

Tour of Hurst Castle – The Victorian Wing Batteries

Overview and setting

The heart of Hurst Castle is the Tudor fort which was built between 1541 and 1544 by Henry VIII.

It is sited to guard the Needles Passage, the narrow western entrance to the Solent and gateway to the trading port of Southampton and the new naval base at Portsmouth. The Isle of Wight lies across the Needles Passage. On the islands shore diagonally opposite Hurst, to the south-east, are two 19th century defences: Fort Albert, and on the cliff top above, the remains of Cliff End Battery.

In the early 1850s a number of Britain's most vulnerable coastal forts were modernised following concerns about French military intentions and fear that steamships could arrive with an invading army. Hurst Castle was identified as one of these vulnerable forts. The modernisation at Hurst began, the moat was deepened in 1851 and its immediate defences strengthened. Between 1852 and 1854 the bastions and curtain walls were extensively modified so that a second tier of guns could be mounted. Outside the castle two large earthwork batteries were built for 29 heavy weapons.

These works were hardly finished before technological revolutions – the development of rifled guns and quick-firing (QF) guns, and the introduction of steam-powered warships – made such fortifications obsolete. In 1859 a Royal Commission was created to consider the defence of the United Kingdom. Among its recommendations was that a powerful ring of fortresses should be built to protect Portsmouth and its naval base.

As part of this programme, work to strengthen Hurst Castle began in 1861. The earthwork batteries were demolished and replaced by huge armoured wing batteries, which you can still see today. Largely completed by 1874, these housed 31 of the new guns, which fired shells weighing more than 360kg, in granite casemates (vaulted chambers). Accommodation was provided for a peacetime garrison of 143 officers and men. The great wing batteries were added as part of a huge programme of new defences around Portsmouth and Spithead that turned this part of the coast into one of the most heavily fortified areas in the world.

In the First and Second World Wars the castle was fully garrisoned, its searchlights and guns guarding the western entrance to the Solent against attack from the sea and air. It retained a limited military role until the abolition of the Coastal Artillery arm of the Army in 1956.



The great squat west wing of the 1860s, seen from the south-west. On the roof to the right is one of the Director Towers of 1941.

Site Tour

You will arrive at Hurst Castle by ferry as Hurst Castle stands at the end of a long, narrow shingle spit that connects it to the Hampshire coast.

The Entrance

Entrance to the castle is through the West Wing of the Victorian fortress which was built around Henry VIII's Tudor castle. You will notice that this is constructed of redbrick which will help you identify work undertaken on the castle during the Victorian era.

Walking inside you will find the Guard Room, on your right, which houses the ticket office and shop, as well as World War II militaria. The Guard Room shows the original firing loops in the walls which would have covered/protected the gateway, a winch for the draw bridge and a small cell and prisoners' room to the rear.

Please note that the entrance gate, you have passed through, is actually the back of the building. The front of the Castle looks out to sea across to the Isle of Wight with huge gun ports dominating its structure.



The plaque above the entrance to the east wing. It was added, together with its counterpart on the west wing, after the completion of the batteries, and bears the arms of Queen Victoria.

Features to look out for in the entrance:

- Queen Victoria coat of arms in bronze, on the outside wall of the castle, look up as you walk over the drawbridge
- The use of red brick which characterise the Victorian construction

Discuss:

- You are at the back of the Castle, the front looks out to sea
- Explain how Hurst Castle's history is made up of Tudor and Victorian heritage. How the Victorians strengthened the Castle's military defences by wrapping additions around the Tudor fort (see Tudor Castle Insider Guide for further information)

BACKGROUND TO THE WING BATTERIES

The Victorian wing batteries are made of two parts - The East and West Wings. See Hurst Castle Floor Plans document.

The confidence of Victorian military engineers is seldom more evident than in these tremendous armoured batteries built between 1860 and 1873 (the date over the two entrances to the East and West wings).

Apart from differences in length – the east wing has 24 casemates (a small room in the thickness of a wall of a fortress, which guns and missiles can be fired) and the west 37 casemates – the original layouts were virtually identical.

ONCE YOU HAVE WALKED PAST THE GUARD ROOM THROUGH THE PRESENT MAIN ENTRANCE TO THE CASTLE, WITH ITS STOUT DOUBLE DOORS YOU ARE NOW ENTERING THE WEST WING.

West Wing

Bofors 40mm Gun

Here opposite the entrance you can see the Bofors 40mm Light Anti-aircraft gun. The Bofors 40 mm gun, often referred to simply as the Bofors gun, is an anti-aircraft/multi-purpose autocannon designed in the 1930s by the Swedish arms manufacturer AB Bofors.

It was one of the most popular medium-weight anti-aircraft systems during Second World War, used by most of the western Allies as well as by the Axis powers. A small number of these weapons remain in service to this day, and saw action as late as the Gulf War.

In the post-war era the original design was not suitable for action against jet powered aircraft, so Bofors introduced a new model of significantly more power, the 40 mm L/70. In spite of sharing almost nothing with the original design other than the calibre and the distinctive conical flash hider, this weapon is also widely known simply as “the Bofors”. Although not as popular as the original L/60 model, the L/70 remains in service to this day, especially as a multi-purpose weapon for light armoured vehicles, as on the CV 90.

Above the Bofors gun you can see inscribed ‘129 Coast Battery R A’ (Royal Artillery) which was the last battery stationed here in the Second World War.

TURN LEFT AT THE BOFORS GUN AND YOU WILL BE FACED WITH TWO CASEMATES ON YOUR RIGHT.

These casemates contain two 12.5-inch RMLs (rifled muzzle-loaded guns) of the 1860s, salvaged from Fort Albert opposite Hurst on the Isle of Wight and mounted on simplified replica carriages.

A crew of 12 was needed to work each of these huge guns – the cast iron shells alone weighed 800lb (about 363kg) each. The shells had a range of about 4 miles (5.5km) and were propelled by 43.5lb (nearly 20kg) of cordite, which replaced gunpowder early in the 1890s as the first smokeless propellant.

The woven rope mantlets (a plate or shield attached to a gun, protecting the opening through which the weapon's barrel projects) which hang on the inside of the iron shields of the casemates, are modern replicas. They were designed to absorb lethal splinters of the granite casemate if it received a direct hit, and to help keep out the large quantities of smoke produced by firing the guns.

The casemates face the Needles Passage with their brick expense magazines projecting into the courtyard behind.

In the rear of the casemates, (which is now the front as you look at them) are small fireplaces and timber and glass partitions, which could be dismantled before action, which defined the living quarters of the gunners. A number of these partitions survive in both wings.

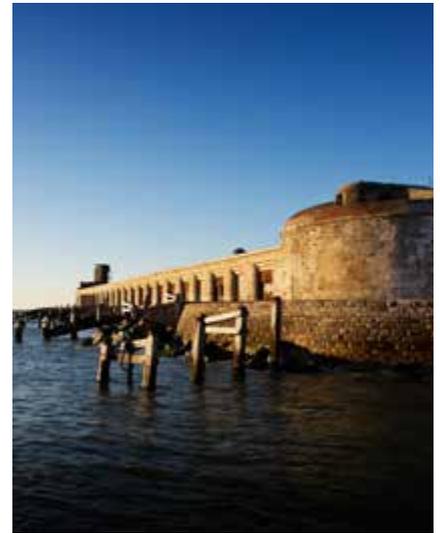
One of the two 12.5-inch rifled muzzle-loading (RML) guns of the 1860s.



Image showing the mantlet which hang on the inside of the iron shields of the casemates, this is a modern replica.



The Tudor south bastion, directly overlooking the Needles Passage, with the Victorian west wing stretching out beyond it.



Features to look out for:

- The guns housed here, brought over from Fort Albert
- Look up and see the sponges and rammers above
- Woven mantlets
- Gunners quarters

Discuss:

- The guns and how they needed 12 men to load and fire them
- How the mantlets were installed to protect the men from splinters and the smoke
- How the gunners would have lived in these quarters here, year round

WALK OUT OF THESE CASEMENTS AND TURN THE LEFT TOWARDS THE TUDOR ENTRANCE.

SEE THE ROOMS TO THE RIGHT OF THE TUDOR ENTRANCE.

Immediately to the north west of the Tudor entrance is one of the two magazines (a chamber for holding a supply of cartridges). The rooms are signposted 'Cartridge for Issue Room & Underground Shell Store for 12.5" and 10" shells'; these are all built to a similar design, with double-skinned walls to ensure cool, dry storage, lighting passages for safety and thick concrete protective roofs.

Features to look out for:

- Walk through to the end of these rooms and you can see the firing loops, which are now on the opposite wall of the entrance, where gunners would have been able to be stationed to protect the entrance (opposite to the Guard Room)

WALK OUT OF THESE ROOMS AND TURN RIGHT – AWAY FROM THE TUDOR CASTLE, WALK PAST THE TWO CASEMATES ALREADY VISITED, AND THE MAIN ENTRANCE AND ITS DOUBLE DOORS. YOU ARE NOW ENTERING THE MAIN PART OF THE WEST WING.

Casemates run all along the left hand side of the West Wing; these have been turned into a number of different rooms/exhibitions. They are:

- **The Master Gunners Office** - now houses an exhibition from NFDC about Hurst Spit and the surrounding area (see Geography Teachers Guide for more information).
- **Magazine** – Clean Area, see the notice on the wall which illustrates how the Gunners had to change when dealing with ammunition.
- **Friends of Hurst Room** – An organisation of volunteers, set up in 1986. The Friends' aim is to support the castle in any way they can, financially with any project, enhancement of the building, education or research. Their room at the castle is full of donations received forming an armoury that will hopefully enhance your visit.
- **1931-45 Generator Room (now part of the Friends Room)** – You can see the metal pipes sticking up outside this room which would have allowed steam to escape from underground where the generators were once sited.
- **Magazine** – shifting lobby.

ON THE RIGHT HAND SIDE NOW LOOK UP AND YOU WILL THEN SEE THE STONE LIGHTHOUSE SITED ON THE NORTH WALL OF THE WEST WING.

Lighthouses, Stores and Ablutions

The stone lighthouse, known as the Low Light, which was built as part of the construction of the west wing sits on the north wall of the West Wing.

This lighthouse was superseded in 1911 by the metal lighthouse (now decommissioned) beside it. (Please see Teacher Pack – Lighthouses for more information on the Lighthouses of Hurst).

The building below the stone lighthouse originally housed a series of rooms; a Coal store; Non-commissioned Offices Billet; Canteen Bar and Tap; and a Boiler Room.

The adjacent ablution facilities (where officers had a better chance of a hot wash, their facilities being closer to the boilers) were added in the 20th century.

The visitor lavatories underneath the metal lighthouse are modifications of the original garrison latrines.

On the roof of the casemates almost opposite the stone lighthouse is a shallow 'blister', part of the original construction of the wing, and one of a pair on the west wing that provided limited protection for officers directing the gunners below by means of a speaking tube.

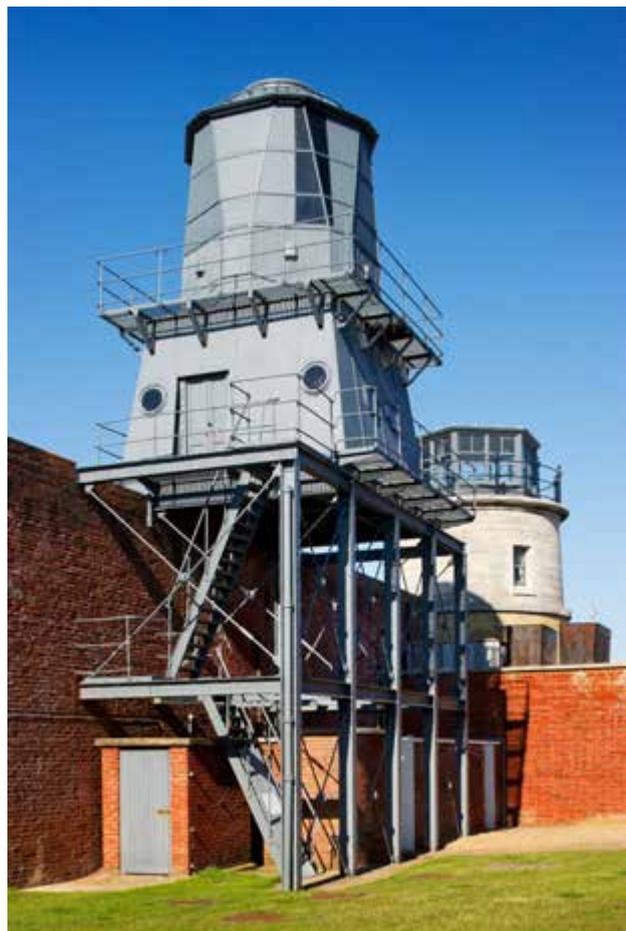
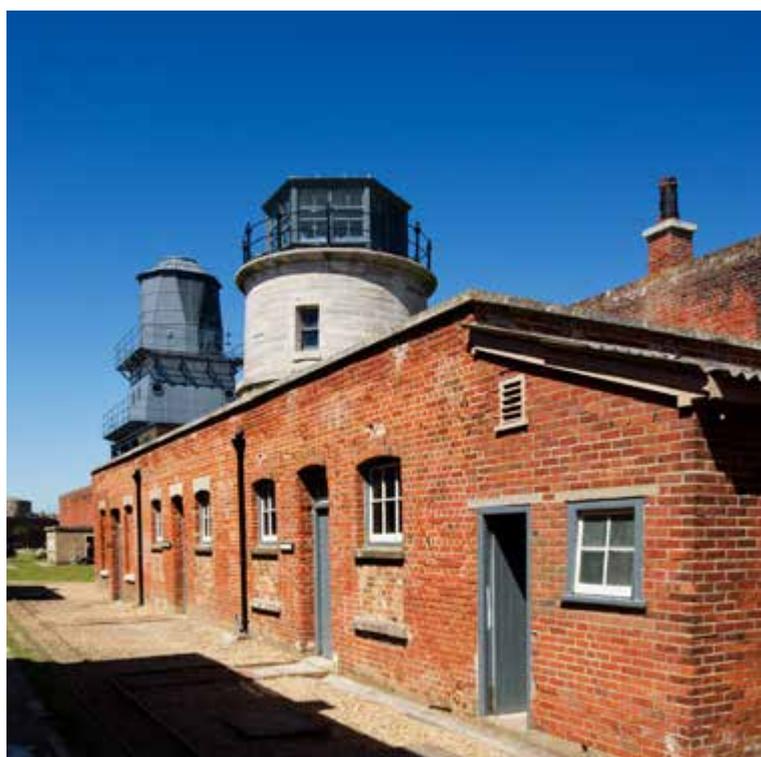


Image showing the stone lighthouse behind the metal lighthouse (both decommissioned).



Showing the series of rooms.



These washbasins in the west wing were installed during the Second World War.

Features to look out for:

- Stone lighthouse, known as the Low Light
- Metal lighthouse, known as the High Light
- Ablution facilities – officers would have used
- Look up and see the blisters, to provide some protection to the officers whilst directing the gunners

Discuss:

- Washing facilities for the garrison, Officers had more chance of hot water than the soldiers – imagine that in winter!
- The metal lighthouse was built so it could be moved along the wall, in case the shingle spit moved. (Please see Lighthouse Teacher Pack for more information).

WALK ON PAST THE LIGHTHOUSES AND YOU WILL SEE ON THE GRASS IN FRONT OF THE NORTH WALL THE:

Armstrong 9-inch Rifled Muzzle Loader (RML) c. 1860

This barrel and the 38-ton barrels, located in the casemates by the Tudor Castle, were retrieved from the Isle of Wight foreshore.

The Armstrong RBL 40 pounder gun was introduced into use in 1860 for service on both land and sea. It used William Armstrong's new and innovative breech-loading mechanism. It remained in use until 1902 when replaced by more modern Breech Loading (BL) guns.

You will also see here two target plates that the gunners would have used for practice.

Discuss:

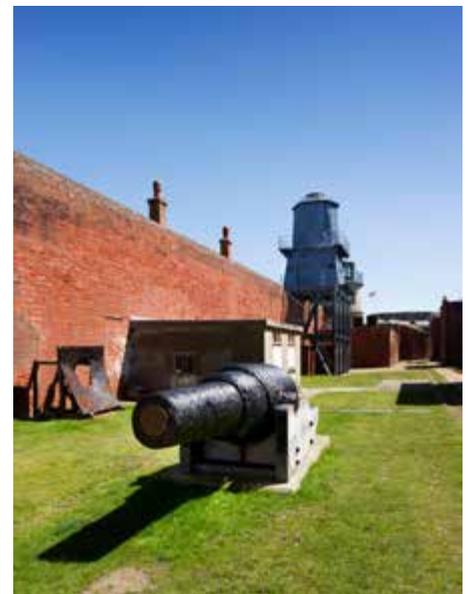
- The target plates, how they would have been towed out to sea and used for practice shots.

Opposite to the RML gun:

Here you will find the Castle Café & overflow café seating room.

The Peter Hobby Room is next to this. Peter was the Lighthouse Keeper here from 1952 till his retirement in 1989. Peter was the last person to operate the Acetylene Plant at the Hurst Point Lighthouse.

Inside this room you will find lots of information on lighthouses.



A 9-inch gun dating from 1860.



Target plate.

CARRY ON PAST THE PETER HOBBY ROOM AND THE WEST WING CASEMATES DISPLAY MANY OF THE MODIFICATIONS MADE IN THE SECOND WORLD WAR



See here a display of the QF guns used at Hurst in both world wars.

The QF 12 pounder 12 cwt gun was a common, versatile 3-inch (76 mm) calibre naval gun introduced in 1894 and used until the middle of the 20th century. It was produced by Armstrong Whitworth, Elswick and used on Royal Navy warships, and exported to allied countries. In British service, "12 pounder" was a rounded reference to the projectile weight.

Beyond the QF gun lies the 90cm searchlight. Hurst Castle mounted three fighting lights (also known as Fortress Projectors), in fixed positions. The 90cm searchlight was one of the standard British searchlights at the outbreak of the Second World War. It had a beam of 210 million candle power and a range of up to 16,000 feet. Some 3,000 were built.

Beyond are the casemates turned into the garrison theatre during the Second World War. The garrison garden was laid out at the same time.

The Garrison Theatre

The theatre constructed by the garrison at Hurst Castle is possibly the last such to survive from the Second World War. In 1939 the theatre producers Basil Dean and Leslie Henson set up Entertainments National Service Association (ENSA) to bring concerts to the forces. Many professionals gave their services, but so too did amateur groups.

One such troupe was created by Betty Hockey, who was moved to do so when she saw the soldiers in her home town of Bournemouth. In 2008 she recalled seeing troops waiting to go to France, not knowing when they would be sent, or 'what they were going to get when they got there'. She came to Hurst with her troupe in the Nonstops in 1944. In one skit of that performance four dancers sat on the stage and invited four of the troops to join them: 'Nearly the whole lot swarmed up, of course....and the soldiers sitting on our laps had to act like babies. Well, you can't imagine what they did. Some of it very indecent, I expect!'

After the concert they had drinks in the officers' mess: 'a soldier came in and said. "Will you get the concert party down to the boat at once, sir...the tide's running out very fast".'

There was no moon that night 'and not a light to be see, of course, because it was taboo and we had to walk a long way round the beach...the time we fell over barbed wire, I have no idea! There were two officers carrying the two kids (Betty's daughter Gloria and Gloria's friend Jill) and they fell

over I don't know how many times. But we eventually got down to the boat and it was about six feet out, so the soldiers picked us up manually and carried us about half way and ...threw us into the boat.'

After briefly getting stuck on a sandbank, the Nonstops made it back to Keyhaven. They continued to perform for the services until 1948.



The Garrison Theatre today.

Discuss:

- The garrison built their own theatre and this is the only surviving UK example
- How exciting the garrison must have felt to finally have some entertainment

Inside The Garrison Theatre you will also find twin 6 pounder QF guns. These guns were mounted for a time on Fort Albert, before being transferred to Hurst Castle. The guns were widely used on coastal defence works before and during the 1939-45 war. They had a rapid rate of fire and a range of approximately 5,500 yards. They were manufactured in 1936 and are very rare in having the royal cipher of King Edward VIII.



COME BACK OUT OF THE GARRISON THEATRE AND LOOK OPPOSITE.

The rendered building, opposite The Garrison Theatre, against the rear north wall, built as a barrack and general store in the 1880s, was converted into the officers' mess in 1940.

To its left are the west magazine and the former artillery general store, signposted Barrack Store and General Store were probably both so and used until about 1914. Nearby, blocked fireplaces of the 1860s in the main rear, north wall were intended to heat barracks that were never built.

At the rear of the West Wing are two Association of Lighthouse Keepers rooms (ALK's). Here you will find lots of information on the lighthouses located here and across the country.

Features to look out for:

- Against the rear wall, the rendered building which had been a barrack and general store and later converted into Officers Mess
- Look out for the fireplaces on the rear wall, built for barracks that were never needed

9 pdr Blomefield, 1799 - located outside the ALK's rooms.

This pattern of gun was in widespread use in the Napoleonic and Crimean wars and a few remained in service until 1900. With a 5 degree elevations, the range is 1600 yards. Quickfire drill achieved 7 rounds a minute.

NOW HEAD UP THE STAIRS BASED AT THE END OF THE WEST WING ONTO THE ROOF.



On the top of the west magazine is a Position Finder Cell, built for the gunners probably in the early 1890s.

On the roof of the west wing are the 12-pounder gun emplacements installed here in about 1900.

In 1941 roofs were added to protect gunners against air attack and the tall gun Director Tower was constructed.

A Bofors gun (a rapid-firing anti-aircraft gun) was mounted at the end of the roof in 1943.

Features to look out for on the roof:

- The surviving Director Towers
- Gun emplacements for the 12-pounder guns

NOW HEAD BACK TO THE MAIN CASTLE ENTRANCE AND CONTINUE TOWARDS THE TUDOR CASTLE AND THROUGH INTO THE EAST WING



The armament here, obsolete by the late 1880s, was never modernized but a number of the guns were kept permanently loaded during the First World War, to be fired electrically if necessary. The east wing has been little altered since its completion.

Officers' accommodation intended to stand against the rear wall was never built. In its place is a small slate-roofed brick building constructed in the 1880s as a laboratory or shell-filling room for the new OF guns installed outside the end of the wing in about 1893. During the world wars this room formed part of the sergeants' mess. The latrines nearby still bear the injunctions scratched into the doors probably during the Second World War: 'SGTS ONLY' (lavatories for the sergeants) and 'MEN' (open latrines for the ordinary soldier).



Nearby the corrugated-iron roofed building constructed as a field (mobile) gorge workshop in the 1880s was adapted as the sergeants' mess and kitchen in the Second World War. Signposted Bread Oven Room.

East Wing

The adjacent magazine became a coal store, now a World War One room. The casemates opposite were used as a billiard room and the garrison canteen run by the NAAFI (which remains virtually as abandoned in the 1940s).

Much of the east wing awaits conservation.



The east wing from the roof of the Tudor gun tower, with the lighthouse of 1867 beyond it.

Features to look out for in the East Wing:

- The marks scratched on the doors for SGTs and MEN
- Corrugated iron roof building used as a sergeants mess and kitchen