DESIGN JUSTIFICATION

THE EDGE | CUMBRIA COASTAL ACTIVITIES CENTRE

Whitehaven Harbour | Whitehaven

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On behalf of the applicant:

Whitehaven Harbour Commissioners

Project Description	Cumbria Coastal Activities Centre, Whitehaven
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Applicant	Whitehaven Harbour Commissioners

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1 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This Design Justification has been written in support of the Section 73 application to vary Condition 2 (compliance with approved drawings and documents) of planning permission 4/20/2180/0B1. Variations to the approved drawings are required for the following reasons:

- To address the shortcomings relating to construction practicalities, affordability and functionality in relation to the specific requirements of the building users.
- To improve the architectural integrity of the building by reducing the material palette; simplifying junctions; creating cohesion between all facades; and enhancing the sculptural quality of the building.
- To provide a robust form and 'shell' capable of withstanding harsh weather conditions. The construction techniques and materials proposed must be covered by a 12-year warranty and 20-year insurance backed guarantee in order to protect the viability of the development over the long term and reduce any financial burden for future occupiers.

Over the past two years, the proposals have been refined and engineered to address the primary issues outlined above and meet the affordability criteria which is reflected in the Section 73 proposals. At the time of writing, the scheme is now fully funded and fixed building costs have been secured; it would therefore be beneficial to the programme if a delegated decision could be made.

This application relates solely to the main building, which is similar in size, is consistent in overall form, and retains the same primary uses and position on the quayside. The proposed changes reflect the conceptual vision outlined in the original application while embracing the reality of constructing a unique, architectural form in a coastal environment.

This document, therefore, provides explanation and justification for the design changes that have occurred throughout the detailed and technical design process, all of which are considered positive and necessary in realising the unique sculptural form of the building and ensuring its sustainability in the long-term.

2 DESIGN JUSTIFICATION

2.1 CONCEPT

The original architectural concept developed as a response to the extremes of the immediate environment, where large rocks are thrown upon the outer piers of the harbour by the sea. These natural and transient sculptures created a departure point from which to develop a conceptual abstraction of nature, which became the eroded rock form of the Cumbria Coastal Activities Centre.

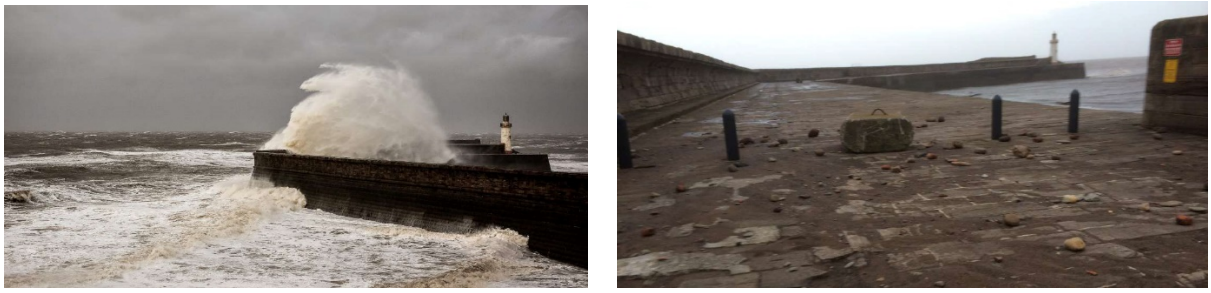


Figure 1: The above images show the West Pier of Whitehaven Harbour being battered by the sea during a storm (left) and the rocks and pebbles that are deposited on the pier as a result (right).

A small red sandstone sculpture was commissioned to illustrate the architectural concept, providing the project team with an engaging, tangible focus for the development of the early design proposals. We have since revisited this departure point in order to improve the integrity of the final form and ensure the building relates directly to the immediate context.

Figure 2: A small red sandstone sculpture, commissioned to illustrate the 'Pebble' concept.

2.2 MAIN BUILDING

2.2.1 INTERNAL LAYOUT

The development of the internal layout of the building was prompted by the need to fully enclose the building and provide a weathertight skin. This coincided with the business requirements of the project which required a greater proportion of hotel style accommodation in order to support the primary function of the building as a Coastal Activities Centre.

While the original application relied heavily on two-dimensional data to determine the layout of internal spaces, the building's translation into a working, three-dimensional digital model resulted in a more realistic internal arrangement. This inevitably gave rise to a shift in the layout, where the internal planes of the external walls were angled to suit the structure, allowing the originally long and thin plan of the building to become more condensed.

The layout of the building and its primary uses, however, remain largely consistent with the original application, and the internal arrangement has improved in efficiency and functionality due to the removal of the semi-external corridor.

SEMI-EXTERNAL CORRIDOR

The semi-external corridor resulted in a complex series of problems relating to layout, weathertightness and durability, particularly in relation to the mechanical aspects of the sliding mesh screens, the risk of rust, and the failure of any component part. This was further compounded by the need to maintain manufacturers warranties and ensure the building remained a robust and durable structure on the quayside.

The internal layout was therefore redeveloped to remove the need for the semi-external corridor fronting the harbour, allowing for the development of a fully weathertight skin which would ensure the building's continued use year-round.

It was also considered that the previous plans allowed for the best views to be obtained solely from the semi-external corridor rather than the internal rooms. The removal of this corridor therefore allowed for the best possible views to be achieved from within the building, with much of the circulation space now concentrated to the southwest façade.

ACCESSIBILITY

Due to level changes across the site and the recommendations detailed in the approved flood risk assessment, the building was required to be raised up on a 600mm plinth. This created a more prominent level difference on the quayside, which required a stepped approach up to the terrace and the northeast entrance.

The alternative entrance, located on the southwest façade, is accessed from a pavement which will be graded as part of the landscape strategy, and is located almost directly opposite to the accessible parking bays and the main car park. Both entrances are deemed equally important, with the southwest entrance in particular providing access to pedestrians on West Strand or those making use of the rear car park and equipment storage compound. Furthermore, both the southwest entrance and the northeast entrance open into the same entrance lobby space.

A full breakdown of internal layout alterations is described below.

2.2.1.1 GROUND FLOOR

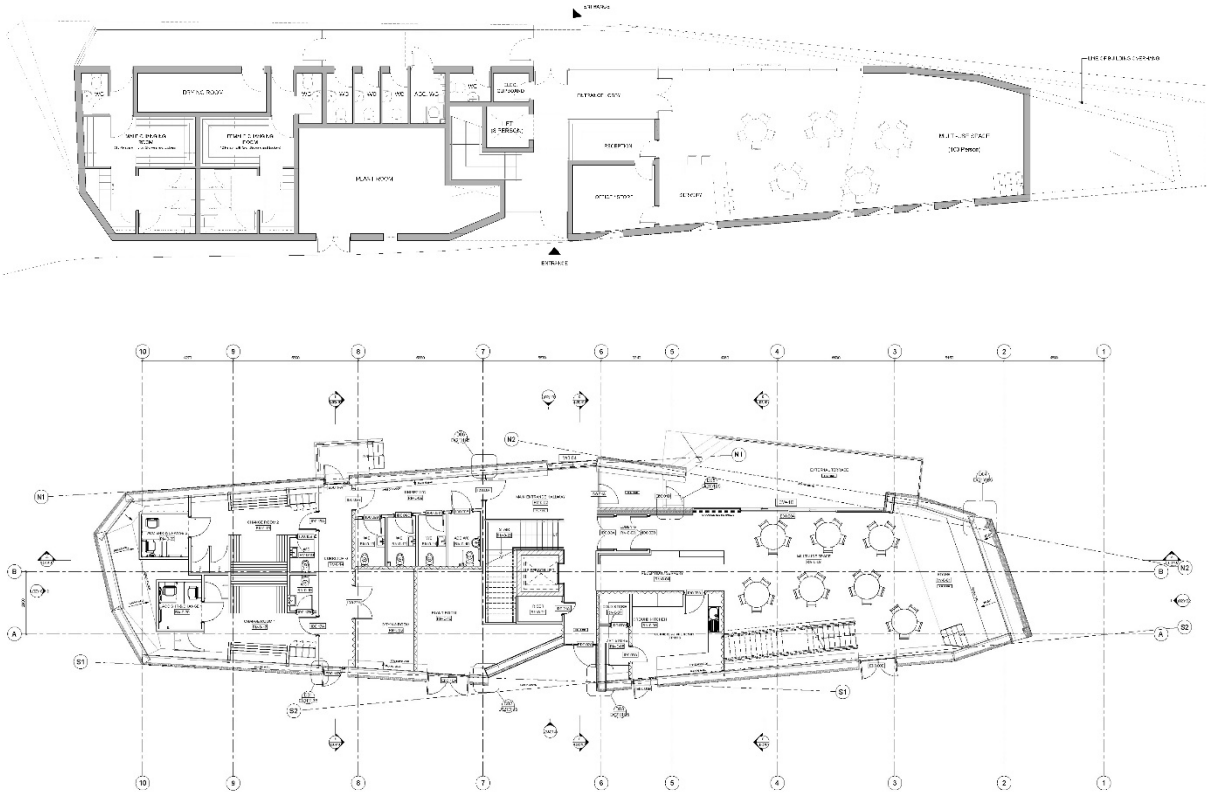


Figure 3: The approved Ground Floor layout (top) and the revised Ground Floor layout (bottom) showing the incorporation of the semi-external corridor into the footprint of the building.

The changes to the Ground Floor layout are as follows:

- The Ground Floor layout has been adapted to make use of the redundant areas created by the original semi-external corridor. Most notably, the changing rooms have been rotated to make use of this space.
- The drying room has been relocated adjacent to the plant room.
- A commercial kitchen has been provided adjacent to the Multi-Use Space and Reception / Servery.
- An external terrace is provided adjacent to the entrance and Multi-Use Space.

2.2.1.2 FIRST FLOOR

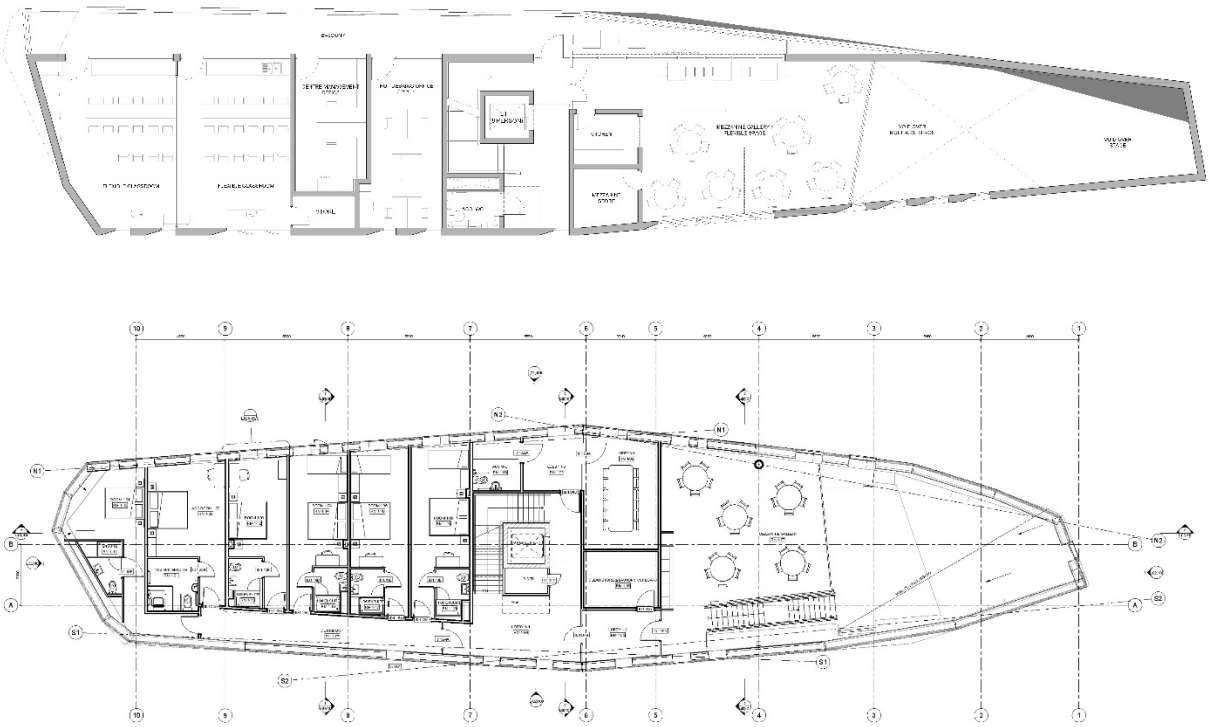


Figure 4: The approved First Floor layout (top) and the revised First Floor Layout (bottom) showing the incorporation of the semi-external corridor into the footprint of the building and the additional hotel-style accommodation rooms in place of the classrooms previously proposed.

The changes to the First Floor layout are as follows:

- The First Floor layout provides 6no. additional hotel accommodation rooms in place of the classrooms previously shown. It is intended that educational activities will now take place in the Multi-Use Space at both Ground and First Floor level.
- A kitchenette has been provided to the Mezzanine Gallery in place of the kitchen previously shown. A full commercial kitchen has now been provided at Ground Floor level in its place.
- The removal of the semi-external corridor has allowed for enlarged facilities and direct, unobstructed views across the harbour.
- A meeting / office space has been provided overlooking the harbour.

2.2.1.3 SECOND FLOOR

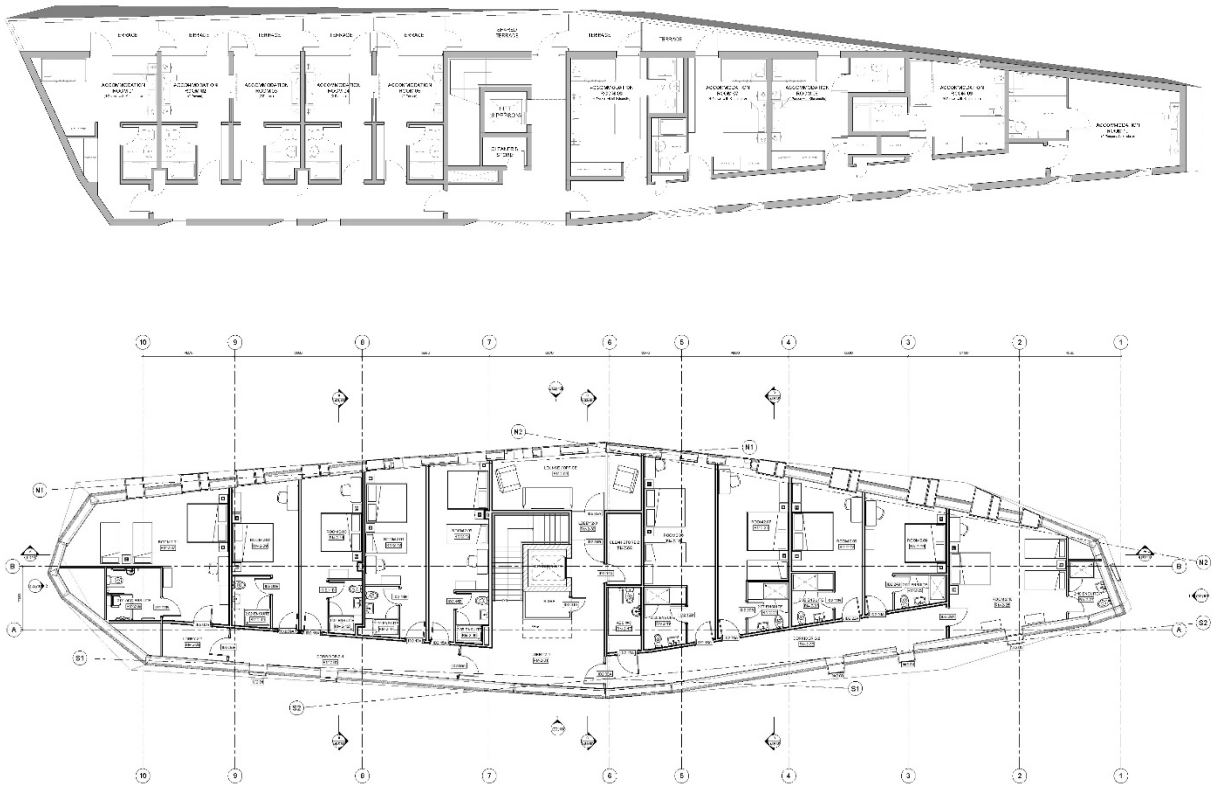


Figure 5: The approved Second Floor layout (top) and the revised Second Floor layout (bottom) showing the incorporation of the semi-external corridor into the footprint of the building.

The changes to the Second Floor layout are as follows:

- The Second Floor layout removes the external terraces fronting each accommodation room to provide enlarged facilities and direct, unobstructed views over the harbour.

2.2.2 MATERIALS

The original application used a mixed palette of materials comprising copper alloy cladding, standing seam cladding, sandstone cladding, and copper mesh. Following further investigation, however, these materials were deemed to be unsuitable for a saline environment and were ruled out.

With input from specialist contractors who work in coastal environments, a new product was identified: VMZinc Pigmento Red cladding. We believe that by using this material, which is pre-weathered and characterised by its stable pigmentation, we can deliver a more robust, simplified and refined version of the architectural concept, and positively contribute to both its appearance and buildability.

Examples of the proposed VMZinc cladding material can be seen in the images below:

Figure 6: Images of the coastal House in Ballycotton clad in VMZinc Pigmento Red

VMZinc Pigmento Red cladding, which has a matt finish reminiscent of natural red sandstone in colour, has enabled the Design Team to develop a weathertight façade capable of withstanding the harsh, coastal environment. The use of one primary material has also simplified the junctions of the building, is more capable of realising the unique structural form, and reduces the risk of reflectivity issues due to the material's matt appearance.

The use of a lightweight structure and the VMZinc Pigmento cladding system has also enabled the Design Team to develop the elevational treatment in three dimensions, creating one single façade that wraps around an internal structure. We believe that this development has created a more cohesive building, has strengthened

the original concept, and has given the wrongly coined ‘rear façade’ the same architectural treatment as the remainder of the building.

Figure 7: The southwest facade has been given the same architectural treatment as the remainder of the building in order to reinforce the original architectural concept.

The previously smooth façade has been further developed to enhance the building’s legibility as a conceptual, hewn rock by incorporating varying widths of standing seam panels, which give the building a textured appearance. These adaptations now allow the developed concept to be viewed in three dimensions, creating a dynamic and dramatic vision from all vistas.

A visual journey around the exterior of the proposed building can be found in Section 3 of this document.

FENESTRATION

The veneer of flush surfaces, where glazing, panelling and louvres were framed within each faced plane, has been developed to omit the large swathes of curtain walling, allowing the Design Team to reinstate recessed windows throughout the building. These recessed windows form part of a capped system which is fully drained and is supported by manufacturers’ warranties.

A full breakdown of facade alterations is described below.

2.2.2.1 NORTHEAST

Figure 8: The proposed Northeast Elevation

The changes to the Northeast Elevation are as follows:

- The Northeast Elevation, which fronts the historic quayside, has been adapted to provide a weathertight skin whilst following the design principles set out by the approved drawings.
- The revised window arrangement has been calculated to ensure all accommodation has excellent views, good levels of daylighting and minimal thermal loss to the building's most exposed façade.
- The previously proposed mesh has been replaced by bronze printed glazing, clear glazing and varying widths of VMZInc Pigmento standing seam cladding to improve the textual quality of the façade.

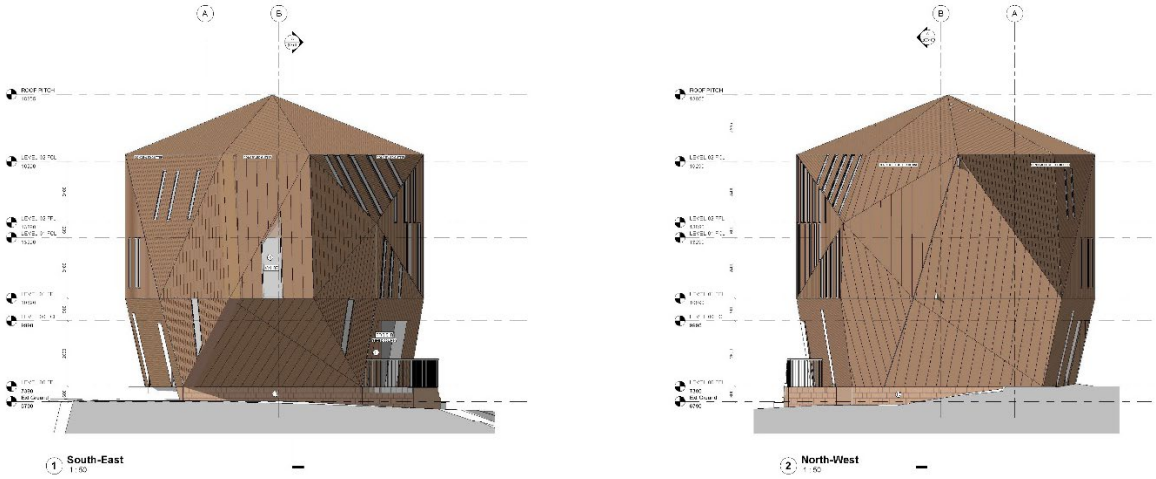
2.2.2.2 SOUTHWEST

Figure 9: The proposed Southwest Elevation

The changes to the Southwest Elevation are as follows:

- The Southwest Elevation, fronting West Strand, has been redeveloped to follow the same design aesthetic as the Northeast elevation, creating the appearance of a building with one continuous façade.
- It is considered that the revised façade is more in keeping with the original architectural concept.

2.2.2.3 SOUTHEAST AND NORTHWEST



The changes to the Southeast and Northwest Elevations are as follows:

- The Northwest and Southeast Elevations now reflect the changes to the Northeast and Southwest facades, allowing the sculptural, architectural form of the building to be viewed from all vistas.

3 KEY VIEWS

3.1 KEY VIEW MAP

One of the primary shortcomings in the original Section 73 submission was the lack of three-dimensional images showing the building within its context. We have therefore developed the following key views using 3D topographical data of Whitehaven's harbour and the 3D architectural Revit model which has been prepared during the detailed and technical design stages of the project.

This visual study is intended to give the reader an impression of how the proposed structure will look in the quayside environment, with seven views looking towards the site and its surroundings.

These views are an actual representation of the technical building model and display detail from street level up.

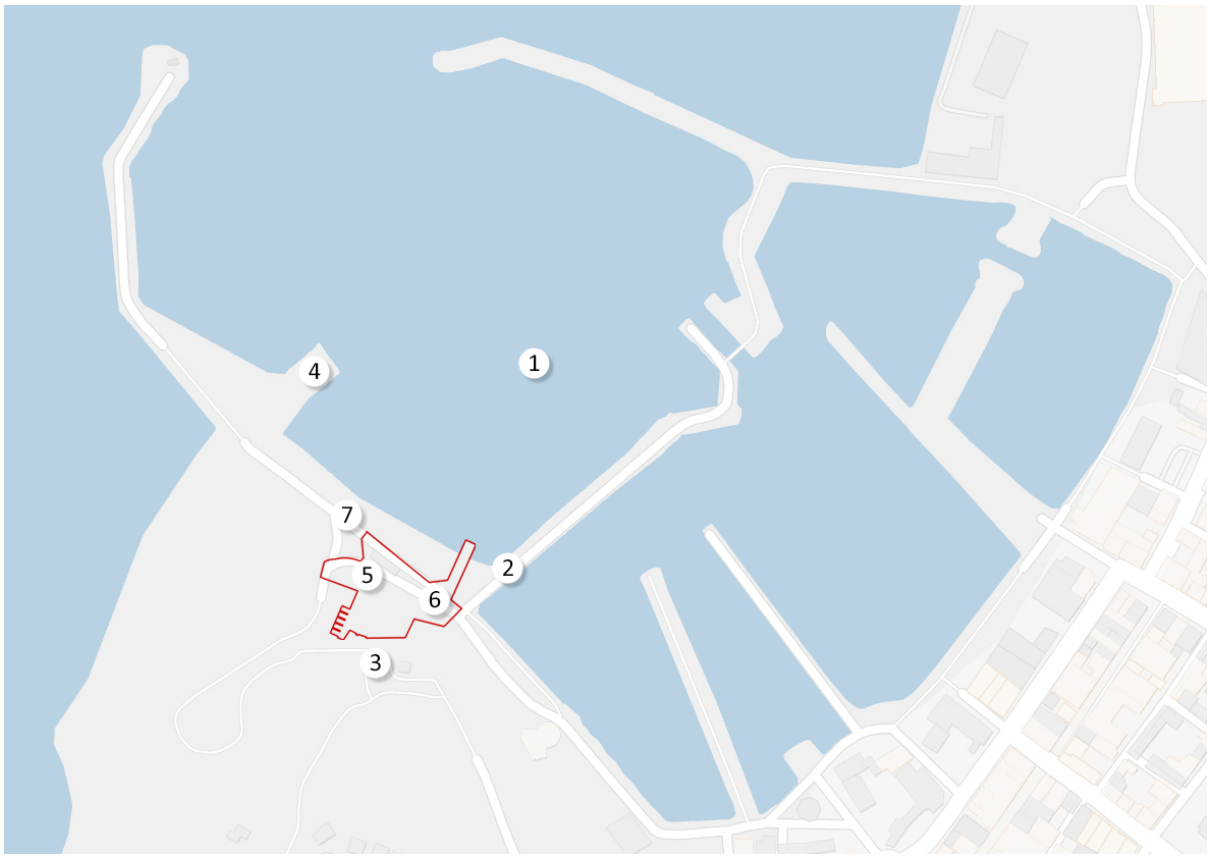
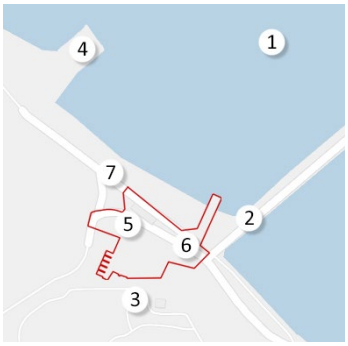


Figure 10: Whitehaven Harbour map showing the locations of each key view.

3.2 KEY VIEW 1

Key View 1 is taken from the centre of the Outer Harbour and provides a direct view of the northeast façade. This vista is a primary view for marine traffic entering and exiting the Inner Harbour and demonstrates the appearance of the building when viewed from North Pier and the lock gates.

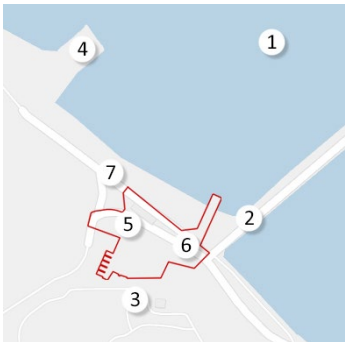
Figure 11: Key View 1.



3.3 KEY VIEW 2

Key View 2 is taken from the Old Quay, across the newly constructed slipway towards the proposal. This vista demonstrates the dynamism of the façade when viewed from alternative angles and illustrates the entrance and terrace on West Pier.

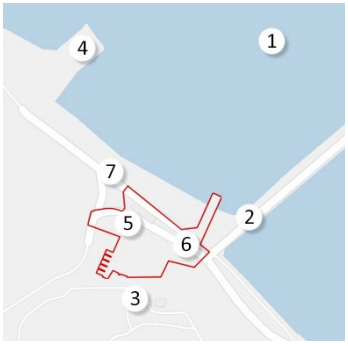
Figure 12: Key View 2



3.4 KEY VIEW 3

Key View 3 is taken from the pathway that loops around Wellington Pit and looks down over the site. From this vantage point, both the equipment storage compound and the southwest façade of the main building are apparent. Most significantly, this view demonstrates the design alterations to the southwest façade, allowing the concept of the eroded rock form to be viewed in three dimensions.

Figure 13: Key View 3



3.5 KEY VIEW 4

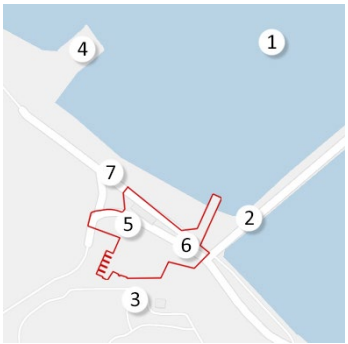
Key View 4 is taken from Old New Quay looking back towards the Coastal Activities Centre. The Candlestick of Wellington Pit, the Beacon Museum and Whitehaven town can all be seen from this vista, with the eroded rock form of the Coastal Activities Centre nestled below the line of the cliff face behind.

Figure 14: Key View 4

3.6 KEY VIEW 5

Key View 5 is taken from West Strand, looking back towards Wellington Lodge and Whitehaven Town Centre. Like Key View 2, this view demonstrates the dynamism of the building when viewed from different angles, with the sharp planes of the building rising behind the Old Fort.

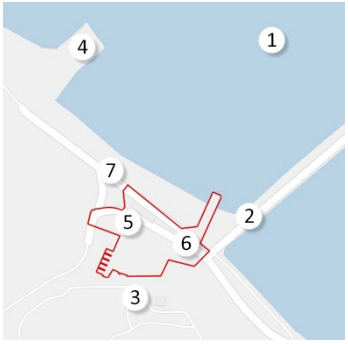
Figure 15: Key View 5



3.7 KEY VIEW 6

Key View 5 is taken from the entrance to the new slipway and shows a pedestrian view of the building upon approaching the quayside entrance. This view demonstrates the interaction between the varying widths of cladding panel and the recessed windows, and illustrates the raised plinth of the building along the quayside.

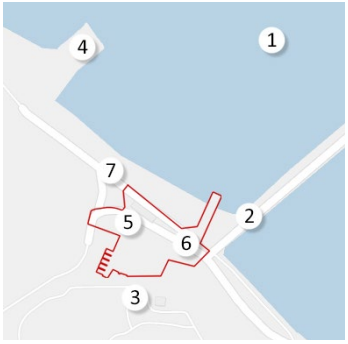
Figure 16: Key View 6



3.8 KEY VIEW 7

Key View 7 is taken from West Pier, adjacent to the Old Fort, looking back towards the slipway and Whitehaven Town Centre. The pedestrian steps between the Coastal Activities Centre and the Old Fort are visible in the foreground, with the dramatic angles of the façade featured behind.

Figure 17: Key View 7



4 CONCLUSION

In conclusion, we believe that the changes outlined in this report have led to the creation of a more refined and robust architectural form, uphold the landmark ambition of the project, and ensure that the original architectural vision can be delivered, both financially and in construction terms.

These changes have addressed the practical issues of weather, reflect the business strategy of the Applicant and have an improved abstract quality which is consistent with the architectural intent set out in the original application. We have also endeavoured to reduce associated financial risks by ensuring all component parts are supported by warranties and insurance backed guarantees.

We are hopeful that, subject to approval of the necessary changes, the Cumbria Coastal Activities Centre will be a long-lasting, unique addition to the historic landscape which will attract visitors to the area for years to come.