3.2 Wildlife

The Exe Estuary’s rich and diverse habitats support a flourishing array of wildlife. The presence of different habitats provides a variety of food sources which can support a great range of wildlife species. The variability among living organisms (including variability within and between species) is called ‘biodiversity’. The degree of biodiversity on the Estuary is a good measure of the variety of habitats present because it indicates the level of disturbance or pollution and, therefore, the overall health of the natural environment.

Biodiversity Action Plan

‘The Nature of Devon - A Biodiversity Action Plan’ was produced in 1998 and revised in 2005. This document is Devon’s response to the national biodiversity planning process; it translates the objectives and targets of the UK Biodiversity Action Plan into a local context. It includes a series of detailed Action Plans which define what needs to be done for Devon to make its full contribution to the achievement of national biodiversity targets. There is a specific Action Plan for Devon’s Estuaries, which has the following objectives:

**Objective 1:** To protect, maintain and enhance the extent and quality of estuarine habitats in Devon and ensure the protection of species which depend upon these habitats, subject to natural change.

**Target:**

- Ensure no net loss of intertidal area within Devon’s estuaries…and no loss of subtidal area (or “valuable” terrestrial area) for intertidal gain.
- Seek to favour natural processes and the creation of saltmarsh, though not at the expense of other important habitats or estuarine features.
- At least maintain extent and distribution of eelgrass beds in Devon estuaries.
- Assess feasibility of restoration of damaged or degraded eelgrass beds.

**Objective 2:** To ensure all relevant plans encourage an integrated approach to the delivery of biodiversity targets for estuarine habitats and species.

**Target:**

- Ensure all estuaries are covered by relevant management plans to integrate BAP targets.

Source: Devon Biodiversity Partnership, 2004 review
Natural Devon

Natural Devon is one of 48 strategic Local Nature Partnerships (LNP) established in England following publication of the 2011 Natural Environment White Paper. The Devon LNP officially started its work in 2012 and the Partnership’s purpose is to “ensure that a healthy natural environment underpins a high quality of life across Devon, with a strong green economy and healthy communities”. The main priority themes include green connections, resilient wetlands, wood for good, sustainable seas, farming with nature, outdoor learning, and naturally healthy.

In May 2014, the Partnership publicised the “State of the Environment for Devon and Torbay”. The report provides a description of the current condition of the local environment and considers trends which point to the future condition of the environment, as well as identifying current and likely future pressures that need to be considered in decision making. The report can be fully assessed on Natural Devon’s website: www.naturaldevon.org.uk.

Source: Devon Local Nature Partnership, 2014

Interesting Wildlife on the Exe Estuary

The Exe Estuary is famous for its waders and wildfowl, but it is also supports an impressive array of other creatures including:

**Birds of Prey:**
- Peregrine Falcon
- Kestrel
- Osprey
- Short Eared Owl

**Invertebrates:**
- Butterflies (Clouded Yellow, Common Blue, Red Admiral, Gatekeeper)
- Crickets (Great Green Bush, Grey Bush) Grasshoppers
- Dragonflies (Broad bodied, Emperor, Hairy)
- Shellfish (Prawn, Shrimp, Mussel, Cockle, Winkle, Oyster, Shore Crab)
- Snails (*Hydrobia ulvae*, Retusa)
- Worms (Ragworm, Lugworm, Polychaete, Nematode)

**Reptiles and Amphibians:**
- Newt (Palmate)
- Toad (Common)
- Frog (Common)
- Lizard (Viviparous)
- Slow Worm (*Anguis fragilis*)
- Snake (Adder, Grass)

**Fish:**
- Eel (*Anguilla anguilla*)
- Flounder
- Sand Goby
- Grey Mullet
- Salmon
- Bass
- Seahorse (Short Snouted, Spiny)
- Pipefish

**Mammals:**
- Bat (Greater Horseshoe, Lesser Horseshoe, Whiskered)
- Dolphin (Bottlenose)
- Seal (Atlantic Grey and Common)
- Fox (*Vulpes vulpes*)
- Otter (*Lutra lutra*)
- American Mink (*Mustela vison*)
- Fallow Deer (*Dama dama*)
Birds on the Exe Estuary

The following information is taken from and provided by the Wetland Bird Survey (WeBS) counts’. The vast numbers of waders and wildfowl on the Exe Estuary contribute to international recognition of the Estuary as an important area for migratory birds. The presence of waders and wildfowl is also a good indicator of the general health of the ecosystem and can indicate changes in climate, e.g. some birds may arrive earlier in the year due to the milder winters.

Image 3t: Wigeon on the Exe Estuary
Source: RSPB

Total Wader and Wildfowl Counts

The Exe Estuary supports a 5-year (’06/’07-’10/’11) peak mean of 18,826² wintering waterbirds. Figures 3g, 3h, 3i below show that in general on the Exe Estuary wader numbers have declined since 1971, whilst wildfowl numbers have increased – in part due to a major increase in the Canada Goose population over that period.

Figure 3g: Annual trend in waders population, 1970 - 2012
Source: WeBs (2013)
Figure 3h: Annual trend in wildfowl population, 1970 - 2012
Source: WeBs (2013)

Figure 3i: Annual trend in waders and wildfowl population, 1970 - 2012
Source: WeBs (2013)
The particular species described below occur on the Exe Estuary in numbers of national or international importance, or have populations of a size that is close to meeting designation criteria.

**Avocet** *Recurvirostra avosetta*: One of the most famous birds on the Exe Estuary, the Avocet usually starts to arrive in September and leaves at the end of March. From 2006 to 2011, 480 birds on average have been observed each month and the peak month for sightings is in February.

**Black-Tailed Godwit** *Limosa limosa*: The black-tailed godwit is predominantly a winter visitor to the Exe. The average number of birds observed monthly, based on records from 2006 to 2011, is 941 individuals and the peak month for sightings is in October. The threshold for international importance is 700 birds. On the Exe Estuary these birds are found mainly on West Mud and Powderham Sand, where they tend to feed in tight-flocks.

**Brent Goose** *Branta bernicla*: The Brent goose arrives from Siberia to feed during winter. The average number of birds observed monthly, based on records from 2006 to 2011, is 1,469 individuals and the monthly peak is observed in December, followed by a gradual movement away from the Exe Estuary as food resources reduce (particularly *Zostera noltii*). In addition, there are changes in distribution throughout the winter. From October to November Brent Geese are found in Cockwood and Exmouth (on *Zostera* beds), but they move up the Exe Estuary to graze on the Exminster, Clyst and Bowling Green marshes from December onwards.

**Dunlin** *Calidris alpina*: The Dunlin is the most numerous wader on the Estuary. The average number of birds observed monthly, based on records from 2006 to 2011, is 3,903 individuals and observations reveal a standard wintering pattern with peaks in December, although different populations pass through the Estuary at different times of the year.

**Little Egret** *Egretta garzetta*: This species has made a recent arrival on the Exe. The average number of birds observed monthly, based on records from 2006 to 2011, is 123 individuals, and although they are seen on the Estuary throughout the year, peak numbers generally occur in September. This is probably due to post-breeding dispersal, which is then followed by a trend towards smaller numbers of birds over the winter.
Oystercatcher *Haematopus ostralegus*: Found on the Estuary throughout the year, but in peak numbers over the winter months, the black and white Oystercatcher is an impressive sight. Numbers have declined locally since the mid 1980s and 1990s despite the relative stability of regional trends.

Image 3x: Oystercatcher
Source: Mike Tuckett

Red-breasted merganser *Mergus serrator*: In the Exe Estuary, Mergansers feed in the area of the main channel throughout the Estuary and off Dawlish Warren. The average number of birds observed monthly, based on records from 2006 to 2011, is 106, and the peak month for sightings is in February.

Slavonian Grebe *Podiceps auritus*: There are very few Slavonian Grebes on the Exe Estuary, but because 4 is the threshold for national importance, the Estuary used to support a relatively important number. Most Slavonian Grebes can be seen on the Estuary in January. They are found around the mouth of the Estuary and in the sea off Dawlish Warren beach. In January and February 2006 there were regular sightings of more than 10 individuals at Dawlish Warren, but few have been recorded since then.

Whimbrel *Numenius phaeopus*: Unlike most waders, Whimbrel use the Exe Estuary solely for migration. They tend to pass through in April and May, and then again on their return in July and August. Flocks may only be present for a few days and could easily be missing on the specific monthly count date, which explains the variability in peak counts. As a result it is difficult to assess trends, but the pattern of seasonal usage is interesting. They occur mainly in the muddy areas of the upper Estuary, as well as feeding and roosting on Exminster Marshes. The average number of birds observed monthly, based on records from 2006 to 2011, is 58 birds and the peak month for sightings is in July.

Wigeon *Anas Penelope*: Over the winter Wigeon move from the lower Estuary (in October and November) to the marshes (in December and January) as *Zostera* is eaten. The principal feeding sites for Wigeon on the Exe Estuary are at Powderham, The Duck Pond, Shelly Bank and the north side of Dawlish Warren.
WeBS Alerts

The WeBS Alerts system identifies changes in numbers of waterbirds. Species that have undergone major changes at a site are issued with an Alert, intended to promote focused research to determine what pressures may be driving the underlying changes in numbers. 10 species have been evaluated for the Exe Estuary Special Protection Area. Alerts have been triggered for five of these:

- **High alert:** Oystercatcher and Lapwing.
- **Medium alert:** Brent Goose (Dark-bellied); Red-breasted Merganser and Grey Plover.

Comparison of site trends with broadscale trends suggests that the declines underpinning Alerts status may be driven by site-specific pressures.

Figure 3j below compares monthly mean counts for Oystercatchers on the Exe Estuary between the 1990s and 2000s. It shows a major decline in numbers at all times of the year. Whilst this mirrors a national trend, it appears to be particularly acute on the Exe Estuary, reflecting the High Alert status attributed to the species locally.

![Figure 3j: Mean number of Oystercatcher population per month, 1990s v 2000s (plus 2011/12)](image)

*Source: WeBS 2013*
Recreational activities on the Exe Estuary and the disturbance of birds

The Exe Estuary is small and has a relatively high level of residential development around it. The Exe Estuary and its margins are used by a lot of people undertaking a diverse range of recreational and economic activities. There is evidence that, cumulatively, these activities are affecting the protected wildlife of the Exe Estuary and Dawlish Warren, through for example, disturbance and habitat damage.

Furthermore, Exeter City, East Devon District and Teignbridge District Councils’ Local Development plans around the Exe Estuary will substantially increase the local population. This will increase local demand for informal and formal recreational activity and, if not addressed, will exacerbate existing recreational impacts on sensitive wildlife. Work is underway, led by the local authorities and Natural England, supported by the Exe Estuary Partnership and the RSPB, to ensure that measures are in place to avoid increased risks from new development to the Estuary’s protected wildlife. These will include establishing and resourcing on-site management such as activity zones, revised codes of conduct, and wardens to educate users and enforce restrictions.

The measures will be designed to ensure that areas of greatest sensitivity for wildlife are not affected by potentially damaging activities at key times of the year. New areas of Suitable Alternative Natural Green Space (SANGS) are also being sought locally, for example to provide an alternative open space for dog walking. The effectiveness of these measures will be monitored and, if necessary, further measures could be put in place.

1 Data were supplied by the Wetland Bird Survey (WeBS). Enquiries should be directed to the WeBS team at the British Trust for Ornithology, The Nunnery, Thetford, IP24 2PU (webs@bto.org)
2 Holt, C.A. et al., 2012
3.3 The Landscape of the Exe Estuary

The Exe Estuary landscape we know today has been shaped by both natural and human influences over time, and this will continue. Forces for future change include continued visitor pressure, sea level rise as a result of climate change, and development pressure around the estuary edges. Guiding and managing such landscape change is the responsibility of all - land managers, planners, businesses, developers and individuals living in and visiting the area. To do this, there is a need to understand the Exe Estuary landscape and agree what should be protected, managed and actively improved within it.

This section therefore describes the landscape of the Exe Estuary and its setting. It identifies what makes it distinctive and special, and how people value it. It sets out guidelines for the Estuary’s proper protection, management and planning that form part of Devon’s landscape character assessments.

The landscape character of the Exe Estuary and its setting

Image 3y: Exe Estuary
Source: EEMP

Image 3aa: Exmouth Cliffs
Source: EEMP

Image 3ab: Powderham Church
Source: EEMP

Image 3z: View of Haldon Hill
Source: Natasha Greig
Devon’s Landscape Character Assessment describes the variations in Devon’s landscape character and attempts to articulate and record those special qualities that people value within each distinct geographical area of Devon. These distinct areas are known as Devon Character Areas, and the Exe Estuary and Farmland is one of 68 such areas in Devon. Figure 3k shows the Landscape Character Types (LCTs) within the Exe Estuary and Farmland Area and vicinity.

Each Devon Character Area is accompanied by a written profile, and the following text is taken from the profile for the Exe Estuary and Farmland:

Although Devon has a number of estuaries few are as extensive as the Exe. This is a landscape of open skies characterised by the sound of seabirds, the masts of boats, and mud and dunes at Dawlish Warren. Views over the river are distinctive and the detail of the scene changes according to tide and season. The open expanse of intertidal mudflat when covered with water reflects the colour of the huge skies above. The whole scene is framed by rising landform on either side, which provides low level enclosure. The land rises gradually to the high ground of Woodbury Common to the east and Haldon to the west.

This landscape is complex and diverse, combining ridge and valley systems with the open estuary landscape and red sandstone cliffs. The patchwork of fields and hedgerows, designed landscapes, woodlands and estuarine and coastal features creates a landscape of high scenic quality which forms an important part of the setting to Exeter, Exmouth and Dawlish. The underlying red soils, frequent vernacular buildings, estuarine and coastal views and hillside backdrops lend a strong sense of place. The shoreline railway and canal add distinctiveness and frequent small boats and moorings emphasise the maritime character.

Constituent Landscape Character Types of the Exe Estuary:

- 3B Lower rolling farmland and settled slopes
- 4A Unsettled farmed valley floors
- 4B Unsettled marine levels
- 4C Estuaries
- 4D Lowland Plain
- 4F Coastal dunes
- 5 Cliffs
- 7 Main cities and towns

Source: Devon County Council, 2014
Figure 3k: Landscape character types of the Exe Estuary and vicinity

Source: DCC 2014 and OS 2014
How our landscapes are valued and protected

The quality and distinctive character of Devon’s landscape is widely acknowledged and valued. It has led to large areas of the County being designated to help protect them against inappropriate development that would harm their beauty or intrinsic character. A number of landscape designations are found within the vicinity of the Exe Estuary as outlined below and shown on Figure 31.

East Devon Area of Outstanding Natural Beauty¹

The East Devon Area of Outstanding Natural Beauty (AONB) is a special landscape, designated to conserve and enhance its natural beauty since 1963 and covering nearly 270 km² of Devon’s finest countryside. The East Devon AONB team has developed a protocol with Devon County and East Devon District Council detailing the AONB’s involvement in the planning process for new developments within its boundary. Action is co-ordinated by a small local team guided by a wider community partnership.

Area of Great Landscape Value - Haldon Hills and Surrounds

Areas of Great Landscape Value (AGLVs) are areas considered significant at a county level for their high landscape quality and distinctive landscape character. This makes them particularly sensitive to new development. Within these areas the primary objective will be the active conservation and enhancement of their landscape quality and individual character.

Coastal Preservation Areas – Teignbridge and East Devon

Coastal Preservation Areas (CPAs) were first designated in Devon in 1966 in response to Government advice which identified the need for effective action to safeguard the unspoiled stretches of the coastline. Within the CPAs, development, other than that of a minor nature, will not be provided for except where it is required for the benefit of the community at large, in connection with public access for informal recreation, or for the purposes of agriculture or forestry and only when such development cannot be reasonably accommodated outside the protected areas. Such development will only be provided for when it would not distract from the unspoilt character and appearance of the coastal area.

Whilst some landscape may not merit local or national designation, there are aspects and qualities in all landscapes that people value.

Devon Landscape Character Assessments (LCAs) mentioned in the previous page are available for all landscapes in Devon, and are therefore important ‘evidence bases’ used by local planning authorities when they prepare local plans and make decisions on planning applications. This helps to ensure that the special qualities that we value in our local landscape, such as tranquillity, beauty, sense of history and wildlife interest, are protected and sustained for future generations to enjoy, supporting our wellbeing and quality of life. Devon’s LCAs can also be used by local communities when preparing more detailed neighbourhood plans.

¹ East Devon AONB Management Strategy 2009-2014
Figure 3I: **Landscape Designations within the vicinity of the Exe Estuary**

Source: DCC 2014 and OS 2014

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3.4 History and Archaeology

The Exe Estuary contains many varied sites of archaeological and historical importance. In common with many other estuarine and coastal locations the Estuary of the River Exe has been used by people throughout time. Estuaries can act as barriers, boundaries, places of entry and exit, communication routes and as a source of mineral and food resources. Archaeological sites within such areas are often specialised in nature and may include fish weirs, boat-building yards, quays and mills.

Early Settlements

In the case of maritime and intertidal zones such as the Exe Estuary, it is important to remember that the present coastline is comparatively modern. As recently as 6000BC the coastline would have been very much further seaward than it is now. Thus many former dry land sites are now in a submerged or intertidal environment. The protection of these sites from erosion, and their long term survival, is generally the result of them being covered by layers of silt. Whilst this can result in exceptional preservation of organic material it also means that the existence and extent of such sites is difficult to establish. Marine and alluvial deposits, silts and peats can also preserve important evidence of past natural as well as man-made environments.

Until recently there were relatively few known sites from the prehistoric and Roman periods in the immediate area of the Estuary except for the Roman fortress and city of Exeter, a Roman settlement at Topsham, a Roman farmstead and earlier prehistoric settlement under the M5, and a few prehistoric finds. Recent development has, however, unearthed more, prehistoric settlements and burial sites on the fringes of the Estuary, on the including at Alphington, and between Exeter and Topsham. A small Roman fort has also been discovered at Topsham with an associated supply base on the site of the former St Loyes College. This indicates that the Exe Estuary played a strong strategic communication and supply/trade role during the first decades of the Roman occupation. Although most remains are buried and not visible, parts of Exeter’s Roman city wall may still be seen in amongst medieval and later masonry, and the wall circuit extends down to the quay area. The Royal Albert Memorial Museum, Exeter, contains impressive collections of excavated material from the city and hinterland, charting its development from prehistoric settlement through to Roman military fortress, civilian town and regional capital.

In addition to the Roman military and settlement sites at Exeter and Topsham, evidence of prehistoric occupation and continued Romano-British settlement has also been found in the Exe valley above Exeter, on the higher ground to either side of the Estuary and in tributary valleys such as the Clyst. Given this level of activity in it is very likely that the Estuary and the corridor of the lower Exe was also actively used during earlier periods.

It is probable that the prehistoric and Romano-British civilian populations around the Exe Estuary were also actively exploiting the natural resources of the area, by fishing, fowling, reed gathering, extracting salt, and using seasonal pastures on the flood plain, as well as farming the surrounding higher land. The Exe would also have been used by civilian communications and commerce, particularly in the Roman period when coastal and trans-channel trade will have expanded. The finding by a diver of a single piece of a Roman amphora (ceramic storage jar) in the mid-Estuary is a tantalising indicator that this sort of trade was indeed going on.
Exe Bridge

The medieval Exe Bridge and associated chapel is currently largely marooned within the modern roadscape. The bridge did not stand in isolation; it was associated with mill leats, fish weirs, and adjoining housing and shops, including some built along the bridge itself and overhanging the water below.

Exeter Quay

Recent excavations here have revealed a sequence of quay facilities from the Tudor period onwards. At the back of it are a 17th century transit shed for the woollen trade (now the Quay House visitor centre), the imposing late 17th century Custom House with its fine decorated plaster ceilings, and an imposing set of stone warehouses from the 1830s.

Exeter Canal

The Canal and its associated basin and warehouses, weir, locks, quays and limekilns offers an insight into the economy and industrial archaeology of the Estuary from the Tudor period to the present day, and links Exeter Quay with the Estuary. Known as the earliest ship canal in England, it was built in the 1560s to take lighters, transporting goods to and from seagoing ships moored in the Estuary, to the Quay. Originally its entrance was at Countess Wear, before the canal was extended further down the Exe Estuary to Topsham in the late 17th century, and again to Turf Locks, near Powderham, in the 1820s, when it was deepened and widened to take seagoing ships. However, the coming of the railways in the 1840s and 1860s brought a decline in trade and traffic, with commercial use finally ceasing in the 1970s.

Powderham Castle and Park

Built by the Courtenay family, the Earls of Devon, Powderham Castle dates from the 14th century and consists of a later fortified manor house with associated formal gardens and deer park. The site is open to the public and medieval jousting events are staged in the summer.
Topsham

Topsham was clearly an important landing point on the river, below the city, throughout the Roman period. Recently an early Roman fort has been identified under the new school in Topsham, which was probably linked to the fortress at Exeter by a road on the line of the present Topsham Road. This appears to confirm Topsham’s Roman origins. Topsham is also the site of a historic waterfront, boatyards and quays, and has a fine group of later 17th century merchants’ housing. Over recent years pottery and metal objects of 16th to 18th century date, including imported pottery, cloth seals and sugar refining material, have been found in the mud banks off Topsham – further evidence of Topsham’s trading heritage.

Image 3ad: Spanish rough cast vessel from the Roman Military period (around 1st century) found at Park Field, Topsham.
Source: Exeter Archaeology

Saltworkings

The saltworkings are an example of the exploitation of the Estuary’s natural resources. There appear to have been a number of saltworking sites in the Exe Estuary during the 18th century, possibly linked to programmes of land reclamation. These are largely known from map sources but at least two survive as earthworks. In addition, there was a salt refinery (amongst other activities) at the Bridge Inn, Topsham.

Land Reclamation, Limekilns and the Agricultural Revolution

Further research is needed to establish the precise dates of land drainage around the Exe Estuary although it is known that large areas of former salt marsh were reclaimed to create pasture in many areas including at Exminster Marshes, from Powderham to Kenton, from Exton to Lympstone and in the Lower Clyst Valley. In some areas LIDAR images of pasture land show the location of former tidal creeks from when the area was inter-tidal. The Exe Estuary timeline of a changing coast at www.licco.eu/resource-library/ gives more details about land reclamation through the ages. During the agricultural revolution of the 18th Century large areas of land were enclosed and/or improved. This led to increased demand for lime and for the fuel to fire the limekilns that spread throughout the countryside. Proximity to the source of these bulky raw materials was clearly an important consideration in the siting of a kiln and so many appear beside the River Exe, for example at Nutwell Court, Lower and Higher Wear. The powdered lime would have been taken from these landfall kilns by mule and cart into the agricultural interior. The lime would also have been used for building mortar and limewash walling etc. Patent manures and chemical fertilisers replaced lime in the early 20th century. There were manure and chemical works on the Lower Clyst at Odams’ Wharf by the late 1800s.

Brunel’s Atmospheric Railway

The Atmospheric Railway along the western bank of the Estuary opened in 1846 and was converted to conventional steam after 1848. A number of features of the original railway survive beside the course of the present railway, principally the engine house at Starcross. Recently a number of the iron propulsion tubes of the railway have been discovered. The Station House at Exminster, now the Swan’s Nest, may have been designed by Brunel.
Exmouth Branch Railway

After several route proposals, a branch railway down the east bank of the Exe Estuary, connecting the City of Exeter and the port town of Exmouth, was opened in 1861. Built in only 12 months, the branch line was exceptionally successful and 2,000 passengers each day of its first week. In 1864, the Exmouth Dock Railway was incorporated in the branch and the Docks used this line from 1866 to 1967, when the service officially terminated. The Exmouth Dock, however, continued in use until 1990. Nowadays, the Exmouth railway only carries passenger trains under the brand name “The Avocet Line”.

Industry and the Industrial Revolution

A number of early industrial sites and their more recent successors were sited along the river and Estuary. Raw materials and fuel from elsewhere in Britain, Europe, the Baltic and the Empire could be easily shipped in and finished products shipped out. The river also provided a source of power with diversions into leats powering the machinery of corn, woollen, and paper mills. One corn mill, at Cricklepit below the city wall in Exeter, has recently been restored and is now the headquarters of the Devon Wildlife Trust, who hold occasional milling days. Some have been redeveloped, such as the “Old Match Factory” which was actually an 18th century flax mill, and Trew’s Weir Mill which originated as a fulling mill in the 17th century, but became the South West’s first cotton mill in the early 19th century and ended its days as a paper mill. The number of mill sites along the river reflects the major woollen industry that once existed here. Raw cane sugar was refined at the Retreat, Topsham in the late 17th and 18th century. Other sites such as the 17th century Glass works at Glasshouse Lane and the 19th century pottery at Haven Banks have simply been demolished. There were boatbuilding yards, dry docks and timber yards at Exmouth, Topsham, Countess Wear and Glasshouse. Buildings such as the Edwardian power station at the canal basin are part of a wider history of Exeter Quay and Canal Basin.

Second World War Sites

These have received particular attention in the last decade or so, with commemorations of the global events that caused their construction and a growing awareness of their significance. They are increasingly rare and neglected reminders of one of the most important periods in recent British history. We have an incomplete picture of military activity in the Exe Estuary but there are two groups of sites which may be of particular interest.

Firstly in Exminster Marshes there are the surviving air-defences of Britain throughout the war and formed part of a complicated system of interdependent bases and observation posts. Part of this site lies within the RSPB Exe Estuary Reserves.

Secondly at Dawlish Warren there are a number of coastal defence pillboxes built in 1940 to counter potential landings on the beaches here. There were also substantial defences at Exmouth. Scaffolding barriers were placed along the beach front and at the harbour a number of pillboxes were erected. There was an anti-aircraft rocket battery on the pier and nearby was an “Alan Williams” Steel Turret, which housed a machine gun for anti-aircraft or coast defence. This is a particularly rare feature and has been re-erected in the town as a monument. Dawlish Warren was used for troop training including by US troops later in the war and the mud flats to the rear were used as a bombing range.
Historic Hulks on the Exe Estuary

The Exe Estuary contains a significant collection of abandoned vessels in relation to other estuaries in the South West, and is home to the largest known concentration of the remains of Brixham trawlers. In April 2005 a non-intrusive archaeological field survey of the historic hulks was conducted along the banks of the Estuary (Read, 2005). It is estimated that there are over 20 historic vessels slowly decomposing around the Exe, most from the late 19th and early 20th century. The largest concentration of hulks is located opposite Topsham in a 'ship graveyard' and the majority of these vessels have been identified as sailing trawlers or ketches.

Image 3af: Abandoned boats at Topsham
Source: EEMP

Image 3ag: Historic hulks at Exminster
Source: EEMP