

Listed Building application statements for additional aspects of the St.Mary's quay improvement project.

16 January 2014

1. Removal of the remaining concrete block surface and replacement with reinforced concrete.

The current approved Listed Building application for the proposed new quay extension shows that the Council have approved a finish for the surface of brushed concrete.

The recent emergency repairs to form a new quay deck in concrete which had to be undertaken after significant storm/wave damage which occurred to the structure during the storms over a week in early January 2014. This wave damage lifted the concrete block surface of the quay (the concrete blocks were laid in 1998 over a sand blinding, over a concrete slab which was placed over the original quay structure). These storms removed sufficient blocks to force us to remove the remaining blocks in an area of approximately 635m<sup>2</sup> (area A on the plan) of the quay surface. The work that has been undertaken as an emergency to provide a surface for essential freight deliveries to the islands has been carried out to match the proposed finish for the proposed quay extensions previously approved LBC and is brushed concrete.

This proposal is for removing the remaining approximately 400m<sup>2</sup> (area B on the plan). The original choice of these block for this particular situation have proved over time to be an ineffective method of providing a surface for this structure. On three occasions over the last 10 years some smaller areas of this surface have previously been removed by storm water/water. Some of the areas of the surface and have sunk, owing to the sand bedding beneath the blocks being washed out, creating ponding of water making some areas of the quay surface unusable for storage of freight and use for access by pedestrians for some short periods during the year.

This proposal will match those works that have already had to be undertaken to ensure that the quay, as an essential and main access point into the islands for freight and passengers, is protected for the future.

The reinforced concrete laid to falls to prevent ponding of water and will have a brushed finish to match that of the previous LBC already approved for other areas on the quay.

This surface will then match the remainder of the quay surface, 50% of which is already brushed concrete laid over the original quay structure to form a uniform visual effect.

It is also proposed that the original handrails are replaced in the same position but the additional provision of a vehicle impact barrier is placed in front of the handrails facing towards to the working area to protect foot passengers and the handrail itself from any impact by large heavy manoeuvring vehicles which is a standard Health and Safety requirement. This will replace the original large sections of timber temporarily placed in front the handrails, on the deck, which were used in an attempt to provide some safety function but which had limited effectiveness and did not comply with any regulations and did not meet any impact specification requirements. Please see example attached of proposal. These are the usual types of equipment used for the protection of pedestrians from vehicle impacts.

2. Removal of the existing wave wall and its replacement with a new structure.

During a recent structural survey of the quay the existing wave wall to the end of the quay which is currently an average of 1.2m high and 60m long and 600mm wide, has been found to be affected by years of salt water immersion and the carbonation testing undertaken as part of this structural survey have found that the wall requires replacement. A copy of the report is enclosed.

The proposed replacement, designed by URS our Marine Engineering Consultants, would be a reinforced concrete structure, the same as the original, but 1.5m high, to improve the wave protection, (without impacting on the views of the sea from the quay) and 500mm wide with a large reinforce foundation toe protruding into the freight yard by 2.5m which will also form the deck surface in that area.

The height for the replacement wave wall in the previously approved application for the quay widening/extension project was to be 2.1m as per attached plan so the new proposal should be a welcome reduction in height while still providing some additional protection.

Owing to the size of the structure that is required to prevent turning forces of the impact of wave action of this replacement wave wall and its protrusion into the freight yard it is proposed that this work is undertaken immediately to prevent a later disruption to essential passenger and freight services to the islands during peak times of activity and run in conjunction with the completion of the deck surface. It would also be prudent to carry out this work at the same time so as to minimise disruption of the Cornwall Council grant funded project to extend the quay later this year.