

BOROUGH OF POOLE

CABINET

14 JULY 2009

BEARWOOD PRIMARY SCHOOL - ROOF REPAIRS

PART OF THE PUBLISHED FORWARD PLAN YES

STATUS: Service Delivery

1. PURPOSE

- 1.1 To inform Members of the findings of investigations into roof leaks at Bearwood School and of the funding requirements to support further remedial works.

2. DECISIONS REQUIRED

- 2.1 That Cabinet be recommended to approve:

- (i) Funding of £183,000 from the Statutory Priorities Budget to carry out further roof repairs to Bearwood Primary School; and
- (ii) That such repairs be implemented in two phases during the summer holidays of 2010 and 2011 in the financial years 2010/11 and 2011/12.

BACKGROUND

Bearwood School was built by Dorset County Council in 1996 before transfer to Borough of Poole under Local Government Reorganisation. Failure of the original man made roof slates caused the roof to be retiled in 1998. A claim against the original roof tile manufacturer was only partly successful; their defence being that the tile problems had arisen due to condensation within the roof system.

The specification used for the 1998 reroofing, therefore, aimed to minimise such condensation risks by using roof ventilators and an underlayer with high vapour 'breathing' characteristics.

This new roof covering has also suffered roof leaks which were subjected to piecemeal repair until 2008, when it became apparent that this approach was not solving the problem. Detailed investigation of the worst sections of roof was undertaken during the 2008 Whitsun half term and summer holiday periods, supported by specialist testing and advice by the BRE.

- 2.1 These investigations confirmed that a small amount of water gets through the roof tiling and associated details during heavy or wind driven rain and also that the roofing underlay is failing to perform one its primary functions or preventing such water from running into the building. That failure arises in some places due to the porosity of the fabric, which allows water to seep through, and in other cases where it has been cut around the many ventilators or is otherwise poorly detailed.
- 2.2 BRE confirmed that the water ingress is caused by a number of factors but indicated specifically that the underlayer should be replaced (noting that a more recent British Standard for underlayer materials now recognises the need for more watertight grades to be used in more exposed situations). BRE also recommend that any system being considered for replacement should be assessed for wind driven rain at the pitch at which it is to be used.
- 2.3 During the investigations it was discovered that the Marley Melbourne roof tiles are virtually impossible to replace individually using the manufacturer's recommended methods without causing breakage to adjacent tiles. This makes ad hoc repairs impractical and results in the need for retiling of larger areas rather than single tile replacements.
- 2.4 The side lap 'wings' of these tiles were found to be broken on many tiles, most frequently in areas which had been subjected to roofing works or where there had been unauthorised roof access.
- 2.5 The affected sections of roof are confined principally to the lower slopes of the central 'pod' of the building where the combination of low roof pitch, damaged tiles, large number of roof ventilators and other roof details combine to increase the vulnerability to water ingress.
- 2.6 The other sections of this roof and the roof over other parts of the school currently show minimal (if any) evidence of water ingress and are not considered to be an immediate problem.
- 2.7 The areas of roof investigated and repaired in August 2008 have shown no subsequent water ingress. It is considered the repair system and detailing adopted in 2008 has been successful save for the continued use Marley Melbourne tiles. In future these tiles would be better substituted with Redland Cambrian tiles which are of similar size and colour, but are less vulnerable to damage and can be more readily replaced singly should the need arise.
- 2.8 Although the worst slopes have already been addressed, unacceptable roof leaks continue to occur in severe weather and one leak, over the head teacher's office, leaks routinely. These problems can only be successfully overcome by stripping and retiling whole sections using the methodology adopted in 2008 requiring painstaking attention to detail and careful testing and monitoring as work proceeds.

4. FINANCIAL IMPLICATIONS

- 4.1. The cost to re-tile the remaining lower roof sections of the central building 'pod' amounts to £183,000 including fees and 25% contingency and including adjustments for any projected inflation over the period.
- 4.2. The works will be undertaken in 2010/11 and 2011/12 and will be funded from the statutory projects budget. This budget is currently set at £100,000 for both of these years. Undertaking this work will therefore commit most of this resource.
- 4.3. The current level of un-earmarked funding in the statutory projects budget in 2009/10 is £250,000, in addition a further £200k is expected to be available to fund works in 10/11 and 11/12 (assuming there is no change to the Council's capital allocations). Whilst there are no formal commitments against this sum as yet, proposals are being considered for works which include St Edward's (£25,000 for repairs to school field) and the Ashdown fencing (costs unknown). It should be recognised, therefore, that funding set aside for statutory priority work may not be sufficient and should there be a requirement to fund a large unforeseen project, use of the general contingency funding may need to be considered.

5. LEGAL IMPLICATIONS

- 5.1. Legal and Democratic Services have considered the findings of the investigations by Property Services and BRE and consider that litigation over the roof is high risk with high costs and a poor chance of recovery. This view is supported by our experience with the claim against Weatherwell in connection with failure of the initial roof. Recovery equated to £30,000 while the associated cost of the claim equated to £37,641 let alone the actual costs of the re-roofing.

6. RISK MANAGEMENT IMPLICATIONS

- 6.1. Risk that new roof coverings will also leak.

Given the history of the building this risk has to be considered to be significant.

Four means have been identified to moderate this risk.

- Firstly to submit the proposed roofing system to Building Research Establishment for testing under laboratory test conditions. This would cost in the order of £5,000 and hopefully confirm that the system we adopted in 2008 is indeed still effective when using Redland Cambrian Tiles. This would be worth considering to give increased confidence in the specification.

Recommended

- Secondly to very carefully select the contractors to be used from the very best available to ensure the quality of tradesman employed and achievement of the required standards of workmanship.

Recommended

- Thirdly to allow for very high level of inspection and testing (water testing of underlayer before retiling is allowed to proceed).

Recommended

- Fourthly, in discussion with BOP insurers, to invite contractors to provide insurance backed guarantee for the satisfactory performance of the roof for its 20 year design life. This option does not in itself decrease the risk of failure, but offers some recompense if failure did arise.

Property Services do not know whether such guarantees could be obtained and if so at what cost. They would also be of limited value unless adequately covering the adjacent recently retiled roof slopes which could easily become damaged when completing the new hip detail at their abutment as this will entail some gentle easing and refixing of tiles on the adjacent slopes. Many contractors would be expected to decline to tender rather than offer such guarantee. Provision of a Guarantee is not therefore suggested as an absolute requirement.

Recommended that a 20 year Guarantee of the completed work is invited as a supplementary option to be considered by the Council at its absolute discretion alongside the primary tender figure.

After further discussions with a local contractor (used in the 2008 works) they have confirmed that they would be able to supply a 10 year Guarantee from the National Federation of Roofing Contractors. The cost of this Guarantee is shown in appendix 1

6.2 Risk that remaining roof areas will leak.

The remainder of the roofs, whilst undoubtedly suffering some of the defects, do not exhibit signs of water ingress and are therefore considered to represent a lower priority. It is believed that those roofs should be able to last several more years and not require replacing until their design life is fully or nearly achieved, by when the longer term success of recent works will have been demonstrated.

Recommended that no immediate plans are made to retile remainder of the roofs.

6.3 Risk that work cannot be completed during a summer holiday period.

Being weather dependant and requiring careful inspection and testing as work proceeds, this work is believed to be slightly more than we could confidently plan to complete within a given Summer Holiday period. It should therefore either be planned to be undertaken partly in term time or to be undertaken in two stages in consecutive years. This risk will also be moderated by careful selection of contractors as identified in 6.1 above as well as by commencing the first phase in 2010 to avoid other construction works planned for the school in 2009

Recommended that the first phase of the works is undertaken in summer 2010 and the second phase in summer 2011

7. EQUALITIES IMPLICATIONS

- 7.1 There are no especial equalities implications associated with these works other than the normal contractor requirements which we now make regarding employment practices and site behaviour.

8. PROGRAMME

- 8.1 To mitigate potential risk it is recommended that the BRE are involved in any further works to the roof. As this requires a high level inspection and recommendations throughout the duration of the construction period it is recommended that the works are undertaken in two phases:- Summer 2010 and Summer 2011.

9 LEVEL OF CONSTRUCTION WORKS

- 9.1 During the re-roofing in summer 2008, 237m² of re-roofing was completed to the central pod leaving a further 481.7m² to be completed over the Summer 2010 and Summer 2011. Please see attached drawings Works completed summer 08 and Further works recommended.

10. CONCLUSIONS

- 10.1 Budget provision of £183,000 is required over the next three years to enable completion of urgent remedial work to Bearwood School roof to be undertaken in 2010 and 2011 summer holidays.
- 10.2 Pursuit of damages through litigation is not recommended due to the high costs and poor probability of success. This notwithstanding, approaches should be made to relevant parties seeking contributions towards the cost of remedial work.
- 10.3 The Asset Management Group should adopt policies seeking to avoid use of Marley Melbourne tiles and that all underlayer to tiled roofs shall be to the latest current standard.

Report Authors:

Richard Hickman
Acting Head of Property Services

Stuart Twiss
Head of Children and Young People's Integrated Services – Strategy, Quality and Improvement

Contact officers:

John Paton
Property Manager (Operations)
Property Services
j.paton@poole.gov.uk
01202 261210

Ian Johns
Education Officer (Planning)
Children and Young People's Services – Strategy, Quality and Improvement
i.johns@poole.gov.uk
01202 633501