

From:

Subject: Comments on NYM/2020/0973/LB - Case Officer Miss Helen Webster - Received from Building Conservation at The Old Vicarage, Bondgate, Helmsley, York, YO62 5BP,

Date: 14 January 2021 12:23:40

I have a few questions about the proposed,

A detail sectional drawing of the dormer would be useful to show the following

- Extent of flashing, sufficient to ensure no penetrating damp to the neighbouring wall in rain or snow.
- Insulation/ plaster and wall treatment
- How the rainwater/snow melt will drain
- Mortars used to make good.

Plasters, insulation and mortars should be capillary active. There is a constantly growing body of evidence (eg Wiggins) to the fact that Hydraulic limes are as prone to inhibiting effective masonry drying as cement. This is due primarily to the pore sizes within cement and hydraulic lime, the bulk of which which are too small (below 200nm) to allow for capillary action. Robyn Pender a Physicist at Historic England explains clearly here why capillary action is so imperative for effective drying in traditional masonry. Original mortars in the area for buildings of this age and form of construction are overwhelmingly quicklime based or earth based, lime-rich and binder-rich mix proportions with local sand aggregate. The binder type is again overwhelmingly non-hydraulic to very feebly hydraulic in physical chemistry. Technical compatibility with natural materials requires that this physical chemistry be replicated with repair / conservation mortars. It governs the functional behaviour of the mortar in practice and is not an academic or purist pursuit. It is the abundance of uncombined calcium carbonate which is the root of the ability of traditional lime mortar to dry the masonry out and conserve the fabric in the process. Traditional solid walls are required to be capillary active (sometimes referred to a breathable) in order to function and thus the introduction of moisture barriers, capillary poor mortars and even cavities is not appropriate. Products which only allow for the movement of water vapour (through vapour phase diffusion) are not truly breathable as is it 'virtually impossible' for moisture to escape permeable masonry in this way due to the nature of water molecules and the pore structure. Further information on technical compatibility can be found in the subject literature within the public domain.

Suitable suggestions can be made if required.

Comments made by Building Conservation of The Old Vicarage
Bondgate
Helmsley
York
YO62 5BP

Comment Type is Request Additional Information
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