CONDITION SURVEY
OF MASONRY BUILDINGS, FISK FARM
ISLE LA MOTTE, VERMONT
WITH PRIORITISED RECOMMENDATIONS
FOR NECESSARY REPAIRS

CLIENT: LINDA FITCH
FISK FARM, 3849 WEST SHORE ROAD
ISLE LA MOTTE, VERMONT VT 05463

NIGEL COPSEY SEPTEMBER 2003

Fisk Farm occupies the site first built upon by Ichabod Ebenezer Fisk in 1788. Fisk was a pastor, the first teacher on Isle La Motte and the first surveyor of the island. The site adjoins the first colonial quarry in Vermont, which was opened by the French in 1664 during the construction of Fort St Anne. The quarry was owned subsequently by Ichabod Fisk, 'Fisk Black' being one of the names given to the grey to black, polishable limestone of the island.

In 1802 a grand house was built on the site. In 1924, the main body of the house was lost to fire. Fisk Farm now consists of a service wing of the big house (of possibly older construction than the big house itself), a cottage, formally a barn or ice-house, as well as a clapboard house and a large barn.

The purpose of my visual survey was to establish the condition of the masonry buildings and to advise upon both the necessity and urgency of a programme of repair, with guide costings.

THE COTTAGE

This building is reputed to have begun life as icehouse for the mansion. It would seem rather larger than any other icehouse of my knowledge. It is used currently as rental accommodation, with a mezzanine level over approximately half the floorplan. The walls have been lined out.

The building is in a generally poor condition overall.

There is significant deflection to the chimney stack, the north wall and to the east gable wall above window head level.

It is impossible to say without removal of interior linings, but it would seem possible that there is a physical connection between the west chimney and the east gable and the respective movement of each is related.

The lower brick section of the chimney appears to be recent built, using a hard, probably cement-based mortar. The footing may be unsound; there may be settlement above the level of the brickwork, if this was an underpinning. The chimney is likely a later addition to the main building, being different in style and character. The stones are more regular than those used elsewhere. It requires repointing.

Its possible movement should be monitored for now—it may not be progressive, although this would seem to be likely.

NORTH WALL

There are four significant vertical cracks in this wall. They pass through the mortar joints. There is bulging between two of this fissures halfway along, possibly associated with pressure from the method of fixing and the load of the mezzanine level within. It is not clear how this internal floor is attached to the walls or with what.

Lime mortar pointing is loose within the bulge.

The source of the pressure should be analysed and the cracking should be consolidated with stone stitches, and repointed with lime mortar. A certain amount of grouting with a lime-based grout might be considered where forward settlement has occurred.

A lot of the original mortar is missing to 24 inches above ground level. This will be associated with ground salt activity and the proximity of plants as well as of frost and freezing.

Mortar is locally loose elsewhere, but the presumption should be in favour of the retention of the maximum amount except where there is obvious ingress of moisture.

All cement-based patch-pointing is loose and should be replaced with lime mortar.

70% of the mortar is original (or old) and this should remain. New pointing should match the old for character and colour and the flush pointing of the original work should be matched to preserve the character of the elevation.

Here and there there are delaminating stones, where they were originally laid up in the wrong bed. These represent no structural concern at this stage and should be left. A light-handed defrassing would not be inappropriate at this stage.

SOUTH WEST CORNER.

90% of original mortar appears sound. Consolidate and repoint as necessary, mainly at wallplate and ground levels.

WEST GABLE

There is serious and significant structural movement, particularly above window head level. The apex of the gable is deflecting eastward(inward) from just below upper window head level. The wall between this and the groundfloor window head level is bellying outwards. The corners are sound, and remain essentially plumb.

The stones of the gable are generally smaller and more rubbly than elsewhere in the building.

Mortar is loose or missing below window cill level of ground floor.

The NE window lintol has failed and dropped, contributing to the general 'loosening' of the masonry.

70-80% of the elevation has been repointed in the past with hard, ordinary Portland cement-based mortar, exacerbating any problem and increasing the potential for water retention and frost damage. It is mostly loose.

The 'worst-case' solution to the problem with the gable would be to dismantle to the lower window head level within the timber cornice returns, as the corners of the masonry are sound. The stones should be numbered as practicable, ordered and set aside by course. The whole would then be rebuilt, using the same stones and lime mortar.

At the very least, the upper apex of the gable would be rebuilt as above, and the NE lintol replaced and the stonework above it made good.

Realistically, the worst-case is the most likely course of action.

THE RUINS

SOUTH WALL

'The ruins' are the remnant wing of the burned mansion. They were altered after the fire. The roof was raised, and a large area that had previously been a wide doorway filled in with poured concrete, windows and poorly crafted stonework bound with opc-based mortar. This section of wall is failing en masse, having been built upon a poor foundation (it seems to have been built on top of a concrete floorslab, which is cracked and tiliting). It is pulling away from the building.

A photograph of the original opening survives and the most satisfactory option would seem to be the removal of the infill, with a return to something akin to the original opening, albeit filled with a reversible window arrangement.

The remainder of the masonry on this elevation has been repointed with a hard cement mortar, which remains well attached. Removal at this stage might cause more damage to the stone than leaving it. It will become loose over time, and should be removed at this stage.

EAST WALL

There are areas of eroded/recessed original mortar as well as later 'smear' pointing with lime mortar. Still later, there is similar flush pointing with cement. Stones are loose at the junction with the timber gable.

This elevation should be repointed 100%, with a slightly recessed and unstruck finish, being pointed full and then beaten back with a stiff brush. This brings up the aggregate and removes the over-lime rich

surface layer. This process increases the surface area, and therefore the breatheability of the mortar, as well as being aesthetically more pleasing.

NORTH WALL

As with the east wall, the north wall has significant areas of cement and later than original lime pointing. The full lime pointing may not be inappropriate to the condition or character of the stonework. It will be important to produce some homogeneity of surface finish. A large area of the stonework above window head level has lost its pointing and requires new mortar.

The stone lintols above the two windows are cracked vertically. The most easterly lintol is cracked in four places and is no longer performing its intended function. The weight of the masonry above is bearing upon the timber window frame and there is forward movement of both window frame and masonry.

THE BARN

The timber-framed barn has a robust stone plinth, composed of relatively large and heavy masonry units. There has been some deflection of some of these stones, particularly at the NE and NW corners, where stones have fallen out. There are remnants of lime mortar pointing, although the plinth itself is likely to have been built dry. I do not believe it to be absolutely necessary to repoint the plinth. If it is decided that this should be done, then a lime mortar would be essential. At ground level, vapour permeability is of paramount importance.

Any displaced stones should be built back into the plinth and any loose stone pinned with stone shims as appropriate.

GUIDE PRICES/URGENCY OF REPAIR ASSESSMENT

The Cottage

Repairs to the north and east walls are urgent, and should be attended to in the spring and summer of 2004. Repairs to SW corner could be happily deferred until 2005, and maybe incorporated with works to the chimney proposed subsequent to ongoing monitoring.

North wall : $ 2200

South-west corner: $ 1400

West gable: $ 7400,

This includes all necessary works to the gable, but excludes the cost of staging.

THE RUINS

The work to the section of infill work is urgent and would ideally be carried out in 2004 or 2005. The repair of the easternmost window lintol is urgent and should be addressed in the spring/summer of 2004. Works to the south and north wall (other than lintol repair) could be deferred until 2005/2006, although the sooner the better.

South wall infill: demolition and making good: $2880. This does not include any carpentry additions.

This wall should be repointed in the future. At this time, the hard cement pointing is hard and well-attached. Any removal would cause significant damage to the stonework. Any repointing work should be deferred until this rigid cement pointing begins to detach and work loose. This maybe up to 10 years from now.

East wall: 90% repointing: $2800.

North wall—lintol repair and making good: $ 800
North wall: repointing and other repair, making good around opening:

$ 4000

THE BARN

If the plinth is to be repointed: $2160

Other repair works: $ 950

This includes placement of lead/stone shims as necessary beneath timber cill and plinth to the west wall.

Total value of necessary works: $24,590

The total amount of lime required would cost in the region of $1200.

However, the spreading out of the works would reduce the amount of lime required at any one time, and increase the unit cost. The cost of the lime is not, therefore, included in the above calculation. Cost of sand is.

Total value of immediately urgent works: $10,400.

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