THE UNIVERSITY of EDINBURGH
Estates Department

Old College

Stonework Repairs to External Facades

September 2019

History of the Building

Old College is one of Scotland's most historically significant buildings due to the quality of the architecture, its association with three of the country's most important architects and its status as the centrepiece of the University of Edinburgh. Built between 1789 and 1827 (with the dome added in 1879) to designs by Robert Adam, William Playfair and Rowand Anderson. The original composition and form was by Adam, but the elevations were modified during construction, and after.

Old College is built in Craigleith Sandstone, a local Carboniferous sandstone of exceptional quality and resistance to weathering. The six pillars that form the entrance portico on South Bridge are cut from single blocks of stone (each reported to be 9 tonnes in weight) brought from the quarry by carts drawn by 16 horses. Elsewhere the stone is cut as plain and tooled ashlar and reticulated blocks, moulded and carved cornices and string courses, window surrounds and panels. The wide range of finishing and tooling techniques employed give it variety and vitality, however much of this detail is now lost beneath thick layers of grime, pollutant crusts and biological growth.

The Project

A condition survey was carried out in 2015 with inspections by rope access to check for loose and detaching stone. This survey highlighted cracking and decay of stone, previous mortar repairs that were delaminating, decaying sections of projecting cornices and heavy build-up of pollutants and biological growth affecting stone surfaces.

From the survey a schedule of works and specification for each elevation was produced. The Project Team in conjunction with Historic Environment Scotland and the City of Edinburgh Council, developed a strategy to remove the 'build up' of biological soiling and pollutant without affecting the surface patina of the stone. These methods were approved by the Council's Conservation Officer and the repair project obtained listed building consent.

The first phase included stone repairs and cleaning to South Bridge and the first bays of Chambers Street and South College Street. The lighting to the South Bridge elevation was also enhanced. The works were started in September 2018 and completed September 2019.

Examples of work carried out

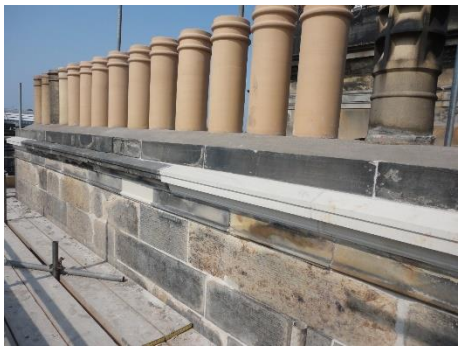
Typical Defects and remedies:

- Sections of cornice delaminating due to weather erosion
- Deterioration of stone due to water penetration
- Failed lead perimeter flashings allowing water to leak through cornice causing stone decay
- New lead perimeter gutters and edge upstand flashings

- New lead cornice flashings and replacement of damaged stone in and below cornice
- Stitching repairs to cracked window head to stabilise and avoid replacement
- Stonework repairs to deteriorated chimney
- Stone “plugs” cut from the original stone were used to fill holes cut for scaffold ties on historic repair schemes
- Stone cleaning using low pressure soft abrasive cleaning of heavily soiled areas, as approved by Edinburgh City Council after cleaning trials. Most of flat surfaces cleaned by steam and biocide with the abrasive cleaning confined to heavily soiled areas
- Bird protection spikes being fitted to ledges and projections.

Section of cleaned decorative moulding

Low pressure soft abrasive cleaning



Stonework repairs to deteriorated chimney

New lead upstand flashings

Insertion of stone plugs

New lead cornice flashings and replacement stone