

# 4. Site clearance

## Understanding the site

SPAB advice to new owners of old buildings is often: work on the garden first. Gardens are usually changed more frequently and easily than structures and regularly get reshaped, dug up and replanted. Doing the garden first allows you to get to know the property overall before making expensive, potentially ill-considered and sometimes irreversible changes to the house.

In the case of our Old House Project, tackling the garden was first was almost unavoidable in any case, since it had overwhelmed the building. Although 100 years ago it had been a well-tended cottage garden, with its productivity noted in auction particularly from the end of the 19th century, by the 21st century it had slipped into abandonment. The previous owner recalled that, despite the house being empty for 50 years, the garden had been well tended as an allotment during her childhood, but by 2018 the whole site was completely overgrown. Our experience with the Old House Project has modified our thinking slightly about gardens – they too need thought and investigation before work takes place - but



it has still shown that it is the right approach to deal with the garden first, alongside emergency protection and investigation of the building. When taking on a building in such a neglected

state as St Andrew's Chapel there is initially a magic in the overgrown nature of the site. Like an adventurer discovering a new world, there is excitement in exploring somewhere untouched but also bewilderment at just how quickly nature can take over. In an effort to capture the site's forgotten state for posterity we not only instructed a professional photographer to record it but also asked Terra Measurement Ltd to use their latest laser scanning equipment to capture the site in 3D. Finally, with the help of a trained drone-operator we were able to record the denseness of the over-growth from the sky.

## Wildlife

From the first day of ownership in November 2018 we have also been working closely with the Kent Wildlife Trust (KWT), conveniently based only half a mile from the site. Their specialist knowledge was used to understand the flora and fauna of the site and whether there were any areas of ecological protection required. It was KWT that put us in touch with their local ecologist, Katia Bresso of KB Ecology, who was instructed to undertake a full Ecology Report of the site. Surprisingly it was reported that even though the site had been abandoned for almost 50 years, there was still very little wildlife found, other than some unusual but not rare ant hills have been constructed in the front lawn area. In line with UK law on Bats, and in an effort to avoid expensive delays to future repairs, we also contacted Natural England and instructed our ecologist again to undertake a full bat survey, including three dawn and dusk visits. Again, the results strangely showed little activity with no roost present within the building and minimal bat activity around the site. With this knowledge, future roof repairs could be planned and a bat license organised through Natural England via our ecologist. In the meantime, with further

guidance and a watching brief in place with the Kent Wildlife Trust and our ecologist, tree branches that had been causing physical damage to the roof and building for many years were trimmed back and with the help of Wayne Wills at Ashford and Cranbrook Roofing. Missing or misplaced roof tiles were temporarily put back in position to stop further water ingress and to allow the building to dry out.



## Retaining the building's equilibrium

We discovered, through our initial archaeological investigations in July 2019, that a large extent of our building had extremely shallow foundations. Therefore, clearing the site gradually over several months and seasons has helped avoid over-rapid changes in ground conditions that might otherwise have affected the building's fragile structural equilibrium. The west wall is in a particularly delicate state and one of the factors in this was probably the reckless felling in the past of an ancient yew tree which had stood against this wall. The felling had occurred by persons unknown without the previous owner's permission. Soon after purchase we asked Dr Julie Charlesworth, the SPAB's expert garden volunteer at Spital Square, to carry out an initial appraisal of the site's plants and trees. For this she drew on the knowledge of the previous owner, who had tended the site in the more distant past and knew its planting well. This was followed-up, in September 2019, when we instructed Jonathan Astill a

professional arborculturalist to carry out a full survey of the garden. Information was recorded on the project architects' CAD site plan to show each tree found, its size, health and importance as a specimen. A plan was then devised with the arborculturalist, taking into account the quota for tree felling stipulated by the Forestry Commission.

Over the course of four winter months, with the help of local contractor Lewis Beale of Beales Fencing and Paving, SPAB volunteers, staff and SPAB Craft Fellows worked as a team slowly taking down shrubs and trees to open up the site for future activity and to allow sunlight back on to the building to help dry it out. With the site opened-up we asked Terra Measurement Ltd to return to complete a full topographical survey including level survey and 3D capture of the whole site. This new scan enabled them to update and fill in the gaps found in the earlier drawings, surveyed before the site clearance took place. With 1mm accuracy achieved during the site scans, it meant that when the new drawings were superimposed over the old ones, it allowed our project engineers at Hockley Dawson Consulting Engineering to understand where the building had moved over a 6 month period.

## Simple soil investigations

Whilst clearing the site we also decided to carry out some basic ground investigations. We dug a vertically-sided square hole - first by hand and then by mini digger. This was done with the help of Stephen Clifton, a local archaeologist with Maidstone Area Archaeological Group who helped position the hole with thought, and on a part of the site that would not affect any future or planned works. Therefore after excavation it could be back-filled as garden or left as a pond that might help to encourage new wildlife. Unexpectedly we found that the topsoil was only 200mm thick lying on a 1 metre deep layer of Marl. The Marl was made-up of a mix of clay, sand, crushed chalk, shells and flint. This layer in turn was lying on



top of a distinct seam of blue grey clay known as Gault Clay that started at 1.2metres and continued down to and beyond 2.5metres. For comparison against historic soil data and information on what lay below that level we referred to information found on the British Geological Survey geological maps and their online Geology of Britain viewer. It appears for areas close to Boxley and the Medway river geological maps give the depth of the Middle White Chalk as 60 to 76 metres and seams of the Grey Chalk below that at 49 to 58 metres thick. In the area of the Old House Project it appears to be an 11 metre thick layer of Gault Clay found over a layer of Glauconite Sand at a depth of approximately 13 metre below the surface. Conveniently, it appears that the Old House Project site sits in the centre of a relatively thin strip of land approximately 1 Km wide containing Gault Clay with layers of white chalk and grey chalk bedrock approximately 0.5 Km to the north and Folkestone Sandstone 0.5 Km to the south. If we include the large amounts of ancient woodland surrounding the area, particularly along the North Downs, then the site of the Old House Project has most of the nation's vernacular building materials within one square mile. This knowledge provides us with options on sourcing materials for repair and utilising the diverse palette of materials for any new build or extensions proposed.

In addition to establishing geological horizons (different layers of soil) we also discovered that the root matter of local trees was very shallow, using only the thin topsoil layer with a few root ends being found in the top zone of the Marl. Furthermore, when first digging a hole by hand we were able to ascertain that the water table of the site was quite high. Water filled the hole quicker than we could dig at around 800mm deep and then following a period of rain over the winter, continued to fill the hole until it stopped at 400mm below the surface. By using a three-ton mini digger we could continue digging down to 2.5 metres comfortably before any risk of the sides needing lateral support and the reach of the mini digger being lost.

Understanding the ground under the site has meant that we are more aware of possible risks of flooding and trees with shallow roots systems. Undertaking simple field tests we understand that the clay on site does shrink when dried and with the help of further more directed soil investigations by a professional geotechnical engineer we hope to lessen the risks of flooding and movement using appropriate land drainage and landscaping. Knowledge of ground conditions will particularly assist our understanding of the structural issues affecting the building's west bulging wall.

