

Into the Modern Era

Palmerston's Forts

The second half of the nineteenth century saw the emergence of a unified Germany and Italy, growing instability in Eastern Europe (the Austro-Hungarian and Turkish Empires), and a further French resurgence.

Advances in naval technology led to a dramatic overhaul of Cornwall's coastal defences. War fleets were now made up of steam-powered, steel-plated battleships mounted with heavy, long range guns firing explosive shells, and fast moving torpedo boats. It was argued in the British Government that the existing forts on England's south coast were no match for the formidable firepower of these new battleships. At the same time the rise to political power of Prince Louis Napoleon in France was causing consternation at the Foreign Office. Lord Palmerston, Britain's Foreign Secretary, argued that further war with France was likely.

As an island nation Britain's power depended largely on the might of her navy, and the secure defence of her naval bases was of paramount importance in military strategic thinking. A Royal Commission Report of 1859 called for enhanced defences for the protection of Britain's' naval dockyards in the face of the perceived threat from France.



Garden Battery, Mount Edgecumbe. One of a series of fortifications built around Plymouth Sound during the 1860s as part of Viscount Palmerston's programme of defensive enhancements to Britain's naval bases. © details

Palmerston's views were not shared unanimously by the Government, or by the military. Nonetheless he pressed ahead with the implementation of the Commission Report's recommendations and carried out a programme of defence enhancements around Britain's principal naval bases and dockyards both at home and abroad. The new defences around bases such as Plymouth comprised chains of fortresses covering every conceivable angle and approach.



Tregantle Fort. This is the largest land fort in the Plymouth defences and includes a self-contained, ditched keep (to the left). It was built in 1858-59 to house 2,000 men in barracks arranged on its south side (facing the camera in this view) and was designed for 35 guns. Photo © Cornwall County Council Historic Environment Service

Palmerston's forts, most of which were built in the 1860s, were massive structures. They were viewed as unnecessary and expensive follies almost as soon as they had been constructed, largely because of the French defeat in the 1870 Franco-Prussian War. They have gone on to serve as valuable centres for communication, training and defence during later conflicts. Some are still in use as military bases today.

The defences constructed around Plymouth consisted of six coastal batteries and a ring of 18 land forts and batteries. The forts were polygonal in design; each side was covered by fire from galleries, known as caponiers, protruding into a surrounding ditch. Guns mounted on the flanks of the fort were vulnerable to fire from the side so were placed in bomb-proof chambers or 'casemates'.



The chain of forts around Plymouth, as proposed by Palmerston in the 1860s. They include Tregantle and Scraesdon in the west, Polhawn and Cawsand cutting off the Rame Peninsula, and Garden Battery and Picklecombe positioned at Mount Edgcumbe.



Scraesdon Fort, Antony. Scraesdon is a large fort standing on a bluff overlooking the Lynher River and the road from the west to Torpoint, and was designed for 27 guns. This fort has become very overgrown and is now used as a military training centre. Appended to the northern side of the fort is a large battery which battery held three gun casemates intended to protect the fort from the north. Cornwall County Council Licence 2007. © Geosense 2005.



The interior of a gun casemate at Scraesdon fort. Photo: Emma Trevarthen.

1890 to 1914

During the decades around the turn of the century the defence of Britain's ports and dockyards, especially those along its southern coasts, continued to be refurbished in light of the growth of the French and German navies. Around the turn of the century the coastal defences were further enhanced in the light of the development of fast-moving torpedo boats, which moved too quickly to be targeted by the heavy harbour defence armaments. Quickfire Batteries were required that could cover the entrances to harbours, which were also protected by electric minefields. More heavily fortified batteries, such as those around Plymouth and on St Mary's in the Isles of Scilly were also built at this time.

Around Falmouth, new gun batteries were put in place at Pendennis Headland, and a new battery to replace the Napoleonic works on St Anthony's Head was built in 1897. This was updated with larger guns in 1903. A minefield was laid out on the seabed between Pendennis and St Mawes.



Quick-Fire guns placed at these batteries were designed to combat a new threat: motor torpedo boats which moved too fast to be accurately targeted by the

armaments available at the end of the nineteenth century. This photo shows a 7 inch quick fire gun mounted at one of the late nineteenth century batteries at Pendennis Castle, Falmouth.

At the same time the effectiveness of the batteries was increased by the installation of Defence Electric Lights. These were batteries of searchlights pointing out to sea to detect enemy ships. They were placed along the eastern edge of Pendennis headland below the fort and on the cliff edges below St Mawes Castle and St Anthony Battery.



The remains of bases for Defence Electric Lights at Crab Quay on the edge of Pendennis Headland. © details

An unsuccessful scheme to make the Isles of Scilly a naval base resulted in the building of several large batteries between 1896 and 1905. Two of these batteries, Woolpack and Steval, were on the Garrison and were accompanied by an unusual defended barracks, a quick fire battery and Defence Electric Lights.



A gun emplacement at Woolpack Battery, the Garrison, St Mary's. Woolpack is a well-preserved 1900s fort, commanding the southern shoulder of the garrison headland, with its pair of Defence Electric Lights on the clifftop below. Within the rampart of the battery are gun emplacements above sunken shell and cartridge stores and shelter rooms. Photo © Cornwall County Council Historic Environment Service

The Great War

The conflict of 1914 to 1918 was a war fought abroad; the threat to Britain's coasts was minimal after the German navy's paralysis following the battle of Jutland in 1916; aviation technology was not sufficiently developed to allow a significant sustained aerial bombardment; and the overwhelming demand for troops and resources to fuel the inferno of the Western Front precluded any threat of a German invasion.

For these reasons few physical traces from this conflict survive in Cornwall. Existing coastal batteries such as Pendennis Castle, St Anthony's Head, and those around Plymouth Sound were strengthened and some rifle ranges and training camps may date from this period. Overall, however, the fortifications programmes of the late nineteenth century left a much bigger imprint on the landscape.

There was one new threat that led to military installations being established. This was the use of submarines. Germany declared a submarine blockade of Britain in early 1915. Submarines posed a serious threat, not just to the fleet, but to the country at large because Britain relied on shipping to supply her war effort and to transport field troops to the combat zone. From 1915 there was a sharp increase in British shipping losses.

Airship patrols were an effective deterrent to submarine activities and to combat the U-boat threat to merchant shipping convoys the Navy established a series of airship stations in the south west. One of the principal stations was RNAS Mullion at Bonython on the Lizard Peninsula. The station was exceptionally busy and carried out numerous attacks on enemy submarines. Aircraft were stationed there as well during 1917 and 1918.



Airships from Bonython were used to combat the possible threat from German submarines. The foundations for two large hangars and the spider-like bases for wind-breaks survive today. Photo © Cornwall County Council Historic Environment Service

At Crugmeer on the coast west of Padstow, another Royal Naval Air Station, this time a grass airfield, was built. Its accommodation originally consisted of canvas aircraft hangars and wooden huts. The airfield was also used during the Second World War and the surviving concrete buildings on the site date from that conflict.

There were also seaplane bases built at Newlyn and on Scilly. The Scillonian base was initially sited at Porth Mellon on St Mary's but was later rebuilt south of New Grimsby on Tresco. At both sites the concrete standings survive, and at New Grimsby the ramp and iron rails for trundling the planes down to the water can still be seen.