

Tour of Hurst Castle – Tudor Fort

Overview and Setting

The heart of Hurst Castle is the Tudor fort. Hurst Castle was built between 1541 and 1544 by Henry VIII as one of a chain of artillery defences protecting key ports and landing places round southern England from continental attack.

It was 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 fort retains much of its original 16th century appearance, despite alterations made in the 19th century (1803-1807) by Royal Engineer Colonel John Eveleigh.

It consists of a two-storey gun tower or keep, surrounded by an outer wall with three bold semi-circular bastions and a gatehouse protected with a portcullis. Originally the Tudor Castle had a drawbridge and was surrounded by a shallow moat. This was largely infilled when the massive granite, brick and iron wings were constructed in the 1860's to house the huge new guns then coming into service.

The layout of this powerful fort is best understood as a whole from the roof of the Tudor keep, which allows a clear view of the entire castle, as well as its wider surroundings.

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. Low on the left at the entrance to Yarmouth you can also see Fort Victoria.

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, or by walking the spit.

Make your way to what is now, and has been since 1870s, the main entrance to the castle. Look up on the outside wall above the drawbridge and see the plaque bearing the arms of Queen Victoria. Make your way over the drawbridge.

You are now entering 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. Once over the drawbridge and inside look for the firing loops (slit-holes) in the walls to cover the gateway if under attack.

You will find the Guard Room on the right which houses the ticket office and shop, as well as World War II memorabilia.

Please note: 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.

Features to look out for arriving at Hurst Castle and in the entrance:

- Queen Victoria coat of arms in bronze, on the outside of the castle as you walk over the drawbridge
- The use of red brick which characterise the Victorian construction
- Drawbridge
- The firing loops / slits in the walls
- Guardroom which would have contained a small cell and prisoners room to the rear

Discuss:

- You are at the back of the Castle, the front looks out to sea
- How this is not the original entrance to the Tudor castle
- 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 Victorian insider guide for further information)

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.



Please note: The main entrance, you have passed through in the 1860's west wing has provided access to Hurst Castle since 1870.

ONCE THROUGH THE CASTLE DOORS BEAR LEFT TO FIND THE ORIGINAL 16TH CENTURY ENTRANCE TO THE TUDOR CASTLE.

The Tudor Castle

The Tudor castle, completed in 1544, was largely built of stone which came from the dissolved monastery at Beaulieu. Although it has been substantially altered and extended, it retains much of its original appearance.

Hurst's low profile and massively thick walls are typical of Henry VIII's coastal forts. These were designed to withstand bombardment while presenting less of a target for enemy guns, and to allow all-round fire for defence. All parapets originally had curved tops to deflect incoming shot, while the gun embrasures (a small opening in a parapet of a fortified building) were given wide splays to allow maximum fields of fire.

The castle originally had 71 gun positions, some sited to allow flanking fire along the fronts of the main walls.

Reconstruction drawing of Hurst Castle at the time of completion, in the 1540s, with its vulnerable lead-covered wooden roof.



Drew Smith © Historic England

Original 16th Century Entrance:

Please note: This was the original entrance to the Tudor Castle which would have had a drawbridge and would have been surrounded by a shallow moat.



The gateway to the Tudor castle, built between 1541 and 1544. The blank plaque above the entrance probably held the arms of Henry VIII, which on others of Henry's coastal forts survive in situ.

Look above the vaulted gateway to see a blank plaque flanked by two shallow pilasters that probably once contained Henry VIII coat of arms; a similar plaque survives over the entrance to Calshot Castle, which was built at the same time.

The two circular holes flanking the plaque were for drawbridge chains, a reminder that until 1861 a moat surrounded the castle. The moat that used to encircle the castle was filled in when the new wings were begun in 1861.

Halfway through the gateway, in front of the solid oak double doors, are the slots for a portcullis or defensive grill, operated from a chamber above. Look up to see the bottom of the portcullis (you will see the portcullis as you tour the castle).



The portcullis above the Tudor entrance to the castle. Although a portcullis has guarded the entrance since the castle was built, the present portcullis and chamber probably date from the 1850s.

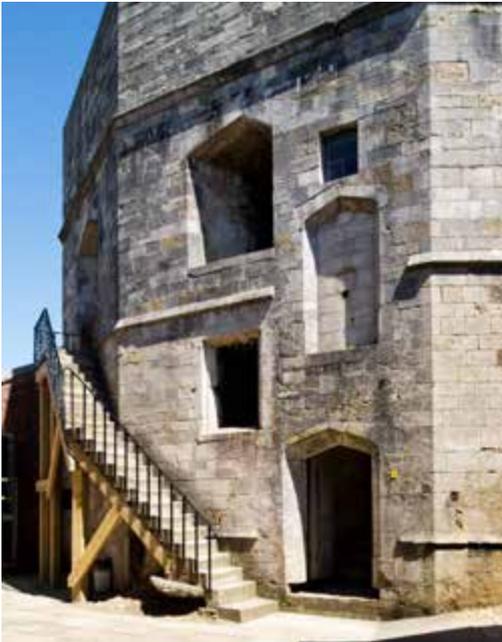
Please note: as you walk through the solid oak doors, look to the walls where the doors are pushed back on. Here on the walls here you can see soldier's initials (or Tudor graffiti) and the dates of 1725 and 1794 can be seen, alongside their initials. (You may need to pull the doors away from the walls to see the graffiti).

Features to look out for in the entrance to the Tudor Castle:

- The blank plaque above the entrance to the Tudor Castle
- The portholes which once carried the chains that operated the drawbridge
- The solid oak double doors
- Slot for the portcullis
- The contrast of the Tudor stone against the Victorian red brick
- The Tudor graffiti

Discuss:

- In 1544, when it was the original entrance you would enter via a drawbridge and shallow moat – once it had been lowered and the portcullis raised.



The Courtyard:

Please note: as you enter through the entrance of the Tudor Castle, the building straight in front of you is the Gun Tower or otherwise known as The Keep.

The central tower of the Tudor Castle was called the Gun Tower or The Keep and was built as accommodation and to enable guns at the top to fire over the surrounding bastions. It is circular within and 12-sided externally, with two floors and a basement.

Although its appearance is much as it was in the 16th century, its interior and roof were entirely rebuilt between 1803 and 1807, when it was needed to be strengthened to cope with updated artillery.

The courtyard surrounding this central Gun Tower is protected in turn by an outer wall (curtain) with three boldly projecting semi-circular bastions. All three bastions have further gun embrasures (a small opening in a parapet of a fortified building) and were used as living quarters.

The masons mark and date 1585 set above the entrance to the ground floor. The date refers to late Tudor alterations.



Look over to the entrance door of the ground floor – above it you can see a mason's mark and the date 1585, evidence of late Tudor repair work.



Look up again above this and you can see a blocked doorway above the existing door to the ground floor. This doorway would once have given access to a timber bridge which would have lead across the courtyard into the outer wall. This would enable those to reach sanctuary within the tower if the castle came under attack.

Features to look out for in the courtyard:

- Masons mark & date, above the ground floor door
- Blocked doorway above the ground floor entrance

Discuss:

- That the main part of the castle, the gun tower was used for accommodation and the roof for the guns
- The timber walkway that would have run above your heads from the gun tower to the outer wall

Ground Floor:

NOW ENTER THE GUN TOWER THROUGH THE GROUND FLOOR ENTRANCE AND GO UP THE SMALL FLIGHT OF STONE STEPS.



The gun tower consists of two storeys and a basement. The ground floor provided living accommodation for the garrison, the space would of been divided into smaller rooms - with timber and wattle partitions hence the four fireplaces.

The Tudor ground floor was level with the entrance threshold; a new floor was put in as part of the 1803 rebuilding that included altering the Tudor window heads. Then in the 1880's about 4ft of concrete was added to this floor to give greater protection to the magazine (a building or compartment for storing gunpowder) below.

This 4ft of concrete was later removed, but it explains the sequence of fireplaces at different levels, all originally used for heating and cooking.

As part of the 1803 alterations is the central brick column. Inside the brick column a spiral stair extends from basement to roof. The small iron door in the 1803 opening dates from the late 1870s.

It gave access to the bottom of the staircase before this was converted solely into a lighting chamber for the magazine.

In the thickness of the wall on the south-east side of the floor is a former garderobe (a lavatory in a medieval castle) or latrine.

In 1853 the tower was equipped with double-tier bunks for 202 soldiers, part of a wider modernization resulting from concerns about France's military ambitions, but by the 1890s it had largely ceased to be used for accommodation. During the Second World War this floor was a carpenter's workshop.



Features to look out for in ground floor of the Tudor Castle:

- Double oak doors as you enter the ground floor
- Fireplaces at different levels
- Replacement central brick column
- Original timber roof
- Garderobe or latrine

Discuss:

- Imagine the partition walls and how the garrison lived here, cooked on the fireplaces and slept
- The original staircase that would have taken you to the roof, now replaced with the central brick column

NOW HEAD OUT OF THE GROUND FLOOR ENTRANCE AND SEE THE STEPS TO YOUR RIGHT.

First Floor:

You will see beside the ground floor entrance external steps lead to the first floor through a doorway adapted from a Tudor window. These steps were added in the 1880's, when the internal stairway on the ground floor was limited to servicing the lighting chamber in the basement. Dominating the first floor is a massive brick vault built between 1803 and 1807 to support heavier guns on the roof.

Originally this floor had much the same internal layout and use as the ground floor, providing accommodation for the garrison, with four fireplaces used for heating and cooking. It is thought that it was probably here that Charles I was kept prisoner in 1648.

This floor has eight windows, one of which is now a door, which look out over the curtain walls, from which hand guns or small mounted guns could have been used.

Garderobe chamber.



In the thickness of the outer walls are three small lobbies to external doorways, now blocked, which once led to timber footbridges added to allow the garrison swift communication between the gun tower and the outer defences. Later footbridges here remained in use late into the 19th century, after which the bastions' upper levels were reached by steps from the courtyard.

Through one of these lobbies on the north-east side is a garderobe chamber. The slatted wood, inside on the left, covers where the human waste would have dropped outside the castle into what would have been the moat.

By the 1890's this floor was used by the Post Office telegraph service, and the window on the east side had been converted into a doorway for additional access.

Features to look out for in first floor of the Tudor Castle:

- Doorway, adapted from a Tudor window
- Brick vault, built to replace the internal staircase, and to support heavier guns on roof
- Four fireplaces, for cooking and heating (one now blocked up)
- The windows, for gun positioning
- Garderobe chamber
- Three small lobbies to external (blocked now) doorways which would have led to footbridges

Discuss:

- That this was the possible location/cell of the prison of Charles I before his trial in Westminster Hall and execution. How the weather would have been in December whilst he was held here.
- The Garderobe chamber
- The timber footbridges that led from the three small lobbies, to allow communication

ENTER THE DOOR IN THE CENTRAL COLUMN AND GO UP THE STAIRS.

Roof:

Follow the spiral steps which lead up to the roof. Look when nearing the top of the staircase where in 1853 a wall cupboard was inserted to hold boxes of ammunition for the gunners on the roof and the brackets above for holding six rammers, sponges and wadhooks for their guns.

In the original structure the central staircase led all the way from the ground floor up to the roof, but since alterations of 1803 the new stone spiral staircase was accessed from the first floor. This staircase had a glazed lantern at the top, which replaced the cupola at the centre of the roof. This lantern was in turn replaced in the 1850s by the heavy stone dome as protection against plunging fire, as seen today.



A layered reconstruction drawing of Hurst Castle at about the time of its completion in the 1540s.

Drew Smith © Historic England

Originally the Tudor roof was flat, timber and lead covered, with a cupola (a light structure on a dome serving as a lantern), which was always vulnerable to decay and plunging mortar fire. The original roof was also only able to support light guns (six 24-pounder guns); the vaulted stone roof of 1803 overcame these limitations and the guns were then replaced with 32-pounder guns.

These guns were themselves replaced in the later 1850's by heavier guns whose mountings remain on the roof today. The four guns facing the sea had traversing carriages and the two facing the land were on swivels.

See on the floor one iron ring and the nearby pole to the east side, which was used together as a pulley system to lift items over the side of the castle to the roof.

Look over the tower walls, from here you can see a panoramic views of the Solent and the Isle of Wight lies across the Needles Passage three-quarters of a mile from Hurst. On the islands shore diagonally opposite Hurst, to the south-east, you can see two 19th century defences: Fort Albert, and on the cliff top above, the remains of Cliff End Battery. Low on the left, at the entrance to Yarmouth, you can also see Fort Victoria.

When descending the staircase look for the horseshoe shaped holders on the wall, these were holders for tools needed to clean the guns housed here.

Features to look out for on the staircase and roof of the Tudor Castle:

- Dome mount on top of the staircase
- Wall recess, at the top of staircase
- Gun mountings, on the roof
- Iron ring and nearby pole, used as a pulley system
- Horseshoe shaped holders on the wall, whilst heading down the stairs

Discuss:

- The shape of the Tudor Fort as seen from the top
- Why was Hurst a good position to defend England
- Why the original Tudor roof needed to be replaced to cope with the introduction of heavier guns in the 19th century

MAKE YOUR WAY BACK DOWN TO THE COURTYARD AS THE BASEMENT IS NOW ACCESSED FROM OUTSIDE THE GUN TOWER.

ONCE BACK IN THE COURTYARD AND WITH YOUR BACK TO THE GUN TOWER TURN RIGHT AND MAKE YOUR WAY TO THE BASEMENT. TO DO THIS FOLLOW THE SIGN TO THE KEEP BASEMENT AND GO UP THE WOODEN EXTERNAL STAIRCASE.

Basement:

Please note: originally you would have reached the basement internally from the ground floor of the Gun Tower by the central spiral stair of the 16th century. It is now accessed from an entrance formed as part of the 1803 alterations. This entrance has vaulted steps leading down to the basement inside a brick building probably added in the 1870's.

The basement was used for storing food, water, fuel and ammunitions. As you now head down into the basement and facing the steps you are walking down you can see a lighting chamber, which is in the central brick vault as altered in 1803. Here lanterns brought down from the ground floor, on what would have been the original spiral central staircase are set behind plate glass for safety, to illuminate the powder magazine.

Inscription around the pier that records Colonel Eveleigh's rebuilding.



In the late 1870s, as an additional safety precaution, and one first advocated by Eveleigh, the entrance to the basement from the central spiral staircase was blocked to prevent any possibility of sparks from the lanterns igniting the gunpowder, and the doorway was converted to house additional lamps. So now there is no doorway in this central vault, from the late 1870s you could only access the basement externally.

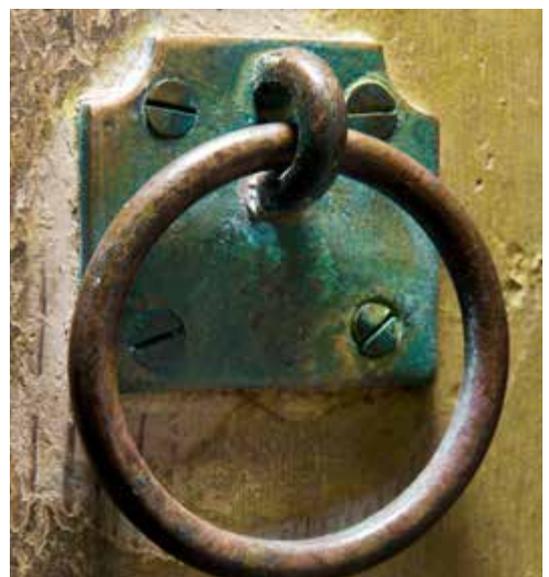
The door fittings survive; for safety these are bronze to avoid the risk of sparks. The risk of sparks from ironwork meant that iron was never used in gunpowder stores.

Sealed glass panel of the lighting chamber within the stairwell.



Look up to the top of this central vault and here you can see an inscription round the pier, partly defaced by later works, that records Colonel Eveleigh's (the Royal Engineer responsible for the rebuild between 1803-1807) rebuilding of the tower interior. These works also included a second massive vault to protect the gunpowder barrels here, some were stacked in recesses in the outer walls. Replica powder barrels are displayed here today.

One of the bronze door fittings in the basement.



Cartridge hoist.



Probably at the same time a cartridge hoist was installed at the end of the brick entrance building and was linked by a short brick passage to the basement, which then held 1,100 12-inch cartridges and 1,150 10-inch cartridges, together with their gunpowder. You can see the top of the hoist at the top of the stairs as you walk back up to ground level.

The basement may also have been used by Smugglers to hide contraband goods, as documented in 1572.

Features to see in the basement:

- Lighting chamber, which replaced the staircase to the basement
- Inscription around the pier
- Recesses to store gunpowder
- Cartridge hoist

Discuss:

- Smugglers who worked the spit in the 16th and 17th centuries. What items they would have smuggled in.
- The precautions the Royal Engineer made to protect the garrison and castle from the dangers of gunpowder stored here
- How the basement would have been a great place to store food in the height of summer

EXIT THE BASEMENT AND MAKE YOUR WAY UP TO GROUND LEVEL AND BACK DOWN THE EXTERNAL TIMBER STAIRCASE BACK INTO THE COURTYARD.

You have now completed the tour of the Gun Tower or Keep. Next to visit within the Tudor Castle is the curtain wall and three bastions that surrounds and protects the central fort.

Bastions and Curtain Wall:

The keep and courtyard were surrounded by curtain wall protected by three semi-circular bastions. These allowed the defending garason to protect the walls by firing along them. The north-west bastion, almost opposite the keep enterance, is the only one retaining anything like its Tudor appearance. (The other two were altered in the nineteenth century).

WITH YOUR BACK TO THE ENTRANCE TO THE GUN TOWER LOOKING TOWARDS THE ENTRANCE TO THE COURTYARD YOU WILL SEE THE NORTH-WEST BASTION.

North-west Bastion

This bastion was sited to protect the approach and entrance to the castle. It was the most powerful of the three, with a basement, two floors and a flat roof for a third tier of guns.

Ground Floor:

To enter the ground floor, use one of the two doors nearest to the double doors of the entrance to the courtyard, to enter the inter-joining rooms. The ground floor of the bastion has been divided into two with a brick wall. It had four gunports in Tudor times and each is interesting. Starting on the left, the first was obscured when the west wing was built in the 1860s; the next one was adapted to take huge sixty-four pounder gun and a traversing carriage, this allowed the gun to be turned from side to side as well as raised and lowered. The other two were narrowed to form rifle loops. The second of these still has the original Tudor vent, intended to help with dispersal of smoke after the gun was fired. This ground floor room provided accommodation for the garrison and was lit in Tudor times by two windows. They are now blocked but can be seen from the courtyard.



A Dutch 6-pounder of 1790, on the ground floor of the north-west bastion. It points west, covering the approach to the castle. Above the embrasure is the Tudor smoke vent, a reminder of the great clouds of acrid smoke generated by the guns.

HEAD BACK OUT OF GROUND FLOOR INTO THE COURTYARD, TURN LEFT TO FIND THE STAIRWAY TO THE FIRST FLOOR.

First Floor:

From the courtyard take the 16th-century stairway which leads to the first floor with its two gun embrasures, altered in the 1860's.

The first floor was divided; the lines of the partitions are indicated on the floor; although faint traces of the originals remain on the walls. The four fireplaces, one with a bread oven, suggest it may once have been quarters for a senior officer; but in 1859 it was partly used as the garrison hospital and by the 1890s provided married quarters for two soldiers and their families.



Bread oven fireplace.

The garderobe here, which is viewed behind two railings, was later used as a cupboard. The door beside the garderobe, in the south-east wall gives access to the portcullis chamber which is right above the gateway. Although a portcullis has guarded the entrance since the castle was built, the present portcullis and chamber probably date from the 1850s.

Head back through the first floor to the stairway and head up to the bastion roof, which is a modern replacement.

As you descend back to the ground floor, look for a blocked doorway in the stairwell that would have led to the wall-walk around the curtain wall.

The steps then descend to the basement (closed to the public) which was fitted with water tanks in the 1870s. The tanks remain, but are no longer in use. Originally it had two embrasures, or openings for guns, intended to cover obvious approaches to the castle. One of the embrasures (now blocked) can be seen at the foot of the steps leading to the basement.

Features to look out for in the North-west bastion:

- Lines of the partitions on the floor, on the first floor & faint traces of partitions on the walls
- Four fireplaces, one with a bread oven, on the first floor
- Access to the portcullis chamber and see the portcullis that would have dropped down over the main entrance
- Blocked doorway in the stairwell

Discuss:

- The lowering of the portcullis and raising of the drawbridge to prevent access to the castle
- How once you would have been able to do a wall-walk between the bastions along the curtain wall before the building alterations

ONCE BACK IN THE COURTYARD YOU WILL BE ABLE TO SEE THE ENTRANCE TO THE SURVIVING CAPONIER.

Caponier:



From the foot of the steps a passage leads to the one surviving Caponier (for flanking fire) of the three built here at Hurst Castle across the moat, one beside each bastion, in 1853.

The Caponier beside the North-west Bastion is the only one surviving.

Their rifle loops covered all the immediate approaches to the castle and replaced the Tudor gun embrasures in the bastion basements.

The Caponier of 1853 projecting from the north-west bastion. Before the great wings were added in the 1860s the other two bastions similarly had caponiers projecting into the castle ditch.

Features to look out for in the Caponier:

- Rifle loops, installed to increase safety for the gunners

Discuss:

- Originally there were three Caponier's at Hurst: this is the only surviving
- The caponiers replaced gun embrasures in the basements of the bastions

ONCE BACK IN THE COURTYARD AGAIN, WALK PAST THE ENTRANCE TO THE GUN TOWER AND MAIN ENTRANCE TO THE TUDOR CASTLE AND WALK ON TO THE NORTH-EAST BASTION.

Please note: you will pass by many alterations made to the Tudor castle so it's important to keep this in mind – imagine that the curtain wall would have been on your right and none of the red brick additions would have been here.

North-east Bastion and South Bastion:

These bastions, originally similar to the north-west bastion, were greatly modified for new weapons in the 19th century. A shell store and adjacent passage to the east wing substantially altered the ground floor in the 1860s. At the same time a massive brick wall was built across the courtyard to protect the landward side of the fort from enemy fire from the sea.

Steps behind the north-east bastion lead to its roof where large guns were mounted after completion of the casemates in 1855; the recesses in the parapet held ammunition.

WALK UP THESE STEPS NOW TO THE ROOF.

KEEP WALKING ROUND ON THE ROOF TO THE SOUTH BASTION.

South of this wall lies the south bastion, overlooking the sea (on the roof here is a 1890s concrete commanding officer's observation post), with adjoining it a room added during the Second World War that contained a coast artillery searchlight.

By the 1880s the magazine below the central tower was deemed vulnerable to shelling and all the casemates on the seaward side were filled solid with concrete and shingle. So now there is no ground floor to the South Bastion.

A 7ft layer of similar material, removed in the 1970s, also filled the courtyard on the seaward side.

Features to look out for in the north-east and south bastion:

- Features to look out for in the north-east and south bastion:
- Recesses in the parapet to hold ammunition
- Concrete observation post
- Adjoining room that in WWII would have contained a searchlight

Discuss:

- How the bastions would have linked up together with the curtain wall

North Curtain Wall:

Each length of the Tudor walls linking the bastions had two low-level gun embrasures and smaller ones at wall-walk height for hand weapons.

The addition of pairs of brick casemates and other modifications to the rear of the walls between 1852 and 1890 obscured most of these, but the original layout is least altered along the north curtain wall, where only a single casemate was added. This in turn was obscured on its western side in the 1870s when the brick housing for the cartridge hoist from the central tower basement was built.

Features to look out for in the north curtain wall:

- Cartridge hoist, built in 1870

Discuss:

- The design of the castle, how the curtain walls surround the gun tower and link the bastions

Hurst Castle today as seen from above.

**Definitions:**

- Magazine: a building or compartment for storing military provisions,
- Garderobe: a lavatory in a medieval castle.
- Embrasure: a small opening in a parapet of a fortified building.
- Cupola: a light structure on a dome or roof serving as a lantern.