

Martello Tower 66

Langney Point, Eastbourne

Design&Access / Heritage s Statement

September 2024

Prepared by

KOLDO&CO.

List of Contents

1 Site Location & Context

- 1.1 Martello Towers general history
- 1.2 Martello Tower 66
- 1.3 Neighborhood notes

2 Heritage Appraisal

- 2.1 Guiding principles
- 2.2 Significance of Martello Tower 66
- 2.3 Lessons to take forward

3 Precedents

- 3.1 Planning History
- 3.2 Key Policies

4 Design, Amount & Appearance

- 4.1 Introduction
- 4.2 Setting and access
- 4.3 Design, appearance, materiality
- 4.4 Sustainability
- 4.5 Other considerations and design features
    - Dry Linings
    - Running services through existing shafts
    - Safely accessing the roof
    - Maintaining the Harbour Navigation equipment
    - Detailing the Interiors
    - Amenity
    - Waste collection strategy
    - Lighting assessment
    - Noise impact assessment

5 Conclusion

Application documents

The following Design and Access Statement should be read in conjunction with the following information submitted:

Drawings

Drawings existing
A1075.00.050/075/099/100/101/102/103/104/201/210/211/212/213
Drawings demolition
A1075.01.099/100/101/102/103/104/201/210/211/212/213
Drawings proposed
A1075.02.050/075/100/101/102/103/104/105/200/210/211/212/213

Documents

A1075 Martello Tower 66 Photographic report
A1075 Martello Tower 66 Heritage Appraisal
A1075 South Coast Martellos Heritage Appraisal
A1075 Martello 66 Assessment of Significance

1- Site Location & Context

1.1 Martello Towers general history

Martello Towers were solid, low circular coastal defensive structures, massively built using brick predominantly with guns mounted on a flat roof. They were designed to provide concentrated fire on ships at sea to repel an enemy landing, house a garrison and be impenetrable from seaborne ordnance. A total of 103 Martello towers were built in England, along the coast from Aldeburgh in Suffolk, and from Kent to Seaford in Sussex. By 1812 there were 74 such towers sited on the South Coast and a further 29 in Suffolk and Essex. The 74 towers along the south coast of England were all assigned numbers and those on the east coast with letters. 74 Martello towers were built along the Kent and Sussex coastlines from Folkstone to Seaford between 1805 and 1808 and the remainder between 1808-1812 along the coasts of Essex and Suffolk.

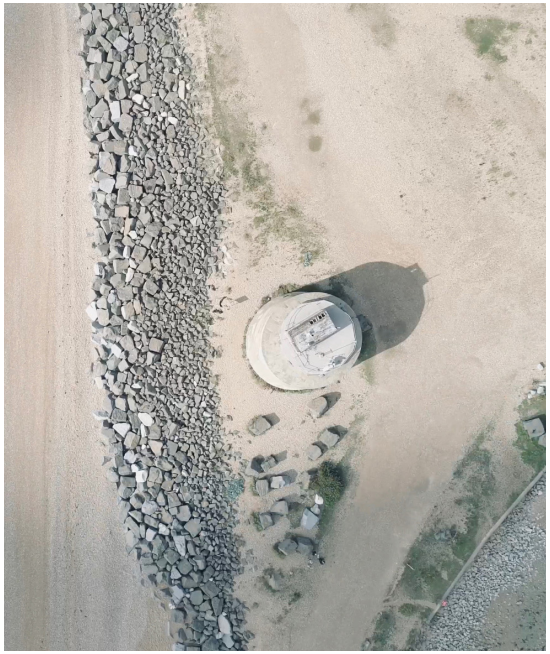
The towers of the south coast were numbered 1-74 from east to west, while those of the east coast were identified by a system of letters (A-Z, and then AA-CC) from south to north.

All are circular internally, the battered (inwardly sloping) walls of varying thicknesses, but with the thickest section invariably facing the seaward side. Most stand to a height of around 10m.

The ground floor was used for storage, with accommodation for the garrison provided on the first floor, and the main gun platform on the roof. The southern towers carried a single 24 pounder cannon, whilst the eastern line carried three guns (usually a 24 pounder cannon and two shorter guns or howitzers). Three large, circular ten-gun towers known as redoubts were also constructed at particularly vulnerable points, at Dymchurch, Eastbourne and Harwich. All three survive.

As the expected Napoleonic invasion attempt did not materialise, the defensive strength of the Martello tower system was never tested, and the tower design was soon rendered obsolete by new developments in heavy artillery. Many were abandoned and fell into decay or were demolished during the 19th century, although some continued in use into the 20th century as signalling or coastguard stations and a few saw use as look out points or gun emplacements during the two World Wars.

Of the original 74 towers on the south coast, 26 now survive, and of the 29 on the east coast, 17 now survive.



Aerial view of Martello Tower 66



View of Martello Tower 66 from the shingle beach



Martello Tower 66 Location plan

1.2 Martello Tower 66

Scheduled monument and Grade II listed.
Constructed in 1805-06.
Heritage at Risk List Entry 1017356

The tower, which is Listed Grade II, lies around 1km south west of its surviving neighbour, no.64, the subject of a separate scheduling. The pair formed part of a long chain of low-lying towers, constructed in 1805-6 to guard the vulnerable coastline around Pevensey Bay from the threat of Napoleonic invasion.

Martello tower no 66 survives well, and retains a substantial proportion of its original components and associated features, including its original gun barrel, which is a rare survival amongst Martello towers. Recognition of its structural and strategic strengths during the 20th century, against a new invasion threat, is represented by the addition of a substantial gun emplacement during World War II.

Despite these later additions, the gun platform retains many of its original features, including the inner running rail and the original gun barrel, which lies unmounted, within the roof well. The modern coastguard station on the roof of the tower, the modern steps, railings and gates and all modern fixtures and fittings, including all components of the modern electrical system and radar equipment are excluded from the scheduling, although the ground beneath and/or the structures to which these features are attached is included.

Exterior:
The slightly elliptical, brick built tower measures up to around 13m in diameter externally, and stands to a height of about 10m. Its battered (inwardly sloping) walls, designed to deflect cannon shot, range in thickness from 1.6m to around 4m on the seaward side. Externally, the tower is rendered in a cement mortar, or stucco, intended to provide further protection to the outer skin of bricks.

Access into the tower was by way of a first floor doorway, which was reached from ground level by a retractable ladder, although this has since been replaced by a new doorway at ground floor level. The first floor was divided into three rooms by wooden partitions, and provided accommodation for the garrison of 24 men and one officer. Two fireplaces heated the rooms, which were lit by two windows to the north east and south west.

The circular roof space was designed to accommodate a 24-pounder cannon, which could be turned through 360 degrees. The cannon was mounted on a rotating wooden carriage, supported on a central pivot, and was traversed on inner and outer running rails using a series of rope pulleys and iron hauling-rings set into the parapet wall. During World War II, a concrete gun emplacement was constructed across the roof of the tower, and this in turn supports a later, temporary coastguard station.

Interior:
The tower was constructed on three levels, with a thick central column rising between the basement and the top of the tower, from which springs the barrel vaulted first floor ceiling which supports the gun platform on the roof. A first floor doorway on the landward side, provided the original access into the tower, and was reached from the ground by a retractable ladder.

Access to the ground floor was from first floor level, by way of a trap door near the entrance, leading down through a suspended wooden floor, although this has not survived. The ground floor was used to store ammunition and supplies, and provision for these included a single, vaulted magazine.

Rainwater collection tanks were installed beneath the floor, to supplement the water supply, and air vents, linking the ground and first floors, were set into the thickness of the walls. The gun platform is reached from the first floor level by the original, internal stone staircase constructed in the thickest part of the tower wall.



Inernal view of Martello Tower 66

1.3 Neighbourhood Notes

The former isolation of the Martello Tower has been greatly eroded over the years, principally by the development of Sovereign Harbour in the 1990s which effectively extended the north-eastern boundary of Eastbourne some distance north of Tower 66.

The native Sussex beach has been much degraded, in places, remodelled by considerable sea defence works including the remodelled of the shingle and levels around Tower 66 were carried out as part of the Harbour development include the addition of a swathe of large boulders on the seaward and harbour sides of the tower, with a few randomly placed boulders in very close vicinity to the base of the tower.

The Harbour entrance is immediately adjacent to Tower 66 to the north east, and separates it from Tower 64.

2 - Heritage Appraisal

Please refer to the following information submitted with this application for a full and comprehensive Heritage appraisal carried out for Martello Tower 66.

A1075 Martello Tower 66 Heritage Appraisal
A1075 South Coast Martellos Heritage Appraisal
A1075 Martello 66 Assessment of Significance

2.1 Guiding principles

The scope and methodology of Martello Tower 66 Appraisal and accompanying assessments have been based on Historic England's guidance "Conservation Principles, policies and guidance for the sustainable management of the Historic Environment". These guiding principles cover from the asset's Historic Value, Aesthetic Value, Communal Value, Setting and Context to its extent of Preservation.

2.2 Significance of Martello Tower 66

High Contributors:

- All original external brickwork across all elevations.
- All original internal brickwork, including the vaulted ceiling and central pier.
- Original first floor doorway location and dimensions.
- Any surviving elements of the original first floor entrance doorway stone architrave and ironplate to cill.
- Orientation of two original landward windows.
- Original cannon at gun platform level/2nd floor.
- Original parapet wall and parapet wall niches, iron hauling loops to the gun platform, original stone ledge adjoining the parapet wall, original stone steps from first floor to gun platform, original fireplaces at first floor level, stone templates for previous timber floor between first floor and ground floor, magazine light opening, magazine niches.
- 360 degrees views from the gun platform.
- The remaining elements of the tower's setting that illustrate its original proximity to the sea, and former isolation.

Moderate Contributors:

- Original basement water cistern (assumed to be present although filled with debris currently).
- Original entrance hatch from ground floor into water cistern.
- Magazine niche ventilation flues and ventilation flue to the stone steps from first floor to the former gun platform.
- The original stone coping stones on top of the original brick parapet wall and iron cramps holding these stones in place.
- The original iron 'racer' tracks for the movement of cannon affixed to the stone ledge adjacent to the brick parapet wall.
- Central granite circular pivoting platform to the centre of the gun platform and affixed iron tracks.
- The vertical channel for the rainwater downpipe cut into the internal brickwork.
- The original vents situated at the ground floor ceiling and first floor floor level to allow the transmission of air between the floor levels. Associated with these are the vertical shafts serving the vents that rose to the gun deck level originally.
- Difference in floor levels between the original pivoting circular base, the main roof level,the ledge adjoining the parapet, and the parapet.
- Former stucco rendered exterior with scoring to simulate ashlar.
- The WWII defensive alterations on the gun platform. (associative historical & communal value / Not of aesthetic value).
- The remaining Martello towers in the surrounding area with a shared significance (Nos. 55, 60, 61, 62, 64, 73 and 74) that contribute to significance as an element of setting.

Limited Contributors:

- The coastguard additions to roof level following WWII. (associative historical & communal value / Not of aesthetic value). Excluded in the Historic England list entry.
- The evidential value of the tower, with its potential to yield evidence about its history and past human activity.
- The contribution made by the other remaining Martello towers along the southern and eastern coasts, any surviving redoubts, along with the Royal Military canal and the WesternHeights in Dover, amongst other fortifications that formed part of the Napoleon defences.

No Contributors:

- The steel security grilles to the windows and ground floor doorway.
- The vestiges of the steel handrail from first floor to the gun platform.
- The wrought iron balustrade at roof level surrounding the coastguard installation.
- Modern graffiti.

Detractors:

- The existence of the ground floor entrance.
- The modern timber staircase from ground to first floor level.
- The uPVC downpipe from the ground floor to original gun platform level.
- The raised surrounding land levels meaning that the original first floor level entrance is today seemingly set too low on the elevation.
- The modern development (Sovereign Harbour) that has encroached on the tower's former remote location.

Martello Tower has been assessed as having a preservation of approximately 7/10. Out of the 26 surviving Martello Towers on the south coast 7 have been assessed as being at 9/10. This means No. 66 falls outside the top 25% of surviving south coast towers. There are five towers that have been assessed as falling at a preservation level (externally) of 7/10, which places the Martello Tower No. 66 in the second 25% bracket, or in other words, overall within the top 50% of the most preserved towers. Martello Tower No. 66 is relatively well preserved but less so than in the top 25% bracket.

The tower has an additional layer of illustrative and communal significance, other than its degree of preservation of original fabric provided by its WWII defensive phase of alterations, that also contributes towards its significance.

Its setting has been downgraded by modern residential development. A degree of separation from Sovereign Harbour remains, allowing an appreciation of the original sea fronting location of the tower, mostly on the seaward facing side.

2.3 Lessons to take forward

From a review of the surviving South Coast Martello Towers the following considerations should be borne in mind, amongst others, when considering alterations:

- No openings should be created at ground floor level as openings at this floor level were specifically avoided in their original design to increase the defensive capabilities of the towers.



Aerial view of Martello Tower 66

- No openings on the seaward side. This part of the towers was particularly likely to be hit by cannon fire if attacked and therefore part of the original design purposely excluded windows or doors on the seaward side to increase their strength against breaching.
- No enlargement of the original windows and retention of the stone window cills.
- Where a ladder chute was part of the original design, a good solution is a visually recessive staircase rising to the first floor original entrance.
- Any new or replacement roof top extension would be best designed to be discernible as a modern addition, to aid future legibility of the phasing of the building and the tower's significance.
- Ideally no ancillary permanent solid structures should be built attached to the tower.
- Consider the land level surrounding the tower. Consider reinstating the original land levels surrounding the tower where possible.

3 - Precedents

3.1 Planning History

Application No. S00245648 - Application for Scheduled Monument Consent - Granted - Decision date: 04.07.2024

Application for Scheduled Monument Content for the proposed change of use to residential - holiday home/let, with the addition of a carefully considered roof top structure. The proposal includes the retention and repair, or reinstatement, of the main historic features of the tower, for its conservation and maintenance.

Consent was granted by the Secretary of State, with considitons, as set out on the decision notice dated 4th of July 2024.

3.2 Key Policies

The Ancient Monuments and Archaeological Areas Act (1979) is the legislation which outlines protections for nationally important monuments. The guidance for this legislation clearly states that the purpose of scheduling is to help preserve monuments, 'so far as possible, in the state which they have come down to us today' (DCMS, 2013).

Therefore, in the determining if scheduled monument consent should be granted, 'great weight' is given to the conservation of the monument. In cases of 'less than substantial harm', as this is likely to be, the harm to the significance of the monument will be weighed again the public benefits of the proposal (DCMS, 2013).

The National Planning Policy Framework (NPPF) has outlined similar considerations in decision making for proposals which affect heritage assets:

Paragraph 195 says that LPAs should consider the significance of heritage assets and seek to avoid or minimise any conflict between conservation and any aspect of the proposal.

Paragraph 197 states that LPAs should take account of the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation.

Paragraph 199 states that when considering the impact of the proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation.

Paragraph 200 states that any harm to, or loss of, the significance of a designated heritage asset (such as from alteration) should require clear and convincing justification.

Paragraph 202 states that where a proposal will lead to less than substantial harm, this should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.

The planning practice guidance for the Historic Environment outline how it is important that any use is viable for the future conservation of the asset. It also clarifies that harmful development may sometimes be justified in the interests of realising the optimum viable use of an asset providing that the harm is minimised (Paragraph: 015 Reference ID: 18a-015-20190723).

The guidance also outlines that where a heritage asset is capable of having a use, then securing its optimum viable use should be taken into account in assessing the public benefits of a proposed development (Paragraph: 016 Reference ID: 18a-016-20190723).

The Eastbourne Borough Plan

- Chapter 3 - Natural Environment
- Chapeter 5 - Urban Heritage and Townscape
- Chapter 6 - Housing
- Chapter 12 - Leisure and Community
- Chapter 13= Utilities and Services

4 - Design, Amount & Appearance

4.1 Introduction

The proposal seeks planning permission and listed building consent to change the use of Martello Tower 66 to residential use C3 - holiday home, with the addition of a carefully considered roof top structure. The proposal includes the retention and repair, or reinstatement, of the main historic features of the tower, for its conservation and maintenance. Over the past few years we have worked closely with Historic England to achieve a design proposal that has their support as well as the Secretary of State approval. The approved design proposal is the one presented for this planning permission and listed building consent.

4.2 Setting and Access

The setting of Martello Tower 66 has been a key consideration in the design process. Although its former isolation has been compromised by the proximity of the Marina development, the tower's current setting illustrates its original proximity to the sea, and its former isolation not only remains untouched by the new design proposal, but it will be enhanced by the proposal of lowering the current surrounding shingle to its original level around the perimeter of the tower. This gesture enhances not only the isolation of the tower further and but also will help reinforce its substantial height and size, and provides a subtle feeling of privacy and separation for the proposed residential use.

This lowering of the surrounding ground level around the tower is done following the circular geometry of the tower and in a non-landscaped manner. This is carried out by means of using compressed shingle, together with small and medium boulders, that line the sloped banks and the new external ground floor level.

Vehicular access to Martello Tower 66 is proposed off Martinique Way in between The White Point Houses and approved Site 1 development, minimising vehicular access in front of the living spaces of the White Point houses.

The access to Martello Tower 66 will be controlled with an automated self closing barrier. This access will merge with the existing Environmental Agency maintenance / access route which goes all along the site and around Martello Tower 66. Access to the tower will from spur connected to the E.A. road. The existing E.A. route is proposed to be pulled away slightly from Martello Tower 66 for its protection and to allow for the proposed lowering of the ground around the tower. All vehicular access will comprise a compacted shingle finish to minimise the visual impact to the surrounding seascape.

The proposals have an allowance for two surface car park spaces. A discrete surface car park is proposed, relatively adjacent to the tower, of the same nature and materials as the access road. During the design process we considered the impact to the setting that a residential curtilage might have, and whether to propose earth/shingle banks to hide the car parking facility. However it was concluded that given the nature of the proposed residential use as a holiday home, an isolated car or two temporarily parked in the proposed area will be less intrusive into the setting of the tower and less permanent than earth or shingle banks.

Accessing the tower - A set of stone (or rough concrete) steps gives pedestrian access to the lowered level of the ground immediately adjacent to the tower. The design of these steps is reminiscent of, and inspired by, the steps encountered all along this beach's groynes. From the lowered ground level a new external staircase with a metal structure and open timber treads takes you to the reinstated main entry to the Tower at first floor level, as originally intended.

The reinstatement of the first floor level entrance also provides the tower occupants a safe layer of protection against any risk of flooding. By removing the existing modern entry point at ground floor level and having the building entrance / door above the level which would be at risk of flooding, it provides the occupants of the building, if ever surrounded by floodwaters, a safe space within the building, with a means of escape at roof level.



Location Plan figure. Proposed access route off Martinique Way highlighted in green



Artist impression of Martello Tower 66 proposal

4.3 Design, appearance and materiality

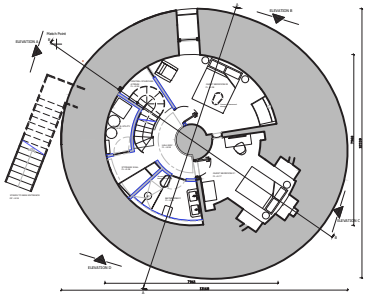
The proposed conversion with its new roof is designed to have a minimal effect on the setting and external appearance of the tower, maintaining its current profile and silhouette. Its design is of modern form, yet subtle and elegant, with modern materials to provide a contrast with the materials and character of the existing building. The scheme uses all existing fenestrations, with windows proposed within the few existing openings and designed to avoid the frames being visible externally.

The proposed scheme partially retains the WWII emplacement skin at gun platform level to illustrate, from the landward side, the historical changes that were made to the towers for WWII defence. The new roof extension design sits well set back from the WWII skin and original parapet edge of the tower, following the parapet circular form. This design gesture allows for the new and the old to coexist in harmony, whilst returning to the tower its original uninterrupted walkable 360-degree open views.

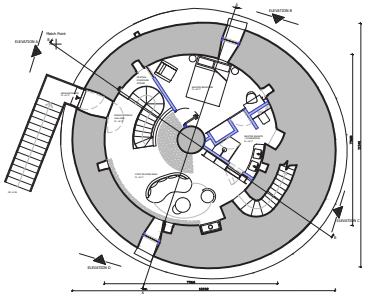
This new proposed, set-back roof extension is capped with a circular zinc clad, light construction metal and timber structure roof held up on eight circular galvanised steel columns. This circular central roof only comes to the edge of the WWII skin edge, reducing the prominence of the roof soffit, yet providing shelter and helping with the energy efficiency of the overall building.

Zinc is a metal that performs extremely well in coastal environments. We propose to use pre-patinated zinc roof sheets which have a dull non shiny finish, and can be pre-pigmented in a mid grey colour that will work well and easily blend in with the towers' exterior. A curved skirt of frameless sliding glazed walls floats between old and new and provides stunning 360-degree views of the coastal landscape. The new roof steel supports and other construction details are intended to be designed and carried out with systems and methods extensively used in historic buildings and with the methodology approved by Historic England and granted Schedule Monument Consent.

Above this roof level sits the coastguard-like lookout volume, reminiscent in shape and openings to the current coastguard building. It is a sound and safe structure, that not only provides the scheme with a valuable and attractive habitable space, but also a safe means of accessing the coastguard equipment located in the new roof. The materials proposed are to be modern yet sympathetic in colour and finish to that of the main tower and level in between.



MARTELLO 66 PROPOSED GROUND FLOOR
KEY PLAN / Scale 1:1250 @A3



MARTELLO 66 PROPOSED FIRST FLOOR
KEY PLAN / Scale 1:1250 @A3

Internally the proposed scheme attempts to celebrate the central column and refrain from substantial changes to the existing fabric, and proposes a contemporary design with natural and light finishes that will be of lightweight construction stud construction.

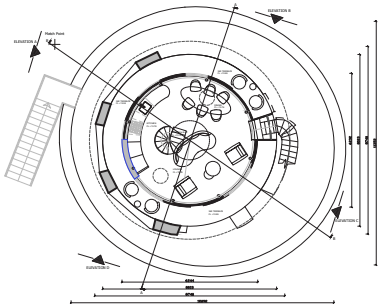
The existing brickwork walls of the tower will be repaired, maintained and left exposed throughout first floor and part of the ground floor, where possible, and will form part of the unique character of the interior of the tower. The dry lining for part of the new rooms on the ground floor will be attached to the new floor structure and the first floor new floor structure above in order to hold it off the existing structure.

There are other design details that have been conceived to highlight the unique shape of the tower interiors. For the example the internal spiral staircase linking the first and ground floor levels, is located within a full height void, which allows for a full understanding of the geometry and proportions of the interior of the tower, from top to bottom.

Entering on the first floor, one is welcome into an open plan space focused on the tower central pillar. There are only two new light construction walls in this level that reach the domed ceiling. These are the two walls defining the master bedroom suite. However these two walls do not reach the actual ceiling as a solid element. This design gesture allows the user to always have a clear view of the original domed ceiling through and through. The solid part of these two tall walls is to be cladded in a light timber panelling, inspired by an artistic impression we found of how this level might have looked in original Napoleonic times. These series of design details allow the user to clearly read the geometry of the original domed ceiling and, at the same time, it serves to locate hidden feature lighting to illuminate and enhance this unique central space.

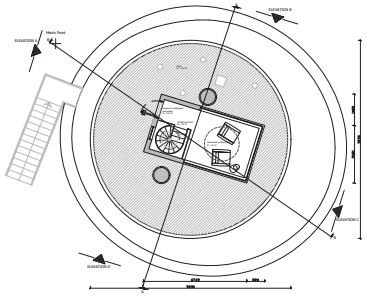
There are two areas of the new timber floor on this level that have etched walkable glass, which allows for more natural light to be pass onto the ground floor level.

At ground floor level are located the remaining sleeping quarters, a second full bathroom, storage facilities and the plant and utility room. The spatial distribution of these new spaces has been carefully designed to allow for the running of all key services without causing harm to the tower's fabric. Further, the servicing of the tower is to rely on the use of the existing conduits in the tower, which were originally constructed for ventilation purposes, but it is also intended that they can carry the required services from the top levels down to the basement. They will also be used as originally intended, by terminating at the rooftop level and aiding the ventilation of the internal spaces and brickwork. Overall, the tower services will be fed from the Marina Site 1 connections onto the general systems, part of the local and regional grids.



MARTELLO 66 PROPOSED SECOND FLOOR

KEY PLAN / Scale 1:1250 @A3

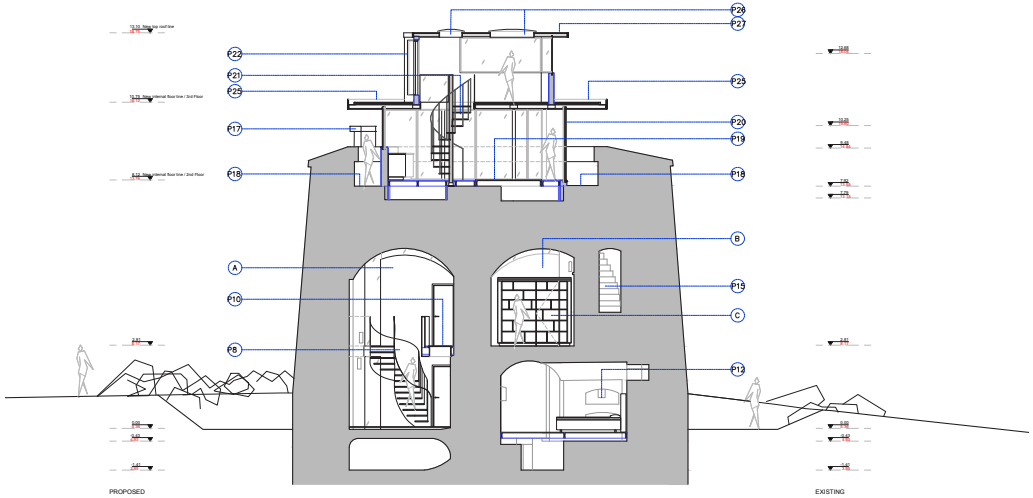


MARTELLO 66 PROPOSED THIRD FLOOR

KEY PLAN / Scale 1:1250 @A3

Going up to the original gun platform level, the scheme proposes to place in this level the main living area and kitchen, which immediately removes the major fire risks from the interior and sleeping areas of the building.

The new light construction timber floor for this level is raised from the original floor level, allowing for the insertion of a clear walkable glass section which will showcase all the original levels and function of the gun platform level, beautifully lit. At the same time, it allows for a water ingress safe step down access to the open walkable gallery or terrace all around the original tower's perimeter parapet wall. This will give the user truly remarkable views and an understanding of its original shape and function, as well as an understanding of the vestiges of the WWII emplacement geometry and characteristics. The sliding curved clear glass walls, proposed to define the enclosure of this new addition, will allow, when opened, to dramatically enhance the experience of the reinstated 360-degree views.



Proposed Martello Tower 66 section BB

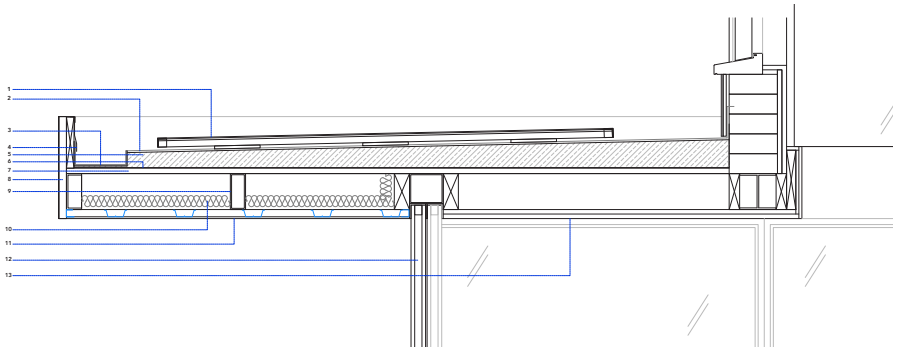
From the heart of this level a new light and safe metal spiral staircase takes you to the roof level gallery or observatory. This is a small space, of same proportions and similar openings to that of the existing coastguard volume. Not only does it preserve the existing silhouette of this tower but it also gives a safe access to the roof for the maintenance of the coastguard equipment, and provides the occupant with a truly unique lookout point facing the seaward to take in the glorious views and that significant feeling of isolation that this unique war defence construction setting has.

4.4 Sustainability

We feel that there is a great opportunity to harvest solar energy by introducing a solar panel system for the proposed flat roofs to the proposed new rooftop structures that will not significantly impact the inter-visibility between the chain of Martellos at this location, and therefore the high contribution this inter-visibility provides to their significance. This is something discuss with and is supported by Historic England.

We have studied and considered in detail the currently available solar energy harvesting systems and concluded that PV solar panels designed for flat roofs, like the rooftop structures proposed, are the best possible way forward. This system is laid completely flat on top of the flat roof, and each solar panel has a height of approximately 3cm, which will make it practically invisible from ground level or even afar.

To mitigate the visual impact that these solar panels might have from the top level apartments from the block of flats around the Marina, these solar panels will be coloured in a grey colour to match and blend in with the rest of the flat roof finish. This is something that most reputable solar energy system companies offer these days.



Martello Tower 66 sectional detail of proposed rooftop structure roof with PV panels system laid flat

Detail Legend: 1- PV solar panel / 2- Waterproof Sarnafil membrane / 3- Perimeter gutter / 4- Sarnafil flashing detail / 5- Rigid thermal insulation forming the falls / 6- vapour control layer / 7- Ply deck / 8- Edge zinc facial / 9- Main roof structure / 10- Thermal insulation to terrace roof overhang for cold bridging 11- Zinc soffit to terrace roof overhang / 12- Curved double glazed sliding panes to terrace / 13- Internal double layer of plaster board.

As part of this proposed solar system we are also proposing the use of a solar battery storage system, such as Tesla Powerwall. This will make possible to store any surplus solar energy produced during the day, and then use it whenever there's a demand for power.

We have allocated sufficient space for solar battery storage system in the plant room of the tower, at ground floor level. The installation of all of the above systems require minimal run of cables to connect the different elements of the systems, that can easily be done through the tower existing and unused shafts, for example from the old fireplaces, onto the new floors and stud walls, without really impacting on the fabric of the towers.

The proposal for heating and provision of instant hot water to the tower will be based on electric systems, connected to the grid and to the solar panel system at roof level. Using modern electric systems to provide the towers with the heating and hot water requirements allows for minimum impact to the towers fabric and maximum flexibility of use, with a very efficient and sustainable set up.

4.5 Other Considerations and Design features

Dry Linings

To achieve the desired proposed layouts we will need to implement a series of new partition walls which will be constructed in timber stud construction with internal insulation and plasterboard linings, ready for skimming and decorating. These new partition walls will be fixed to the new floors & ceilings to avoid unnecessary impact to the existing fabric of the tower.

Running services through existing shafts

There are a series of ventilation shafts throughout the towers' walls that have the potential to be used to run some minimal services, such as a electrical cabling and 40mm diameter water waste pipes. In particular from the second floor rooftop extension. Our proposal has been intentionally designed so there are minimal services to be run from the rooftop extension to the ground level. These will be the cold water pipe feed, approximately 20-25mm diameter, the sink waste pipe, approximately 40mm diameter, electrical feed from and to this level, and from the proposed solar system panels to the ground floor.

All these services can be easily run in the surface of these existing shafts, causing no impact to the fabric of the towers. A 3D mapping of these shafts will be carried out at a later stage in the project process to establish which shafts will be more adequate for this use.

Any services running from first to ground and vice-versa are carefully designed to be accommodated within the new stud walls, dry lining areas, and through the new floating timber floors structure. In fact the proposed layouts for the towers are the result of several layout plan studies to find the best and shorter possible routes for services, yet providing quality usable and functional rooms.

The exist and entry to the tower of these services will be done at ground floor and below ground floor level through the current existing entrances to the towers, again avoiding further impact to the towers' skin.

Safely accessing the roof

Safe access must be provided to Martello Tower 66 proposed rooftop structures to maintain the roof, gutter, the proposed solar panels system, and to also maintain the Harbor Authorities equipment.

To achieve the highest level of safety yet create the minimum visual impact we are proposing the use of Roof Safety Lifeline System - VantageLine. This system contains a powerful integral shock absorption system that reduces the fall-arrest shock loads to very low forces, which protects the operatives and the roof itself. The system consists on a series of very discrete anchors made out of marine grade alloys with a fixing plate that can be weather t-tight installed onto Sarnafil membrane roofs. To these anchor points a 316 stainless steel cable system that allows excellent freedom of movement to safely navigate the building contours.

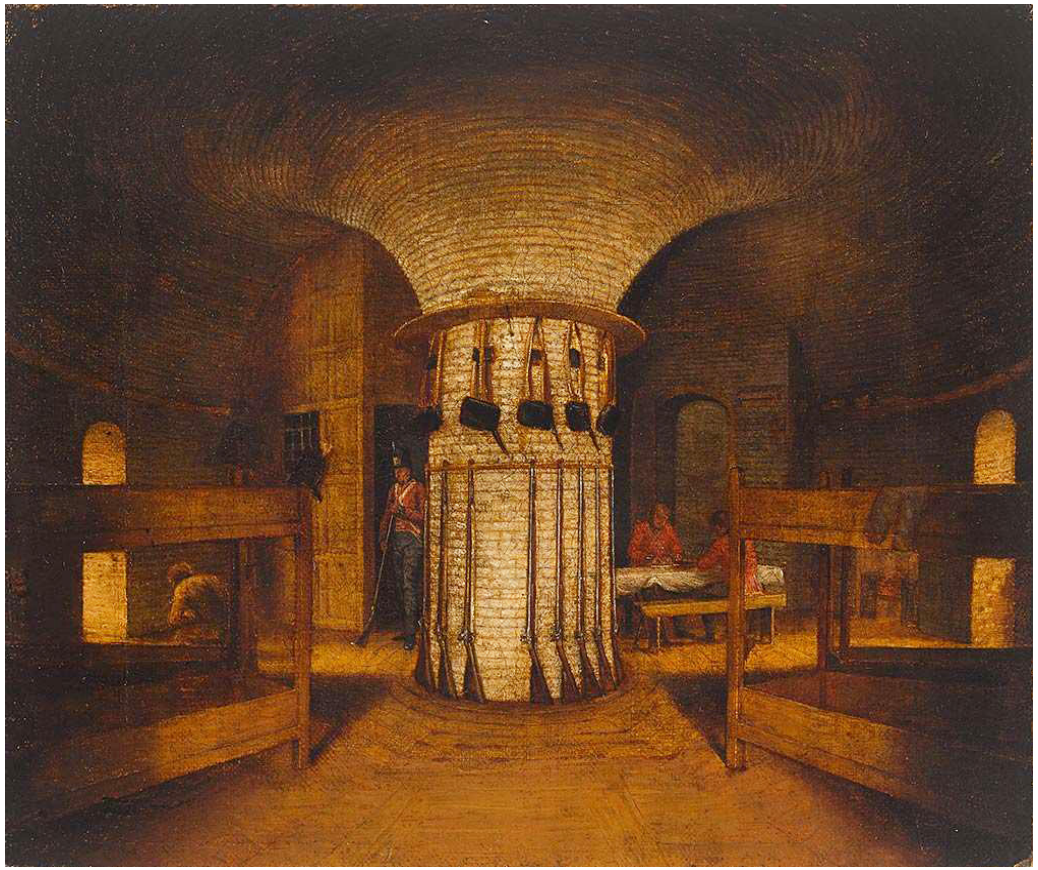
Maintaining the Harbour Navigation equipment

An agreement is in place with the Harbour Authorities and Sovereign Marinas that warranties full access to Martello Tower 66 for the maintenance of their Navigation lights and signalling equipment that will be located in the new proposed roof.

Detailing the Interiors

The interiors palette for the proposed conversion of this Martello Tower is inspired by their materiality and history. it is conceived to create a balanced dialogue in between the existing and the new, where the existing finishes are enhanced by the simplicity of the neutral warm tones of the new. The proposals seek to create a coherent design that gives protagonist to the existing fabric and materials of the towers, yet provides a modern intervention with carefully thought through and crafted details.

We consciously step away from modern finishes such a chromed, brass or stainless steel finishes, as we strongly feel such finishes will be alien in this environment. Instead we want to work with simple natural materials, like wood, metal and stone, and a muted yet warm colour palette, to highlight the humble and utilitarian quality of the original tower use. As depicted in this painting by Captain William Henry Ford, The Interior of a barrack room, c.1812 (oil on canvas) that has been a strong source of inspiration since the very beginning of this project.



The interior of a barrack room, by Captain William Henry Ford, oil on canvas, c.1812

Amenity

The proposal aims to continue to allow the public use of the beach-scape belonging to Martello Tower 66 boundary line for the amenity of the local residents and this area's visitors. We strongly believe the proposal will enhance amenity through the restoration of Martello Tower 66, placating the regular vandalisation and misuse of this historic asset, whilst making it a much more desirable amenity space for everyone.

Waste collection strategy

A combination of domestic recycling and non-recycling bins are provided within the inside spaces (kitchen & bathrooms) of each proposed scheme for the towers. The disposal of the domestic waste will be carried out by the occupants and the cleaning team, and will be taken to the existing collection points within the surrounding neighbourhood.

We had considered to have a designed provision outside each tower for this matter, however we concluded that this will have a considerable permanent visual impact on the towers, plus given the history of vandalism towards the towers it could also result on the external bin storage to be destroyed, littering the site.

Lighting assessment

There is no provision for externally illuminating the tower. Although during the design process with Historic England we discussed the possibility of illuminating the tower externally we all agreed that this could create a high level of light pollution for the surrounding environment. Therefore we concluded that other than minimal guiding steps low level light fittings at ground level to safely access the tower and a security (anti vandalism) movement activated timed light fitting in the main entrance door at first floor level, any other external lighting should be avoided.

Light pollution from the internal lighting will be minimal, especially landwards, as the tower has very minimal existing fenestrations set within its very thick walls. Furthermore, the new proposed roof structure is set far back from the WWII skin on the landward side which will further filter the internal lighting when the tower is being used.

Noise impact assessment

Martello Tower 66 sits far from every other residential building, being this fact very important for the tower's significance. The proposal does not change this, nor does the proposed change of use to single dwelling holiday home. Therefore we concluded that the noise impact the proposal will have in its surroundings will be minimal or null.

Consultations

We have met with with Sovereign Marina Residents Association, The White Point Houses residents and the developer of Site 1 to show and discuss with them the proposal for Martello Tower 66, which has been received very positvely by all of them.

5 - Conclusion

Over the past four years we have worked very closely with Historic England to reach a design proposal that ultimately has the conservation and preservation of Martello Tower 66 at its heart, providing a new sustainable use for this tower that will not only benefit the user but also the local community, by means of giving this beautiful historic asset a new lease of life, creating a safe environment and a new destination or everyone to enjoy.

The proposal is believed to be modest and in line with local planning policy and local context, as well as addressing every concern raised by Historic England during the design process. Its design's scale and geometry respect the character and significance of the building and its settings. The proposed design replicates the Tower's existing silhouette, and reveals its original proportions and way of access enhancing its historic layering.

Internally, the proposal respectfully adapts to the geometry of the tower, enhancing key historic features through carefully thought out layouts that allow the resident to understand and feel the original humble and utilitarian use of the tower. At the same time a warm materials palette that takes inspiration from the tower origins combined with new and sustainable systems will provide an efficient and unique holiday home.

The proposal presents a very unique opportunity to carefully restore and conserve this valuable historic asset, a process that will be carefully carried out with the supervision and approval of each step by Historic England.



Artist impression of Martello Tower 66 proposal

Design & Access Statement

Martello Tower 66

Langney Point, Eastbourne

Agent: Koldo&Co. Ltd
+44 (0) 7958902764
koldo@koldoandco.com
www.koldoandco.com

KOLDO&CO.STUDIO