2.1 Investigative techniques

Work carried out between 2012 and 2013 (Phase 1) involved a comprehensive review of the historical records held within various archives to develop a much better understanding of the history of ownership of the building and the alterations that had been carried out over the past c 400 years. The historical sources covered the 16th to 19th centuries. Against this work a standing building appraisal was also undertaken; this included cataloguing architectural features that were out of place or missing and included the numerous 19th- and 20th-century insertions. Supporting-wall thickness analysis provided additional information, including areas where walls had been visibly thinned or in some cases completely removed. The removal of internal and external staircases was another focus of investigation, especially in relation to how people circulated through the building when the turnpike staircases had been removed. The historical map evidence was also examined, including the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) surveys, Dean of Guild Drawings and various other historical architectural drawings associated with 19th- and 20th-century refurbishment. This work resulted in a phase development model which formed a predictive template to identify critical high impact areas for targeted architectural watching briefs. A preliminary programme of dendrochronological work and ground penetrating survey was also carried out. The former was a pilot study to identify the potential for tree ring dating and distribution of oak timbers and the latter was to identify buried walls, culverts and voids to inform the new drainage routes to be installed below the current ground surface. Underpinning this work was a comprehensive photographic survey; this provided baseline data to inform the later work and created a permanent record of the building as it stood before its refurbishment. Further detail on the historical research and building analysis not published here can be found in Cressey et al (2013) and in the archive.

The refurbishment works carried out in 2015–17 included: upgrading all the principal rooms; installation of a new lift; reduction and in some cases the complete removal of internal floors;
Illus 1 General location map. (© CFA Archaeology Ltd)
renewal and upgrading of services; the provision of new office space; and new door insertions requiring the cutting back or broaching of the walls. All areas where ground reduction was carried out were monitored and a great many of the rooms had wall plaster removed, revealing seven previously unrecorded fireplaces. These features are described fully in Cressey (2017) and the archive.

Alterations to the exterior of the building included the removal of existing harling, stone repair and/or replacement followed by re-harling. External building recording was confined to the courtyard and the north- and west-facing elevations of the North and West Blocks. The building had been covered with several coats of Portland cement render in the 1960s and in certain parts this had failed, revealing the main building fabric and traces of part-exposed features. The elevations were recorded by laser scanning and photography, with new exposed detail added when the render was removed, and then phased. A comprehensive list of all the features can be seen in the respective inventories within the archive.

Paint analysis surveys were also carried out by the Scottish Historic Buildings Trust (SHBT) to establish what colour schemes had been used in the past, prior to restoration of the principal rooms. Various other investigative surveys contributed to the overall analysis, such as those undertaken by structural engineers and architects.