Proposed Render Works
Crow Trees Farm, Chatburn, BB7 4AA

Prepared by: Elliot Burns

Fig 1.1

---

1. Introduction

The project relates to the land at Crow Trees Farm and the renovation of Crow Trees Farmhouse, and ancillary buildings.

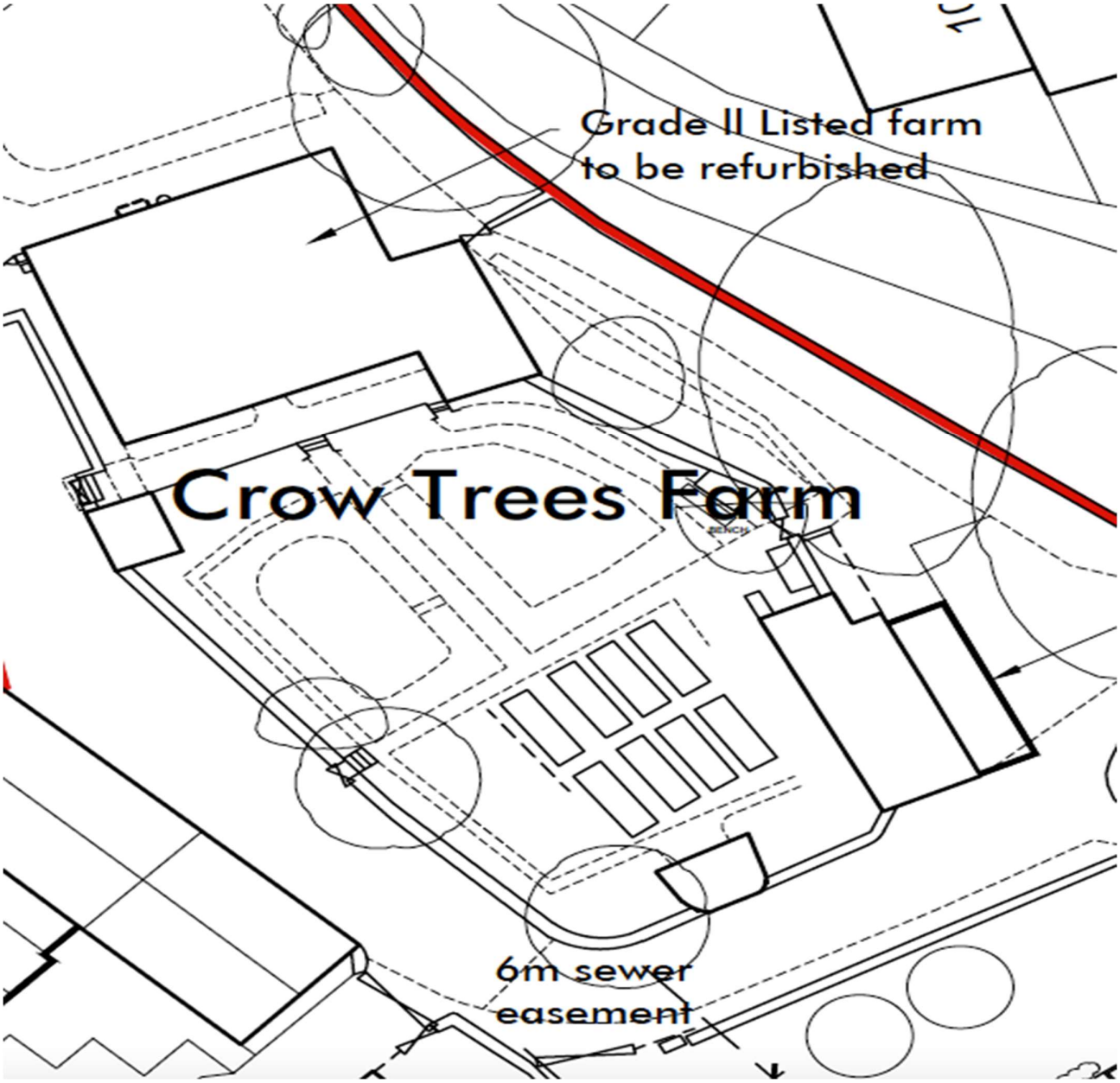

Fig 1.2

This report submission covers the following buildings on site:

- Farmhouse
- Coal House
- Garages
- Greenhouse

2. OPERATION NO 2: WORKING AT HEIGHT

The main area for working from height will be carried out from an independent ring scaffolding to remove the external render, install 3no. Velux windows, replace guttering and undertake minor roof repairs. All of this work is covered in section 4

If required, mobile elevated working platforms (MEWPS) will be hired in and operated by the suppliers operative with licenses kept on file with the induction records.

3. OPERATION NO 3: ERECTION OF SCAFFOLDING (Farmhouse)

A full independent scaffolding with working platforms on all levels is to be erected to carry out all the necessary external works.

4. OPERATION NO 4: REMOVAL OF RENDER (Farmhouse)

Working from the scaffolding platforms, and using the appropriate PPE, the render currently applied to the building shall be carefully removed using hand tools such as hammer and chisel, and power tools such as SDS hammer drill with a chisel bit installed. Any vegetation which is embedded within the existing render is to be removed.

Any removed render is to be collected into buckets and deposited into tipping skips for distribution to the off-site waste area.

Throughout the work care is to be taken to ensure that the existing brick/stonework remains undamaged, with care also taken to minimise the size of rendered section being removed at any one time. All works will be undertaken one level at a time working from the top downwards.

Following the removal of all of the render and vegetation, the exposed surfaces will be brushed of loose materials and dust in preparation for the application of the new render.

Any areas of loose masonry will be made good by the Brickwork Contractor. Stone mullions, heads, cills, jambs, and chimneys will all be made good prior to render application.

Render application will follow Weberpral Monocouche Render Application Guide, detailed here: https://www.uk.weber/files/gb/2019-08/weberpral%20monocouche%20render%20Application%20Guide%20%28Hi%20Res%29.pdf

Fig 2.1

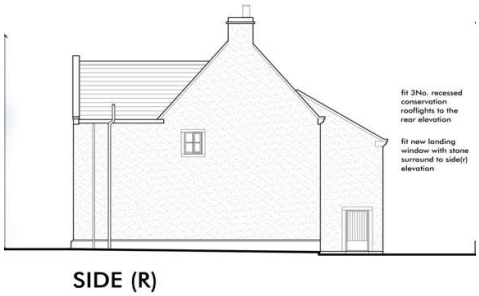

Fig 2.2

Fig 2.3

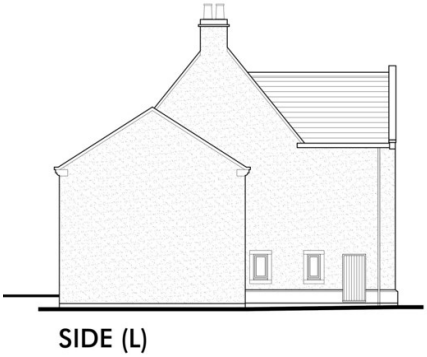

Fig 2.4

5. AREA OF RENDER HIGHLIGHTED TO BE REMOVED (Farmhouse)

The render currently applied to the Farmhouse is a sand/cement, roughcast, wet dashed render.

All rendered elevations of the Farmhouse exhibit varying degrees of render decay due to factors such as cracking which has enabled water to penetrate behind the render leaving it susceptible to frost damage (see figures 3.1, 3.2, 3.3, 3.5 and 3.6), as well as the growth of vegetation within the walls which has been allowed to grow on, through and behind the render, forcing the render off in places (see figures 3.1 and 3.3).

The existing rendered elevations also suffer from poor historical repairs, both mismatching and incorrectly executed (see Figures 3.2 and 3.4).

The current render applied is also having a detrimental effect on the structure of the building as a whole. Due to the waterproof nature of sand/cement renders, it does not allow the building to breathe. This causes the walls to breathe internally which results in damp and mould be present on the internal walls.

Following a consultation with our approved render contractor, the recommendation is to remove the entirety of the render from all elevations, make good any areas of cracked/missing superstructure and prepare for re-application. See Fig 3.7.

Fig 3.1

Fig 3.2

Fig 3.3

Fig 3.4

Fig 3.5

Fig 3.6

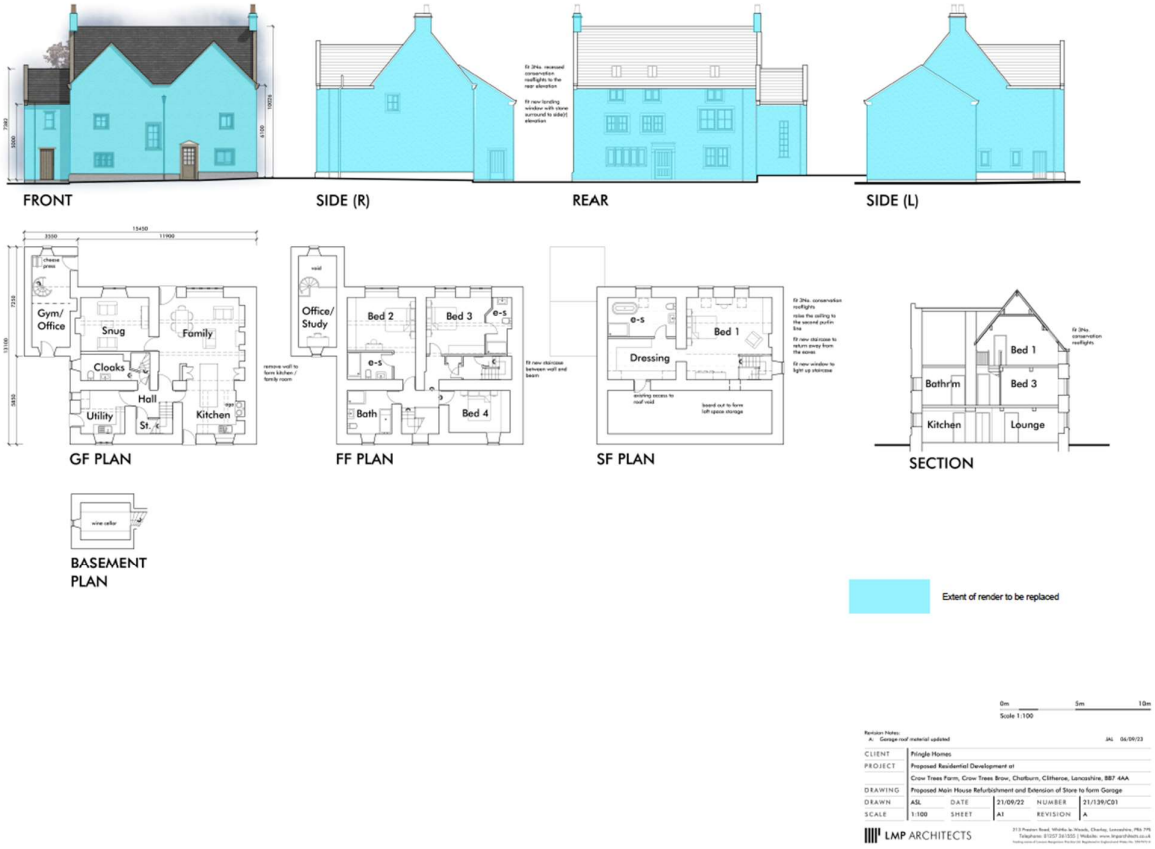

Fig 3.7

---

6. OPERATION NO 5: APPLICATION OF NEW RENDER (Farmhouse)

Again, following consultation with our render contractor, it is suggested we apply a Weber Monocouche, webpral M. Colour - Chalk

Webpral M is a through-coloured Monocouche render which is ideal for both new build and refurbishment projects. The Monocouche can be used to produce a range of finishes, of which we intend to use a sprayed roughcast, applied to a total thickness of 15mm – 25mm.

The Weber Webpral M is of a similar rough cast finish to the product to be removed. A similar product has also been used on the neighbouring property and this would be in keeping and in line with the approved architect drawing no: Ref - 21/139/C01 A LB

The Webpral M will be applied following the product specification data and method specified by Weber.

During the process, any stone window jambs, mullions, heads, or cills will be repaired or replaced where necessary.

7. RENDER SPECIFICATION:

Product:

Weberpral M is a one-coat, ready mixed, cementitious, weather resistant, external decorative, through-coloured render, suitable for most types of brick or blockwork. Factory produced from carefully selected raw materials for consistency of product, it only requires the addition of water on site.

Weberpral M has been awarded an A+ Green Guide Rating as defined in the BRE Global 2008 Green Guide to Specification.

Weberpral M is designed for spray application and can be applied up to 28mm thick in two passes. Manual application is also possible. Weberpral M has excellent weather resistance and durability, whilst allowing the structure to breathe.

Substrates must have a good mechanical key suitable for rendering and weberrend aid must be used to provide an artificial key on substrates such as smooth concrete.

BBA approved certificate number: 05/4268 https://www.mm.weber/files/mm/2017-09/BBA_weber.pral_M_50.pdf.

The product may be taken to have a value (thermal conductivity) of 0.48 Wm–1K–1

8. RENDER APPLICATION:

An application of Weber Rendaid will be applied as a base coat for the Weberpral M

General

Application of Weberpral M should be carried out strictly in accordance with the Certificate holder's instructions and specifications, and the relevant recommendations of BS EN 13914-1 : 2005. The Certificate holder should be consulted for details of suitable contractors.

The product should not be applied in rain or mist, at temperatures above 35°C or below 5°C or, if exposure to frost is likely to occur during curing. In line with traditional sand/cement renders, it must not be applied to frost bound walls.

In sunny weather, work should commence on the shady side of the building, following the sun round to prevent the rendering drying out too rapidly.

To minimise colour shade variations and to avoid dry line jointing, continuous surfaces should be completed without a break. If breaks cannot be avoided, they should be made where services or architectural features, such as reveals or lines of doors and windows, help mask cold joints. Where long, uninterrupted runs are planned, bags of the product from the same batch should be used. Sacks with different batch numbers should be checked for colour consistency.

Prior to application of the render, a survey of the property must be carried out to determine the suitability of the substrate to receive the product and whether repairs to the building structure are necessary before application. A specification is to be prepared by the designer or rendering contractor for each elevation indicating:

- preliminary treatment of the background
- detailing around windows, doors and at eaves
- exact position of movement joints
- any alterations to external plumbing;
- position of beads
- damp-proof course level
- areas where flexible sealants must be used

All necessary repairs to the building must be completed prior to application of the render.

Procedure:

All damage to the substrate from frost attack, salts or corrosion must be carefully repaired. Damaged bricks or blocks must be replaced and any holes or insufficiently filled joints repaired using a suitable mortar. Loose and spalling render or projecting mortar joints must be removed and uneven surfaces levelled to minimise variations in the thickness of the product.

The relevant recommendations of BS EN 13914-1 : 2005 are to be followed to achieve a satisfactory bond. In particular, the surface to be rendered must provide a good mechanical key, have adequate suction and be free from paint, oil, soot, efflorescence, dust, lichens, moulds and similar growth which may to prevent a satisfactory bond. It is therefore essential that new and existing substrates to be rendered are clean.

The render must not be used on water-repellent substrates, on plaster or plaster paint or coatings.

When the substrate consists of different materials or a material of variable suction the recommendations of BS EN 13914-1 : 2005 and the Certificate holder's instructions must be strictly adhered to ensure even quality and appearance of the product.

When applying the product to porous or high suction substrates particularly in warm weather, the surface should be wetted on the day before the rendering is applied. A further mist spray of clean water may be required prior to application of the render.

On backgrounds of negligible suction, WebeRend Aid must be used. The advice of the Certificate holder should be sought concerning special precautions necessary to provide an adequate key. The advice of the Certificate holder should also be sought for application upon very smooth or very irregular surfaces,.

Wherever possible, independent scaffolding should be used to avoid the need to subsequently make-good putlog holes and other breaks in the work. Angles may be formed using PVC beads, or using timber battens. The Certificate holder can advise on suitable materials.

Mixing

Weberpral M powder is mixed with clean water in accordance with the Certificate holder's instructions given on the side of the bag. The mixture is prepared mechanically in either a tumble mixer, with a drill and paddle, or a suitable render spray machine. The mixing should take between 5 and 10 minutes until a homogeneous mass is obtained.

Once the product has been mixed, additional water should not be added. The product may be remixed to regain a workable consistency.

In common with traditional renders, slumping of the material may occur if the mix is too wet and increase the risk of settlement cracks developing.

Application

Application may be carried out either mechanically by spray application, or manually using a trowel or float. Advice should be sought from the Certificate holder regarding suitable equipment and water/render ratio's for mechanical spray application.

The thickness of the finished coating, whether scraped or with a raised texture, should not be less than 15 mm at its lowest point or more than 25 mm. Scraped finishes will require the application of 2 mm to 3 mm more than the specified thickness to allow for material lost in the scraping process.

On low-suction surfaces, a first pass of just over half the specified thickness, followed by a second pass when the first pass has 'picked up' but not set, may be necessary.

Spray application

The spray gun must be held at 90° and at a distance of between 75 mm and 100 mm from the work surface so that ribbons of the material are reasonably flat to facilitate ruling.

For a roughcast finish the first pass is applied to a minimum thickness of 10 mm and ruled level.

It is essential that each pass of the product is applied using adequate pressure to exclude air and ensure a satisfactory bond.

A second pass of the product is applied after one hour to two hours using a swirling action of the gun at a distance of approximately 600 mm to 900 mm from the work surface. To ensure an even textured appearance the gun should be held at 90° to the work surface.

The required texture can be achieved by fitting a suitable spray cap and adjusting the air supply to the gun.

Curing

The product must be protected from rain, mist or cold (below 5°C on a falling thermometer) during the early curing period, when drying could be excessively prolonged.

Polythene sheeting is recommended for curing and should be arranged to hang clear of the face of the wall in such a way that is does not form a tunnel through which the wind could increase the evaporation of water from the render. The polythene sheeting must not be in intermittent contact with the product as this will produce a patchy appearance.

Care must be taken to protect the render from drying too rapidly due to exposure to direct sunlight or drying wind. In these conditions the applied render should be damped down or gently sprayed with water occasionally during the first three days after application to ensure complete hydration of the cement.

Finishing

On completion of the rendering, the surface must be checked to ensure an even coverage of render.