

Trust your instincts? The challenges of surveying historic buildings

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ABSTRACT

This paper is concerned with the challenges of surveying historic buildings and the various ways that these buildings have been occupied and changed over their lifetime. It considers the unusual use of sgraffito on a London building and records for bomb-damaged properties in London.

Keywords: building surveying, historic buildings, bomb-damaged properties, surveying techniques, 'Regent Street disease', sgraffito

INTRODUCTION

When surveying a building you invariably have to trust your instincts. Meeting a building for the first time is exactly like meeting a person for the first time — first impressions count. By the time you have signed in at reception your 'reptilian' instinctive brain is perceiving the smell of rising dampness, the lack of natural ventilation and the slight tilt of the floor under foot, while simultaneously looking for features that help to pinpoint the date of the building you are in. Writing

down this stream of consciousness can be a good place to start a survey, before adopting the more traditional (and necessary) structured elemental survey approach.

First impressions, however, can sometimes be deceiving. While a holistic overview of a building can help to give you some context, it is important that preconceived opinions do not lead you astray. This applies particularly to period buildings and especially those of historic and architectural significance. At a first glance it is incredibly difficult to understand and appreciate what a building may have been through or subjected to over its history and yet, like a person, it is that experience that makes them what they are and ultimately what your client is expecting you to tell them about, with only the benefit of a short space of time.

SGRAFFITO DECORATION

Tucked behind the back of St Paul's Cathedral in the City of London is what is described as a Grade II Listed 'Victorian' building, now used as a hostel (see Figure 1). The first impression was somewhat different to that expected. The subject for survey appeared to be something more akin to a building in Venice and a Canaletto painting. The English Heritage Listing describes a

complex rhythm of shallow projecting bays of unequal width. The facade employs



Figure 1: Sgraffito and terracotta detailing to building elevation
 Photo © Lighthouse Surveyors

(a)



(b)



Figure 2: Severely weathered/perished sgraffito render
 Photos © Lighthouse Surveyors

Renaissance elements including Venetian and round windows, round headed doorways and niches, the ground floor openings all in with sgraffito decoration to the intervening wall surface, the first floor openings with terracotta surrounds, some pedimented, set in brickwork with plain brick panels of shallow projection.

Of particular interest is the 'sgraffito' and fine-quality terracotta to the principal elevations.

Sgraffito decoration is realised with successive layers of pigmented and scratched/engraved mortar to create a colour-contrasted finish that is intended to beautify a building's facade. Sgraffito decoration combines the talents of both drawing and painting and also requires a craftsman to have the meticulousness of an expert plasterer in the application, layering and final appearance of the materials. What to do with such a decayed but

nevertheless beautiful finish is a challenge both to the philosophy of repair (eg, protect, repair or renew) and the feasibility of the procedure itself — finding someone who can complete the work is no easy task. Financial considerations are therefore very significant too.

Cue ringing alarm bells. The purpose of sgraffito is to arguably embellish a facade and give the appearance of something that the building is not. Sgraffito has the potential to mimic masonry and create the impression of carved stone and raised joints but at a significantly reduced material cost. As with all buildings that give the impression of something they are not, caution is advised.

Sgraffito is only a rendering, however, and, of course, it has a significantly reduced life span compared to that of stonework. Despite this, the examples shown here are remarkably intact, although now in need of appropriate intervention.



Figure 3: The original design

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ARCHIVAL RESEARCH

Archives held inside the building revealed that it had only been used as a hostel since 1968 and was first opened in 1874 as a choir school for boys. Built by the architect and classical archaeologist (and astronomer) Francis Cranmer Penrose under instruction from the Dean of St Paul's Cathedral, the building originally provided accommodation for the education and music training of 40 St Paul's Cathedral choir boys and was built on the former site of eight houses adjacent to the Deanery of St Paul's.

The building now has a central flat roof with pitched roof sections at each end. A large flat roof is not something you would necessarily initially associate with a building constructed in the 1870s, although in the following decades the trend for playgrounds on top of Victorian schools was not as uncommon as you might imagine.

Further research in the archives at St Paul's Cathedral, however, revealed that the original designs proposed a much taller building than the existing one and one that was finished with a pitched roof. It is not certain, however, that this design was ever built and, of course, there have been two world wars between the date of construction and now.

The excellent 'Bomb Sight' map (available at <http://www.bombsight.org>) utilising World War Two bomb census survey data from 1940–1945 (held in the National Archives) and originally organised by the Ministry of Security, is an excellent source of information when surveying London property. Indeed a brief search revealed that there had been a high-explosive bomb strike in the street adjacent to the subject property in 1940. In December 1940 London suffered its most devastating attack from the Germans during which the city was mercilessly fire-bombed. Miraculously the subject property and St Paul's Cathedral survived. However, the possible loss of the building's original pitched roof during the war and its later incarnation as a more useful flat roof is not inconceivable considering the extent of bomb damage in the immediate area.

At each end of the building the internal layout is frustratingly formed with mezzanine first floors making tortuous internal differences in floor levels and the need for numerous staircases for navigating around the building. In the first instance it is difficult to see why the architect adopted this complex design. Although the large entrance under this mezzanine floor is now somewhat modified and provides access to a bin store, archival

(a)



(b)



Figure 4(a): St Paul's Cathedral December 1940; **(b)** St Paul's Cathedral 1940

Photos © Ministry of Information Photo Division official photographs



Figure 5: The original coach house entrance

research revealed that the building originally incorporated an internal coach house. The height requirements for the coach and horses (as shown in Figure 5) necessitated higher than normal ceilings and internal mezzanine floors above the coach house, different to the ceiling height in the main building.

THE USE OF STEELWORK

Internally the building utilises structural steelwork and fortunately the surveyors were able to see this while some responsive/cosmetic repairs were being undertaken by others at the same time as our survey. Reconstruction, repair and remodelling of historic buildings (utilising structural steelwork) is not uncommon, of course, but understanding the age, reason and extent of the use of structural steelwork is very important when assessing current and ongoing repair liabilities of a building.

The use of structural steel-framed buildings became more prevalent in London

around the beginning of the 20th century and so slightly post-dates the construction of this building in 1874. The early use of steel is more commonly associated with buildings such as Selfridges department store on Oxford Street, which was one of the first large buildings to deploy the use of a steel frame hidden behind a traditional facade in 1909. However, the remodelling of buildings and the historic use of steelwork post-construction is an important consideration.

Steel presents a different challenge for the surveyor, however, and highlights a shift in the dynamic of the construction industry and a new set of rules and considerations for architects, engineers and builders working together. Steel can soften at high temperatures and result in building collapse. Until the 1970s, when people began to understand the health risks, asbestos was often used to fire-proof structural steel. Steelwork embedded into the external masonry walls of buildings is also vulnerable to corrosion. Increased

use of steel inevitably led to a reduction in the thickness of more traditional load-bearing external walls and built-in steel became far more vulnerable to corrosion.

Again the surveyor must be wary, as very often it is buildings that have an ornate facade (which create the impression of traditional, solid, load-bearing construction) that can be most at risk. Indeed terracotta (also used in the subject building) was often used as a cheaper alternative to carved stone.

One of the key features of terracotta is the 'fire skin' that is formed when the clay mix is fired during production. Extreme care has to be taken when cleaning soiled terracotta to ensure that this skin is not damaged as it is this skin that provides the weatherproofing qualities to the terracotta. Indeed it is often this skin that is irreparably damaged when subjected to an inappropriately aggressive cleaning system.

The corrosion of structural steel (and indeed the steel ties sometimes used to secure the terracotta cladding) can take place,

concealed, for many years, and result in a significant loss of structural strength. Corroded steel can also expand to four times its original volume and result in the cracking, failure and dislodging of masonry.

The use of steel frame construction techniques on London's famous Regent Street (redeveloped with steel-framed buildings between 1895 and 1927) and associated instances of corrosion has led to the coining of the phrase 'Regent Street disease', although the problem is by no means confined to this part of London.

In a well-publicised case, Lord Sugar sued his surveyors for negligence in 2008 (through his property company) for failing to negotiate a potential £300,000 price reduction on the purchase of a property on Regent Street that was suffering from steel corrosion. The property company consequently sought damages in recompense.

The solution to steel corrosion is expensive and disruptive to remedy and traditionally



Figure 6: Graffiti on the oak cladding

requires exposure of the steel, de-rusting and the application of a corrosion treatment coating. Understandably (and especially with important historic buildings) the extent of disruption is such that it is more and more common now to see steel corrosion being treated with cathodic protection involving the use of electrical currents to reverse the corrosion current. This is a very specialist field of work and requires careful planning, design and implementation, not least from a health and safety aspect, to mitigate the risk from unwanted electrical currents.

BUILDINGS AS LIVING RECORDS

Despite some confidence in being able to date the building to 1874 from historic archives and English Heritage's website the trail was temporarily lost when some fascinating graffiti dating back to 1832 was uncovered within an oak clad room. Indeed, the room was peppered with the engraved and dated initials of various occupants, although troublingly many of the dates were well before the building was actually constructed. We can do no better than assume that the valuable oak cladding was considered worthy of retention and reuse and thus salvaged from an older building. As is often the case even with the benefit of what appear to be well-researched archival records, the written record and the building do not always align.

Despite having a technical qualification such as a Bachelor of Science degree in building surveying, for many surveyors, the work on historic buildings encompasses much

more than one discipline. An understanding of history, architecture and the arts is just as important and, for many it provides a varied aspect to the profession that provides much enjoyment. English Heritage's 'Guide to Surveying Historic Buildings 2006' captures this sentiment well:

The nation's historic buildings, spanning more than a thousand years of history, have much to tell us about the ordinary lives of past generations — how people of all classes and creeds lived and worked, worshipped and spent their leisure time. We can also learn from them how buildings were constructed and adorned, the traditions they embodied and the aspirations they expressed. They are a living record of our social, economic and artistic history, as well as being powerful contributors to our sense of place and to feelings of local, regional and national identity.

This guide provides excellent advice on the survey, record-keeping and reporting methodology for historic buildings. The inevitable advice for surveyors when faced with a period property is to temper the initial (and important) surveying instincts and don't be too quick to pigeonhole a building in terms of age, condition and its future maintenance liability. Finally, give the building the respect that its age deserves and be prepared to find that the use of the building over the centuries will link back to its history in unexpected and not necessarily always conclusive ways.