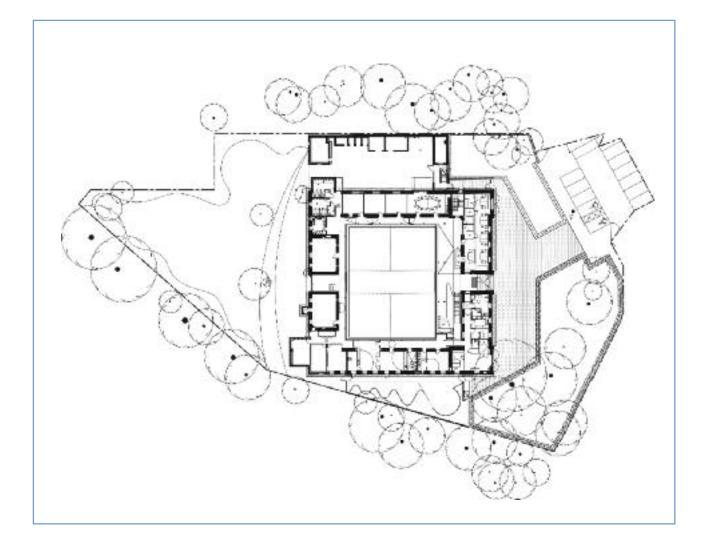
MATERIAL CONSIDERATIONS A NATURAL FACTORY



CASE STUDY CASTLEMILK STABLES









With thanks to Elder and Canon Architects for imagery

Stone features

Prior to refurbishment, much of the original stonework in the historic part of the building was damaged due to weathering and inappropriate cement repairs. Analysis of the stone found the existing stone to be grit stone, which was probably locally sourced during construction in the 18th century. This type of sandstone is not currently available in Scotland and after analysis of samples by British Geological Survey, Bearl stone, sourced from a Northumbrian guarry, was chosen for both a technical and visual match. Existing lime mortar samples from pointing in the stonework were also matched by the Scottish Lime Centre to prevent future damage from inappropriate mortar in the historic stonework. Generally all elevations were cleaned with a stiff bristle brush to remove lichen, finished off with a light fungicidal wash. The specialist contractor endeavoured to minimise stonework repairs, although some stone indents and a number of full stone repairs were required.

Tooling was applied to the face of the new stone to match adjacent stones. Cement pointing was carefully removed by hand tooling, to avoid damage to arrises (sharp edges to building stone). Alongside traditional materials and good conservation practice, a limited and complimentary palette of new materials and technologies were employed within the inner courtyard, namely structural steel, glass and timber.

Special techniques

Castlemilk stables required indent stone repairs showing best practice principles by retaining as much of the historic stonework as possible. This caused minimal intervention involving the least physical disturbance to the existing building. Stones were only replaced where they had decayed to such a degree that they affected the structural function of the surrounding stonework. Proper matching properties of the replacement indent to the original stone has produced a more successful and long lasting result than simply considering the surface colour without thinking about how the stone will perform, as using unsuitable stone will in the future cause further damage and decay. Close attention was paid to the tooling (the chisel marks and grooves) on the stone indent repairs to match the existing stone. These aspects of stone repair allowed the new stone to work in harmony with the existing historic fabric. The attention paid to detail on the existing fabric is beautifully complimented by the more modern materials and techniques introduced in the courtyard.

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Name of building Castlemilk Stables

Date completed 2007

Building type Community Building

Location Machrie Road, Castlemilk, Glasgow

Architect / Interior designer Elder and Canon (for restoration) David Hamilton (original architect)

Client Glasgow Building Preservation Trust

Stone type Bearl stone

Main contractor / stone supplier Chard construction Dunhouse Quarry Co., Northumbria

Anticipated lifespan

> 100 years

Background to building

Castlemilk stables were built around 1790 in the grounds of the former Castlemilk Country House. The heritage value of this building is not only in its listed status but also relates to its cultural and historical links with Castlemilk's historic past as a part of a country estate and designed landscape. The building is a substantial stone-built structure, laid out in a guadrangle form with a central tower and dome on the main elevation. It suffered neglect and fire damage in the latter half of the 20th century, but was fully refurbished between 2003 and 2007, managed by the Glasgow Building Preservation Trust. This work included replacement stonework, roofing, general building fabric repairs, and the creation of a new public realm with office and community space. The building has had contemporary additions using modern materials while respecting the historic fabric of the original stable block.

Material Considerations A Natural Factory

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