

HORIZONS Children's Sailing Charity

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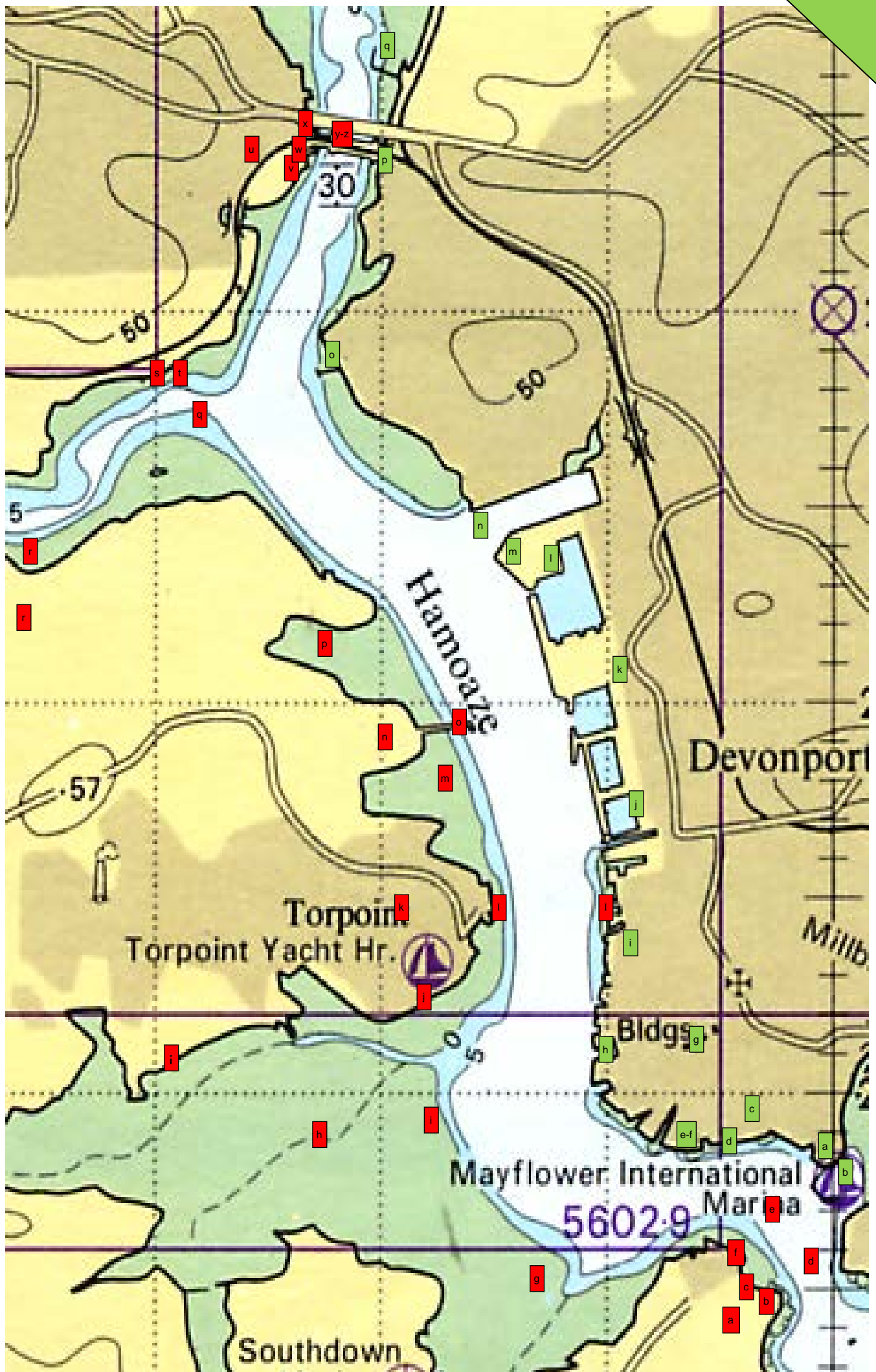
Educational Boat Trips around Plymouth Sound, River Tamar and Royal Dockyard.

Educational Boat Trips

Order of pages

Front Cover
Green Route
Orange Route
Yellow Route
Blue Route
Red Route





Horizons Children's Sailing Charity (Educational boat trips Green Route)



The county boroughs of Plymouth and Devonport, and the urban district of East Stonehouse were merged in 1914 to form the single county borough of Plymouth – collectively referred to as The Three Towns.

Mayflower Marina (Start)

a, Ocean Quay

At around 1877 a rail good shed was erected at friary leading to a goods line established beyond Devonport and Stonehouse to Ocean Quay. A few years after this in 1890 the quay was improved to take passengers.

The idea was that Liner passengers would land by tender and be whisked to London and get there well in advance of those that stayed onboard and alighted at Southampton. There was then competition by the London and South Western Railway (LSWR) picking up from Ocean Quay with Brunel's Great Western Railway (GWR) from Millbay.

The first attempt at faster trips was In 1904 and GWR managed to get their customers to Paddington 19 minutes before the LSWR train arrived at Waterloo. Over the ensuing months the time to London was reduced to 3hrs and 54min with trains topping 100mph. This was all stopped in 1906 after a train travelling around a 30mph bend at 70mph crashed killing 24 passengers.

b Stonehouse Creek

Stonehouse Creek is also known as Stonehouse Lake (on many maps). The upper reaches of Stonehouse Creek, now Victoria Park, were formerly known as the Dead Lake and it is frequently marked as such on early maps of the locality. This area was filled in to celebrate the 60 year reign of Queen Victoria.

The lower reaches of the creek were filled in from the 1960s onwards. Before the filling in or silting up, this tributary of the Tamar was tidal as far to the north east as Pennycomequick and the western end of Ford Park Cemetery.

On either side of the Creek were the Royal Naval Hospital and Stoke Military Hospital, patients for the naval hospital being landed at a jetty. The Army hospital is now Devonport High School for Boys.

c Scott memorial

Mount Wise Park also has a memorial dedicated to Captain Robert Falcon Scott who died on his return journey over the Antarctic ice cap, after reaching the South Pole in 1912. Scott was born in Devonport on 6th June 1868. A short passage from his final diary entry is laid out on the ground around the monument.

c Millenium Mast Viewing point

Here there is a 40m high public viewing platform built on the site of a Tudor House. The mast stands in Mount Wise public park which was set out in the 1890's. The whole park sits above The Plymouth Underground Extension – a network of tunnels joining planning rooms, a communications centre, dormitories, shelter and other facilities.

d Mount wise pools

These pools originally known as Bullocks dock opened at the end of the great war, and were known as the Mount Wise Open-Air Sea Water Baths.

e Mutton Cove

Currently used by local fishermen.

Was never part of the royal dockyard and was a public landing space. On moving from Devils point the Mount Edgcombe ferry started leaving the quay and harbour in 1750.

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e All weather Gym

The adiZone – designed and developed by Adidas – has been erected next to the dockyard wall at Mutton Cove. This is a permanent, 625 square metre outside gym that will boast facilities inspired by Olympic and Paralympic sports, including basketball, football and tennis areas, a climbing wall, an outdoor gym and an open area to encourage dance, aerobics and gymnastics.

f King Billy's figurehead

The statue that stands beside the dockyard at Mutton Cove, known as King Billy, is of William IV who reigned between 1830 and 1837. The statue was originally a figurehead on the 120 gun warship, 'Royal William'. The ship was converted to steam in 1859 and the figurehead was replaced with a smaller one. In the 1990s, the figurehead at Mutton Cove was deteriorating fast so it was decided to make a fibreglass copy which now stands in place of the original. The original wooden figurehead has now been restored and stands along with other preserved figureheads at Black Yarn Stores at Devonport Dockyard.

f Last Shed

g Tamar, Tavy and Lyner tower blocks

Coloured Red, Blue and Green the colours of the Devonport field gun team.

h Cornwall Beach

The dockyard North yard ended at North Corner next to Cornwall beach before the building of the bridge to Morice Yard. Originally there were five pubs and the piermasters house. The piermasters house can still be seen under the bridge alongside North Yard wall. For those arriving at Devonport by water both Cornwall Beach (North Corner) and Mutton Cove were the principal points of entry, hence the number of Inns and taverns at these two points.

h South yard/Morice Yard Bridge

In 1963 Morice Yard and South Yard were linked by means of a fly-over. Work was started by Messrs Howard Farrow Ltd, of London, in May 1962 and the almost 300 feet long reinforced concrete bridge would span Cornwall Beach. The carriageway was 23 feet wide and the pavement 5 feet 6 inches.

i Flagstaff Port Control

This is the Devonport Dockyard and hamoaze signal station, Call sign 'Flagstaff' and controls the movements of vessels North of the Narrows

j Frigate Refit Complex

Opened in 1977 by the then Foreign secretary and Devonport MP, David Owen, the Massive three hangared frigate complex allowed dockyard workers to work undercover on up to three boats at one time.

Ships in the complex could be connected to electricity supplies, air conditioning and sewage disposal. This meant it was possible for a whole ships company to remain onboard throughout the refit process.

The massive doors can rise to a height of 160ft and are in four sections. Each can be operated independently so the top can be lowered for ventilation purposes.

When finished the docks were flooded and the ships moved out to their own basin for less weather dependant work and another ship can enter.

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k Royal Dockyard

Her Majesty's Naval Base (HMNB) Devonport including HMS Drake, is one of three operating bases in the United Kingdom for the Royal Navy. HMNB Devonport is located in Devonport, in the west of the city of Plymouth. It is the largest naval base in Western Europe and is the sole nuclear repair and refuelling facility for the Royal Navy. The Royal Dockyard is owned and operated by the Marine division of Babcock International Group (Babcock Marine), since 2007.

The Royal Navy Dockyard today consists of 14 dry docks (Docks Numbered 1 to 15, there is no 13 Dock, four miles (6 km) of waterfront, 25 tidal berths, five basins and an area of 650 acres (2.6 km²). In 1689 Prince William of Orange became William III and commissioned a Royal Dockyard for Plymouth. On 30 December 1690, a contract was let for a dockyard to be built in the Hamoaze area, which was then in the Parish of Stoke Damerel and began the start of the Devonport Royal Dockyards. The site was one of two suggested by a Naval Officer Edmund Dummer who was given the task of designing a state of the art Royal Dockyard.

At Devonport, Using stone in stead of the normal system of using wood Dummer designed the first successful stepped stone dry dock in Europe. These docks were stronger with more secure foundations and the stepped sides that made it easier for men to work beneath the hull of a docked vessel. To ensure that naval dockyards were efficient working units that maximized available space, he produced a simplistic design layout with centralized storage areas and a logical positioning of buildings. At the time all of this was known as the Plymouth Dock, not to be confused with the nearby town of Plymouth until September 1843 when authority was given for it to take the name of Devonport Dockyard.

l SRC

The Submarine Refit Complex (SRC) behind the FMB at the end of North Yard wa opened by HRH Prince Charles on 23rd May 1980. This complex was at the time advertised as the 'best submarine refit facility in the whole of Europe'. Up until recently the complex was dominated by the £2.5 million crane on the roof of the nine storey (four below ground) submarine support building..

m FMB, HMS Defiance and HMS Drake

FMB (Fleet Maintenance Base) built on the south side of Weston Mill Lake was opened by The Prime Minister, James Callaghan on 21st April (HM Queen's Birthday) 1978.

In 1972 HMS or RFA? Forth was renamed as HMS Defiance whilst serving as the establishment's depot ship in Weston Mill Lake until 1978

HMS Defiance was the Fleet Maintenance Base at HMNB Devonport between 1972 and 1979, and again between 1981 and 1994 when it was then absorbed into the main naval base HMS Drake..

n Weston Mill Lake

The area derived its name from being the mill belonging to the tithing of Weston Peverel, otherwise known as the parish of Pennycross. It was possibly the oldest mill in the Plymouth area as a deed of Geoffrey de Weston mentions Ham as being on the west side of the road from the mill.

By reclaiming land to the North of the Naval dockyard in the 1980's allowed the development of a series of deep water moorings alongside the Weston Mill Lake Jetty

o Royal Naval Ordnance Depot Bull Point

It provided storage for 40,000 barrels of powder in an integrated complex including a floating magazine where powder was unloaded and the 1805 St Budeaux laboratory where it was checked and processed, before being taken to the Bull Point magazines.

Very few of the original buildings remain standing, the building seen behind the Camber (1851-4) is 'Building 13' (Receipt and Issue Magazine) 1853-7, Ammunition was received from ships coming in to refit or be paid off. Powder barrels which had been checked were held there ready for re-issue. Both the magazines and camber have listed buildings and scheduled monuments status

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p US Army Route 23 - Normandy way – Saltash passage

The American V and VII Corps travelled along Route 23 to Saltash Passage for the DD Landings in June 1944. There is a Memorial at Saltash passage dedicated to those that departed from this hard, both the U.S. and British flags fly side by side.

Route 23 was named Normandy Way by the mayor of Cherbourg M René Shmitt in May 1947

q Royal Naval Ordnance Depot (RNAD) Ernesettle

All the low lying areas to the north of the Tamar bridges was originally part of the River Tamar and was reclaimed in 1854.

Work started in 1926 with the building of four storage magazines, these were used to house depth charges that had been prepared at the Ordnance depot at Bull Point and transported around to Ernesettle by barge. A 2ft 6ins gauge railway was also constructed at that time to enable trucks to be pushed by hand into the magazines from the original quay.

From 1938 the Depot kept getting enlarged by cutting underground magazines and laboratories. Transportation of munitions was dangerous so they kept doing this by water and to facilitate this a new 600 feet long jetty you can still see and is still used today was completed in July 1941.

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a Staddon Heights

This area overlooking Plymouth has been a sight of many fortifications to protect the harbour. Staddon Height Batteries were built in 1782 and abandoned in 1847.

Staddon Point Batteries in 1847 were built close to the water, and were strengthened in 1869 by the construction of Bovisand Battery.

b Fort Bovisound

In 1816 a stone jetty and slip were built for boats from sailing warships anchored in Plymouth Sound to collect fresh water from the nearby reservoir. The first fort at the site, named Staddon Height Battery, was started in 1845, and still exists in the upper part of the present fort. As part of the recommendations of the Royal Commission on the Defence of the United Kingdom, work started on the main part of the fort consisting of 23 granite Casements (a fortified gun emplacement or armoured structure from which guns are fired), originally housing 22 9-inch Rifled Muzzle Loaders (RMLs), one 10-inch RML gun and 180 men. By 1880 the armament included 14 10-inch and nine 9-inch RML guns. Underground there are large deep tunnels to store artillery ammunition safe from enemy gunfire. In 1898 six 12-pounder quick-firing guns were installed.

In the early 1900s the original guns were removed. In 1942 the remaining four 12-pounders were replaced by two twin 6-pounders, to combat German E-boats during WW2. A Bofors 40mm anti-aircraft gun was installed in 1943. In 1956 the Ministry of Defence abandoned the fort and a lease was granted in 1970.

c The Shagstone / Shag Rock

A outcrop rock used for navigation habited by Shags. Also the eastern end of the line between Penlee Point denoting the extent of Longroom Port Controls coverage.

d The Mewstone

This is a triangular island which is currently uninhabited. However, it has served as a prison and a private home, as well as a refuge for local smugglers. Its most infamous resident was Sam Wakeman who avoided transportation to Australia in favour of the cheaper option of transportation to the Mewstone, where he was interned for 7 years. After his internment on the island he remained there paying his rent by supplying rabbits for the Manor House table. It is said Sam Wakeman is responsible for carving the rough stone steps to the summit of the Mewstone. The Mewstone and Little Mewstone is now a bird sanctuary and access is not permitted to visitors.

e Breakwater

The breakwater, which protects the anchorage and is built across the mouth of the entrance to the harbour, is about a mile long, with a lighthouse on one end and a beacon - a refuge for stranded mariners - on the other. It was begun in 1812 and was a prodigious engineering feat, designed by John Rennie and Joseph Whidby. It was built at an enormous cost in both money and lives and it was years before it was finished. It is around 1,700 yards (1,600 m) long, 200 feet wide at the seabed and 40 feet wide at the top, and rises to about 20 feet above sea-level along the whole of its length and stands in around 11 metres / 36 feet of water. The breakwater has a 23-metre-tall (75 ft) lighthouse on its western end and a 9-metre-tall (30 ft) beacon with a spherical cage on top at the eastern end. It is said that the cage is a lifesaving device designed to keep wrecked sailors from drowning in the huge waves of a storm on the low-lying breakwater.

f Breakwater Fort

Building work on the Breakwater Fort started in 1860 and went on until 1880. It was part of the ring around Plymouth, coming between Fort Bovisand to the east and Picklecombe Fort to the west. It was designed by Captain Siborne as part of Lord Palmerstons plan for the defence of Plymouth and other Royal Dockyards. It had 2-foot thick steel armour-plating, and a gun hoist (still there) to lift the heavy armaments onto the fort. These were 14 x 12.5-inch and 4 x 10-inch rifled muzzle-loading

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guns, though at a later date they were replaced by quick-firing guns. The fort later became a signalling and semaphore station. In the 1890s it was painted with a yellow and black chequered pattern which is still visible. It was used as an anti-aircraft station and training school during the Second World War - the wartime buildings have now been demolished.

g Rame Head and St Michaels Chapel

The site was used for a promontory hill fort in the Iron Age. The headland has a prominent Chapel, dedicated to St Michael and is only accessible by a steep footpath. The chapel was first licensed for Mass in 1397 and is probably on the site of a much earlier, Celtic Hermitage. It remains as an intact shell. Earl Ordulf, who was the owner of vast estates in the West Country and was the uncle of King Ethelred, gave Rame to Tavistock Abby (which Ordulf had founded) in 981.

h Coastguard Station at Rame Head

Originally a Lloyds Signal Station, where signalling was done from passing ships to the station by flags during the day and by lights at night, it became a radio station in 1905, then transferred to the Coastguards c.1925.

The station is now run by volunteers from The National Coastwatch Institution (NCI). This voluntary organisation was set up in 1994 to restore a visual watch along UK shores after many small Coastguard stations closed. NCI is a registered charity managed by a board of Trustees with a Constitution agreed by the Charities Commission.

i Penlee point

Penlee Battery is a nature reserve lying on the coastal headland of Penlee Point.

The site was formerly a fort, constructed from about 1890. It contained the largest gun of the Plymouth defences, a 13.5 inch breech loading gun and was in active service through both World Wars. Some gun emplacements still remain.

It is famous among dragonfly enthusiasts as the site where Britain's first Green Darner dragonfly was found, in 1998.

j Trinity House buildings and Fog horn

Only the buildings remain, the foghorn was removed some time ago. To the left are a series of huge steps that were used to transport large RML (RIFLED MUZZLE LOADING) guns from sea to the Penlee Battery

k Pier Cellars & the Brennan Torpedo

Pier Cellars dates from around 1560 when it was used for the storage and smoking of Pilchards.

The small buildings above the Harbour have been used as a farmhouse, a grog shop and the local headquarters for the later detachments stationed there in the 1900's. The cellars were requisitioned by the government in 1889 to house the newly developed Brennan torpedo. Each station had twelve torpedos and was manned by one officer, one mechanist, eight N.C.O.s and two engine drivers. The pier that was adjacent was used to land stores and munitions for the station.

During World War two the station was used for the development and testing of one and two man torpedos of the Welman Chariot type.

k Brennan Torpedo

The Brennan torpedo, invented around 1876, was the very first wire guided torpedo, and was similar in appearance to the modern day type, save that instead of being circular in cross-section it was fish shaped. It was designed to run at a consistent depth of twelve feet underwater and had an indicator mast sticking up from the torpedo until it just broke the surface. At night this mast had a small light fitted which was only visible from the rear.

The Brennan torpedo became standard harbour defence throughout the British Empire and was in use for more than fifteen years.

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I Cawsands and King sands, Cawsands bay

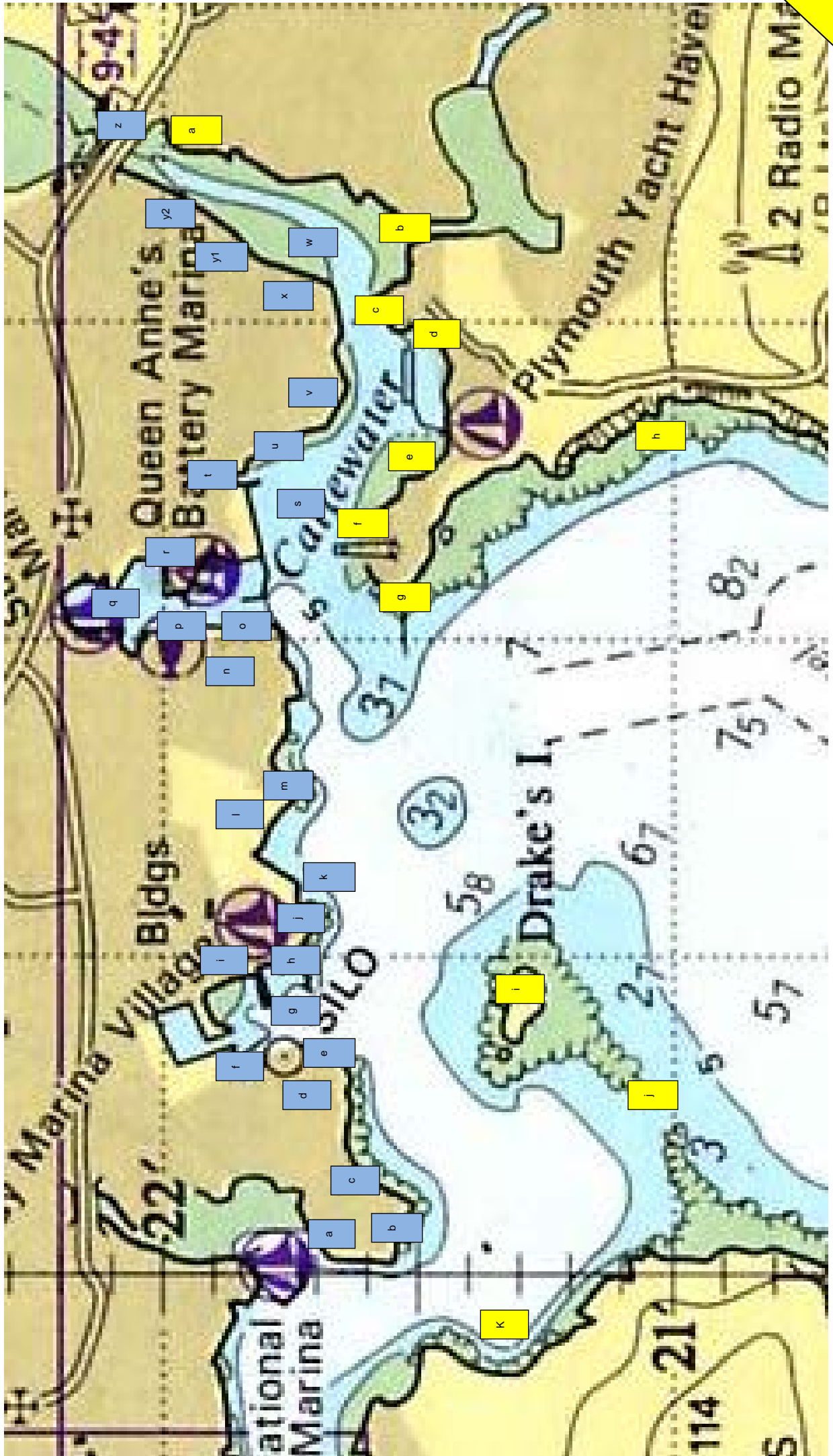
Until boundary changes in 1844 Kingsand was in Devon; Cawsand, however, was always in Cornwall. On the old county boundary between the two villages there is still a house called DevonCorn, which has the marker on the front of the house separating Devon and Cornwall (Corn). The villages are well known for their smuggling and fishing past. Although the known smuggling tunnels have been sealed up, there are still old fish cellars and boat stores to be seen along the coast.

m Cawsands Fort

Cawsand Fort was completed in 1863. It was designed to cover the approaches to Cawsand Bay and the shore to the East of Kingsand and also had guns facing inland to defend against attack from the rear. It was fully armed with thirteen guns by 1885. It was released by the War Department in 1926 and remained largely derelict until its recent re-development for housing.

n Fort Picklecombe

Fort Picklecombe was commissioned in the mid 19th century by Lord Palmerston, Palmerston ordered a series of coastal forts and batteries to be built in this area to defend the large naval base at Devonport near Plymouth. The coastal entrance to Plymouth known as Plymouth Sound, and was to be defended by Fort Picklecombe to the west, Fort Bovisound to the east, and a smaller fort on the Plymouth Sound breakwater. Fort Picklecombe itself would be defended from attack from the rear by a series of smaller forts and batteries positioned on or near the Rame Peninsula.



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Horizons Children's Sailing Charity (Educational boat trips Yellow Route)

Pomphlett Quay, Rocky Pindar Boatyard

a Dry stack

A very clever way to look after your motor boat, so you don't have to take it home each time you go afloat, this company takes it out of the water and stacks it in the large shed for you and puts it back in the water when you want it next.

b Hooe Lake

From here, gunpowder was produced for the fleet and for mining in days gone by. Also much of the stone for Plymouth Breakwater came from Hooe Lake, transported on sailing barges specially adapted for roll on roll off wagons loaded with stone for dumping at sea.

More recently the lake became a dumping ground for local small ships, tugs, Tamar sailing barges and various fishing boats including a Scottish "Zulu" and a French "Tuna" boat, MTB's and other derelict craft.

The old frames of the Tamar river sailing barge "Alfred" can still be seen there today.

There are five quarries situated around Hooe lake, now all disused and in disrepair. The largest "Hooe lake quarry" was used to store fuel by the MOD until the 1970s after its useful life as a lime stone quarry.

c RM Turnchapple

539 Assault Squadron Royal Marines (539 ASRM)

539 Assault Squadron is tasked with providing the capability of integral amphibious movement to the units of 3 Commando Brigade. The Squadron acquired its name from 539 Assault Flotilla which took part in the Invasion of Normandy on 6th June 1944.

c Fireboat Vigiles

The Fireboat "Vigiles" is part of Devon and Somerset Fire and Rescue Service and is berthed alongside at RM Turnchapple is used to protect the Royal Naval Dockyard, the oil storage facilities and the commercial shipping that uses the port. Its high speed enables it to carry out a rescue role.

c UK Border Agency

The agency protects the UK border, and is one of the largest law enforcement agencies in the UK. Using the 'searcher' they are able to detect prohibited and restricted goods, and prevent tax fraud, by searching all types of vessels

c HM Cutter Searcher

A Stan Patrol 4207 patrol vessel built by Damen Shipyards, Holland. It is 42 metres long, is powered by two Caterpillar diesel engines through controllable pitch propellers, and is capable of reaching speeds above 26 knots. It can accommodate up to 16 people, and can remain at sea for extended periods and in heavy weather conditions.

Each cutter carries a rigid hull inflatable boat (RHIB), which can carry 5 crew and a coxswain for boarding duties. The 7.4-metre Delta-built craft is driven by an inboard diesel engine powering a water jet. The RHIB is launched down a slipway in the stern of the cutter, allowing for safe and speedy deployment and recovery in most sea conditions.

d Oreston

Famed for its limestone quarries, and the discovery of prehistoric remains of animals such as rhinos and lions, stone from which was used in the construction of the Plymouth Breakwater, the name is assumed to derive from "ores town", or possibly "Hora's Tun", named after a Saxon tenant farmer who held the lease prior to the Norman Conquest. The Oreston Quay is now home of the Plym Yacht Club.

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e Mount Batten

Named after the Parliamentarian naval commander, William Batten, this headland commands the entrance to both the Cattewater and Sutton Harbour and has long been used for defensive purposes. Guns were placed there against the Spanish threat in the late 16th century, and the site was hotly contested during the Civil War. The artillery tower was most probably built during the Commonwealth (1649-1660) almost certainly in response to the threat of war with the Dutch. It became a flying boat station in 1917, playing a vital role in both World Wars, and remained in military hands until 1992.

e Mount Batten the air-station years (1913-1986)

Sea plane trials first took place around Mount Batten as early as 1913 and an air-station was subsequently developed. A local commemorative display poster cites the following names and years for the air station

1913-1918 as RNAS Cattewater

1918-1928 as RAF Cattewater

1928-1986 as RAF Mount Batten

Between 1917 and 1945, with some gaps, it was a flying boat base for both the Royal Air Force and the Royal Navy. The RAF operated search and rescue launches from the base. T.E. Lawrence (Lawrence of Arabia) was stationed there under the moniker Aircraftsman Shaw.

Shorts Sunderland flying boats of the Royal Australian Air Force operated from RAF Mount Batten during World War II, taking part in the Battle of the Atlantic. The RAF finally left in 1986.

f Mount Batten Tower

A 30 foot high gun tower guarding the southern approach to Plymouth harbour was built in 1652 across the water from Plymouth Fort (now the Citadel). It was designed to accommodate 10 guns on its roof. It was in use during the Second World War with two Quick Firing guns.

g The Mount Batten Breakwater

The Mount Batten Breakwater (also referred to as Cattewater Breakwater and Mount Batten Pier) to the west doubles as a breakwater for the Cattewater and Sutton Harbour. It was built in 1881 by the Cattewater Commissioners

h Jenny Cliff

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i Drakes Island

Drake's Island commands the approaches to the Cattewater and Sutton Harbour as well as the important approach channel to the Hamoaze and Dockyard. As a result, it was fortified continuously from the mid 16th century until the Second World War, and contains remains of every period, including a particularly fine casemated battery of 1867 commanding the main channel.

The first recorded name for the island was in 1135, when it was referred to as St Michael's, after the chapel erected on it. At some later date the chapel was rededicated to St Nicholas and the island adopted the same name. From the latter part of the 16th century the island was occasionally referred to as Drake's Island after Sir Francis Drake, the English Privateer who used Plymouth as his home port. Even well into the 19th century, maps and other references continued to refer to the island as St Nicholas's Island and it is only in about the last 100 years that this name has slipped into disuse and the name Drake's Island has been adopted.

In June 1774 the first recorded submarine fatality in history occurred north of Drake's Island, when a carpenter named John Day perished while testing a wooden diving chamber attached to the sloop *Maria*.

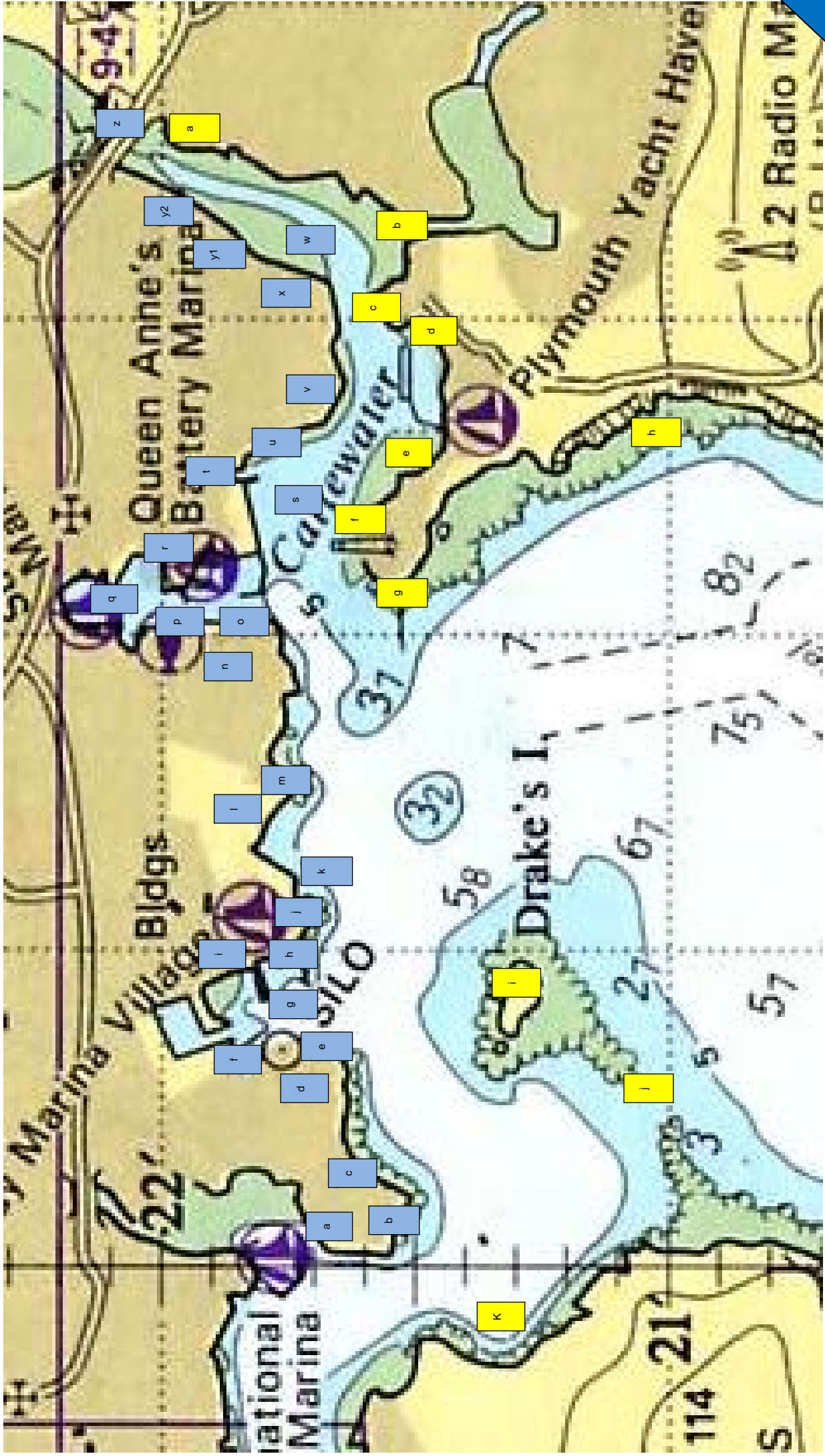
The 1859 Royal Commission on the defence of the United Kingdom recommended a huge programme of new fortifications to defend Plymouth. On Drake's Island, the existing battery at the centre of the island was to be replaced by five 12-inch muzzle loading guns in open emplacements. A new battery was to be built on the southwestern end, of twenty one 9-inch guns in an arc of stone casements with iron shields. The work was not complete in 1880. Six 12-pounder quick firing guns were added in 1897 and three 6-inch guns became the main armament in 1901; the original muzzle loaders were dumped under a pile of earth. Finally, in 1942, a modern twin 6-pounder gun was installed

j Bridges

The *Bridge* is a shallow reef that links Drake's Island and the Cornish mainland. At low water the depth of the Bridge can be less than one metre but at high water it can rise to 5 metres. In World War 1 this natural barrier was supplemented by other obstructions to prevent submarines and small ships attacking the naval base. The Bridges are now marked with two red and two green pillars.

k Barn Pool

A sheltered deep water basin anchorage used by the Vikings in 997. Offshore there is a shipwreck of the Catharina von Flensburg. In 1831, HMS Beagle set off from here on her second voyage with Charles Darwin on board.



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Marina Village

Queen Anne's Battery Marina

National Marina

Marina Village

Horizons Children's Sailing Charity (Educational boat trips Blue Route)



a Royal William Yard

The Royal William Victualling Yard, was the major victualling depot of the Royal Navy and an important adjunct of Devonport Dockyard. It was designed by the architect Sir John Rennie and was named after King William IV. It was built between 1826 and 1835, and occupies a site of approximately 16 acres (65,000 m²) being half of Western Kings, north of Devils Point.

The Royal William Yard is a collection of Grade I listed buildings, these include:

The Guardhouse

Residences 1 and 2 - These two grand houses were built for civil service officers in the Royal William Yard

Clarence - this building was originally used as a liquid store with one floor each of spirits, vinegar and beer. As needs changed, so did the role of Clarence and latterly the building was used for the storage of spares and components.

Brewhouse - Although purpose built in 1834, it was never actually equipped as a brewhouse, since emerging technology allowed large quantities of fresh water to be carried at sea, thus eliminating the need for the beer rations. It stood empty until 1885, when the west wing was used as a repair workshop and rum store. In its history it has even housed a torpedo workshop for the Navy.

Cooperage - Built to accommodate 100 coopers to make the barrels and kegs in which the produce of the 'Yard' could be stored and transported.

Melville - Designed, built and operated as the nerve centre of the whole of the Royal William Yard. All administration was carried out here and it served as a major storehouse for food, clothing and equipment.

New Cooperage - Sixty years after the Yard was completed, the New Cooperage was built to house the coopers and others tradesmen. Here there was room for painters, wheelwrights and a host of other skilled men needed to keep the Royal Navy in perfect trim. Its final use was a survival pack ration and equipment store.

Mills Bakery - was originally equipped as a biscuit and bread factory in 1834. Given only one full production run, there was no more baking here until 1847 when, newly equipped it was used for its original purpose until 1925, subsequently becoming a clothing and equipment store.

Slaughterhouse - Up to 100 bullocks per day were slaughtered here and the meat salted into wooden barrels. The building was in use for this purpose for 26 years from 1859.

b Devils Point/ Western Kings Point

Devil's Point is located on the eastern side of the mouth of the River Tamar where it meets the English Channel at Plymouth Sound. It is also known as Western Kings Point. The Point marks the southwest extremity of East Stonehouse. On the opposite western shore of the Tamar is Mount Edgcumbe Country Park. To the immediate North is the Royal William Victualling Yard

The area is a public park and has a wealth of historical features. For centuries it has been used by friends and family to wave goodbye or welcome home to the crews of Royal Navy warships as they transit the narrow waters adjacent to Devil's Point.

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c Western King

Western King, forms the southernmost point of the Stonehouse peninsula. Some of the earliest surviving defences were built on this peninsula, including Firestone Bay Artillery Tower, built on the orders of the Edgcumbe family in the late 15th or early 16th century to protect their port and the town of Stonehouse. Western King continued to be regularly fortified right down to the Second World War, and most of the remains that can still be seen date from the late 19th or 20th centuries.

The foreshore and cliff exposures around Western King Point, Stonehouse, form a Site of Special Scientific Interest (SSSI). The site exposes a complex series of grey and pink Devonian limestone, the youngest of the Plymouth Limestone Group and deposited in a reef environment

c Artillery Tower

During the reign of Henry VII defences at the mouth of the Tamar were strengthened by the building of cannon-bearing towers. One of these, the Artillery Tower at the sea end of Durnford Street, has been preserved as a restaurant.

d Longroom Port Control

Plymouth is a naval port under the control of the Queens Harbour Master. At all times ships and small craft are to obey the International Rules for the Prevention of Collision at Sea 1972 and the Dockyard Port of Plymouth Order 1999.

Shipping movements are controlled by the 'Long Room' on VHF channels 13 & 14 call sign 'Long Room Port Control'

Longroom controls the area north of a line between Penlee Point and the Shagstone to south of the Narrows

e RMB Stonehouse and Camber – (sailing centre)

Royal Marine Barracks (RMB) Stonehouse incorporating The New Longroom Battery that was a Drill Battery built between 1881 and 1891 and currently housing the Communications Troop. RMB Stonehouse houses the 3 Commando Brigade HQ & Signal Squadron and Sailing Centre.

RMB Stonehouse manages the services sailing centre seen at the west of the Millbay entrance. The sailing centre is situated behind the wall and used the buildings and slipway of the old RNLI station. The lifeboat house and launching slip were built in 1862 and was replaced by a more permanent structure in 1897. The dinghies you can see in front of the wall are standing on what was once a sea filled swimming pool.

f Millbay Docks / Great Western Docks

The Mill Bay took its name from the grist mills owned by Sir Francis Drake that used to exist in the north-east corner, where the present Millbay Road and West Hoe Road meet. The water of the Plymouth or Drake's Leat was used to work the mill and where it flowed from the western end of Frankfort Street across Union Street, used to be marshland.

Ships from Falmouth and Portland came here to unload their cargoes of stones and on Sunday June 12th 1756 the foundation stone left Millbay for the Eddystone Reef to build Mr John Smeaton's stone Eddystone lighthouse.

Later a 500 foot long Millbay Pier, completed in 1844. Soon warehouses were being built near the Pier and ships were regularly calling with passengers and cattle. One of the first was the SS Great Britain while on her way to Liverpool in June 1845.

In 1850 the railway reached as the Millbay Pier making this a popular starting point for transatlantic and European holidays.

Horizons Children's Sailing Charity (Educational boat trips Blue Route)



g Plymouth Ferryport and Brittany Ferries

Passenger, cars, caravans and commercial vehicles with daily crossings to **ROSCOFF, FRANCE** taking 6 hours to 8 hours plus 2 Weekly crossings to **SANTANDER, SPAIN**- approximately 20 hours 30 min

h Octagonal Custom House and RNLI

The Octagonal building on shore at the Eastern entrance was built as a custom house around 1850 and now houses Plymouth RNLI headquarters. Both of their boats can be seen within Millbay Marina and Village complex.

i Millbay Marina and Village

There are plans to expand the existing Millbay village north to include the Historic Millbay pier and the inner and outer basins.

j West Hoe

Here we can see a grand parade of Victorian building all of which have become hotels and bed and breakfasts, As they reach towards Plymouth Hoe you can see the old regency public steam baths that became the headquarters of the Royal Western Yacht Club and is now a bar. The Royal Western Yacht Club moved out of their bombed grand clubhouse behind the Hoe at the same time as they merged with the Royal Southern Yacht Club.

k West Hoe Pier

On the pier there is a memorial plinth which marks the place where Sir Francis landed at the end of his solo circum-navigation.

On 27 August 1966 he sailed his ketch Gipsy Moth IV from Plymouth in the United Kingdom and returned there after 226 days of sailing on 28 May 1967, having circumnavigated the globe, with one stop (in Sydney, Australia). By doing so, he became the first person to achieve a true circumnavigation of the world solo from West to East via the great capes.

l The Plymouth Hoe

Plymouth Hoe, referred to locally as **the Hoe**, is a large south facing open public space with memorials and viewing galleries. The Hoe is adjacent to and above the low limestone cliffs that form the seafront and it commands views of Plymouth Sound, Drake's /St Nicholas Island, and across the Hamoaze to Mount Edgcumbe in Cornwall. The name derives from the Anglo-Saxon word *Hoe*, a sloping ridge shaped like an inverted foot and heel.

Plymouth Hoe is perhaps best known for the probably apocryphal story that Sir Francis Drake played his famous game of bowls here in 1588 while waiting for the tide to change before sailing out with the English fleet to engage with the Spanish Armada.

Also on the Hoe is a statue of Sir Francis Drake by Joseph Boehm (a copy of the original in his home town of Tavistock) was placed here in 1884 to commemorate him. There are also several war memorials along the northern side of the Hoe. The largest commemorates the Royal Naval dead of the two world wars; its central obelisk is by Robert Lorimer and was unveiled in 1924, while the surrounding sunken garden was added by Edward Maufe in 1954.

l Smeatons Tower

Smeaton's Tower is the third and most notable Eddystone Lighthouse. It marked a major step forward in the design of lighthouses. In use until 1877, it was largely dismantled and rebuilt on Plymouth Hoe in the city of Plymouth, Devon where it now stands as a memorial to its designer, John Smeaton, the celebrated civil engineer.

Horizons Children's Sailing Charity (Educational boat trips Blue Route)



m Tinside

Tinside Pool is a unique Art Deco lido (Swimming Pool) designed as a 180 feet diameter (55 metres) semicircle. There is a large central fountain and two smaller side fountains. The lido is floodlit at night, originally the lighting went through three decorative colour changes.

The lido was officially opened on 2 October 1935. After period of declining popularity and neglect, the lido closed in 1992 but a local campaign led to a renovation, at a cost of £3.4 million, and Grade II Listed Building status in 1998. The facility re-opened to the public in 2005 and a lift and hoist were added in 2009 for disabled access.

xx Royal Plymouth Corinthian Yacht Club

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

n The Royal Citadel

The Royal Citadel in Plymouth, Devon, England, was built in the late 1660s to the design of Sir Bernard de Gomme. It is at the eastern end of Plymouth Hoe overlooking Plymouth Sound, and encompasses the site of the earlier fort that had been built in the time of Sir Francis Drake. The Royal Citadel is still occupied by the military, being the base of 29 Commando Regiment of the Royal Artillery. This specialist British Army unit provides artillery support to 3 Commando Brigade of the Royal Marines.

o1 Elphinstone Wharf, Emigration Depot and Elphinstone Barracks

In 1847 some of the old victualling stores and warehouses on Elphinstone Wharf, to the South of Phoenix wharf were made into a Government Emigration Depot. 1847 was the year of the potato famine in Ireland when hundreds of Irish men and women used the Dublin and Cork to Plymouth steamship services as a passage to a new life.

It cost 10s 6d to cross to Plymouth and a further £14 14s to get to Australia. For just £8 8s they could get to North America instead. That year twenty-six vessels sailed from Plymouth carrying 1,730 emigrants.

In 1860 there was sleeping and other accommodation for 150 adults, in 1883 the extended the Depot had 372 berths being available for single men, 402 for single women, and 344 for married couples with children. By 1893 financial problems in both America and Australia brought about the end to assisted passages.

By 1897 The old victualling stores and, later, Emigration Depot in Commercial Road became known as Elphinstone Barracks. It housed the Government Torpedo Depot of the Royal Engineers under Royal Engineer Captain M A Boyd, the chief instructor.

It was situated to the south of Phoenix Wharf on the quay now used as a car and boat park.

The only building that remains from those days is the white house by Phoenix Wharf, used by the Mayflower Sailing Club.

o2 Phoenix Wharf

The Phoenix Wharf Pier is just outside the limits of Sutton Harbour it was purchased in December 1889 by the Plymouth Corporation at the time it was purchased to store materials for street making and sewerage works but it was needed as a much needed free landing stage. It was stated that the dimensions of the Pier were 70 feet in length and 45 feet in width. It was built of concrete blocks with the wooden platform projecting beyond, supported on iron columns. Phoenix Wharf was used until 2010 as the boarding point for boat excursions up the River Tamar or to view the Dockyard and warships.

Horizons Children's Sailing Charity (Educational boat trips Blue Route)



o3 Mayflower Sailing Club

The Mayflower Sailing Club was founded in 1922 and at that time operated from a site just a few yards from the departure point of the Pilgrim Fathers. Pre WW II the club operated out of a boathouse situated next to the municipal dung heap and boats had to be craned into the water as no slipway was available. The first slipway was built in 1936 and as part of the rebuild of Plymouth after the war a second slipway was built. In 1960 the Club moved from its original club hut to its current Clubhouse about 100 yards away

p Mayflower Steps

The Mayflower Steps are from where the Pilgrim Fathers finally left England aboard the Mayflower, before crossing the Atlantic Ocean to settle in North America on 6 September 1620. The traditional site of their disembarkation in North America is called Plymouth Rock.

p Plymouth Barbican

A barbican, from medieval Latin *barbecana*, signifying the "outer fortification of a city or castle, The present Barbican district is generally regarded as being roughly equivalent to the location and size of the medieval walled town of Sutton. A barbican is also a fortified gate, and here the name probably derives from the 'Castle Barbican' which was an entrance to the late medieval fortress that guarded access to the Cattewater, prior to the building of the Royal Citadel.

For centuries the Barbican was home to Plymouth's fish market (now relocated to the other side of the harbour) and is still home to many fishermen. The oldest street in Plymouth running along the south of the Barbican is now called New Street, it was formerly called Rag Street.

q Sutton Harbour, fish quays and lockgates

Sutton Pool, or Sutton Harbour as it is now known, is the birthplace of the modern City of Plymouth. The first Anglo Saxon settlers sailed in to this inlet and made their first settlement on its shore. Here they built their fishing boats and mended their nets. From here the Town grew, northwards and westwards at first, thanks to the money earned in the port through trade. The two piers at the entrance to the Pool were constructed in 1791 and 1799.(where the lock gates are situated now) This made the harbour safer from the tides but resulted in it silting up due to the lack of the scouring action of the sea.

Work started on a set of lockgates on 1st January 1992 and was finally completed on April 23rd 1993. The 1889 old fish market on the west of the harbour was closed when the New Fish Market opened in 1995 at a cost of £3 million, this is the third largest fresh fish market in England,

r Plymouth Aquarium

The National Marine Aquarium is a registered charity committed to promoting a sympathetic understanding of the sea through programmes of education, conservation and research. With over 70 sharks from more than ten different species. The sharks on display range in size from the small dogfish to the large Sand Tiger Sharks.

s The Cattewater

The Cattewater is that stretch of water where the mouth of the river Plym merges with Plymouth Sound, just to the east of Sutton Pool. It is around this Pool that the manor of Sutton started, which grew to form the present day city. On the northern shore of this confluence of waters there was a rock outcrop, which it was claimed, had the appearance of a cat. This gave its name to this stretch of water and eventually the name of Cattedown to the adjoining wharves and commercial area.

Horizons Children's Sailing Charity (Educational boat trips Blue Route)



s River Plym

The River Plym source is some 450m (about 1500 ft) above sea level on Dartmoor, in an upland marshy area called Plym Head. The river flows roughly southwest and enters the sea near (and gives its name) to the city of Plymouth, where the settlement was historically known as Sutton. Its tidal estuary is known as the Laira. It is approximately 30 km (about 20 mi) long.

t Victoria Pier and Victoria Wharf

The Victoria Wharves are located on what was formerly Marshall's ship breaking yard and Marine Field, both of which were acquired in the 1890s by Mr Cornelius Laskey Duke, who then built Victoria Pier that is 350 feet long with 100 feet jutting out in to the Cattewater. There is wharfage of 250 feet on the east side and a depth of 25 feet.

Currently vessels of up to 8,000 dwt (Deadweight tonnage), with a maximum beam of 18m and length of up to 140m use the Wharf.

u Dead Man's Bay and Esso Wharf

The lower reaches of the Plym once had much steeper sides than they do today. The subject of extensive quarrying, particularly in the early part of the 19th century, much of the stone sits now in Plymouth Sound (it forms the Breakwater).

One of these quarries, Deadman's Bay or simply Bay Quarry, now houses the storage tanks for Esso. The quarry had been largely worked out by 1850 and, in time, with its sheer cliff backdrop became an ideal location in which to land and store petrol. There was a petrol store here in 1877. By 1893 the Anglo-American Company had become the first oil company to establish itself in Plymouth.

v Cattedown Wharves

Channels leading to the commercial berths at Cattedown Wharves are dredged to 5 metres below chart datum (2 metres below chart datum leading to Pomphlett Aggregate export terminal) vessels constrained by their draught (Deep vessels or those full of cargo) can come up the river at high tide tie up safely alongside where there are dredged pocket berths. vessels up to 150 metres in length can berth here.

Imports include refined clean oil products, agribulks, timber and specialist aggregates. Exports include both primary and secondary aggregates, china clay, grains and scrap metal.

w Air Sea Rescue Launch

x TR2 (Theatre Royal Two)

TR2 is the Theatre Royals production and education centre, is a truly unique facility. This building contains unrivalled set, costume, prop-making and rehearsal facilities. Some of the most important and vigorous work is carried out here by our Creative Learning team, who provide one of the most comprehensive education and outreach programmes in the UK.

y Palaeolithic period (24,000 BP – c 7,000 BC)

A number of important Palaeolithic sites have been found at Cattedown. Nearly all the sites have been investigated five sites have produced finds of human remains including Worth's Cattedown Bone Cave. During quarrying in 1886 they found the bones of at least 15 hominids with associated flint tools. In addition a large quantity of faunal remains have been recovered from the caves including wolf, horse, reindeer, bear, bison, hyena, elephant, rhinoceros, etc; The Cattedown Bone Caves are part of a huge system of caverns thought to spread beneath the whole of Cattedown and to around 50m below sea level.

Horizons Children's Sailing Charity (Educational boat trips Blue Route)



y1 Howards Quay

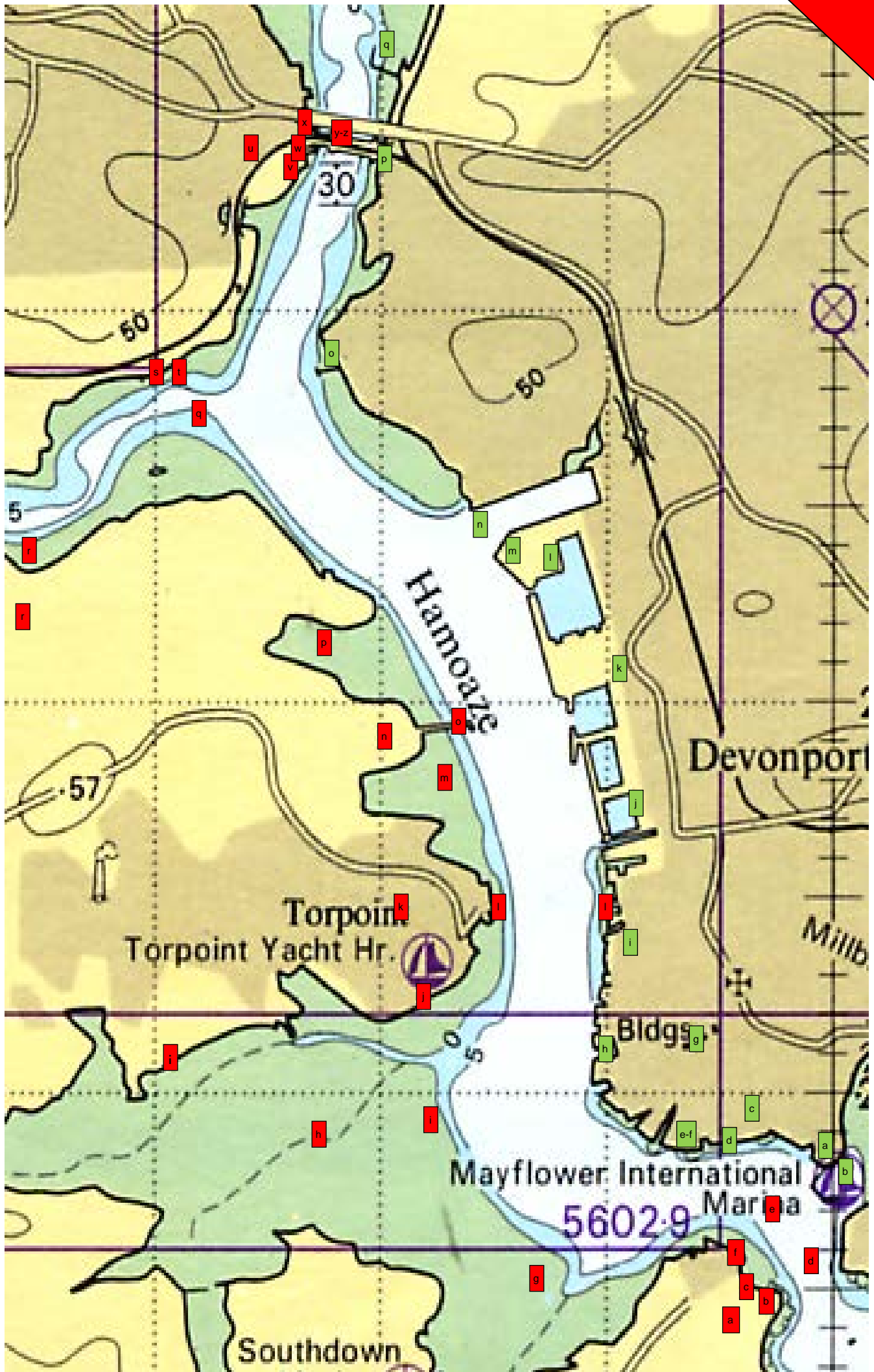
This is a relatively new wharf, this area is shown as mud on the 1880 and 1907 OS maps, the land was reclaimed in the early 20th century to become the coal off-loading point for the Central Electricity Generating board's main Plymouth coal-fired power station which lay just behind the site. The power station was decommissioned and demolished in about 1970.

y2 Laira Wharf

Built around the time of Howards Quay, this wharf as well as Coxside was connected to the rail network by the Plymouth and Dartmoor Railway, and Brunel's South Devon Railway.

z Laira Bridge – Road and Rail

Lord Morley of Saltram provided the first road bridges across the River at Laira - both were toll bridges. The Laira Flying Bridge was a hand winched chain ferry - a forerunner of the floating bridges that still operate between Devonport and Torpoint. The eastern abutment to the 'Old Iron Bridge' built of elegant cast iron spans was completed in 1827, still stands. The rail bridge, with its functional lattice steel work, was completed in 1887. The new road bridge was opened to traffic in 1962.



Horizons Children's Sailing Charity (Educational boat trips Red Route)



a Mount Edgecumbe Country Park

Mount Edgecumbe Country Park is one of four designated Country Parks in Cornwall. It is 885 acres (3.58 km²) situated on the Rame Peninsula, overlooking Plymouth Sound and the River Tamar. The Park has been famous since the 18th century, when the Edgecumbe family created formal gardens, temples, follies and woodlands around the Tudor House. Specimen trees such as Californian Redwood shelter a herd of wild fallow deer. The South West Coast Path runs through the Park for nine miles (14 km) along the coastline so you can walk all the way to Cawsands from here. The Park and Gardens are jointly managed by Cornwall Council and Plymouth City Council.

a Mount Edgecumbe House

Mount Edgecumbe House built in the 1500's and restored after World War Two and is the former home of the Earls of Mount Edgecumbe.

Set in Grade I Cornish Gardens within 885 acres the Formal Gardens are grouped in the lower park near Cremyll. Originally a 17th Century 'wilderness' garden, the present scheme was laid out by the Edgcumbe family in the 18th Century. The Formal Gardens include an Orangery, an Italian Garden, a French Garden, an English Garden and most recently an American plantation and a New Zealand styled garden, a Jubilee Garden, which opened in 2002, to celebrate the Queen's Golden Jubilee.

b Mount Edgecumbe Garden Battery

Garden Battery dates to 1862-3 and was built on the site of an earlier saluting battery. It defended both the main channel into the Hamoaze to the north of Drake's Island, and the shallower channel to the west. By 1871 Earl's Battery was positioned on the roof of Garden Battery and was armed in the Second World War.

b Mount Edgecumbe Blockhouse

Mount Edgecumbe blockhouse is located immediately to the rear of the later Garden Battery and is thought to have been built in 1540 or 1545 by the Edgecumbe family. Held by the Royalists during the Civil War, it was captured in a Parliamentary raid of 1644

c Mount Edgecumbe Orangery

Situated in the Italian Garden the Orangery (White Building) is thought to have been built as early as 1760. The building is now a fully licensed restaurant.

d River Tamar

The River Tamar (Cornish: *Dowr Tamer*) forms most of the border between Devon (to the east) and Cornwall (to the west). It is one of several British rivers whose ancient name is assumed to be derived from a prehistoric river word apparently meaning "dark flowing" and which it shares with the River Thames.

e The Hamoaze

The Hamoaze is an estuary (A partly enclosed coastal body of water with one or more rivers or streams flowing into it, and with a free connection to the open sea). The Hamoaze is officially the stretch of the tidal River Tamar between the River Lynher and Plymouth Sound

f Cremyll

There was a larger community here called West Stonehouse (compare with East Stonehouse) until it was burnt by the French in 1350. In medieval times the ferry was part of the manor of Stonehouse, held by the Valletorts.

The main gates to Mount Edgecumbe Country Park and Mount Edgecumbe House are located in Cremyll.

Horizons Children's Sailing Charity (Educational boat trips Red Route)



f Cremyll Ferry

The ferry may well date back to the Saxon's arrival in the eighth century and it was a link in the main southern route into Cornwall until the 1830s. For hundreds of years the route was worked with rowing boat, and with horseboats for carrying livestock, carts and cargo. In 1511 the Mount Edgumbe family took control of the ferry and they would keep control for over four hundred years. In 1885 the first steam ferry was introduced, the last of these being the second SS Armadillo and the SS Shuttlecock which were introduced in 1924 and 1926, Both of these boats are still in operation, on removing their steam engines the SS Armadillo became MV Northern Belle and the SS Shuttlecock became the MV Southern Belle.

g Millbrooke and Millbrooke Lake

There is evidence that there has been a settlement here since the Stone Age. In the 17th century it possessed a large fishing fleet, and the convenience of water transport led to the development of industries such as brickyards and the manufacture of gunpowder.

The village boasts that they have had a Co-op shop there for over 100 years.

h St Johns Lake

St. John's Lake is a huge tidal inlet on the Cornish side of the River Tamar, opposite Plymouth. It is an area of saltmarsh formed when the incoming tide meets the fresh river water. It supports the greatest number of estuarine birds in Cornwall and attracts the most species and individual birds in this area. As such it has been designated under the European Directive on Wild Birds as a Special Protection Area. Apart from the resident birds it provides an important 'refuelling' stop for birds migrating.

i HMS Cambridge, Trevol ranges and HMS Raleigh

In 1868 HMS Cambridge was a naval gunnery school based in out hulks (these were old Navy Ships no longer useable for fighting) moored in the Hamoaze off of St John's Lake. It was known locally as the Devonport Gunnery School. On board these ships all the intricacies of firing ship cannons and guns, plus the manning of shore parties to attach land based targets. Rifle shooting would be at the Trevol range at the top of the lake, this is where they would also practice land assaults from the sea. The ships eventually were taken away and a 'concrete' HMS Cambridge was constructed behind the range.

In early 1900's HMS Cambridge moved to a new site at Wembury. HMS Raleigh, the current RN new entry and training establishment was built.

j Torpoint Ballast Pound – Torpoint Yacht Harbour

French prisoners of war constructed the Old Ballast Pound around 1783 to shelter the ballast barges within its walls.

k Torpoint

Torpoint was an 18th century naval maintenance base and ferry point, which later developed into a town by the early 19th century. The first Torpoint ferry was started in 1791 to facilitate travel from Cornwall to England.

The establishment of the Royal Navy's main training facility, HMS Raleigh, the initial entry training establishment for all junior ratings entering the Royal Navy and the Royal Naval Reserve, is situated to the west of Torpoint.

Horizons Children's Sailing Charity (Educational boat trips Red Route)



I Torpoint Ferries (Chain ferries/floating bridges)

In 1791 a ferry was established between Devonport in Plymouth and Torpoint in Cornwall. Chain ferry operations were introduced by James Meadows Rendle in 1832.

The route is currently served by three ferries, named after three rivers in the area: Tamar II, Lynher II and Plym II. Each ferry carries 73 cars and operates using its own set of slipways and parallel chains, with a vehicle weight limit of 18 tonnes (20 tons) The ferry boats are propelled across the river by pulling themselves on the chains; the chains then sink to the bottom to allow shipping movements in the river.

m Sunken ferry

n Yonderberry Fuel Depot

To the north of Torpoint is the Yonderberry Naval fuel Depot, whose 28 tanks erected in 1920, which appears dominant on maps, is actually very well landscaped by embankments and trees and is barely noticeable from the town and can just be seen through the tree lined river banks.

o Refueling Jetty

The large fueling jetty is used to get all types of fuel from Yonderberry Fuel depot to RMAS replenishment ships to restock and refuel RN Warships at sea.

p Wilcove

In 1931 due to the deep water requirements of replacement ships to house the Torpedo school that was currently based at Wearde Quay the whole establishment was moved and re-housed within the bay at Wilcove and remained there until closed in Easter 1954

q Lyner or St Germans River

The river is approximately 21 miles (34 km long), rising at a height of approximately 920 feet (280m) on Bodmin Moor and flowing into the Tamar Estuary.

r Jupiter Point, and St Antonys house

North of Torpoint, on the northern side of the peninsula's ridge is Antony House, home of the Carew-Poles, with its extensive parkland and Barton farm. This ornamental landscape, begun as early as the 16th century.

HMS Raleigh uses Jupiter point below the house as a training site to instruct RN Personnel in practical boat handling skills.

s Wearde Quay

The Torpedo and Mining Training Establishment known as HMS DEFIANCE was set up as an independent command at Devonport on 3 December 1884. The original establishment consisted of two, sometimes three, hulks moored in the Hamoaze at the mouth of the St. German's River opposite a small promontory known locally as Wearde Quay.

t Whithead torpedo

Part of the curriculum of the school was the firing of LIVE submarine mines and Whitehead torpedoes up the river Lyner and the Cawsands torpedo range. These Torpedoes were named after its inventor Robert Whitehead from Bolton in 1823. In 1866 he invented a floating torpedo which could hit a target at 700 yards, (640 Metres) and at a speed of seven knots (8.05 mph) after being fired underwater by compressed air.

Horizons Children's Sailing Charity (Educational boat trips Red Route)



t First ship-to-shore wireless communication

It was at HMS Defiance that Capt Henry Jackson developed and transmitted the very first ship-to-ship wireless communications in 1896

u Saltash

Saltash means *ash tree by the salt mill*. There are public toilet facilities underneath the bridges, and SSC (when open). The village green and Millennium Green are good lunchtime stopping points.

v Saltash Sailing Club and Caradon Pilot Gig Club

This is one of the pontoons we can disembark from, the club house is very welcoming to visitors from Horizons. Toilet facilities are available when the clubhouse is open.

w Isambard Kingdom Brunel

Isambard Kingdom Brunel, (9 April 1806 – 15 September 1859), was a British civil engineer who built bridges and dockyards including the construction of the first major British railway, the Great Western Railway (GWR) [often referred to as God's Wonderful Railway]; a series of steamships, including the first propeller-driven transatlantic steamship (SS Great Britain); and numerous important bridges and tunnels. His designs revolutionised public transport and modern engineering.

x Saltash Passage Ferry

Below the road and rail bridges there is a plaque on the roadside wall which proclaims: "BOROUGH OF SALTASH: This plaque commemorates the closing of the ferry across the River Tamar at Saltash on the 23rd day of October 1961, after more than 700 years of service." Starting as a basic ferry ending its service as a motorised chain ferry

y Royal Albert Bridge also known as Brunel Bridge

It was designed by Isambard Kingdom Brunel. Surveying started in 1848 and construction commenced in 1854. The first main span was positioned in 1857 and the completed bridge was opened by Prince Albert on 2 May 1859. Brunel died later that year and his name was then placed above the portals at either end of the bridge as a memorial.

Its unique design consists of two 455 feet (138.7 m) lenticular iron trusses (in common usage, the term "lens" is also used to describe the shape of a three-dimensional object obtained by rotating a two-dimensional lens about its narrow axis of symmetry. Such a shape is described as **lenticular**.) 100 feet (30.5 m) above the water, with conventional plate-girder approach spans. This gives it a total length of 2,187.5 feet (666.8 m).

z Tamar Road Bridge and extension

Construction of the Tamar Bridge began in July 1959. Before this, the lowest road crossing of the River Tamar was Gunnislake New Bridge at the village of Gunnislake

When it opened in 1961 it was the longest suspension bridge in the United Kingdom. In 2001 it became the world's first suspension bridge to be widened (from three to five lanes) using cantilevers, (A cantilever is a beam anchored at only one end. Cantilever construction allows for overhanging structures without external bracing) and the world's first bridge to undergo strengthening and widening work while remaining open to traffic. Today the Tamar Bridge carries approximately 40,000 vehicles every day.