CABINET – 6 AUGUST 2014

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BEACH HUTS AT MILFORD ON SEA (WESTOVER)

1. INTRODUCTION

1.1 The Council licences beach huts at 4 locations along the coast line. These are situated at Calshot, Milford on Sea, Hordle Cliff and Barton on Sea. Prior to the storm on 14 February 2014 there were 118 concrete beach huts located on the lower promenade at Milford on Sea, with the only wooden beach hut in this location having been destroyed in the January 2014 storms. These beach huts are located on a series of reinforced concrete slabs that run parallel with the seawall.

1.2 On 14 February 2014 this area of the coastline suffered significant damage due to unprecedented strong winds and high tides. An inspection on Saturday 15 February 2014 identified significant damage to the beach huts. This inspection and on-going inspections also identified the presence of blue and white asbestos within the construction of the majority of the beach huts.

1.3 A report was presented to the Cabinet on 4th June 2014 and the resolutions from that meeting were as follows:

(a) That the options to allow the repair of individual huts or to defer any action until long term coastal protection works are completed be discounted for the reasons explained in Report A to the Cabinet;

(b) That it be agreed that the preferred way ahead is that which is set out in paragraph 3.6 of Report A to the Cabinet, that is to demolish the remaining huts and allow beach hut owners to replace them;

(c) That following consultation with Milford Parish Council and the New Forest Beach Hut Owners' Association a further report be brought back to Cabinet in August 2014 detailing the way ahead.

(d) That the Council commission further survey work to take account of the individual condition of each beach hut but, in the meantime, the Council continue to progress the research and consultations on the preferred option; and

(e) That provided the surveys of individual huts do not reveal any structural problems that require their immediate removal, no huts be demolished until planning consent has been obtained for their replacement.

2. STRUCTURAL SURVEY OF REMAINING HUTS

2.1 Following the Cabinet meeting of 4th June 2014, as identified in 1.3 (d) above, the Council commissioned Roughton Structural Engineers to carry out a survey of each individual hut. In addition, Roughton employed a specialist company to undertake a specific survey of the roof slab. This survey included removing core samples from each block of huts, which were sent away for further analysis.

2.2 The surveys were carried out on 24th and 26th June 2014 and all hut owners were written to so that they could arrange access and/or be present at the time of the inspection. Hut owners were also given the opportunity to have their own surveyor present at the time of the inspection. Approximately 30 licence holders combined resources and employed one structural engineer to be present at the time of the inspection.

2.3 The Council received the final report back from Roughton on the 23rd July 2014 and the executive summary and recommendations are attached as Appendix 1 to this report. The whole report was made available to the New Forest Beach Hut Owners' Association on the 24th July 2014. The whole report can be found on www.newforest.gov.uk/beachhutowners

2.4 Roughton identified, in paragraph 1.10 of their report that, following expert analysis, it is their opinion the roofs are structurally compromised, or will very soon become unstable, and in their current state are a risk and present a hazard, with cost of remedial work likely to be greater than the cost of replacement. Roughton also identified that any further works on the roofs would most likely incur further damage to the existing structures. This further damage has not been allowed for in Roughton's financial predictions.

2.5 Roughton also identified, in section 1.12 of their report, that the roofs have no structural ties to the supporting walls and are lacking adequate bracing and restraint. In section 1.13 Roughton identified a large number of timber and concrete lintels and purlins that need replacing.

2.6 Roughton have identified the cost of repairs to individual huts in their report. They range from £2,330 to £5,430 excluding Vat. The total estimated cost of all the repairs to the 85 remaining huts is estimated at £329,420.

3. SEA DEFENCES AND PROPOSED CONSTRUCTION OF NEW BEACH HUTS

3.1 In tandem with the work that was being carried out by Roughton, CH2MHILL, a company specialising in construction on the coast, were tasked to produce a conceptual design for replacing the beach huts, together with estimates of the cost of construction.

3.2 In undertaking this conceptual design, they were requested to take the following factors into account:

- Restrictions on the size of the huts, particularly with regard to height (there must be no further visual impact on the properties that lie behind the huts), and the number of huts that may be constructed, as a minimum 119 will be required.
- The impacts of storm events on the new huts and their ability to withstand future events.
- That it is unlikely that any major capital coast protection scheme will be undertaken for at least 3 years.
- The existing reinforced concrete slabs that form the promenade area where the huts will be constructed.
- Materials and construction methods.
- Future maintenance of the huts.

3.3 Following an initial site visit by CH2MHILL and discussions with members of this Council's Coastal Engineering and Planning teams, it was agreed that, in addition to the above considerations, the concept design study would:

- Develop concept-level engineering options for the re-design of the beach huts. Design conditions should be able to meet the peak storm conditions reported by the Milford wave buoy on 14th February 2014.

- Prepare concept design drawings for the options.

- Provide budget construction cost estimates for the options.

- Prepare a brief options study report summarising the above.

3.4 In subsequent discussions with this Council it was also agreed that the study should assume that, should the huts be re-built, the existing promenade slab would also be rebuilt to ensure the integrity of the slab foundations of the new huts. The study was to consider engineering options only – architectural and aesthetic considerations and options would be applied by others at a later date.

3.5 At the time of writing officers are still awaiting the final report but, in draft, the summary findings of the report are:

- The replacement of the promenade slab and demolition of existing huts is estimated at £375k and will be required for all options.

- The form of beach hut currently adopted could be locally strengthened such that it can resist the wave overtopping that is currently experienced.

- A reinforced concrete beach hut could be adopted as an alternative to the current form of construction and this could provide enhanced durability and be more robust.

3.6 A full copy of this report will be made available on www.newforest.gov.uk/beachhutowners

3.7 The following cost estimate has been provided for the 3 options of hut replacement as identified below in 3.8. It is suggested that the construction of a wave wall, as identified in Option one, is rejected on the grounds of the amount of space needed to construct it on the promenade. The option of rebuilding in concrete, as a more substantial structure, at an estimated cost of £705,000 for 119 huts, is the preferred option

3.8

Beach Hut Re-Build Option based on 119 huts	**Construction Cost Estimate**
Replace as Existing (Like for Like) - Masonry structure	£400K Plus fees of 14%
Local Strengthening - Reinforced masonry (no wave wall)	£520k Plus Fees of 14%
Rebuild in Concrete - Reinforced concrete structure (no wave wall)	£705K Plus Fees of 14%

4. THE PROPOSED WAY FORWARD

4.1 Working with the information supplied within the CH2MILL report, it is suggested that a detailed design brief is developed, based on rebuilding with terraced blocks of beach huts in reinforced concrete. As part of this process the Council would invite the Chair of the New Forest Beach Hut Owners' Association technical team to represent the views of the beach hut owners in the design process. Once this design has been worked up then the District Council would submit a planning application the construction of the huts.

4.2 Whilst the design is being finalised tenders can be obtained for the demolition works and the replacement of the slab. The demolition only would take place after planning consent has been granted for the construction of the new huts.

4.3 Once the design has been finalised tenders will then be obtained for the construction of the new huts. It may be appropriate to carry out a joint tender for the replacement of the slab and the replacement of the huts at the same time.

4.4 It is proposed that each of the existing beach hut owners should enter into an agreement to pay a contribution towards the cost of building the replacements. For the 33 hut owners whose huts have already been removed from site, the contribution would be £3,832 plus Vat. This is based on the cost of rebuilding on a like for like basis - see paragraph 3.8 above. Of the remaining 85 huts, the 47 hut owners whose estimated repair costs exceed £3,832 plus Vat would be asked to pay £3,832 plus VAT (£4,598 at current VAT rate of 20%) for their huts to be replaced. The remaining 38 hut owners, whose repair costs are below this figure, would only pay the estimated repair cost of their particular hut as identified in the Roughton's report.

4.5 We will endeavour to ensure that the above works are completed so the huts are available to use in the summer of 2015.

5. FINANCIAL IMPLICATIONS

Based on the financial information set out in the reports produced by CH2MILL & Rougton the following financial appraisal is set out as follows:

Promenade Works

Estimated Costs

Removal and Replacement of Existing Slab and Beach Hut Demolition	£375,000

Estimated Funding

Coast Protection Works	(£225,000)
Site Clearance Works	(£150,000)
	(£375,000)

Beach Hut Rebuild

Estimated Costs

Reinforced Concrete Structure	£705,000
Fees (Planning, Design and Procurement etc. @ 14%)	£98,700
	£803,700
Contingency @ 10%	£80,370
	£884,070

Estimated Funding

Contribution from Beach Hut Owners

• 34 beach huts no longer in place contribute "like for like" cost	(£130,288)
• 85 beach huts contribute repair (38) or "like for like" (47) cost	(£299,589)
	(£429,877)
Beach Hut Rebuild Cost (net)	£454,193
Annual Income from Beach Hut Licences	£45,600 p.a.
Return on Council Costs	10.0%

6. ENVIRONMENTAL IMPLICATIONS

6.1 The current condition of the huts, which contain asbestos, is causing concern. The visual impact of the huts, in their current condition, also has a negative impact on the environment.

6.2 As part of any consideration to allow replacement with new huts on the existing site, regard will have to be given to the environment on which they are to be located including the views of some households who have historically had a view of the Needles.

7. CRIME AND DISORDER IMPLICATIONS

7.1 None

8. EQUALITY AND DIVERSITY IMPLICATIONS

8.1 None

9. PORTFOLIO HOLDERS COMMENTS

9.1 The recommendations below seek to balance, as far as is possible, the interests of the Beach Hut owners, the residents of and visitors to Milford-on-Sea and the wider New Forest Council Taxpayers. I support the proposed way forward and the recommendations.

10. CONCLUSION

10.1 Following the storms of February 14th 2014 and the significant damage caused to 118 Beach Huts at Milford on Sea the Council has been working hard with representatives of the Beach Hut Owners and the local community to develop a fair and responsible way forward.

10.2 The Council's immediate response has been to ensure public safety while consultations have continued work to develop a longer term solution has been undertaken. Of the original 118 concrete beach huts, 33 are no longer in place and 85 are in need of repair.

10.3 The Council commissioned a report from Roughton Engineers in July 2014 to establish the extent of the repairs required to the 85 remaining beach huts. This report has now been received and individual repair costs have been identified. In addition, the report concludes that the beach huts, in their current condition, are not fit for purpose, as the roof structures are structurally compromised and will very soon become structurally unstable. Further damage and costs, over and above the costs for the individual huts already identified, could be incurred if an attempt is made to remove or replace the roof. Site Clearance costs are estimated at £150,000.

10.4 The Council also commissioned a report from CH2MHILL into the condition of the concrete slab upon which the beach huts sit and which forms a critical part of the sea defences. This report concludes that the concrete slab should be replaced (estimated cost £225,000) prior to any construction works being carried out to the beach huts.

10.5 CH2MHILL calculate that the cost of rebuilding the beach huts on a "like for like" basis would be in the regions of £400,000 plus professional fees, and have also put forwards an option of rebuilding with more robust reinforced concrete structures at an estimated cost of £705,000 plus professional fees. The cost per beach hut of rebuilding with a "like for like" structure is estimated at £3,832 plus VAT, which compares with the cost of repairing individual beach huts, which has been identified to range from £2,330 (excluding VAT) to £5,430 (excluding VAT).

10.6 Based upon the reports received a business case has been developed that supports the replacement of the existing promenade concrete slab and the rebuilding of the beach huts using reinforced concrete.

10.7 Included within the business case is the assumption that existing beach hut owners will make individual contributions that meet either their liability for repairing their hut or the cost of rebuilding on a "like for like" basis, whichever is the lesser amount. These contributions would be subject to VAT at the appropriate rate.

11. RECOMMENDATION

That the Cabinet recommend to the Council that:

i) That a project be developed for the replacement of the concrete slab of the existing promenade, as a coastal protection scheme, with a budget provision of £225,000;

ii) A project is developed for the rebuilding of all the beach huts using reinforced concrete and with a gross budget provision of £884,070 to include estimated contributions from the beach hut owners of £429,877;

iii) That following the gaining of planning permission for the replacement of the beach huts all remaining concrete huts at Milford on Sea be demolished, but not before that time, and a budget provision of £150,000 be provided for site clearance ; and

iv) That each beach hut licence holder be offered the opportunity to sign up to the Council rebuilding the huts as set out above, to include agreement on the individual contribution payable by them.

FURTHER INFORMATION

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BACKGROUND PAPERS

Surveyor's Reports
Cabinet report 4th June 2014

APPENDIX 1

1.1 EXECUTIVE SUMMARY

Roughton has been instructed to inspect the beach huts on the sea front parallel to Hurst Road at Milford-on-sea. The purpose of this report is to comment on the general condition of the huts and to produce an estimated cost to undertake repairs to each individual beach hut in the following blocks: 52-54, 56-72, 73-90, 91-116, 117-133 & 146-150. (116 is demolished and did not form part of this survey)

Roughton have been asked by NFDC to assess both the existing latent defects that were exposed as a result of the storms as well as the damage that the beach huts sustained in the storms of Winter 2013/2014, recommend remedial works, and provide budget costs for the recommended work.

This report should be read in conjunction with Roughton structural survey report of the beach huts which took place on 28th February 2014.

The principal building works identified within this report include:

- Rebuilding of demolished and damaged concrete block walls
- Replacement of concrete and timber lintels
- Replacement of timber purlins and wall plates
- Replacement of missing and damaged timber fascia boards
- Removal of damaged internal false ceilings and upvc cladding
- Replacement of missing and damaged door frames and doors
- Replacement of concrete roof structures and associated materials
- Repointing repairs
- Installation of expansion joints within each block as a complete scheme
- Asbestos works and removal
- Decorations

We have estimated the cost of all works identified to be approximately of £329,420.00 excluding VAT, statutory approval fees and professional fees. Please see Section 5.0 for a breakdown summary of the costs per beach hut.

Where necessary the recommendations may need to be reviewed and amended to take account of any specific statutory or other requirements. Where replacement is required or recommended we have assumed ‘like for like’ replacement using modern materials and techniques.

The concrete roofs to the beach huts were tested for chloride content the presence of reinforcement within the concrete and compressive strength. The report is included as appendix 2. Generally the concrete roof slabs contain medium to high levels of chlorides which indicates a high risk of reinforcement corrosion.

The radar and cover meter surveys of the imbedded steel reinforcement, and the exposure of small areas of the reinforcement, showed that the condition of the steel varied from severe corrosion to no coherent reinforcement and various types of metal used as reinforcement, some are not recognised reinforcement methods. These findings would suggest that the slabs now have little structural strength.

The compressive strength tests showed low crushing strengths with two samples breaking up prior to be tested. The low strengths achieved correlates with the poor condition and corrosion present within the concrete.

A third of the roof units investigated showed the presence of no coherent steel / metal support. We are of the opinion that whatever was present has now corroded away completely and is not carrying out the structural task it was originally designed to do. The prospect for the roof slabs to suitably perform is considered to be low. Extrapolating the incidences of poor quality found in the tests across the whole range of slabs would suggest that a significant number would be adversely affected in concrete strength, chloride content, reinforcement quality, steel supports – or a combination of each. The condition factors used to assess residual strength to the roof structure show this to be low – conceivably low enough to prove that many of the slabs are structurally compromised. This is due to weak concrete, concrete with high chlorides as mentioned above (which appears to be the case across the board) and corroded reinforcement. Although there is also some degree of variability to the roof structures, and this would likely reveal that some slabs may pass, some would be borderline and some that would be failures. Addressing these different levels in terms of remedial works would be accordingly mixed and varied and would be costly, particularly if slabs of varying degrees of condition are joined.

An asbestos survey was carried out by ABP Associates Ltd that identified the corrugated sheeting to the internal surface of the roof structure to be asbestos, with tests indicating the presence of crocidolite and chrysotile as detailed within the asbestos test report within appendix 3.

1.2 RECOMMENDATIONS

From consideration by our Head of Structural Engineering of the results within the HTA concrete roof structural condition report, we are of the opinion that the roofs are structurally compromised, or will very soon become structurally unstable and in their current state are a risk and a present hazard. Extensive repairs to the roof structures will be required to prevent further deterioration and corrosion, with the cost of remedial work to the slabs likely to be greater than the cost of replacement. Our recommendation would be to demolish and replace the roof structure to each hut. In carrying out these works it is likely further damage would be incurred to the existing structures, but the extent of any such damage would not be known until the work was undertaken.

The core sample taken from huts 112 and 125 showed no reinforcement/mesh, indicating total corrosion of embedded steel structures. This is likely to be the case in other huts within these two blocks 91-116 & 117-133. We are of the opinion that an individual roof in a block cannot be replaced in isolation without causing potential damage to adjoining roof slabs.

The current roof structures have no structural ties to supporting walls, and are lacking adequate bracing and restraint. All new roof structures require restraint to walls by the provision of lateral restraint straps to purlins, wall plates and internal wall faces. The full extent of the roof restraint and methodology should be fully assessed and adequately designed accounting for all factors that may affect the hut and its scheme.

A large number of timber and concrete lintels, timber purlins, wall plates and fascia boards require replacement, together with a significant number of missing, significantly damaged and/or decayed doors and door frames. A number of doors also require easing and adjustment.

The installation of expansion joints within each block should be carried out as a complete scheme to aid in preventing vertical cracking along the rear wall. It is important that at the design stage the designer recognises the factors that may affect each hut performance and makes provisions to accommodate any likely movement.

Walls that have been identified as having to be rebuilt, or having no wall ties, require wall ties to be placed in continuous lengths of blockwork wall, and must have both bonding ties to provide a fixing to one side of the joint, and sleeved ties to allow for movement in the other side. Identification of the repairs required to each beach hut can be found in appendix 1 of this report.