Increasing interest in conservation, research and authentic restoration of old buildings has led to greater attention being paid to building conservation studies now than in the past. The research carried out to determine building significance and to help plan conservation measures is becoming increasingly complex. Detailed information on a wide range of aspects of buildings is collected, including age, history, materials, style, state of preservation, sequence of construction, presence of associated structures and function(s). Also information on the surrounding landscape is assessed sometimes in a consideration of significance. Excluding study of building fabric, archaeologists can contribute in a number of areas. These relate to site interpretation and management and include documentation of building context and building construction and collection, identification and interpretation of artifacts. Where archaeologists might look for such data is discussed briefly below. Archaeological methods, with their benefits and limitations, are then described.

1. Context. Many building conservation studies look at an individual building in isolation; e.g. a farm house without its associated outbuildings or kitchen. It is often extremely informative to compare associated buildings, for information on dates and methods of construction, or changes in building function. In many cases some of these associated buildings or structures will not have survived, and archaeological techniques can be used to locate their positions and remains. Other structures that may relate to a studied building include roads, paths, walls and tanks, gardens and orchards. An archaeologist can make a valuable contribution to the management scheme for a historic building by making a plan of the total land holding or associated area, showing and interpreting the locations of all known archaeological remains. This can then be used to plan further development on the site without endangering historical remains.

2. Building construction. A large part of most building conservation studies is concerned with documenting methods and sequences of construction and finishes. Such evidence is read from walls, roofs, openings, inside cupboards and so on. One additional area of information less often tapped is the sub-floor regions of buildings. These areas, and particularly the deposits of soil in them, may contain a wide range of information on constructions on that site. Footings or piles are usually found under flooring, as well as fragments of building materials and artifacts lost or discarded by occupants of the site. These may provide evidence of alterations, repairs, interior or exterior finishes or methods of original construction.

3. Artifacts. Often large quantities of relics are found associated with historic structures. Some may remain attached to the building, but often many more are found in sub-floor deposits or in areas surrounding buildings. Artifacts found in soil deposits can only be recovered by archaeological means. They may be important for a number of reasons. They may provide information on room function or dating of events or structures. They may be historically important through association, or intrinsically important if rare or early examples. Finally, they may have a practical use; that of providing material for educational displays.
METHODS

Archaeological methods and techniques range from relatively uncomplicated (and therefore inexpensive) forms of survey and observation to painstaking and slow large area excavation and analysis. Several methods and examples of their applications in building conservation studies will be given below.

A survey is always the most basic requirement. Usually it will be carried out on foot, although very large areas may have to be covered in a vehicle. Good maps at a reasonable scale are essential, and aerial photographs very useful, for recording information. All man-made modifications of the landscape are recorded, with sufficient information for their identification and interpretation. Such plans are essential management tools if large scale development of an area is contemplated. Surveys of this kind have been done at Mulwala homestead (NSW)(1); 'Woodbine', Port Fairy (2); Point Cook (3) and 'The Briars', Mornington (4).

Archaeological remains recorded on such surveys are generally of three types: economic (pastoral/agricultural), recreational and domestic, although there is overlap between these broad categories. Economic remains comprise structures related to the management of these farms, the farm tracks, farm sheds, jetties and boat channels, fences, evidence of clearing activities, earthworks (dams, levee banks, cultivation mounds), stockyards and sheepwashes. Archaeological remains of such structures and activities, except some cultivation sites, are generally easy to identify because their function is obvious. Recreational sites recorded include tennis courts, golf greens/tees and ornamental gardens and their associated structures. These sites are often more difficult to identify, consisting of only low mounds or ridges of earth. Their dimensions may suggest a function, but these may be confirmed from a study of historical sources and from their locations. Domestic sites are usually of most interest to archaeologists. These include rubbish dumps and wells, although the term may also include human burials. Usually such sites are located by scatters of debris on the surface, or by depressions, where materials have subsided. Low mounds and shallow depressions are some of the most common features encountered and can be the most difficult archaeological features to interpret. Methods of investigating them further will be discussed below.

The principal function of a property survey is usually for planning future management and this was the case in three of the four studies mentioned above. However, in the case of the work at 'The Briars' it was also used to assess the reliability of historic maps. As well, it can be used to check other information, like oral testimony. It has been suggested that the stone outbuilding at 'Woodbine' predates the house and was in fact used as a dwelling while the present house was constructed. However, conservation studies at the site have focussed on the present house, ignoring associated structures.

A study of artifacts found in the surface, of soil types, and of extant vegetation (like orchard trees) may be carried out in conjunction with the survey of surface topography. Objects found on the surface usually relate to the underlying deposits, providing information on the age, areal distribution and function of the latter. For example, an area scattered with glass, ceramic, brick and concrete fragments and animal bones at Point Cook was believed to have been the site of a relatively recent weatherboard house.(5) The assemblage of artifacts found supported this suggestion (its date and function), and helped to pinpoint the location of the building. A study of distribution of artifacts may also help to determine function. Recent work at Glass Terrace(6), and comparison with studies at 'Woodbine', have suggested that kitchens may have a far greater number and variety of artifacts than most other room types. At 'The Briars', Mornington, an area of terracing and channelling was found with old fruit trees growing in it.(7) It was possible to show that they were related and therefore to suggest what area had been cultivated previously.

Another method commonly used in conjunction...
with surface examination is probing. Since structures are often demolished, or depressions filled, to ground level, archaeological remains are often found just below the surface or partially overgrown. In order to delineate whole features it is therefore necessary to trace their outlines by feel. This may be done simply with a finger, ballpoint pen, ruler, piece of wire or trowel, and is fairly easily done in order to follow footings of demolished structures. Examples include a brick foundation, possibly from a fowl house, at Point Cook(8), a mixed stone, concrete and brick footing for a house, also at Point Cook(9), and brick drains at Glass Terrace, Fitzroy(10). The technique is best suited to soft or loose sediments such as those at Point Cook which are sandy. Probing is also often carried out to determine whether footings and other solid features still exist below the surface where there is no visible evidence for them. This technique is widely used.(11)

Probing may be extended to greater depths with little disturbance to archaeological sediments by the use of an archaeological probe. This instrument reaches much greater depths than the items suggested above, and brings up a very thin column of soil. Such a device, 10cm in diameter and 1.5m long was used at 'Woodbine', Port Fairy, to obtain a picture of the stratigraphy of the area in front of the house.(12) The probe survey showed that archaeological remains were confined to the upper 400-450mm of soil and assisted in the interpretation of the stratigraphic sequence. It was also used to extrapolate from the stratigraphy of the more intensively investigated, but small, area to the entire front garden.

Further methods of non-destructive subsurface examination should be mentioned here, although they are generally performed by specialists in earth/geo-sciences rather than by archaeologists. One method that was tested at the site of 'Woodbine' is magnetic survey.(13) Measurements of magnetism are systematically taken and interpreted to indicate locations of magnetic objects, including soils. Tests carried out in front of 'Woodbine' indicated likely positions of basalt blocks and metallic artifacts. However, the results of transects run across a depression behind the house were interpreted as indicating the presence of a hole filled with cultural debris.(14) Such a hole could be a well or latrine with a rubbish dump infill, potentially of great historical and archaeological importance. Other methods tested on archaeological sites include resistivity surveying and archaeomagnetism, but so far there has been no evidence of simple application of such techniques, and this applicability must still be reviewed for each particular site.

All the above archaeological techniques can generally be employed quickly and easily. However, for further detailed information, destructive techniques (augering, excavation) are required. Although archaeological deposits in historical sites are generally shallow, they are also usually very complex stratigraphically, particularly in areas of repeated disturbance, such as around buildings. Augering only brings up a small column of soil and provides little more information than a probe, whilst being far more destructive. This technique is generally not recommended. There are two main techniques of excavations trenching and open area. The former is used to obtain a cross-section through an area, the latter to expose features and objects in plan.

Test trenching was used at 'Woodbine' to look for evidence of an earlier verandah on the front of the house through examination of the deposits across the area where such a structure would have been placed.

The example of the work at 'Woodbine' illustrates the complexity of historical archaeological sites and will be briefly described here. Two test trenches 0.5m wide, one 6m and the other 2m long were excavated to 0.3-0.4m deep and 0.4-0.6m deep respectively, at which depths bedrock was encountered. Thirty two distinct soil/rock units were excavated, which had to be related to one another and to the building phases (Figure 1). This was achieved through interpretation of careful excavation and records and through comparisons of densities of finds in different units. It was possible to demonstrate that the present verandah footing (plinth) was definitely a
The numbers are the stratigraphic unit numbers as they appear on the matrix, and relate to the age of the unit rather than its physical appearance.

Figure 1: Stratigraphy of two trenches.
later addition. However, no evidence of an earlier verandah was found.

Another, smaller, excavation (1 x 1m) carried out inside the house was more productive and uncovered the remains of fireplace footings (15).

Open area excavation is not likely to be used in contracted conservation studies because it is so time-consuming, not only during the excavation phase, but in subsequent analysis and writing up. The latter will generally take approximately twelve times as long as the time spent in the field. This type of approach has been used at Mills Cottage, Port Fairy (16) and the 1826 settlement at Corinella (17) in longer-term research projects.

CONCLUSION

The foregoing brief summary of archaeological techniques and procedures illustrates their use in interpretation and management of historical building sites. Some of these procedures could be employed by other workers to provide further or fuller information on historical buildings and structures. In other cases the need for the services of an archaeologist may be seen. It is hoped that this introduction to the archaeological contribution will help those dealing with historical structures to determine this.

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9. Ibid., Fig. 6 No. 11.
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12. Wesson, Report on archaeological work...
14. Wesson, Report on archaeological work... p.43.
15. Ibid.