change’ studies sponsored by The Crown Estate.

EARL, William Robert – Fl.1825-45. A prolific early exhibitor of Southampton and the IW; e.g., 1824 (SS 56) ‘West Quay, Southampton’; 1825 (RA 338) ‘View at the back of the IW’; 1825 (BI 134) ‘At Northam near Southampton’; 1826 (BI 96) ‘A view of Atherfield’; 1826 (BI 99) ‘A view from Blackgang Chine’; 1826 (BI 191) ‘At Newtown’ and 1843 (BI 159) ‘Back of the IW’.

ELLIS, Edwin – 1841-1895. A painter of coastal and fishing scenes, with a rich palate in the manner of Charles Napier Hemy.

EVERSHED, Arthur – 1836-1919. A painter, etcher and illustrator who studied under Alfred Clint before he became full-time artist. His RA titles include: ‘Southwold’ and ‘On the Beach, Southwold’ (1882), ‘Blackshore, Walberswick’, ‘Fishing Gear, Southwold’ and ‘Walberswick Ferry’ (1884) and ‘Walberswick Ferry’ (again) in 1896.

FARINGTON, Joseph RA – 1747-1821. Farington worked with Richard Wilson and became one of the first students at the RA. He painted watercolours in the Solent and at Cowes.

FARREN, Robert B. – Fl.1880s. Painter of East Anglian landscapes exhibiting sixteen works at the RA.

FEENEY, William Peregrine – Fl.1880-1896. He painted East Anglian and Thames landscapes exhibiting three views at the RA and eleven at the SS.

FIELDING, Anthony Vandyke Copley – 1787-1855. A prolific painter of landscapes and coastal scenes, he exhibited numerous watercolours at the RWS in the 1840s-1850s, particularly views of Staffa and Mull (e.g., ‘Clamshell Cave on Staffa’, 1840, No. 273; ‘Scene on the seashore, Island of Mull’, 1849, No. 361). He made numerous sketching tours of the IW producing views of Sandown, Shanklin, Ryde, Cowes and Culver Cliff. An aquatint of ‘Ryde Sands’ was published R. Bowyer and M. Parkes in 1827. In Hampshire

examples include: 1831 (BI 30) 'Vessels on the shore near Southampton' and 1844 (BI 326) 'View from Bow Hill near Chichester, the IW seen over Hayling Island'. He painted coastal scenes in East Anglia including 'Beccles on the Waveney', 1819. Fielding toured Wales in 1808 and became a pupil of John Varley. He toured Wales again in 1811 and 1815. His Welsh works include 'Caernarvon Castle' (V. & A. 2972-1876); 'View on the Flintshire coast across the Dee' (RWS 35, 1820).

FINDEN, E. and FINDEN, W. – 1838. Authors of 'Ports, Harbours and Watering Places of Great Britain' containing numerous views of the Scottish coastline engraved by W. H. Bartlett and others.

FLETCHER, William Teulon Blandford – 1858-1936. He painted a much-reproduced oil of children playing on the beach in front of Yarmouth Pier in the early 1880s. Fletcher visited Walberswick with Walter Osborne and Nathaniel Hill during the same years; he also painted a view of '*Wells-next-the-Sea*'.

FORBES, Stanhope Alexander RA NEAC – 1857-1947. A genre and landscape painter who worked in Brittany before settling in Cornwall in 1884. He was a leading member of the Newlyn School and a founder member of the NEAC in 1886.

FOSTER, Myles Birket RWS – 1825-1899. One of the finest watercolourists of the later Victorian period. Whilst best known for genre subjects, he also produced numerous views of coastal topography covering most parts of the British coast particularly north-east England, the south-east, the Isle of Wight and Devon and Cornwall. He was a friend of He was a friend of the poet Laureate Lord Tennyson and visited the family at Farringford in Freshwater on the IW, where he painted with Helen Allingham. A full catalogue of his works is provided in 'Birket Foster' by Jan Reynolds (Batsford, 1984).

FRANCIA, Louis Thomas – 1772-1839. Exhibited a series of views between 1796-98. His most famous pupil was R. P. Bonington. He exhibited views of the IW and Hampshire coasts including: 1796 (RA 487) 'A view of Mr Wilkes' Cottage' (Sandown); 1796 (RA 860) 'A view from Shanklin Chine' and 1798 (RA 590) 'A distant view of Yarmouth from Lymington, with part of the Lymington River'.

FRIPP, George Arthur RWS – 1813-1896. A prolific painter of finely detailed coastal scenes in watercolour.

FULLWOOD, John RBA RI – Fl.1880-1930. He produced pen and ink, etchings and watercolours of Island scenes. Some of his work is illustrated in C. J. Cornish's 'Isle of Wight'.

GASTINEAU, Henry – 1797-1879. A prolific exhibitor of coastal landscapes exhibiting at the RA, OWS and elsewhere between 1812-75.

GILBERT, Arthur – 1819-95. A London landscape painter of moonlight scenes; e.g., 1859 (SS 519) 'A bright day, Undercliff, IW' and 1866 (RA 127) 'Night, near Ventnor'.

GLENDENING, Alfred Augustus – Fl.1870-99. Examples of his work include: 1871 (SS 236) 'The sea shore - Ventnor'.

GLENDENING, Alfred Jnr RBA – 1861-1907. Son of Alfred Augustus he painted at Luccombe, IW, and in the Undercliff, IW, as well as coastal genre subjects.

GODET, Julius – Fl.1850-80. A regular visitor to the IW, he returned on at least sixteen occasions to paint views throughout the Island but especially on the coast near Ventnor. Examples include: 1853 (RA 1240) 'Waterfall on the beach at Bonchurch'; 1854 (BI 161) 'In the Undercliff'; 1855 (RA 599) 'Bonchurch'; 1856 (SS 583) 'View in the Undercliff near Bonchurch, Culver Cliff in the distance'; 1860 (RA 41) 'Steephill near Ventnor'; 1862 (BI 387) 'On the beach at Bonchurch'; 1862 (SS 874) 'Steephill Castle'; 1863 (SS 461) 'Coast scene near Ventnor'; 1865 (BI 407) 'The Undercliff, Bonchurch'; 1867 (BI 484) 'Near Ventnor'; 1872 (SS 147) 'Coast scene near Ventnor'; 1875 (SS 134) 'Near Ventnor'; 1876 (SS 417) 'Near Bonchurch' and 1879 (SS10) 'The Undercliff near Bonchurch'.

GOODWIN, Albert RWS – 1845-1932. A painter of landscapes in oils and watercolour, he was influenced by Turner.

GORDON, Lady Willoughby – Fl.1820s-30s. Wife of General Sir Willoughby Gordon of The Orchard, Niton Undercliff, IW, she was a talented artist and pupil of J. M. W. Turner. Girtin and Cox. She was sister of John Swinburne of Capheaton. Turner's 'View from the terrace of a villa at Niton' (from sketches of a lady): 1826 RA 297 was based on her drawings.

GOULDSMITH, Miss Harriet (later Mrs R. Arnold) – 1786-1863. A prolific painter of the activities of lobster fishermen at Ventnor Cove, IW. She also painted at Steephill, Bonchurch and Shanklin Chine. Examples of her works include: 1826 (BI 204) 'The Watermill at Ventnor Cove'; 1826 (RA 38) 'Going out lobster fishing, Ventnor'; 1826 (SS 299) 'The farm at Ventnor'; 1827 (BI 30) 'View on the estate of T. P. Hill Esq. at Ventnor'; 1827 (RA 127) 'View at Steephill'; 1827 (SS 396) 'Going out lobster fishing at Ventnor Cove'; 1827 (SS 479) 'A south view of the water mill, Ventnor'; 1828 (BI 464) 'A water mill at Ventnor'; 1828 (SS 152) 'A cascade in the IW'; 1830 (BI 366) 'A cottage near Lord Yarborough's, IW'; 1831 (SS 433) 'Cottages at Ventnor'; 1831 (SS 455) 'View near Bonchurch' and 1840 (BI 45) 'View at Ventnor'. Her Hampshire coastal works include 'View of the ferry at Lymington' 1829 (RA II); 'View in Hampshire, the IW in the distance' – two exhibits (BI 141 – 1841 and SS 96 – 1830).

GRACE, James Edward – 1851-1908. Painter of coastal scenery in Suffolk and on the IW; e.g., 'Walberswick – A Ferry on the Blyth, Suffolk' (RA 1877). RBA titles included 'Southwold Fishing Boats', 'On the Suffolk Coast' and 'A Suffolk Village, Evening' in 1877; 1891 (SS 217) 'Carting sand, Bembridge'; 1891 (NE 110) 'Summer, IW' and 1894 (RA 1085) 'On the cliffs, IW'.

GRANT, Carleton – Fl.1890s. A landscape painter elected to the RBA in 1895; exhibited there and at the RA 1885-1899. Known for his work in Polperro, on the Thames Estuary and in North Wales; e.g., 'Near Walberswick, Suffolk' shown at the RBA, 1897.

GRAY, William – Fl.1835-60. An important IW topographical artist of the mid-Victorian period. His watercolours heightened with white show the influence of T. C. L. Rowbotham and T. M. R. Richardson Jnr with whom he worked in the late 1850s and early 1860s at Bonchurch, IW. His son, William Gray Jnr. (see below) was less proficient, although some of the best works are almost indistinguishable. Gray exhibited at the RA and elsewhere; e.g., 1855 (RA 1137) 'The White Cliff, Ventnor' (Wheeler's Bay); 1859 (BI 560) 'On the coast, Bonchurch'; 1860 (BI 191) 'The Undercliff near Blackgang Chine'; also 'Monk's Bay, Bonchurch, looking west'; 'Niton Undercliff near the Cripple Path'; 'Ventnor showing the Royal Marine Hotel'; 'The fishing village at Luccombe'; 'Sunset Ventnor Cove', 'Steephill Cove' and 'Luccombe Beach'.

GRAY, William Jnr – Fl.1860-80s, Ventnor. E.g., 'The Royal Marine Hotel, Ventnor' and 'On the beach at Luccombe'.

GREGORY, Charles – 1810-96. A watercolourist producing landscape and marine subjects around the IW. His style is more precise and confident than that of his son, George (below); his work was rarely exhibited. His views include: 1867 'The Royal Yacht Squadron from the east'; 1867 'The Parade, Cowes'; 'The ship 'John' and an American vessel in Thetis Dock, Cowes' and 1868 'Launch of the Sunday School Lifeboat 'Dove' from Prince's Green, Cowes'.

GREGORY, George – 1849-1938. Proficient painter of marine, coastal and rural scenes in oil and watercolour. Son of Charles Gregory (above). Examples of his work include: 1881 'On the River Medina', oil and 1903 'Prince's Green, Cowes', watercolour.

HARDIE, Martin CBE VPRI RE RWS SMA – 1875-1952. An authority on watercolour painting he painted a view of 'Blakeney, Norfolk'

HARDING, James Duffield OWS – 1798-1863. Landscape and topographic painter; e.g., 1870 'Entrance to Wootton Creek, IW', watercolour.

HARDY, Thomas Bush RBA – 1842-97. Painter in watercolour of numerous coastal scenes; e.g., 'Off Ramsgate'.

HARRADEN, Richard Bankes – c.1810. Produced fine large aquatints of Hampshire and the IW including 'The valley of Bonchurch' and 'Blackgang Chine'.

HARVEY, Harold Charles Francis – 1874-1941. Prominent painter of Cornish coastal and harbour views and genre subjects.

HARWOOD, J. & F. – Fl.1840s-1850s. Publishers of mid-nineteenth century guides illustrated with steel engravings – e.g., Roscoe's 'Tours'.

HASLEHUST, Ernest William – 1866-1949. Born Walthamstow. Landscape painter (mostly watercolour) and book illustrator. Elected RBA 1911, RI 1924. Exhibited (1914-1945) at RA, RBA, RI and elsewhere. Walberswick work reproduced in Percy Bradshaw's

'I wish I could paint' (Studio Publications 1945 – reprinted 1946, 1951, 1954). He illustrated 'The Isle of Wight'.

HASSELL, Edward – Fl.1833-1852. Prolific London painter of Hampshire and IW scenes, e.g., 1839 (BI 351) 'Distant view of Southampton from Itchen' and 1839 (SS 528) 'Itchen ferry near Southampton'.

HASSELL, John – 1767-1825. A friend of George Morland, Hassell's 'Tour of the IW' contained oval-coloured aquatints.

HAWKSWORTH, William Thomas Martin RA RBA – 1853-1935. A landscape painter of the Norfolk and Kent coasts, he painted views of 'The Yare, Great Yarmouth: Shipping, etc' and two views entitled 'Great Yarmouth'.

HAYES, Edwin – 1819-1904. A prolific coastal and marine painter. He favoured the coasts of Yorkshire and East Anglia, and the Solent. Elected RHA 1861, RI 1863, ROI 1883. 'Over the Bar, Southwold' was shown at the RA in 1877. In Scotland he painted 'Tantallon Castle' - sold Soth. Sc. 04/1981 (Lot 54).

HEARNE, Thomas – 1744-1817. A prominent early watercolourist; local works include: c.1791 'Lymington – unloading from a ship'.

HEMY, Charles Napier RA RWS – 1841-1917. An important painter of fishing and coastal scenes, sometimes with a Pre-Raphaelite level of detail. He is best known for his numerous views painted in the south-west England.

HEPBURN, J. William – Fl.1920s. An architect and painter, he was elected RBA 1924. RBA exhibition titles included 'Southwold Harbour' (1924), 'Covehithe, Suffolk' (1926) and 'A Corner in Southwold' (1927).

HESELTINE, John Postle – c.1843-1929. London-based artist and etcher, e.g., 1881 (RA 1273) 'Langstone Harbour'; 1893 (RA 1376) 'Hurst Castle' and 1894 (RA 1391) 'Lymington'.

HICKS, George Elgar – Fl.1840s-50s. Produced several fine coloured lithographs of the IW Undercliff including 'Ventnor from the east'; 'Upper Bonchurch' and 'Bonchurch looking west'.

HILL, Nathaniel – 1861-1934. Landscape, coastal and genre painter. Visited Walberswick with Walter Osborne and Blandford Fletcher, 1884/1885. 'Walberswick Pier' shown at Dublin Art Club, 1886. Elected RHA 1894.

HINCHCLIFFE, J. J. – 1805-1875. An engraver who produced views for Finden's 'Ports & Harbours' (Finden, 1838) e.g., 'Bridge at South Stack Lighthouse'.

HINE, Henry George VPRI – 1811-1895. A painter of coastal scenes in Northumberland and Sussex exhibiting over ninety works at the RA and SS and elsewhere; Hine worked mainly in watercolour.

HINES, Theodore – Fl.1870s-80s. A London artist painting on the IW and elsewhere; e.g., 1880 (SS 115) 'The village of Luccombe'; 1881 (RA 1424) 'The village of Luccombe' and 1881 (SS 538) 'At Luccombe'.

HOFLAND, Thomas Christopher RBA – 1777-1843. A prolific painter of rugged scenery he exhibited over 300 works. 1834 (SS 297) 'Blackgang Chine'.

HORSLEY, Charles – 1848-1921. Landscape painter from Manchester. Studied Manchester School of Art. Elected RBA, 1904. His RBA titles included: 'The Windmill, Walberswick' and 'Near Dunwick' (1908); 'Trees, Walberswick' (1910); 'Evening, Walberswick, When the Shades of Evening Close, Blythburgh, Suffolk' and 'The Old Mill Wall, Walberswick' (1911); 'On the Blyth' (sic) in 1912; 'The Marshes, Walberswick' (1913); 'Black Shore, Walberswick' (1914); 'The Heronry on the Blyth' (sic) in 1915; 'Evening, Walberswick, Stormy Evening, Walberswick Marshes', and 'The Heronry, Walberswick' in 1916.

HOWARD, Vernon – 1840-1902. A painter of country scenes and landscapes on the IW; e.g., 1865 (SS 787) 'Bonchurch'; 1870 (SS 711) 'Near Luccombe, IW – Culver Cliff in the distance'; 1875 (SS 142) 'St Lawrence' and 1876 (SS 441) 'At St Lawrence'.

HULME, Frederick William – Fl.1840s. An album of IW studies including 'Undercliff'; 'Steephill Castle', Ventnor was sold at Sotheby's on 11 April 1991. A watercolour 'The Undercliff at Steephill' (1857) was later engraved, as was another view of Steephill.

HUNT, Alfred William RWS – 1830-1896. A widely travelled landscape painter in watercolours.

HUNT, William Holman ARSA RWS OM – 1827-1910. A Pre-Raphaelite painter who produced some fine landscapes.

HUNT, William Howes – 1806-1879. Great Yarmouth painter of beach and coastal scenes. His works are held by the British Museum, Norwich City Art Gallery and Great Yarmouth Museums.

INCHBOLD, John William – 1830-88. Important landscape painter influenced by the Pre-Raphaelites; he was a close associate of Tennyson and Swinburne. 1870 (RA 305) 'The Undercliff – Springtime'; 1871 (RA 1067) 'The Upper Cliff, IW' and 1877 (RA 472) 'Yarmouth'.

JONES, George Kingston – Fl.1896-1889. He exhibited three works including 'On Caister sands' and 'Southwold from Walberswick' at the RA.

JOY, William – 1803-1867 & **JOY, John Cantiloe** – 1806-1866. Painters of coastal and shipping scenes including 'A scene on Yarmouth Beach' 1824, and 'A view on the Beach, Yarmouth' 1823.

JUKES, Francis – 1745-1812. Engraver and artist. He published a series of coloured aquatints of the IW in 1799; e.g., 'View of Dunnose from the cliff near Shanklin in Sandown

Bay'. Other works include: 'View of the Undercliff', 'Part of Chale Bay', 'St Lawrence near Steeple'.

KINSLEY, Alfred – 1852-1945. A prolific coastal and marine painter exhibiting record at the RA, RBA and RI. Examples include 'A Bit of Southwold' (1893), 'Dunwich Bay, Suffolk' (1895), 'Southwold Common from the Marsh' and 'Old Pier, Southwold' (1896).

KNELL, William Adolphus – 1805-75. A prominent marine painter, the north-east coast of England and the waters of the Solent were the locations for several of his paintings.

KNIGHT, John Baverstock – 1788-1859. From Blandford in Dorset, he painted a watercolour of 'Hurst Castle and the Needles from Lymington'.

KNIGHT, Dame Laura RA RWS – 1877-1970. A painter who worked in Staithes on the Yorkshire coast before moving to Cornwall. She produced some bright, impressionistic landscapes.

KNOX, George James – 1810-97. A landscape artist, Knox painted and exhibited IW subjects over a thirty year period. His topographic work was of a high quality. Examples include: 1840 (SS 609) 'On the coast near Shanklin'; (SS 621) 'On the coast near Brading'; (SS 670) 'Fishermen's huts near Freshwater'; 1842 (SS 693) 'Coast scene, IW'; (SS 740) 'Fisherman's Cottage, IW'; 1859 (SS 681) 'Dunnose Point, Shanklin'; 1866 'The Old Undercliff Road, Niton'; 1866 'Near Shanklin'; Undated 'Wheeler's Bay near Ventnor'; Undated 'Fishing off the Needles'; 'Springvale near Ryde'; 'Newtown, IW' and 'Near Wootton, IW'.

LADBROOKE, Robert – 1769-1842. Co-founder of the Norwich School, he exhibited a number of Norfolk coastal views at the Norwich Society of Artists including 'View from Lowestoft' (1804), 'View of Mundesley' (1806), 'View of Yarmouth Jetty' (1806) and 'Mackerel market on the beach at Yarmouth' (1810).

LANCASTER, Hume RBA – Fl.1840s. A London landscape painter, he worked on the IW; e.g., 1843 (SS 310) 'At Ventnor'; 1844 (BI 222) 'Freshwater Bay'; 1845 (BI 235) 'Arched rock, IW – Sunset after a storm'; 1845 (SS 216) 'Wreck on the Needle rocks' and 1846 (SS 305) 'Old breakwater, near Ryde'.

LANCASTER, Percy – 1878-1951. Widely travelled painter and etcher, known for restrained, economical and elegant watercolours. Elected RBA, 1914, RI 1921. Showed 'Southwold from Walberswick' at the RBA in 1923.

LANGLEY, Walter – 1852-1922. A genre and landscape painter working in Newlyn and Walberswick. Titles included: 'Walberswick', 'At the Capstan', 'Southwold', 'On the Beach', 'Southwold', 'On the Cliff, Southwold' and 'At Walberswick' and many Cornish views.

LEITCH, William Leighton – 1804-1883. A watercolourist and friend of Clarkson Stanfield who was an art teacher to Queen Victoria. Some of his finest work formed a major

contribution to W. H. Davenport Adams 'History, Topography and Antiquities of the IW' (1856). He executed numerous views of Osborne House and the estate.

LINNELL, John – 1792-1882. A landscape painter and pupil of John Varley as well as being a member of Dr Monro's circle. He toured Wales in 1812/13 (Mallalieu, 1984). Linnell painted several Hampshire coastal views, e.g., 1829 (BI 225) 'Southampton' and 1829 (BI 8) 'A view of the IW from Lymington'.

LIVESAY, Fanny – Fl.1870s. A painter of IW Undercliff scenery often in the vicinity of her home, Sandrock Spring Cottage. 1871 (SS 400) 'Blackthorn winter – Undercliff, IW'; and 1872 (SS 565) 'Undercliff, IW'.

LIVESAY, Richard – Fl.1790-1800. Teacher of drawing to the children of George III and drawing master to Portsmouth Naval College. His set of five large engravings 'Review of the Isle of Wight Volunteers' are his best-known works. His grand-daughter was the artist Fanny Livesay (above).

LLOYD, Walter Stuart RBA – Fl.1880-95. A prolific painter of landscapes. His works were often large watercolours and rather coarse in style. Examples include: 1880 (SS 9) 'Dunnose Head'; 1880 (SS 236) 'Spring in the Landslip'; 1880 (SS 472) 'Between Ventnor and Shanklin'; 1880 (SS 511) 'Luccombe Bay' and 1881 (RA 1435) 'Ventnor from the downs'.

LOUND, Thomas – 1802-1861. An influential landscape painter from Norwich who studied under J. S. Cotman. His coastal works include 'Yarmouth jetty – early in the morning' (1839), 'Cromer beach' (1839), 'Yarmouth beach' (1839), 'Hasbro' beach' (1842), 'Beach scenes at Yarmouth and Mundesley' (1846), 'Beach scene at Yarmouth' (1846), 'Sea view – Lowestoft' (1846), 'Yarmouth beach' (1848), 'Off Lowestoft' (1848), 'Cromer beach' (1848), 'Mundesley beach' (1848), 'The beach, Great Yarmouth' (1849), 'Yarmouth beach' (1849), 'The fishermen's rendez-vous near the Jetty, Great Yarmouth' (1852), 'The beach – Great Yarmouth' (1852), 'Beach scene at Yarmouth' (1855) and 'Hunstanton beach' (1860).

MARSHALL, Herbert Menzies RWS RE – 1841-1913. Topographical painter and watercolourist.

McKEWAN, David Hall – 1816-73. London landscape painter who produced numerous IW coastal scenes including; 1838 (SS 14) 'Coast scene, IW'; 1838 (SS 232) 'Sands at Ryde'; 1838 (SS 241) 'Yaverland Church and rectory'; 1840 (BI 122) 'Coast near Shanklin'; 1840 (RA 610) 'Wreck in Culver Bay'; 1840 (SS 676) 'Arch rock, Freshwater Bay'; 1842 (SS 672) 'Coast near Ventnor' and 1845 (RA 860) 'Coast of Ventnor – ship ashore'.

MEADOWS, Arthur Joseph – 1843-1907. A prolific painter of coastal and harbour scenes who exhibited widely.

MEADOWS, James Edwin – Fl.1850-70. London landscape and coastal artist. He painted mainly on the south coast of England; e.g., 1856 (RA 12) 'Cottage on the beach, near Bonchurch'; 1856 (RA 161) 'The old church on the cliff, Bonchurch'; 1857 (RA 208) 'Near Bonchurch'; 1857 (RA 289) 'View at Wroxall, near Shanklin'; 1864 (SS 42) 'On the beach at Bonchurch'. Other works: 'New Brading' (a view on the Downs road).

MILES, Thomas Rose – Fl.1870s. A painter of coastal scenes in oils. 1873 (SS 105) 'Evening, the beach at Sandown – Ships' Boats Putting off'; 'Return of the Lifeboat' (back of the Wight) sold by Bonham's in 1990.

MITCHELL, William Frederick – c.1845-1914. A Portsmouth painter of shipping views often set within the harbour or in the waters of the Solent. His numerous works are numbered and totalled over 3,000.

MOGFORD, John RI – 1821-85. A painter of coastal and river scenes in watercolours, particularly in the west of England.

MOORE, Henry RA – 1831-1895. A fine coastal, sea and landscape painter and Follower of the Pre-Raphaelites. He studied at York School of Art and RA Schools. One of the most prolific and successful artists of his time.

MOORE, John of Ipswich – 1820-1902. East Anglian painter of landscape and coastal scenes; he exhibited 332 works at the Ipswich Art Club. His coastal views include: 'Cottages on the cliff – Walton-on-the-Naze' (1878), 'A sketch of Comer Sands' (1880), 'Sunrise – Cromer' (1880), 'Sunset – Cromer' (1880), 'A sketch at East Runton near Cromer' (1882), 'The beach – Felixstowe' (1885 and 1887), 'Runton, Cromer' (1897), 'The beach, Felixstowe' (1897), and 'Gorleston Pier – vessel entering harbour'.

MORLAND, George Charles – 1763-1804. Prolific painter of IW coastal scenes with fisherfolk, horses and other animals. He came to Shanklin in 1879 to escape his debtors, residing for a while at Eglantine Cottage in the High Street. He painted at least thirty-two works of importance on the Island, especially in the vicinity of the Mermaid Inn at Freshwater Bay, one of his favourite haunts, e.g., 'Wreck of an Indiaman at Blackgang Chine', 'Coast scene' (Freshwater Bay), 'Smugglers off the IW'. He accompanied Thomas Rowlandson on his IW tours.

MOSTYN, George – 1898-1972. Self-taught painter. Full-time artist from c.1925; exhibiting in Paris at around this time. Prominent member of W. F. Crittall's Sole Bay Group and regarded by distinguished contemporaries as a much under-rated artist.

NELSON, Thomas – Late 19thC. Publisher of a wide range of books containing chromolithographs of coastal and inland scenery between 1860-80.

NIBBS, Richard Henry – Fl.1840-85. A painter of marine and coastal scenes in Sussex and IW; e.g., 1853 (SS 471) 'On the beach, Bonchurch' and 1866 (SS 1) 'Rocken End, IW'.

NICHOLS, Miss Catherine Maude RPE – 1848-1923. A painter and engraver of landscapes including thirteen at the RA; mainly views of Norwich and the Broads but also six works at the SS.

NICHOLSON, Francis OWS – 1753-1844. A painter of Yorkshire and Scottish landscapes in watercolour; his patron was the Marquis of Bute.

NIXON, John – c.1750-1818. A contemporary of Rowlandson, his drawings have a similar style. He engraved a view of 'Conway Castle' after J. Walker. He made a tour of the IW and many of these works are in the collection of Carisbrooke Castle Museum. His drawings illustrated Thomas Pennants' 'Journey from London to the IW' (1801).

OSBORNE, Walter Frederick – 1859-1903. An Irish born painter of genre subjects sometimes set on the coast. He visited Walberswick in 1884 and 1885. 'An October Morning', painted at the river mouth, hangs in the Guildhall Gallery, London. Elected RHA 1886, NEAC 1887. A further view of Walberswick 'Boy on a beach' was painted in 1884.

PARKER, Henry H. – 1858-1930. A painter of landscapes and some coastal views mainly in south-east England.

PARSONS, Alfred Wilde RWA – 1854-1931. A landscape painter and watercolourist; some of his best subjects are coastal views with fishermen.

PAYNE, William – 1760-1830. One of the leading watercolourists and drawing masters from the 1790s. He painted extensively in south-west England and on the Yorkshire coast.

PERCY, Sidney Richard – 1821-86. An important painter of landscapes (usually the Highlands or the Lake District) but on occasions showing views of the coast.

PETHER, Sebastian – 1790-1844. A painter of landscapes, often by moonlight.

PLAYER, William H. – Fl.1860s. A painter of IW landscapes including: 1860 (BI 255) 'The bathing place at Bonchurch'; 1860 (BI 286) 'The breakwater at Bonchurch in a south-west breeze'; 1862 (BI 394) 'From the cliff path near Ventnor' and 1862 (SS 873) 'Cottages in Luccombe, Sandown Bay in the distance'.

POTTS, George B. – Fl.1830-50. He painted views in south-east England and on the IW, including: 1833 (SS 429) 'Ryde, in the IW'; 1834 (SS 424) 'Near St Lawrence'; 1839 (BI 46) 'On the coast near Ventnor Cove'; 1841 (BI 253) 'At Ventnor'; and 1848 (RA 443) 'Near Atherfield'.

PRIEST, Alfred – 1810-1850. A painter of marine and coastal scenes in Norfolk and elsewhere. Works include 'Sea view' (1834), 'Beach scene' (1836) and 'Yarmouth beach' (1836).

PRIESTMAN, Bertram – 1868-1951. A painter of landscapes and coastal scenes, including many fine East Anglian views.

PROUT, Samuel – 1783-1852. A widely-travelled artist in the styles of Girtin and Varley. His drawings illustrated 'Beauties of England and Wales or Delineations, Topographical, Historical Descriptive of each County', printed by Thomas Maiden, for Vernor and Hood (Britton, J., 1803).

PYNE, James Baker RBA – 1800-70. A Bristol landscape painter influenced by Turner.

PYNE, Thomas – 1843-1935. A landscape painter, usually in watercolour. He studied under his father, James Pyne. He painted in Walberswick and Southwold in the early 1880s, exhibiting some of his work in London in 1884; 'Mouth of the River Blythe, Suffolk' (sic) at the RA, and 'The Ferry, Walberswick', 'At Walberswick', 'The Blythe, Suffolk' and 'Southwold' at the RBA.

QUATREMAIN, William Wells – Fl.1890-1910. Painter of landscapes in watercolours; he also worked for the postcard publisher J. Salmon Ltd of Sevenoaks and some fifteen of his views were reproduced. These were also illustrated in the book 'The Garden of England' (c.1915).

QUINTON, Alfred Robert – 1853-1934. A prolific painter of landscapes in watercolour, he painted at the RA from the mid-1870s. In 1911 his work was brought to the attention of the postcard publishers J. Salmon and, by the time of his death, he had painted over 2,000 views for them.

RAYE, Charles – Fl.1825. Author and artist, his book, 'A picturesque Tour of the IW', published in 1825 with twenty-four delicate aquatint plates, is one of the finest publications about the IW.

REDMORE, Henry – 1820-1877. A marine painter from Hull producing mainly east coast subjects.

REINAGLE, George Philip – 1802-1835. An early painter of marine and coastal scenes. He exhibited five pictures of views on or around the IW coast between 1826-32.

RICHARDSON, Thomas Miles Jnr RSA RWS – 1813-90. A painter of views of Scotland, the Yorkshire coast and the IW. One of the school of artists who painted at Seaside Cottage, Bonchurch Shore, IW, between 1855-65. He was probably a major influence on the Island artist, William Gray, who adopted his techniques. 1861 'Horseshoe Bay, Bonchurch – unloading a coal boat', 13" x 35"; 1860 'A scene on Bonchurch Shore' (looking West), 8" x 29"; 1860 'Bonchurch' (looking east along shore), 13 $\frac{3}{4}$ " x 39" and 1862 'A fishermans' Cove' (Bonchurch), 7 $\frac{1}{2}$ " x 28".

ROBERTSON, Charles RWS RPE – 1844-1891. A painter of landscapes in watercolour and a Follower of the Pre-Raphaelites he painted a detailed view of Southwold Harbour entitled 'On the East Coast' in about 1883, as well as several views on the IW.

ROBINS, Thomas Sewell – 1814-80. A painter of marine subjects and coastal views; e.g., 1835 (RA 553) 'Ships at Spithead'; 1847 (BI 476) 'Spithead, afternoon' and 1877 (SS 798) 'Wreckers – near Shanklin'.

ROCK & CO – Fl.1860-80s. Prolific publishers of vignette views. They were generally sold in locality books of twelve or twenty-four views and sometimes contained fifty or one hundred views.

ROWBOTHAM, Thomas Charles Leeson – 1823-75. A painter of coastal and marine subjects in watercolour. He travelled and painted widely across the British Isles and his work was praised by Ruskin. He worked with T. M. Richardson Jnr, E. W. Cooke, Sir. E. A. Waterlow, W. Gray and others at Bonchurch, IW, between the mid-1850s and 1864. He produced an identical view to that by Richardson of 'A coal boat unloading at Horseshoe Bay at Horseshoe Bay, Bonchurch, IW' in 1863. A further work was 'An extensive view of the coast at Shanklin' was sold by Christie's on 23 January 1979.

ROWLANDSON, Thomas – 1756-1827. The most important artist of the Georgian period, a close friend and associate of George Morland, Henry Wigstead, Francis Wheatley and Samuel Howitt. As a caricaturist and artist, he toured extensively including the New Forest and the IW on several occasions. The IW Council acquired the Longleat collection comprising 112 watercolours in June 2002. Full details are provided in the Christie's sale catalogue (14 June 2002).

ROXBY, C. W. – Fl.1880s. Watercolour landscape and figure painter. Exhibiting record, mainly at RBA, 'Walberswick Pier' (1888/1889); 'Eastern Broad, Suffolk' (1889); 'View from the Common, Southwold' and 'Walberswick Pier' in the 1889 winter exhibition.

RUSSELL, Sir Walter Westley – 1867-1949. A painter, etcher and illustrator, he worked regularly on the Norfolk coast and in Suffolk. 'Southwold Beach' was shown at the NEAC in 1897.

SANDBY, Paul RA – 1725-1809. A leading influential early watercolourist who painted landscapes from about 1770, also illustrating 'Views in South Wales' in aquatint (Sandby, 1775). He also produced fine watercolour drawings of the city of Cardiff and the Castle (National Museum) and visited Cowes, IW.

SCHWABE, Randolph RWS NEAC – 1885-1948. A prolific painter of landscapes including coastal scenes.

SERRES, Dominic – Fl.1760-90s. Painter of numerous marine subjects in the Solent principally on the Portsmouth side, e.g., 1769 (RA 106) 'A view from the Gunwharf, Portsmouth'; and 1770 (RA 172) 'A view of Hurst Castle in Hampshire'.

SERRES, John Thomas – 1759-1825. Painter of marine subjects e.g. 'A view of the Royal Yacht Squadron', offered for sale by Bonhams on 10 August 1989.

SEWARD, Marion – 1861-1924. She painted a large number of watercolours of Walberswick in Suffolk, and a series recording the disappearance over the crumbling clifftop of All Saints Church, Dunwich.

SEWELL, Miss Ellen M. – Fl.1870s. A member of the talented Sewell family of Bonchurch, IW. She produced drawings and watercolours, some of which were published in local books. Subjects include 1845 'Ventnor'; 1844 'Bonchurch'; 'Newtown Church ruins'; 'Freshwater Gate'; 'Pidford'; 'Binstead Old Parsonage'; 'Ashcliff, Bonchurch'; 'St Lawrence Church'; 'Mrs Vine's Cottage, Puckaster'; 'Luccombe'; 'Interior of Carisbrooke Castle'; 'Chale Bay'; 'Blackgang'; and 'Ventnor'.

SHAYER, William Snr – 1787-1879. A painter of genre and rustic folk in rural (usually coastal) settings. He was the most prolific exhibitor of IW scenes between 1828-65. 1823 (RA 170) 'A scene in the IW near Mirables'; 1828 (SS 153) 'Puckaster Cove, IW'; 1834 (SS 156) 'A scene in the IW – Rocken End in the distance'; 1835 (SS 244) 'The cornfield, a scene in the IW, Hambro' Castle and Steep Hill in the distance'; 1839 (SS 396) 'Coast scene on IW'; 1849 (SS 290) 'Undercliff, IW' and 1850 (SS 387) 'On the beach near Puckaster, IW'. His Hampshire coastal works include: 1829 (SS 84) 'Southampton Quay – evening' and 1855 (SS 319) 'On the banks near Redbridge, Southampton'.

SHORT, Obadiah – 1803-1886. Norwich landscape painter in the manner of John Crome. He exhibited 'Beach scene at Yarmouth' (1832), 'Beach scene at Corton' (1833) and 'Coast scene, Lowestoft' (1856).

SLOCOMBE, Frederick Albert – 1847-1920. A London landscape and genre painter he worked on the IW; 1873 (RA 1293) 'Near Ventnor', 1873 (SS 662) 'Moonlight on the sea – St Lawrence' and 1875 (RA 1108) 'On the beach, near Ventnor'.

SMYTHE, Thomas – 1825-1906. Brother of Edward Robert Smythe; his Suffolk works include: 'Old breakwater, Southwold' (1880), 'Old boathouse, Southwold' (1889) and 'Southwold beach' (1889).

SNAPE, Martin – 1853-1930. Prolific painter in oils of the Hampshire coast, e.g., 1880 'The Hard, Gosport' and 'Haslar Creek'.

STANFIELD, Clarkson RA – 1793-1867. An important topographic artist and a prolific painter of coastal scenery. He was a close friend of Charles Dickens and David Roberts, who both rented houses at Bonchurch, IW, and they may have encouraged him to visit the Island. He stayed at Seaside Cottage on the shore working with the other watercolourists. He also included a view of 'Brading' in his book 'Coastal Scenery' (1835).

STANNARD, Alfred – 1806-1899. Brother of Joseph Stannard (below) he was a Norwich painter of landscape and coastal scenes e.g., 'Yarmouth Quay from the south' (1860), 'Gorleston looking towards the pierhead' (1843) and 'Yarmouth beach with figures' (1842).

STANNARD, Joseph – 1797-1830. Brother of Alfred Stannard (above) he also painted coastal and fishing scenes, e.g., 'Beach scene' (1825), 'Yarmouth beach' (1825),

'Fishermen – Yarmouth beach' (1829), 'Shrimpers – looking from Gorleston Pier towards Lowestoft' (1829).

STARK, James – 1794-1859. A Norwich School landscape painter in oils and watercolour. He exhibited at the Norwich Society, RA, BI and elsewhere. His coastal views include 'Cromer, Norfolk' (1837), 'On Yarmouth beach' (1851), 'Scene on the beach, Cromer' (1818) and 'Cromer beach' (1836).

STEEDMAN, Charles – Fl.1830-40s. A London painter of IW views: 1833 (SS 201) 'A smithy near Ventnor'; 1843 (RA 56) 'Near Ventnor'; 1846 (SS 98) 'Near Ventnor'; 1846 (SS 528) 'Ventnor Cove' and 1849 (RA 133) 'Part of the Undercliff'.

TAYLOR, T. – Fl.1799-1805. Oxford painter of IW views: 1799 (RA 51) 'View of Brading Harbour'; 1799 (RA 552) 'View of Shanklin Chine'; and 1800 (RA 290) 'Mill Bay' (Ventnor).

THIRTLE, John – 1777-1839. A founder member and later President of the Norwich Society of Artists, Thirtle was a fine draughtsman and watercolour artist. His coastal views include 'Scene – Cromer' (1830), 'Cromer beach' (1830) and 'Beach scene' (1830).

THORNELEY, Charles RBA – Fl.1858-1898. A coastal and marine painter; he exhibited at RA, RB and ROI in late nineteenth century.

TOMKINS, Charles – Fl.1790-1809. Distinguished artist and draughtsman who published a 'Tour of the IW' (1796) with eighty aquatints. Further of his watercolours are illustrated in 'A picturesque tour of the IW' (McInnes, 1993).

TURNER, Joseph Mallord William RA – 1775-1851. A pupil of T. Malton and Dr Munro, Turner made sketching tours around the British coast from an early age. He first toured Wales in 1792 and again in 1795, 1798 and 1799. His landscapes up to the 1820s were more topographical after which his experimentation with the effects of light rendered them more impressionistic. He visited most parts of the British coast producing drawings that could later be developed as paintings in his studio. Many of his views were engraved, e.g., 'Picturesque Views of the South Coast of England' (Cooke, 1826).

TURNER, William of Oxford – 1789-1862. Landscape painter whose views included 1839 (RA 525) 'Portsmouth Harbour and the IW beyond from Portsdown Hill'. This subject was repeated at 1841 (BI 244) and 1846 (RA 1150).

VARLEY, John – 1778-1842. A fine landscape and architectural watercolourist. He exhibited extensively, particularly at the OWS. He produced a fine watercolour of 'Cromer beach' in 1802 and another in 1830, as well as a detailed drawing of Trimmingham Cliffs in 1822.

VAWSER, Miss Charlotte – Fl.1830-50. A London artist who painted on the IW: 1838 (RA 608) 'Steephill', 1844 (RA 1038) 'St Lawrence' and 1847 (RA 838) 'Steephill'.

VICKERS, Alfred Gomersal – Fl.1827-1837. Son of Alfred Vickers (below). He painted views on the IW and elsewhere. 1827 (SS 471) 'Fishing boats off Ryde'; 1830 (RA 224)

'Near Bembridge'; 1831 (BI 459) 'A wreck in Freshwater Bay'; and 1837 (SS 269) 'Scene at St Helens'.

VICKERS, Alfred Snr – 1786-1868. A prolific painter of IW landscapes his sketchy style of oil painting is quite distinctive and has been compared with that of the French artist, Eugene Boudin. He first exhibited a view of the IW in 1832 and continued painting IW scenes until his death in 1868. 1832 (SS 459) 'Cowes'; 1835 (BI 28) 'A squall of Cowes Point'; 1835 (BI 79) 'View on Southsea Common'; 1836 (SS 175) 'View of Sandown Bay from Shanklin'; 1838 (BI 207) 'View at St Lawrence, Undercliff'; 1838 (BI 264) 'Scene on Southsea Common, IW in the distance'; 1840 (BI 287) 'Coast scene, view of Yarmouth from Freshwater'; 1841 (BI 373) 'Luccombe Chine'; 1842 (RA 282) 'Scene on the coast at Milton, Hampshire'; 1843 (RA 282) 'Morning at Lymington, IW in the distance'; 1843 (SS 151) 'Sandown Bay from Luccombe Point'; 1843 (SS 183) 'The Solent sea near Yarmouth'; 1845 (RA 180) 'At Wootton Bridge'; 1846 (SS 477) 'Clearing up after a gale at Spithead'; 1847 (BI 297) 'The way to Bembridge by Brading Harbour'; 1847 (RA 327) 'On the beach near Culver Cliff'; 1847 (BI 231) 'Entrance to Portsmouth Harbour from Southsea beach'; 1850 (RA 1213) 'Tide flowing into Brading Harbour'; 1850 (SS 226) 'On the south coast of the IW – near Luccombe Chine'; 1851 (RA 748) 'On the coast near Bembridge'; 1861 (BI 345) 'The IW from the Lymington River'; and 1868 (SS 372) 'At Freshwater'.

VINCENT, George – 1796-1832. Norwich School artist who painted many beach scenes with fishing boats and fish market scenes in oils, e.g. 'A Dutch fair on Yarmouth beach' (1821), 'Yarmouth beach' (1821), 'View of Yarmouth Quay' (1823) and 'Yarmouth Quay' (1830).

WALMESLEY, Thomas – 1763-1806. A landscape painter who exhibited at the RA from 1790. His work is in the 'Picturesque' style with a number of his views engraved as aquatints by others. His 'Select views of the IW' are the finest picturesque works of that period.

WALTERS, George Stanfield – 1838-1924. A coastal and marine painter who worked at Whitby and along the Thames Estuary. His 408 exhibition titles at the RBA (elected 1867) included 'On the Beach, Southwold' (1902), and 'The Harbour Inn on the Blyth, Suffolk' (1903).

WATERLOW, Sir Ernest Albert RA PWS – 1850-1919. Landscape and animal painter who worked in southern England, e.g., at Bonchurch, IW, in the 1870-80s.

WATTS, Frederick William – 1800-62. A landscape painter who was influenced by the work of John Constable. He produced views on the IW: 1837 (BI 175) 'Near Bonchurch'; 1837 (BI 203) 'On the coast at Ventnor Cove'; 1837 (RA 255) 'Distant view of Shanklin'; 1837 (SS 195) 'Mill at Ventnor'; and 1837 (SS 211) 'View near Brook'.

WEATHERILL, George – 1810-1890. A painter of east coast views and shipping subjects.

WEBB, James – 1825-95. A prolific painter of coastal scenes in southern England including the IW. These include: 1854 (BI 70) 'A peep of the Culver Cliff, Shanklin'; 1854 (BI 557) 'Sandown Bay, Culver Cliff'; 1855 (RA 222) 'A day on the downs, Shanklin'; 1855 (SS 217) 'Evening off the Needles'; 1855 (SS 397) 'Shanklin'; 1864 (BI 254) 'Bonchurch'; and 1865 (SS 676) 'Sandown Bay'.

WEBB, William Edward – c.1862-1903. Manchester painter of marine and coastal subjects e.g., 'Conway Castle' (Soth. Bel. 22/7/80).

WEBSTER, George – Fl.1797-1832. A London-based artist producing marine and coastal scenes. He first exhibited at the RA in 1826. He also exhibited at the BI between 1816-1832.

WEBSTER, Thomas RA – c.1772-1844. A geologist and artist associated with Francia and Girtin. He toured North Wales with the Varley's in 1802, e.g., 'Harlech Castle' (V. & A. AL4837).

WESTALL, William ARA – 1781-1850. A prolific artist and steel engraver, William Westall was the younger brother of Richard Westall, an oil painter, and was chosen as a landscape artist to accompany an expedition to Australia at the age of 20. He survived a shipwreck to return to work for Rudolph Ackermann, who had opened a print shop in the Strand in 1775. Between 1838-1842 Westall worked on the IW and engraved an extremely fine set of some twenty-four views of prominent buildings and scenes.

WHITE, John RI ROI – 1851-1933. A painter of coastal, marine and genre subjects including a number of views of the Devon coast.

WILLIAMSON, Frederick – Fl.1870-80. His favourite subject was sheep and cattle in the south of England, often on the coast; e.g., 1871 (RA 747) 'Near Bonchurch'; 1877 (RA 660) 'Near Shanklin' and 1878 (RA 693) 'Near Luccombe'.

WIMBUSH, Henry B. – Fl.1880-1908. Henry Wimbush was a prolific landscape artist who was commissioned by the postcard manufacturers, Raphael Tuck, to produce a large number of views of Island scenes to be reproduced as colour postcards. His light, clear and bright style is particularly distinctive and attractive. However, his watercolours are quite rare as the Tuck repository in London was destroyed in the blitz.

WIMPERIS, Edmund Morison VPRI – 1835-1900. A prominent early watercolourist, he exhibited three views of Undercliff scenery at SS between 1870 and 1872. 1870 (SS 361) 'On the coast – Puckaster', 1870 (SS 371) 'Puckaster Cove' and 1871 (SS 332) 'Near Ventnor'.

WOLFE, George – 1834-1890. A painter of coastal scenes in oils and watercolours particularly in Devon and Cornwall.

WYLLIE, William Lionel ARA – Fl.1871-1898. Prolific London and Portsmouth marine painter in oils and watercolours, and an etcher, e.g., 1871 (RA 387) 'Rotten Row, Portsmouth Harbour' and 1880 (SS 684) 'Portsmouth Harbour'.

YGLESIAS, Vincent Philip – 1845-1911. A landscape and genre painter, he exhibited widely, especially at the RBA. He painted at Staithes, Yorkshire, and East Anglia in the late nineteenth century. His RBA exhibition titles included 'Southwold from Walberswick' and 'The Ferry, Walberswick' (1884/1885). 'Walberswick', 'Evening at Walberswick' and 'A High Tide at Walberswick' (1885); 'Sea Holly on the Suffolk Coast' (1888/1889); 'Walberswick' (1890) and 'At Walberswick' (1897).

