



LEE HOP'S MARKET GARDEN

**Archaeological investigations to complement the
conservation plan**



PREPARED FOR
THE TOWN OF VINCENT
AND
HOCKING PLANNING AND ARCHITECTURE

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Lee Hop's Market Garden - June 2000
Archaeological Investigations

G.Nayton

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LEE HOP'S MARKET GARDEN.

Archaeological investigations to complement conservation plan.

Brief

The archaeologist's brief was to undertake archaeological research as part of a conservation plan for Lee Hop's Cottage, Lee Hop's Garden and Halvorsen Hall. The archaeological report was to be written as a stand-alone document that could be read in conjunction with the conservation plan document.

The investigations had two main thrusts, the first being a metal detector survey and physical examination of the surface of the study area. The aim of this investigation was to provide information about the survival and location of former structures and their vulnerability to disturbance by activities such as landscaping. The second thrust of the investigation was a test excavation to provide information on the layout, cultivation methods and material culture associated with the former market gardens.

METHODOLOGY

The site history and relevant historical plans of the study area were provided to the archaeologist by the conservation plan team. All the known plans showing features or buildings were reduced to the same scale and overlaid to produce a composite site plan showing the approximate location of structures and features over time. This was used as the site plan for this project. The individual plans that make up the composite are not shown in this report as they will be included in the conservation plan for the study area.

The investigations were carried out across a three-day field season. The archaeological survey was undertaken on the 31st May with a two day excavation following on the 1st and 2nd of June.

A metal detector survey was carried out across the study area and areas that returned signals suggesting the presence of buried metal were mapped. The machine used has an effective depth range of approximately 25 cm, sites buried deeper in the soil profile would not register during the survey. For this reason close attention was paid to evidence which suggested the depth of fill across parts of the site and this too was mapped on the site plan.

Surface features such as footings, paving, depressions and fence lines were also mapped onto the site plan. The features were plotted using tape and compass surveys that used the two standing buildings within the study area as points of reference.

Aerial photographic information, survey equipment and a turf cutter were supplied by the Town of Vincent for use during the field season. The study area is within a larger area (Hendersons Lake) which is interim listed on the Aboriginal Sites Register. An excavation permit under Section 16, historic site category of the Aboriginal Heritage Act was therefore needed and permit 258 was issued for this project. A condition of the permit is the provision of a copy of this report to the Department of Aboriginal Affairs. Excavations were carried out by two historical archaeologists with a labourer employed to remove fill under supervision and to refill the trenches.

Limitations on the project budget meant that there could only be a maximum of two days excavation. This presented several problems as the market gardens were known to be buried under an unknown depth of fill and little was known about their position or layout to help position a small excavation. The excavation also needed to open up a sufficient amount of the garden area to recover information about its layout. The excavation method chosen was a narrow trench as this method was thought the most likely to gain the greatest amount of information on the garden layout in the time available.

However, to gain this information the positioning of the trench was vital. The trench needed to:

- Be able to reach the market garden under the layers of fill.
- Be positioned to cut across the cultivation rows and garden beds to gain information on layout and cultivation.

The composite site plan was used to plot the mid-spring location of the high water mark before Lake Henderson was drained. This gave some idea of the position and shape of the lake. The market gardens were known to have been sited on the drained lakebed but the distance they extended up the banks towards the house was unknown. A trench was then positioned to run from near the mid spring high water mark towards the buildings located on higher ground.

As the direction of garden beds and the position of paths was also unknown it was possible that this trench may fall within the route of a path resulting in little information on the actual garden. A second trench was then sited near the mid spring high water mark to form a T shape with the first. Trench 1 was 14 metres long while Trench 2 was approximately 15.5 metres long. They were too large to be excavated by two people within a two-day period and it was therefore proposed to sample them with a series of test pits along their lengths. Once the depth and layering pattern of the fill was understood the remaining test excavations were to be excavated by a labourer under archaeological supervision.

This proposed method of excavation was abandoned after the results of the first two test excavations in Trench 1 revealed the depth of fill overlying the gardens, even at the western extremity of the trench where it could reasonably have been expected to be shallow. Trench 2 was not sampled and all efforts were concentrated on either end of Trench 1. The excavation of the eastern end of Trench 1 was also abandoned when the garden level was finally reached at the western end of Trench 1. Excavation outside of the limits of the two test excavations was by shovel with one layer of fill at a time being removed. The upper layers of fill were simply removed while those containing older materials were sieved and man made artifacts removed, bagged and labeled by trench and fill number. All material from the two excavation pits was sieved and man made artifacts removed, bagged and labeled by test excavation and spit number. The presence of construction materials such as bricks, mortar, pea gravel and undiagnostic shards of metal was noted and samples were taken and bagged with the other artifacts from that layer or spit.

The project budget allowed only a limited time for artifact cataloguing and analysis. As a substantial assemblage of artifacts was retrieved choices had to be made as to what material could be catalogued and what would receive less detailed treatment. Material from the garden layer and fill layers thought to be associated directly with the occupation of the site were catalogued, other material was more generally categorized. No conservation of the archaeological materials has been undertaken as part of this project.

BRIEF SITE HISTORY

The following information was supplied by the conservation plan team and condensed for this report to provide a short historical framework within which to understand the archaeological investigations.

The study area lies at the southwestern corner of Robertson Park and covers part of the former location of Lake Henderson. Lake Henderson is one of a series of fresh water lakes that lay within the boundaries of the City of Perth. Drainage of the lakes closest to the city centre began in the 1850s and by the early 1870s other lakes in the system including Lake Henderson were drained for use as market gardens.

Lake Henderson was subdivided into 1.2-acre lots and by 1873 James Fox owned that section of the study area which lies to the north and east of the southern fence line of Lee Hop's cottage. Fox was an expirée who had been transported to the colony 22 years before. He cultivated the first market garden within the study area. Fox is thought to have built his first house on the property in 1873 and a group of buildings lying behind the present position of the cottage, shown on an 1897 survey of the area are thought to be Fox's early 1870s farm buildings. Fox built a second house on his property. This is thought to be the house with a paling fence around it shown to the north of the farm grouping. As he took out a mortgage on the property in 1880 this is thought to be when he built the second house.

In 1893 Fox sold the property to hotelkeeper John Chipper who sold it to surgeon Daniel Kenny in 1899. It is not known if Chipper lived on the property and managed the market garden. However, it is known that Daniel Kenny was sub leasing both cottages and the market garden by 1902. Lee Hop leased the farm buildings and the market garden with Charles Cannop leasing the larger cottage. Ah Hong was leasing the adjacent market garden part of which lies in the southern portion of the study area. In 1903 the present cottage was built close to the lot's southern boundary and it is presumed Lee Hop occupied it. The farm buildings were still standing in 1907 and it is not known exactly when they were pulled down.

In 1913 Daniel Kenny's land was sold to the City of Perth to form part of Robertson Park. Filling of the lake area began at the Randell Street end and moved progressively towards the study area. By the late 1920s market gardening had ceased and Fox's second cottage had been demolished and the area converted into gardens and a children's playground. Lee Hop's cottage was renovated for use as a park caretaker's residence and the first caretaker moved in during 1928. The visible fence lines around the cottage date to the time of the caretaker as do the visible footings and paved areas within the garden.

A third cottage on the corner of Stuart Street had been built by 1917, and a general engineering works was built over the fill in the southeastern corner of the study area by 1929. Both buildings and associated outbuildings were demolished in 1983. The back verandah of the Lee Hop cottage was demolished in 1963 and an additional room added to the back of the house. A garage was also added to the southern side of the cottage. All the structures that have existed in the garden of the cottage have been demolished at various times. The last, demolished recently, was the caretaker's brick wash house. The foundations of this structure remain. Halvorsen Hall was built within the study area in 1970.

RESULTS

Archaeological survey

Only two areas within the study area recorded signals during the metal detector survey (Fig. 1). A very sparse pattern of signals was discovered spread over the southeastern corner of the study area. The buried fragments of metal were confined to the site of the buildings and yard of the general engineering factory. The pattern of signals was very widely scattered and suggested that little remains of this site after its removal in 1983. This also suggests that little is left of the other sites in the southern part of the study area that were also removed at this time.

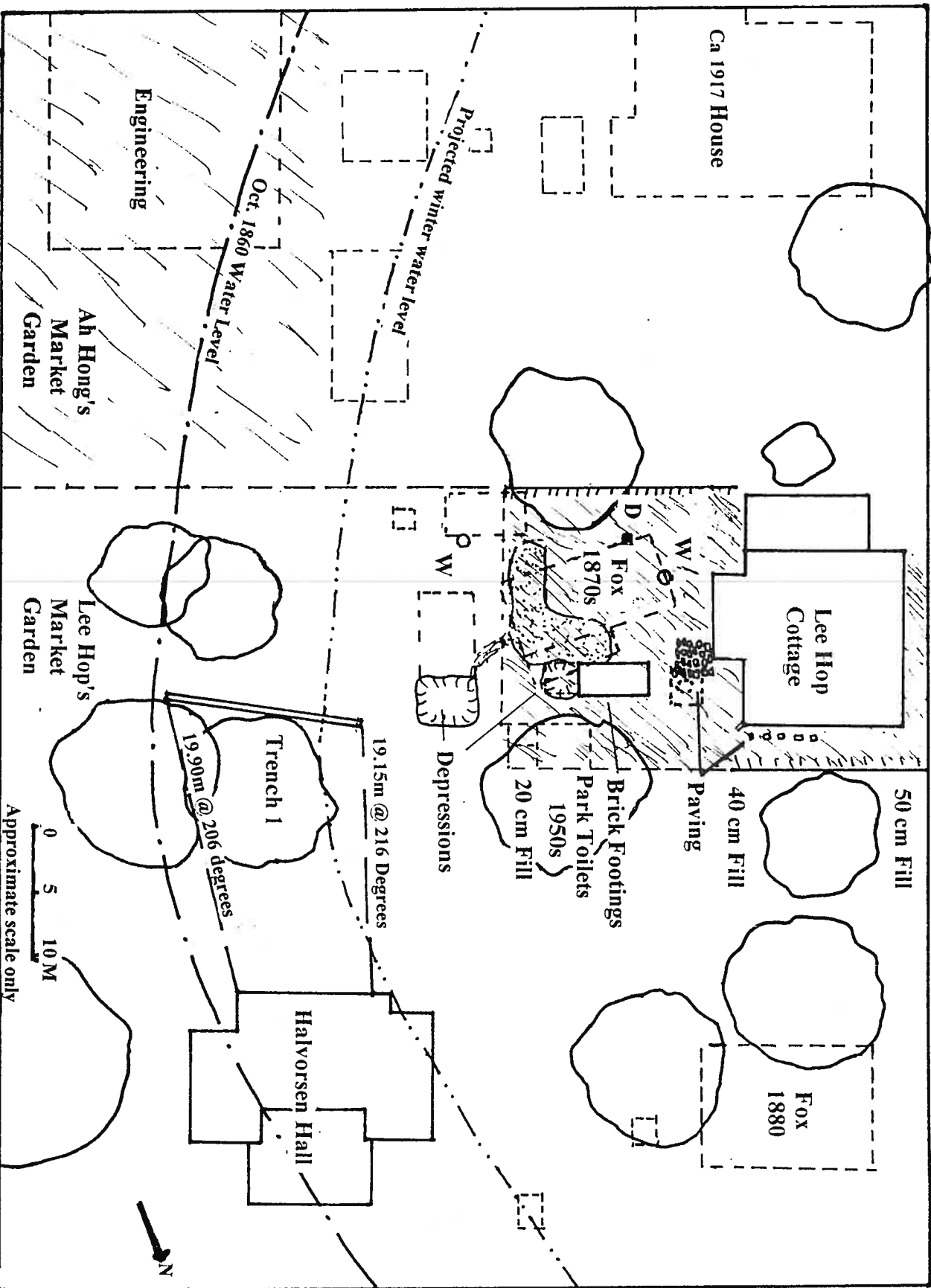


Figure 1 Archaeological Survey Site Plan

The other area of signals was confined to within the caretaker's fence line of the Lee Hop cottage (Fig. 1). The majority of visible surface features were also located within this area. These features included a stepping stone path down the northern side of the cottage and a concrete drain at the northeastern corner of the cottage. An area of paving and the footings of a brick outhouse were located behind the cottage. A square depression adjacent to the eastern side of the foundations marks the former location of an earlier building. There was no visible evidence of the 1950s public toilet which was once located in the northeastern corner of the garden or of Fox's group of farm buildings. An L shaped area of gravel marks the location of a former building which is lightly connected to the suspected site of another former structure lying outside the fence line. Two circular depressions one near the house and one outside the fence line are thought to mark the location of former wells. An underground metal drain was also noted during the metal detector survey.

Land within the fence line was markedly lower than that to either side (Fig. 1). The degree of fill on either side of the caretaker's garden appeared to be about the same. It decreased from 50 cm adjacent to Fitzgerald Street to 40 cm at a point level with the back of Lee Hop's cottage to a depth of 20 cm just short of the caretaker's back fence. The degree of fill on both sides of the garden means that any historical sites within these areas would be located at too great a depth to be found using the metal detector.

To the west of the house the ground level is approximately the same as that of the doorstep. This suggests that there has also been some soil build up in this area which returned quite closely scattered signals during the metal detector survey. A garage has been built adjacent to the southern wall of the house and a new room added on the back. Both these additions would have disturbed the archaeological deposits under and adjacent to them. The inside of the house was not inspected as part of this project but the remaining outside verandahs were. There is potential for archaeological deposits to exist under the verandahs and all around the house except in the two areas disturbed by additions.

The area directly east of the level of the caretaker's back fence is thought to be the part of the study area least protected by fill, as the area would have been on higher ground when the park was created. The difference between the caretaker's garden ground level and that of the park also disappears near the back fence suggesting that the levels in this area have not been altered deliberately since the caretaker moved in during the late 1920s. This area contains two features that have been buried but which still register as depressions in the turf surface (Fig. 1). One is thought to be a well and the other a building relating to a period of occupation prior to that of the caretaker. However, although the evidence suggests the amount of fill is less within this area it still appears to be deeper than approximately 25 cm as the metal detector could not detect even the sites for which there was physical evidence in the form of the depressions.

Archaeological survey analysis

The archaeological survey showed clearly that all of the study area except that lying within the confines of the park caretaker's garden is covered with layers of fill. Even in the area thought to contain the least amount of fill the additional layers are greater than approximately 25 cm thick. Fill protects underlying archaeological sites by providing a buffer between the sites and every day activities within the park. The depth of fill will also protect underlying sites from many ground disturbing maintenance and landscaping activities.

The fate of former structures within the park varies with the date they were demolished and what happened to the site afterwards. All the sites associated with the house on the corner of Stuart Street and the general engineering factory are likely to have been completely removed when they were demolished in 1983 and the land surface raised to that on the other side of the cottage garden. However, the demolition would not have affected the remains of Ah Hong's market garden in the southeastern corner of the study area as this was sealed with a layer of fill before the engineering factory was built.

Fox's 1880 cottage was demolished in 1928. This demolition is unlikely to have removed the site so completely and it is extremely likely that footings from this building and its outbuildings and the archaeological record of activities associated with their use still remain intact under the fill. The survey evidence suggests that the fill sealing this site is 50 to 40 cm thick.

Fox's 1870s farm buildings are thought to lie in and behind the caretaker's garden. They consisted of a brick house with a short verandah, a wooden shed to the east of the house, a galvanized shed to the south and a small, probably galvanized, structure to the east of that. The grouping is finished off by a windmill and tank stand to the north. The location of the sites shown in Figure 1 is approximate but thought to be reasonably accurate. Only one of the surface features is likely to relate to this complex of sites, the square shaped depression to the east of the caretaker's garden. The northern part of the wooden shed survived longer than the other out houses and this depression is thought to be the site of the foundations of this portion of the shed. It is extremely likely that the footings and archaeological record of activities associated with the farm group still survive within the garden and the area east of it. They are however, not all protected by fill. The house site should have no deliberately added fill over it and is likely to be within 15-30 cm of the surface with the outbuildings being a little deeper. This is only the depth of a spade and makes them vulnerable to most activities that disturb the ground surface.

The other features noted within the garden relate to either Lee Hop or the caretaker. The shed or sheds that stood on the gravel foundations probably relate to Lee Hop as they have a link to the depression that lies outside the caretaker's garden. The wells probably also relate to Lee Hop especially the one outside the fence line. There is some possibility that they are older and were dug by James Fox but they do not fit

easily with the projected position of the farm group buildings. The brick foundations are from the caretaker's washhouse and the depression behind it is thought to belong to an older structure against which the wash house was built.

Lee Hop's cottage was built in 1903 it is therefore likely that it was built using tongue and groove floorboards. If this is the case and the boards were well fitted without gaps then the archaeological record associated with Lee Hop and the park caretaker is likely to only exist around the cottage. This is because well fitting tongue and groove floorboards prevent small items from falling through the floor and creating an archaeological record of activities within the house.

However, the area around a house is an area of quite intensive activity and the archaeological record can be expected to be reasonably rich. The garden is usually an area of lesser activity but in the case of Lee Hop it was a work area associated with his market garden. It was where he had his sheds to store his equipment, seed and produce prior to marketing. There is also a possibility that the area was used as a secondary rubbish dump with small holes dug throughout the area to get rid of small amounts of rubbish.

The sites that belong to Fox's and Lee Hop's occupancy form an important part of the story of market gardening within the study area. As archaeological sites there is a strong possibility that they are relatively undisturbed and along with Lee Hop's cottage and the market gardens themselves form a complete story of historic occupation and gardening within the study area.

Archaeological Excavation

The test trenches were positioned to run adjacent to and at right angles to the mid spring high water mark of the lake while avoiding existing trees on the site. The western end of Test Trench 1 was positioned at 19.15 m at 216 degrees from a point 2.9 m from the southwestern corner of Halvorsen Hall (Fig. 1). The eastern end of the trench was at 19.90 m at 206 degrees from the southeastern corner of the wall. Measurements along the trench were taken from the western end. Test Trench 2 was positioned to cross the eastern end of Test Trench 1 to form a T shape. The trenches were 30 cm wide.

Test excavation 1 was positioned between 0 and 50 cm along Test Trench 1. Test excavation 2 was located between 13 and 13.5 m putting it adjacent to the point where the two trenches overlapped. They were excavated by a mixture of excavation by natural stratigraphy, where each of the different soil and fill layers was removed as one unit, and excavation by arbitrary layers, where a thicker layer was removed in two or more spits. Test excavation 1 was excavated to a depth of 80 cm while Test excavation 2 was excavated to a depth of 55 cm (Fig. 2). Excavation was stopped because these depths are as far as such small holes can be realistically dug.

Shovel excavation of other areas of Trench 1 was carried out either by the archaeologists or by a labourer under archaeological supervision. Layers were excavated by natural stratigraphy and soil from those containing older material was sieved and artifacts retained.

The first 4.5 metres of Trench 1 was excavated to a depth of 1.1 to 1.4 metres (Fig. 2, Fig. 3). It followed a natural slope found in the lower deposits. The eastern end of Trench 1 was also excavated between 9.8 and 13.5 metres. The test excavation in this part of the trench at 55 cm was deeper than the shovel excavation, which was only to 30 cm (Fig. 2, Fig. 4).

Fill Deposits

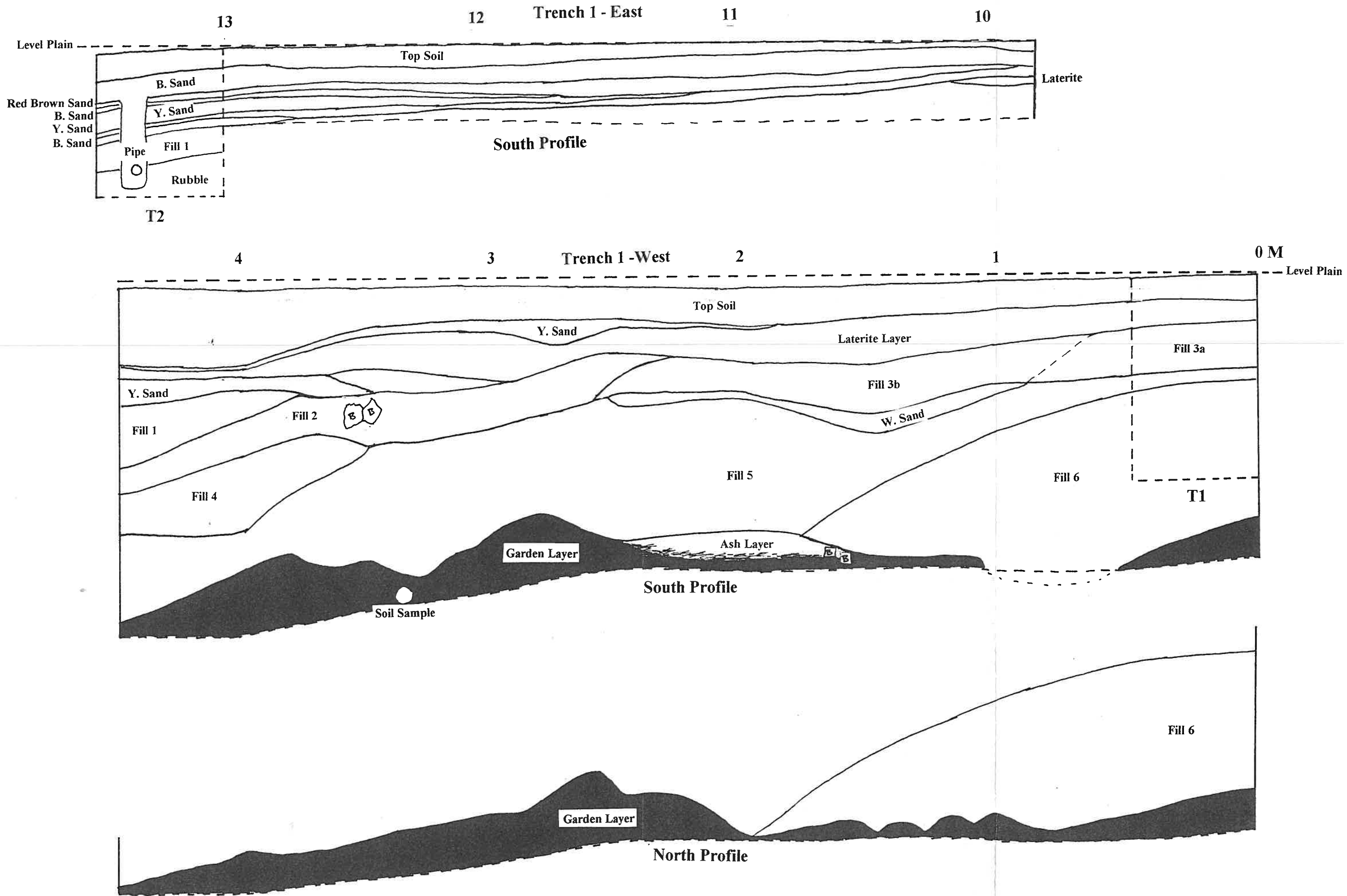
The western excavation uncovered a layer of top soil over two relatively recent fill layers of yellow sand and laterite gravel's (excavated as spit 2 in Test excavation 1). At the eastern end of the trench the ends of three other relatively recent layers of fill were also uncovered (Fig. 2). Of these recent layers only the laterite layer had its deposits mostly in the western end of the trench with the eastern end of the layer being uncovered at 10 metres. The other layers except the lowest of the three layers at the eastern end of the trench were spatially discreet fills of sand. The lowest layer (Fill 1) was the highest layer of demolition materials within the soil profile. It started at 3.8 metres but had disappeared by 10 metres (Fig. 2).

Fill 1 is categorized as a fill of white building rubble. It contained small shards of orange and dark red brick, large bolts, formed concrete and concrete mortar (see appendix 1). The overall white look of the layer came from the amount of concrete mortar in the matrix. The layer also contained a small percentage of non-construction materials such as pieces of bone, bottle glass and ceramics. Dated bottle shards were from a light green bottle with an applied lip made to be sealed by a glass and cork stopper, 1870-ca 1925 and a light blue automatically made bottle available from ca 1900. The layer also contained a child's marble.

Under fill 1 a second layer containing a mix of building rubble starts (Fig. 5) and this layer extends past 13.5 metres underlying six thin layers of sand fill in the eastern trench excavation (Fig. 2). It extended into Test excavation 2 where it was excavated as spit 6. The layer, which lies mainly in the eastern trench, was labeled fill 2. While the stratigraphy of the two trenches cannot be joined together to show these are the same layers a material type which occurs only in T2 spit 6 and the yellow rubble under fill 1 indicates that they are the same layer. The material is dark green bottle glass that has been melted out of shape. The layer also contains metal, which has been melted into slag and even a piece of pumice.

The layer contained 2 pinkish red pressed bricks with shallow rectangular frogs. They were associated with a sandy yellow mortar. Shards of dark red brick, one piece of which was plastered with concrete painted black, of red wire cut bricks and a brick

Figure 2 Soil profiles of excavated sections of Trench 1



type that was light orange with red flecks were also found. Both a sandy yellow mortar and some white mortar were found along with concrete mortar, concrete, wire nails and some window glass. Some of the sandy mortar was limewashed beige.

The non-construction materials included chicken and mammal bone (probably sheep/pig), crown seal bottle caps, ca 1915 to present, and a glass marble from a Codd bottle, 1870 - 1930 and glass from a wine glass. Bottle shards included shards from a green turn paste bottle, ca 1880 - 1925, 2 moulded olive green and two green bottles, 1860 - 1925, 1 light green bottle, 1 clear bottle embossed ...CK... which possibly had a flared finish and a dark amber moulded bottle 1860 - 1925. Ceramics included a shard from a 3rd period ironstone plate 1891 to present, shards from white glazed, cream glazed and light brown glazed earthenware plates. Also found was a shard of refined earthenware, white glazed one side and honey glazed on the other and one whitebodied, white glazed shard from the rim of a large dish or chamber pot. The assemblage also included transfer printed ware in black and blue, 1875 to 1914, and a shard of flow blue ware 1840 to 1895. The transfer-printed ware was from both a cup and a plate. A copper hook from a hook and eye dress set, 1905 to present and the stem of a glass bottle stopper were also noted. The dateable material suggests the assemblage dated to the late 19th century to ca 1925.

The next layer of fill containing historic material was a fill of dark organic material labeled fill 3 (Fig. 5). This layer has been divided into two segments (a and b) which although different are thought to be part of the same layer (Fig. 2). The uncovered part of the fill extends from 0 to 2.60 metres. It lies adjacent to fill 2 in the soil profile but is partly overlaid by 2 where the two layers meet.

Segment 3a extends from 0 to approximately 80 cm. It is categorized by the presence of a lot of metal. The metal does not appear to be mainly building material but shards from objects such as metal buckets and tin cans, and included the handle and part of a rim of a metal bucket (see appendix 1). There were also a few small shards of perforated sheeting such as that used in meat safes. There was some construction material in the form of window glass in three different thicknesses, lead sheet, some concrete, dark pink and red/orange brick both associated with a yellow mortar and lesser amounts of an orange brick associated with a white lime mortar. There was also some burnt and unburnt wood which could have been from a building or used for firewood. The layer also contained nine nails and one screw. All but two of the nails were wire nails with one dating to the early years of wire nail production, ca 1870 and the others all appearing to be 19th century types. The two nails that were not wire rose headed nails were early flat-headed nails with square shafts.

Non construction materials include some bone, an oyster shell, a shard of blue banded transfer print ceramic, shards from two light green medicine bottles, ca 1880 to 1920 and part of a wine glass. There were also shards from two olive green bottles, one from a moulded bottle with an applied lip, ca 1860 to 1925 and the other the smashed base of an older olive green bottle, ca 1820 to 1870. The dateable material is mainly earlier than that in fill 2 with no artifact types which are still available today. All the material comes from a period before ca 1925 and except for the pre 1870s bottle base

Figure 3 Western end of Trench 1



Figure 4 Eastern end of Trench 1



Figure 5 Soil profile, Western end of Trench 1



is typical of a late 19th early 20th century assemblage. Although the early bottle type is thought to have a manufacturing end date of 1870 this same type of bottle has been found in a site at Cossack which was not built to 1870 (Nayton 1992). The manufacturing end date may be slightly wrong or the presence of a slightly earlier bottle in the assemblage may be due to bottle reuse. Bottle reuse is a practice known to be common in the 19th century.

Fill 3b lies adjacent to 3a but contained a great deal less material culture. The layer contained no bricks and mortar and the metal appeared to be mainly non-construction (see appendix 1). Two different thicknesses of window glass was present as was 4 wire nails which again appeared to be 19th century types. The layer had a greater variety of non-construction materials that included part of a copper ruler, a bone knife handle and part of the blade from a cutlery set. It contains shards from two bottles, one a olive green bottle made in a two piece shoulder length mould, ca 1860-1925, the other a clear bottle which is possibly a wide mouthed bottle. Also shards from two ceramic dishes, one white glazed and the other from a green transfer printed plate, ca 1875 to 1914. The assemblage is again late 19th to early 20th century.

The next fill layer is at the eastern end of the western trench under Fill 2 (Fig.2). Fill 4 is a dark organic rich layer containing building rubble the spatial extent of which is unknown. Spit 7 in T2 is possibly the same layer but not enough material was recovered from spit 7 to characterize it.

The fill has shards of formed concrete, brick pavers and shards of pressed red bricks with black flecks and a very shallow rectangular frog. A very noticeable element was concrete re-enforcing wire, which was only found in this layer. The layer also had both white and grey concrete some painted grey with milk paint, some other shards were moulded. Shards of sandy mortar limewashed beige, white and dark pink and painted beige with milk paints were also recovered. Metal artifacts were mainly door hinges with both H and T hinges recovered with some sheet metal. There were only 5 nails, four of which appeared to be 19th century wire roseheaded nails, ca 1880 - 1900 with one being a square shafted flat headed nail. Two different thicknesses of window glass were also represented in the assemblage.

Non-construction materials included sheep/pig and chicken bone and an oyster shell. There were shards from at least 7 bottles, 1 olive green and 1 green moulded bottles 1860 - 1925, 3 or 4 light green bottles one of which was turn pasted, 1880 -1925 and one with a down tooled applied lip. The other two bottle types were a clear medicine vial and a rectangular paneled medicine bottle. Most of the ceramic shards were from cups with only one plate, decorated with a blue transfer print, 1875 - 1914 and a shard from a large kitchen canister honey glazed both sides. One cup shard was blue glazed both sides, one was from a white porcelain cup and two were from white china cups. The assemblage also contained part of a slate pencil and a bowl shard from a clay tobacco smoking pipe commonly available until ca 1914. For the amount of the layer excavated this layer contained more non-construction materials then fills 1 to 3. The presence of transfer printed ceramics does not necessarily constrict the assemblage to pre 1914 as ceramic types tend to have a long occupation life and can be found in

assemblages which date to later than ca 1914. However, the clay smoking pipe is a quite short-lived artifact and would not be expected to enter an archaeological assemblage long after it was no longer commonly in use. The absence of crown seal bottle caps, which began to become a very prominent part of historical assemblages after ca 1915, also suggests that the end date for this assemblage does not date to long after 1915.

Fill 5 is a major layer of demolition fill that directly overlies the market gardens for most of the length of the western end of Trench 1 (Fig. 2). Construction materials include pressed bricks that are orange with red flecks, red and dark red, all without a frog. It also included wire cut orange bricks and one shard from a red brick paver. Most of the mortar was sandy yellow giving the matrix its dominant colour but there was some white and a small amount of cement mortar. Some of the white mortar was painted grey or white with milk paints, a shard of concrete mortar was painted dark blue and some of the sandy mortar was painted yellow or white. However, much more of the sandy mortar was lime washed beige, white or pink. The assemblage contained sheet metal, wire, metal straps, wood and concrete all of which are probably also building materials. Of note is concrete moulding possibly from a front door surround, a collection of mosaic tiles and ceramic insulators from a house that had an electricity supply, ca mid 1890s to present. The layer also contained three thicknesses of window glass, window putty and a collection of wire nails and screws.

Non-construction materials included an oyster shell and sheep/pig and chicken bone. Ceramics included a terracotta flowerpot, 2 white glazed plates and two transfer printed plates, 1875 to 1914, one with a decoration which could be part of the willow pattern. There was also a shard of stoneware kitchen canister. There were many more bottles than ceramics in this layer. There are shards definitely from 23 different bottles and possibly from as many as 31 bottles. There was only one fully automatically made bottle, ca 1915 to present, several semi automatically made mostly dated to ca 1860 to 1925 but with one dating to ca 1900 to 1925 and another to 1880 to 1925. The assemblage also contained shards from 3 medicine bottles, a wide mouthed bottle or vase with a folded out lip and at least two Codd bottles, ca 1870 to 1930. One of the Codd bottles was embossed CANNINGTON SHAW A Co Ld MAKERS St HELENS. 5529. The name is that of the maker of the bottle and dates it to after 1913 (Boow & Byrnes 1991:177). Other artifacts consisted of a lid from a small tin, an artifact which is possibly a metal trouser button, tin from tin cans, a crown seal bottle cap, ca 1915 to present, a slate pencil, shards of white and blue milk glass, and a shard of yellow glass. The scarcity of automatically made bottles with crown seal caps suggests this material stopped accumulating not long after 1915 but the presence of the Cannington bottle means that it was still accumulating in 1913.

The lowest fill layer found during the excavation was of white demolition rubble labeled fill 6. It was found only at the western end of the trench and extended from 0 to 1.8 metres where it overlaid part of the market garden. The construction materials were predominately pressed orange bricks 11 cm wide by 7 cm high with no frogs associated with a white lime mortar, which gave the matrix its colour. One sample shard of the mortar finished with a pink limewash was retained. There was also a

shard of highly glazed brown tile, a shard of a white milk glass tile, small shards of dark hardwood timber some of which were burnt, a piece of metal strap and some iron sheeting. Three nails and an iron screw were recovered; one of which was an 1870s nail type. The layer consisted almost entirely of construction materials but 2 shards from a tin can and 2 shards from two different bottles were also recovered. One was a olive green neck shard from a moulded bottle, ca 1860 to 1925 while the other was from a brown moulded bottle embossed with part of a trademark or nameA . Pd.....

Garden Layer

A garden layer was uncovered under the layers of fill deposits. Soil profiles from both sides of Trench 1 were taken of this layer (Fig. 2). From 0 to 1.8 m this layer is overlain by fill 6. In this area of the trench the profiles from the two walls are quite different. On the southern side of the trench it slopes down towards the east and dips below the excavated level between 55 cm and 1.08 m. It then rises to a point just above the excavated level and continued at the same level until 2.3 metres. On the opposite wall of the trench the level also starts by sloping down to the east but the slope extends further and there is no ditch feature. Beyond the slope the profile is one of small corrugations approximately 10 cm high by 20 cm wide. The soil matrix was fine dark sand and it contained no artifacts.

Partly overlying both this first section of garden layer and the beginning of the second part is a pocket of ash deposits. The ash overlies the garden layer but underlies fill 6. The ash deposit can be seen in the profile of the southern wall but it did not quite extend into the northern wall. The ash deposit did contain artifacts most of which were not construction related. Artifacts recovered included shards from an automatically made crown seal bottle, ca 1915 to present, metal and a bone handle from a penknife, metal from tin cans and shards from a turn paste bottle, ca 1880 to 1925. Construction artifacts were shards of window glass of two different thicknesses, a shard of metal strap, 1 wire nail, which was possibly flat headed and some shards of miscellaneous and burnt metal.

The second part of the garden layer has an uneven profile of large corrugations. Two unevenly shaped corrugations can be seen in the southern profile with their crests located at 2.85 and 3.85 metres. In the northern profile only one corrugation, also unevenly shaped, can be seen which has a crest at 3.60 metres. East of this crest the layer generally slopes away somewhat unevenly before starting to rise at the eastern edge of the excavation. A soil sample was taken from this layer to provide material for soil and pollen analysis if such research is required at a later date.

The second part of the garden layer contained quite a few artifacts, a small portion of which, were construction materials. This material may in fact have come from fill 5, which overlay this part of the garden, as total separation of the two layers proved difficult. The construction materials recovered were a few shards of sheet metal, some miscellaneous metal, some chromed metal sheet with white milk paint adhering to it,

wire, 1 shard of cement mortar, 2 shards of lime plaster limewashed white and another limewashed pink. There was also 1 square nut, 6 wire roseheaded nails and shards from two thicknesses of window glass. Shards from a terracotta plant pot may have also come from fill 5.

Non construction artifacts were much more numerous. Metal objects included part of a round tobacco tin, 1910-1930, part of furniture facings, a copper thimble and a metal shanked button, ca 1870 to 1910. A green glass button with a metal shank was also recovered. There was also a shard from a lead bottle sealing capsule with part of a trademark and the letteringRY Coy. M...The trademark cannot be identified from this fragment but such seals with trademarks were used between 1862 and ca 1930.

There are shards from at least 10 possibly 11 bottles with moulded green, blue green and clear bottles, ca 1860 to 1925, 2 shards from a light green bottle with panels which probably was a pharmaceutical type bottle, and 3 from a cobalt blue bottle. This bottle would have contained a poisonous substance and such bottles were used between 1820 and 1930. Four shards from a case gin bottle were also recovered along with some from a brown fully automatically made bottle, and another with a crown seal lip both dating to after ca 1915. A shard of thick clear glass could have come from a bottle with panels however; two other thick clear shards are more clearly from a table ornament rather than a bottle. There was also a shard from a wine drinking glass.

Ceramics were also numerous and shards from 10 different vessels were noted. Three shards were from different kitchen canisters while there were shards from five different plates and one cup. The ceramic was all from whitebodied wares, three dishes were glazed white, three were transfer printed, ca 1875 to 1914 and the cup was blue banded transfer print which is also ca 1875 to 1914.

Archaeological excavation analysis

Dating

As expected the archaeological excavation revealed layers of fill above a garden layer. Dating however, appears confused as most of the layers are basically late 19th early 20th century. A dating method devised for the Cossack Store site is however, capable of delineating short time periods within Australian historic sites. The method is a modified mean formula (Nayton 1992:81-82) which produces a mean date for the layers as well as a date range for the assemblages. For this site the start and end dates of the date range were based on the earliest manufacturing start date and the latest end date for artifacts contained in the layer. The mean calculation takes into account all of the dateable material within a layer and where the mean sits along the date range shows where the bulk of the dateable material lies.

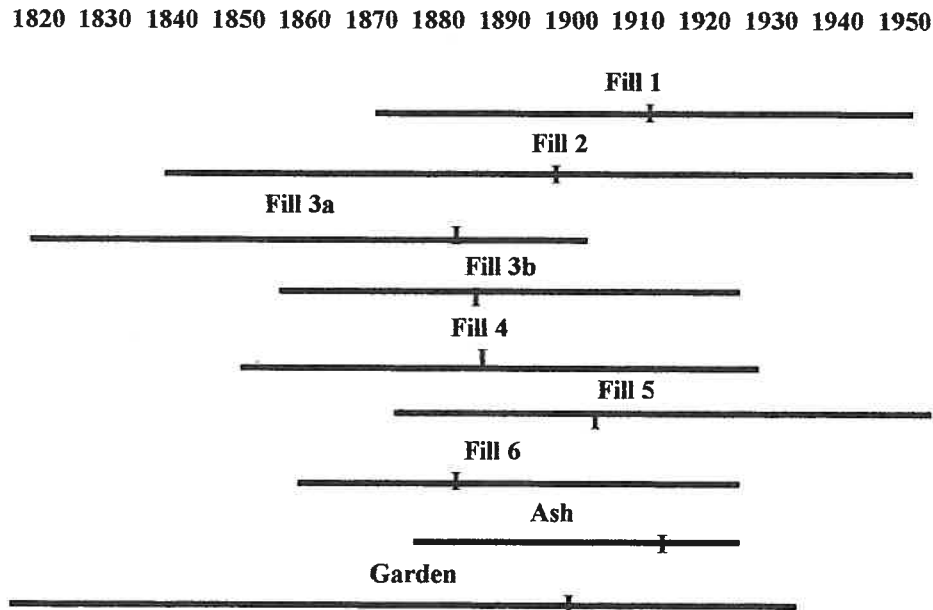
Figure 6 Date ranges and means for excavated layers

Figure 6 shows the date ranges and means for the different layers. It can be seen that the fill layers fall into groups with fills 1 and 2 having later material and later means then fills 3, 4 and 6 which have means grouping in the 1880s. Fill 5 has two later artifacts and an assemblage mean close to 1900. The two bottom layers are occupation layers rather than fill layers. They both have means later than most of the fill.

The garden layer has a mean of 1899 the early beginning date of the range is due to the presence of an artifact type which has a long period of possible use from 1820 to 1930. The rest of the artifacts, as can be seen by the mean date, are grouped around the turn of the century with the assemblage continuing to be accumulated until at least 1915.

The ash layer is thought to be material cleaned out from a fire on the property and then dumped on the spot it was found. As the fire obviously contained material other than firewood it is thought to have been a bonfire rather than material from a fireplace in the house. The presence of both a crown seal bottle and a turn paste bottle means that the material must have been dumped between 1915 and 1925. The mean date for the assemblage is 1917 which suggests dumping around this date if the material was from a bonfire lit by Lee Hop to get rid of excess rubbish on the site. However, the bonfire could have been part of the caretaker's site cleanup of old rubbish left by Lee Hop, in this case the burning of older rubbish would give the assemblage an earlier mean than the actual date of the burning. The date of the burning could therefore be close to 1917 or actually be 1928 when the caretaker moved into the house.

This gap between the accumulation of an assemblage and the dumping of it elsewhere also accounts for the apparent anomaly of the fill layers being older than the

occupation layers underneath them. The mean dates for the fill layers relate to the time period when most of the artifacts within the assemblage were added to it. The date the material was dumped is harder to determine.

Fill 6, a demolition layer, is overlying the ash layer and therefore dates to after this layer, meaning it must date to after ca 1917. What dateable material it contains is however, pre 1915 indicating that material had stopped accumulating in the assemblage by this date. Lack of later material can indicate the date of abandonment of the original site or the date the site was demolished and the material dumped. In this case with a later layer underneath the fill it is more likely to indicate when the original site was abandoned. As the garden and ash layers underlie the entire fill materials the mean dates for the all the fill layers is also indicative of the date of abandonment not demolition.

Fill 5, another demolition layer which overlies fill 6 does contain post 1915 material having two artifacts which date to after 1913 to 1915 and another which dates to between 1900 to 1925. The presence of evidence for a domestic electricity supply also suggests the houses the material came from were still occupied in the early 20th century. The artifacts suggest the material in fill 5 was still accumulating in the period just before 1920 therefore site abandonment, demolition and dumping must have occurred after 1915. The small amount of post 1915 material in the general assemblage suggests that abandonment of the house or houses represented by the fill material is likely to have occurred before ca 1920 but this is not necessarily the date they were demolished and dumped.

Fill 4 is an organic rich layer, which also contained building materials, rather than a layer of demolition rubble. It is similar to fills 3a and b in this regard and with them forms a discontinuous organic rich layer over fill 5. All three fills have means grouped in the 1880s with none containing post 1915 materials. The datable building materials all suggest late 19th century houses built between ca 1870 and 1895. Non construction materials within the layers have mean dates in the 1890s for 3b and 4 with the small amount of dateable material in 3a still giving a 1880s date. This gives a picture of the material coming from houses built in the 1870s or 1880s with the accumulation of material culture within those houses greatest in the early 1890s and the houses themselves being abandoned in the later 1890s.

Fills 1 and 2 are later demolition layers overlaid by sand. They have means of 1899 and 1911 respectively although the 1911 mean was calculated on only two artifacts and therefore is not as reliable as a mean calculated on several artifacts. They both contain artifacts not available until after the turn of the century with fill 2, the lower of the two layers, containing some post 1915 material. The nails associated with the houses were all wire roseheaded nails which suggests the houses were built between 1870 and ca 1895 but the material culture associated with them and the presence of evidence for a domestic electricity supply suggests they were still occupied in the early 20th century. However the material does not suggest they were occupied long beyond 1915.

Analysis of fill layers

From historical documentation we know that the study area was sold to form part of Robertson Park in 1913 but that it was one of the later areas to be filled, filling occurring in the late 1920s. However, all the fill layers date to earlier than this, with most dating to the 19th century. This is because the fill used is demolition material from houses no longer used or wanted. The overall picture given by the fill layers is of an area where houses were built in the 1870s and 1880s which were then abandoned in the boom times of the late 1890s and early 1900s as the population upgraded to better housing stock. However, their use as fill material in the late 1920s suggests that pressure on available building space, necessitating the removal of old building stock to make way for new, did not start occurring until later.

The material within the fill layers presents a very clumped appearance with similar building materials occurring close together with dissimilar material further along the layer. This suggests that the material was deposited in wagonloads with different wagons coming from different house demolition sites rather than from a central dump. It is fairly likely that the houses being demolished came from within the Town of Vincent, with some of them being the housing stock demolished to make way for the park itself. The clumped nature of the material should make it possible for archaeologists to identify and study material from individual wagon loads while any trenching activities undertaken as part of the proposed landscaping would provide a representative sample of material culture within this older building stock.

The fill layers, as well as falling into different date groupings, also fall into different groups depending on which direction the fill was laid from and the nature of the fill material. In the eastern part of the trench all the layers are extensive and are laid from the lake end of the study area towards the cottage (east to west). They represent attempts to fill the lakebed.

In the western end of the trench the picture is more complicated. Fill 6 has clearly been laid west to east, it is not lake fill and appears to be demolition material which has been pushed down the slope from the higher ground near the cottage, probably to make the slope less steep. It appears to be material from one house and almost certainly belongs to either Fox's original farm building or to his 1880s house. The layer is mainly dated on nails which include a pre 1880 nail suggesting the earlier rather than the later building. Also the earlier building is closer to the dumping site being only metres from the top of the slope. It is possible, as with the ash layer that lies slightly underneath it, that it is the result of cleaning up the site for the park and the caretaker in 1928. However, Fox's farm building is thought to have been demolished earlier than 1928 although the ash layer underneath suggests it was not removed until after ca 1917.

Fill 5 is an extensive layer that appears to be part of the first attempt to fill the lakebed. The organic rich layers of Fills 3 and 4 overlie the demolition material. These layers, apart from the present topsoil, are the only organic rich layers within the soil profile and probably represent the first park surface. The layer appears to have

been dug through causing the apparent separation into fills 3 and 4. The extent of the disturbance, at almost a metre, suggests the former location of a large plant such as a bush or young tree.

Again fill 3a has material which has been added to it from west to east. The material is non-construction and appears to be related to market gardening. It is extremely likely that this additional material is the result of the site clean up in 1928 which has been pushed down the slope out of the new caretakers garden where it has mixed in with the top soil of the new park. The non-construction material in fill 4 could be from a more general site clean up as it is less obviously market garden orientated and may also have partly accumulated from the use of the new park. It contains material that was in general use up to ca 1925 but contains no post 1915 or post 1930s material. This suggests that as a park surface it was probably short lived and that it was more likely to have been laid prior to 1928 and overlain soon after then lain after ca 1928.

The initial infilling of the lake may have subsided as the materials used settled necessitating the application of additional fill layers. Fill layers 1 and 2 are from house sites that were in use up to 1915. Both concentrate in the eastern part of the trench suggesting they were added to bring the former lake area up to the same level as that in the western end of the trench. This may have been necessitated by subsidence or because the area was left lower in the first place. The sand layers in the eastern end of the trench are probably a later version of the same solution to a lower, wetter lake area, with each sand layer also functioning as the park topsoil. The laterite layer in the western end of the trench does not appear to be fill as such but an extent of hard cover added to one area of the park. It may have been the ground cover for a piece of park equipment or we may have encountered part of a driveway to allow access to Halvorsen Hall.

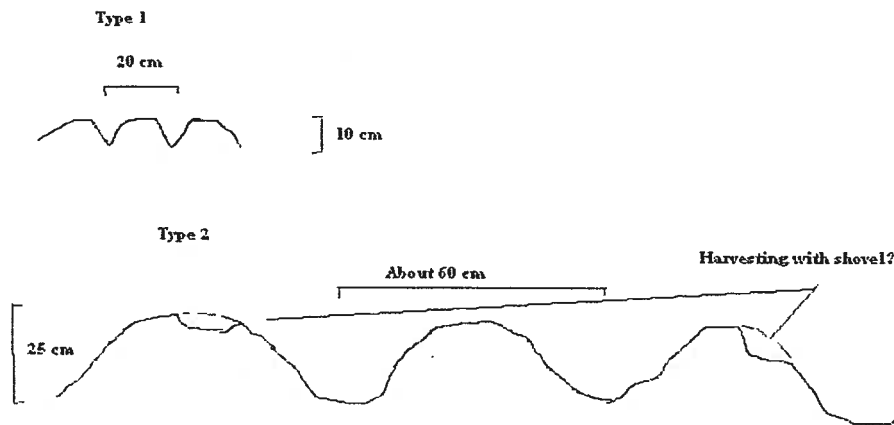
Analysis of garden layers

The garden layer falls into two distinct areas showing different methods of cultivation (Fig.7). Type 1 is small row cultivation created with a hoe. There is no evidence of harvesting therefore it is likely that the plants were harvested by cutting, with the roots and stem allowed to die back *in situ* as a form of fertilizing. Plants such as wheat and barley are grown and harvested in this manner. Robert Suzak, whose family have been market gardening since the 1920s also suggested tomatoes, strawberries, herbs or celery could have been grown with this type of cultivation. Neil Passmore (Gardening Australia and Sunday Times garden correspondent) also felt that these were reasonable suggestions as were those Rob suggested for the type 2 cultivation.

The type 2 cultivation is one often seen in present day market gardens for crops as diverse as strawberries and potatoes. It is large row cultivation where the plants are grown in the tops of rows with drainage ditches in-between. A spade has disturbed the rows in this garden during the harvesting of the crop suggesting root crops such as potatoes or turnips. Rob also suggested cabbages, cauliflower's or brussel sprouts

which, although they are harvested by cutting, then have hard stems, which have to be removed by digging the plant up. A soil sample was taken from this garden layer and later analysis of this should provide pollen evidence for the types of plants grown.

Figure 7 Cultivation Types

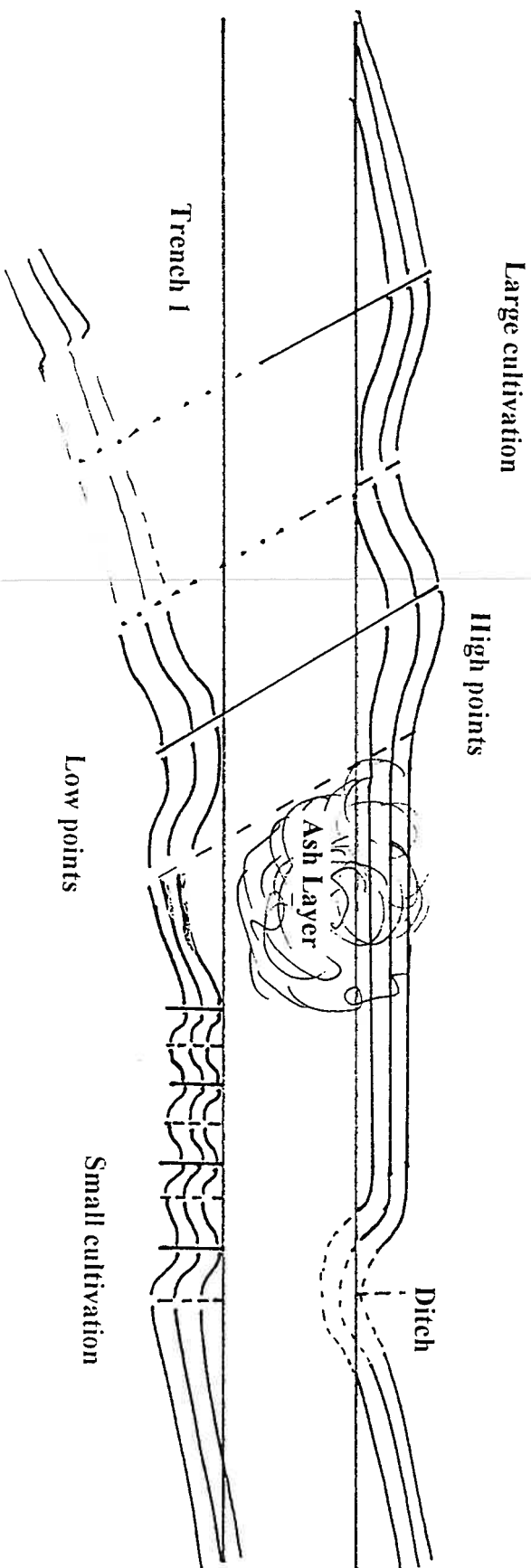


An analysis of the layout of the garden beds suggests firmly that the type 1 and 2 cultivation areas are actually distinct gardens from two different time periods (Fig. 8). The area of type 1 cultivation lies under fill 6 and the ash layer dating it to before ca 1917. The small row cultivation is at right angles to the excavation trench and starts within the trench and runs to the north of the excavated area. To the south of the excavated area is a ditch with flat uncultivated ground lying next to it. The flat ground is probably the end of a dirt path running alongside the ditch to the cultivated ground. To the west of both the ditch and the small row cultivation the ground rises. This could be either the start of the slope up to the higher ground on which the buildings stood or the edge of a mounded garden bed. Such beds usually have a ditch on either side with the plants grown in soil mounded up in-between. An example of this type of garden bed was recorded from the 1887 kitchen garden in Government House Gardens (Nayton 1998:16).

The type 2 cultivation bed clearly runs at an angle to the excavation trench and a short distance to the north would have over run the type 1 bed if, in this area it is not protected by more of fill 6. This clearly suggests that this layout is later, as does its existence directly under the first layers of lake fill. The type 2 bed clearly represents the last garden layout in this area before the lake was filled. The angle of the rows suggests the gardener was following the contours of the lakebed rather than imposing a right angled grid on the landscape. Following the contours would have forced surface run off to run sideways along the ditches aiding watering. The cultivated bed runs both sides of the excavated area. The size of the bed cannot however be determined from this small sample.

The two gardens also show evidence for different methods of fertilization. Leaving the roots and stems to die back into the earth fertilized the earlier garden. Organic fertilizers may have also been dug into the soil when the bed was first prepared.

Figure 8 3D representations of evidence of cultivation



However, such fertilizers would leave no visible trace and chemical analysis of the soil would be needed to determine if this did indeed happen. The later garden however appears to have been fertilized at least partly by burning rubbish and adding the ash to the beds. The pocket of ash found is a remnant of this practice sealed into place by fill 6 before it was dug into the garden beds. However, both the ash and the large row cultivation area contain non-garden related artifacts whereas the small row cultivation contained no artifacts whatsoever.

The two garden areas show differences that go beyond different row types for different crops. They show difference mind sets to the practice of gardening. The earlier garden is laid out without regard to the landform within which it is set. A grid is imposed on the landscape that would have run at an angle down the slope increasing water runoff from the garden. Fertilization was by leaving green stuff to decompose in the soil or by adding organic fertilizers such as manure. The later garden conforms to the landscape and uses it to aid watering. Manure may have been added to the soil but so too was ash and kitchen rubbish. This suggests not only different gardens but different people. The later garden is known to be Lee Hop's, the earlier is a remnant from either Fox or the two later owners. The remnant has survived because Lee Hop did not garden as far up the slope as his predecessors leaving a rim of garden untouched above his cultivation. Some of this remnant has then been sealed by fill 6. Fill 6 is probably the demolition material from Fox's 1870s farmhouse demolished by Lee Hop then used to flatten the slope contour on the area of bank he did not garden. He may then have abandoned the upper edges of his garden to concentrate efforts further down slope. This would explain the lack of more post 1915 material in the garden layer.

SIGNIFICANCE

The system of fresh water lakes north of Perth CBD attracted early settlement and the area achieved a number of first's. It was Perth's first local food growing area, first suburb and first working class area. As such it was where ticket of leave men clustered and where the first ethnic communities formed. It represents the Perth version of the 'Rocks' area in Sydney.

Within such areas cluster sections of the community not well represented or understood by historical documentation. Few people within such areas wrote their own story or told of their life through their eyes. What documentation there is on their lives was accumulated by outsiders, usually middle class white males and usually in some form of official capacity. This bias has long been understood by historians and archaeologists and giving voice to silent majorities like the poor, ethnic communities or slaves has long been seen as a strength of archaeology. The archaeological record associated with such groups is therefore highly significant as it provides one of the main avenues for understanding their lives and social interactions.

Only one other former lake area has been surveyed for archaeological sites and that is Perth Oval, which was formerly part of Stone's Lake (Aris, Ball & Nayton 1999). Historical documentation of building locations in the Perth Oval area only extended back as far as 1898 when a mixture of suburban settlement, grazing and Chinese market gardening occurred on the site. However, the lake edge was known to have been used for market gardening since soon after first settlement, long before the lake was drained in 1845. This is also likely to be true of the study area. Analysis of aerial photographs identified market garden patterns and sites associated with the 1898 settlement. Other sites were noted which might be associated with earlier settlement but could not be positively identified as such without supporting evidence such as historical documentation or archaeological excavation.

The study area is therefore currently the only area where an early farm associated with an ex convict has been positively identified.

It is also one of two former lake sites where sites associated with former Chinese market gardens have been identified. Of the two however, it is the only one where the dwelling of the Chinese market gardener still exists as the only known such site associated with Perth Oval no longer exists even as an archaeological site.

The study area contains a continuous sub section of the history of the lake's area. It has market gardens, the farm and later grander house of an ex convict and the home of a Chinese immigrant. Both Lee Hop's cottage and Fox's 1880's house are also part of the story of Perth's first suburb. These people like many others within this area did not get to tell their own story. The archaeological record associated with them is therefore highly significant as one of the best avenues of research to throw light on their lives. Areas of significance are shown on Figure 9 and listed below.

Degree of significance

Considerable Significance

1870s Farm and Lee Hop's house and work area
Fox's 1880s House
Market gardens

Some Significance

Garden and shed of Fox's 1880s house
Layers of fill

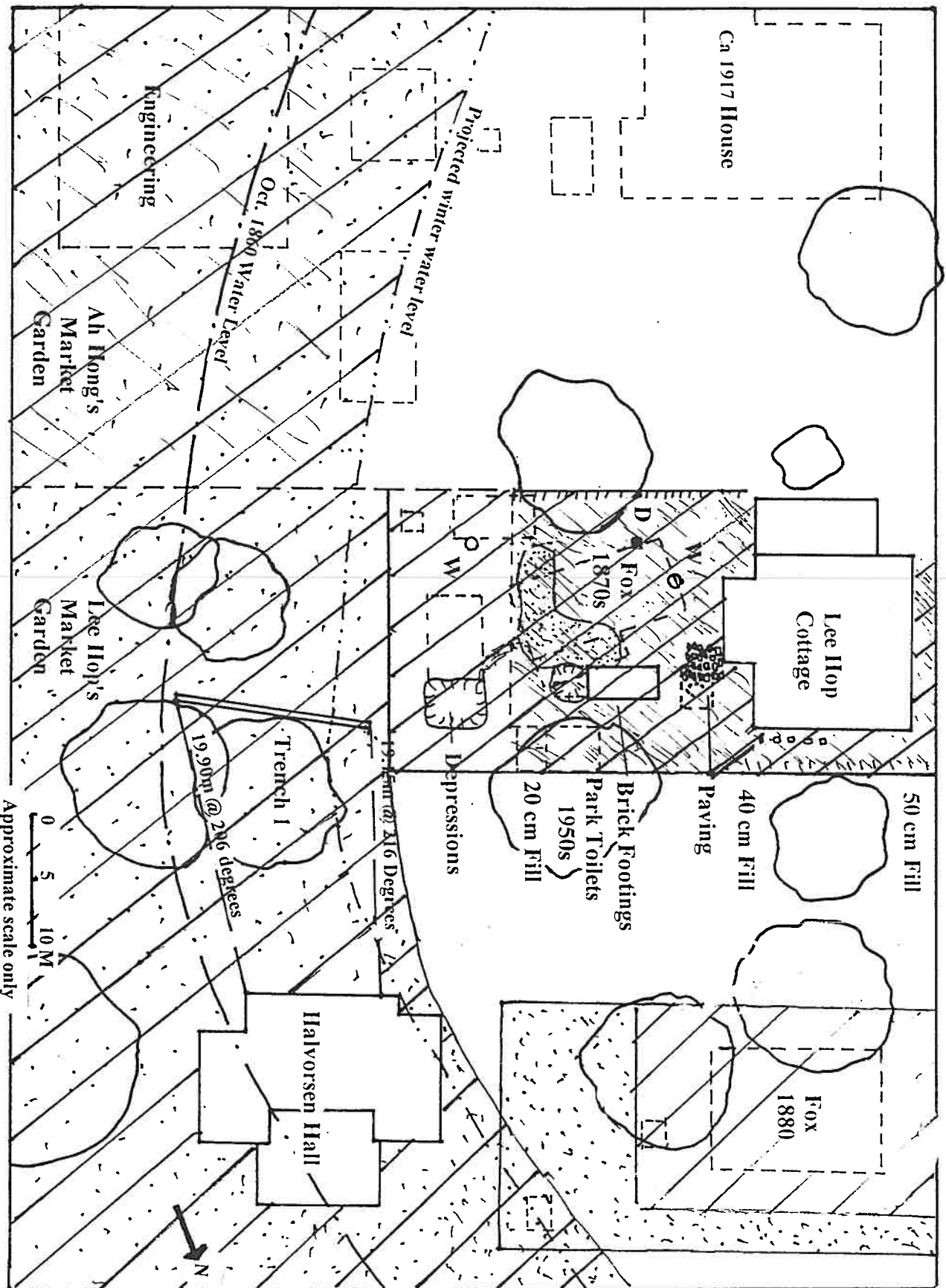




Figure 9 Archaeological Significance Site Plan

 Considerable
 Some

RECOMMENDATIONS

Proposed Park Improvement Plan

Much of the archaeological record associated with the historical use of this area is under layers of fill. This will protect it from most of the re-development however; there are some areas of concern.

Recommendation 1 - Appropriate permissions and permits should be sought from the Department of Aboriginal Affairs before site works begin as the park is within a registered area.

Recommendation 2 - That the proposed plan within the study area is altered to reflect the knowledge we now have about the position and layout of the market gardens.

Recommendation 3 - The area within and just to the east of the caretaker's garden is vulnerable to disturbance through landscaping or gardening. It is strongly recommended that this area is not used for a garden display. Instead it is recommended that it is left ungraded and the ground around surface features turfed.

Recommendation 4 - Footings and paths visible on the surface of the cottage garden are associated with both the caretaker's and Lee Hop's occupations. Those associated with the caretaker could be carefully removed if necessary for safety reasons. However they form part of the site history and together with the few visible features associated with Lee Hop could be used as a focus of interest within this area. As this area is a focal point of activity within the study area it would be an appropriate place for an interpretive display illustrating the site's history.

A suggested method for a passive interpretation technique is to mark the location of former sites and features by tracing their outline in the turf with concrete, brick or ceramic pavers. A successful example of such an interpretation is the tiles following the former river bank location in Fremantle. In the study area the location of the 1860 spring high water mark shown in Figure 1 could be highlighted as could Fox's farm, his 1880 house site and Lee Hop's outbuildings. However, some exploratory archaeological work would be needed to determine the exact location of the structures to guide the interpretation

Recommendation 5 - It is not recommended that extra trees be planted within that part of the study area which was owned by Fox and leased by Lee Hop and which lies to the west of the October 1860 water level. While the fill layers over much of this area will protect the archaeological sites from most of the landscaping, tree roots will penetrate through the fill to the archaeological layers. It is particularly important that trees are not planted on the sites of former buildings or structures relating to Fox or Lee Hop. The fill to the east of the water line is thought to be deep enough to prevent most damage to the market garden archaeology.

General Management policies

The archaeological occupation sites under Robertson Park are protected from most day to day gardening and maintenance activities by a thick layer of historic fill. However the probable depth of fill varies depending on whether a particular area was on the bank or in the lake. Occupation sites lying on areas of bank are therefore more vulnerable to trenching or digging activities such as laying reticulation. The banks are also the areas where other farms like Fox's are likely to have been located and where prehistoric activity associated with the lakes is more likely to be found. The historic fill has some significance but is less significant than historic or prehistoric occupation sites or market gardening features.

However while this report establishes that there is vertical layering of significance within the study area with the most important sites at the bottom it must be remembered that the entire area of park and surrounding houses is interim listed on the Aboriginal Sites Register. This means that any disturbance within the boundaries of the listed site is subject to the regulations of the Aboriginal Heritage Act 1972.

Recommendation 6 - It is therefore strongly recommended that the Town of Vincent, the Aboriginal Affairs Department and relevant Aboriginal people hold meetings to establish a workable set of protocols to cover various degrees of disturbance to the several former lake sites covered with historic fill within the metropolitan area, which are listed or interim listed on the Aboriginal Register.

Points which appear to need clarification include:

At what level does disturbance merit sanction by AAD

It is impractical for householders to have to gain permits every time they want to plant a new rose bush or change the layout of their gardens. It is also impractical for the Town of Vincent's gardening staff to have to continually apply for permits to do their day to day work. It is therefore important to establish with AAD and the local Aboriginal peoples exactly what sort of disturbances the Aboriginal Heritage Act should cover in this situation.

What routine procedures should be established for those disturbances that are deemed to merit sanction by AAD but which only impact on the layers of historic fill over historic and prehistoric occupation layers.

From the perspective of historical archaeology only, the layers of fill are significant but not as significant as the occupation layers. There is also a great deal of fill within the Lake Henderson area therefore the impact of disturbances such as reticulation trenches and most landscaping projects on the overall resource is likely to be limited. For this reason it is not deemed necessary for historical archaeologists to routinely monitor such projects.

However, AAD and the local Aboriginal people may feel that routine monitoring and/or consultation is necessary to fulfill the requirements of the Aboriginal Heritage Act. In such a case it should be established if the monitoring should cover the retrieval of artifacts with Aboriginal associations only or whether it should also cover retrieval of historic materials in the fill layers.

What routine procedures should be established for those disturbances that are likely to impact on historic occupation layers.

From the perspective of historical archaeology these layers are highly significance and any such work should be monitored by a historical archaeologist. Recommendations 7 to 11 cover suggested procedures for these layers. However, AAD and the local Aboriginal people may have additional requirements such as consulting with Aboriginal people before site works start. These requirements should be established and blended with the historical archaeological requirements to establish an overall set of protocols.

What procedures should be established for those disturbances that are likely to impact on both historic and prehistoric occupation layers.

For the historic layers the protocols established for the preceding situation would still apply however, AAD and the local Aboriginal people may have extra requirements particularly to cover the possibility of finding prehistoric Aboriginal artifacts.

Recommendation 7 - It is suggested that the outline of Lake Henderson is superimposed on park plans so that council workers can tell when they are about to carry out ground disturbing work within an area of shallow fill. In such areas site works may need monitoring for impact on historic (or prehistoric) occupation layers. In Robertson Park the fill consists of layers of sand overlying layers of building rubble. The fill layers are therefore is easily distinguishable from the dark grey silt of the occupation layers under the rubble.

Recommendation 8 - It is further recommended that an historical archaeologist monitor work that is deemed likely to disturb historic occupation layers. At present a permit for such work, under the historic sites category, should be sought from the Department of Aboriginal Affairs. If a set of protocols for the lakes areas as recommended in recommendation 6 is established then all such work should follow these protocols.

Archaeological monitors watch site works to prevent heritage information and artifacts being lost as a result of the disturbance. They record fabric and artifacts uncovered or removed, provide a fast assessment of the significance of features or artifacts uncovered. At the end of the site works they provide a written report which catalogues and analyses the artifacts and information uncovered and a photographic record of works in progress. Both of these serve as a heritage archive and as an interpretation tool.

Recommendation 9 - Within the study area ground disturbance for maintenance, services or new developments which will disturb deposits of considerable significance should be kept to a minimum. Such works should be planned to minimize impact on known sites and the site works should be monitored by an historical archaeologist. Where forward planning cannot avoid impact on known sites archaeological test excavation should be carried out within the area of impact prior to site works commencing. The site works should then be monitored by an archaeologist. Because the park is part of a registered Aboriginal site a permit under section 16 of the Aboriginal Heritage Act 1972, historic sites category should be sought from the Department of Aboriginal Affairs. Or alternatively if different protocols for such work are established by joint consultation, as suggested in recommendation 6, these should be followed.

Recommendation 10 - An archaeologist should monitor any site works carried out on Lee Hop's cottage that is deemed likely to involve the removal or the uncovering of significant building fabric or artifacts.

Conservation works and the provision of new services often involve impacting on building fabric or disturbing artifacts trapped in ceiling spaces, wall spaces or under floor spaces. This work can often reveal new information about the building or its occupation. For instance the removal of less significance fabric to reveal original fabric removes the evidence of changes to the fabric that have occurred during the life of the building. However, recording site works and sampling removed fabric can add significantly to our knowledge of changes over time. Additionally such work can often reveal pockets or layers of artifacts normally inaccessible. The opportunity can then be taken to record or excavated the revealed deposits.

Recommendation 11 - Artifact collections from site works and disturbances should be catalogued and curated in suitable conditions to control degradation of the resource.

Collections resulting from archaeological excavation or monitoring will be bagged labeled and catalogued. Artifacts may not be bagged individually but may be bagged in groups and labeled by location. Significant artifacts discovered through unmonitored disturbance should also be bagged, labeled by location and curated. Collections of artifacts should be kept together in suitable conditions which minimize artifact disintegration. If artifact collections are not intended to be displayed on site for interpretation purposes then a suitable storage place should be nominated.

Packaging of Aboriginal artifacts should follow the guidelines set down for such material and they should be lodged with the Western Australian Museum.

CONCLUSIONS

The archaeological survey demonstrated that all of the study area except that lying within the confines of the park caretaker's garden is covered with layers of fill. Fill protects underlying archaeological sites by providing a buffer between the sites and every day activities within the park including those associated with many ground disturbing maintenance and landscaping activities. **For historic occupation sites care only needs to be taken on projects that will disturb layers under the fill. Suggestions for avoiding disturbance during the park upgrade have been included in the recommendations. As the park falls within a listed Aboriginal site additional measures may need to be taken to comply with the Aboriginal Heritage Act 1972.**

Archaeological sites associated with Fox (an ex convict market gardener), Lee Hop and Ah Hong (Chinese market gardeners) including market gardens an 1870s farm and an 1880s cottage are thought to survive under the fill. However the farm, which lies in the garden behind Lee Hop's cottage is close to the surface and vulnerable to disturbance. The ground in the cottage garden and just to the east of it should not be disturbed. **Laying turf, without grading and leveling the ground surface, would provide a ground cover that would prevent erosion while causing very little disturbance to the archaeological layers in the area.**

Archaeological excavation confirmed the survival of two distinct areas of market gardens under the fill. The remnant of the older layout uncovered consisted of a ditch with a path to the west of it leading to a garden plot of small hoed rows. The features were imposed on the landscape rather than conforming to it which may have caused a problem with water runoff in the wetter months. Plants grown in the rows were harvested by cutting and the stems and roots left to rot providing organic fertilizer. Manure may have also been added when the beds were prepared.

The second layout was the one that was in use prior to the lake being filled to create the park. It consisted of large rows and ditches, which followed the contours of the lake bank to retain water runoff within the garden. The second garden was not cultivated as far up the lake bank as the previous garden. Plants were grown in the tops of the rows and either harvested with a spade, as in root crops, or had the left over stem and roots removed after harvesting, as in cabbages, cauliflower or brussel sprouts. The garden was fertilized by added ash and kitchen rubbish with perhaps manure also added to the mix.

The excavation also determined that the lake had been filled with successive layers of mainly demolition rubble. The rubble had been dumped by the cart or truckload from separate house demolitions. The demolished houses were mainly built in the 1870s and 1880s and abandoned in the late 1890s or just prior to 1920. However, they are not thought to have been actually demolished until the later 1920s. The fill material also contained non construction materials, one deposit of which is likely to have come from the clearing out of Lee Hop's gardening sheds. Another

deposit of mainly building materials is thought to have come from Fox's 1870s farmhouse.

The lakes north of Perth was the cities first local food growing area, a practice that started before the lakes themselves were drained to provide a greater expanse of fertile land. They became a magnet for the poorer sections of Perth society and in a way the area represents the Perth version of the 'Rocks' area in Sydney. These people mostly did not leave written records and therefore the archaeological record represents one of the best avenues of research to throw light on the lives of these early residents of the Town of Vincent.

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APPENDIX 1

**Lee Hop's Market Garden - June 2000
Archaeological Investigations**

G.Nayton

Trench/Spit/Fill	Num.	Date	Description
T1 S1			sample pea gravel
T1 S1			sample brick fragments
T1 S2			sample pea gravel
T1 S2			sample blue metal
T1 S2	3		shards mortar
T1 S2	6		shards tin sheet
T1 S2	2		shards thick metal sheet,
T1 S2	1	1860>	shard clear bottle glass embossed with the letter T
T1 S2	2	ca 1915>	shard brown bottle glass, automatic bottle
T1 S2/S3			sample metal
T1 S2/S3			sample ripple iron
T1 S2/S3			sample tin
T1 S2/S3			sample thick sheet metal, probably iron sheet from wall of building
T1 S2/S3			sample thick steel sheeting, possibly riveted
T1 S2/S3			sample brick
T1 S2/S3	1		red brick section, wire cut
T1 S2/S3			sample mortar shards
T1 S2/S3			shards perforated metal sheet, meat safe
T1 S2/S3	1	1875-1914	shard ceramic transfer print, think blue band
T1 S2/S3	1	1870>	wire nail
T1 S3			shard blue metal
T1 S3			sample thicker metal sheet, probably building iron sheet or bucket
T1 S3			sample metal
T1 S3			shard meat safe wire
T1 S3	1		shard softwood, shaped timber from building
T1 S3	3		shards unidentified organic mattered material
T1 S3	6		shards burnt wood
T1 S3	1		piece wire
T1 S3	5		shards thin galvanized metal
T1 S3	1		shard lead pipe
T1 S3	2	1870-1900	wire nails, probably roseheaded, 1 older (thicker) than other
T1 S3	1	<1875	wrought nail
T1 S3	1		iron bucket handle, hooked ends
T1 S3	3		shards window glass, 2mm thick
T1 S3	1	1860>	shard clear thin pharmaceutical bottle glass, 0.5mm thick

Trench/Spit/Fill	Num. Date	Description
T1 S3	3	ca 1860-1925 string rim)
T1 S4		shards olive green bottle glass (2 - applied rim, 1 - rounded lip and samples only of metal kept
T1 S4		thick metal sheet plus part of a rim could be a bucket
T1 S4		tin can sheet metal
T1 S4		metal oval fastening ring
T1 S4	6	pieces of wood
T1 S4	16	pieces burnt wood
T1 S4	14	shards orange brick
T1 S4		lead sheeting, building material
T1 S4	6	1870-1900\$ nails - 2 wrought with flat heads, others roseheads
T1 S4		several shards of an olive green hand moulded bottle (not 2 piece mould) pyramid kickup (wood shaping tool) applied lip, downturned string rim
T1 S4		1820-1875 light green paneled pharmaceutical bottle
T1 S4	1	1880-1925 shards drinking glass - thin & plain
T1 S4	2	shards window glass 1.5mm thick
T1 S4	3	shard window glass 2.5mm thick
T1 S4	1	sample building material
T1 S5		sample yellow mortar
T1 S5		sample white mortar
T1 S5		sample dark pink brick, pressed, associated with yellow mortar
T1 S5		sample red/orange brick associated with yellow mortar
T1 S5		sample orange brick associated with white mortar
T1 S5		sample thick metal sheeting
T1 S5	3	large shards grey concrete
T1 S5	9	shards burnt wood
T1 S5	2	shards coal
T1 S5	2	shards bone, rib
T1 S5	1	oyster shell
T1 S5	1	shard bitumen
T1 S5	3	1880s-1890s wire nails, look like 1880s-1890s roseheads
T1 S5	2	shards window glass, 0.5mm thick
T1 S5	1	shard olive green bottle glass, part of bottle in S4
T1 S5	1	large shards orange brick associated with white mortar
T1 S6	1	metal strap 3.2 cm wide
T1 S6	1	white milk glass tile with mortar
T1 S6		

Trench/Spit/Fill	Num.	Date	Description
T1 S6	1		shard plaster , lime washed pink
T1 S6			sample white plaster
T1 S6	1		shard highly glazed brown tile
T1 S6	1		shard grey or black mortar
T1 S6			several small shards wood - dark wood
T1 S6	4		shards burnt wood
T1 S6			pieces tin
T1 S6	1	1860-1925	pieces of thicker metal sheet
T1 S6	1	1862-1925	shard olive green bottle neck not auto
T1 S6	3	1870-1900	shard brown bottle glass part trademark
T1 S6	1		wire nails 1 thicker 1870's nail
T1 S6			iron screw
T1 Sur	1		shard stoneware canister, white glazed inside, orange glazed outside
T1 Sur	1		shard blue metal
T1 Sur			sample pea gravel
T1 Sur	1		shard honey glazed stoneware, with decorative motif, dark brown glazed inside (flat)
T2 S 3	1		shard glass ornament with pattern of fabric swirls
T2 S 3	2	1880-1925	bottles - 1 clear, 1 dark amber embossed .BOTT... (part of this bottle remains the p[roperty of]..)
T2 S 3	1		shard cement mortar
T2 S 5	1		bird bone (chicken)
T2 S 5	2		pieces blue metal
T2 S 5	1		piece burnt wood
T2 S 5	2		pea gravel
T2 S 5	1		shard concrete mortar
T2 S 1	2		shard frog brick
T2 S 1	2		pieces pea gravel
T2 S 1	3		pieces blue metal
T2 S 1	3		shards concrete mortar
T2 S 1	1		piece metal strap
T2 S 1	1		fragment burnt wood
T2 S 1	3		shards orange brick
T2 S 1	3		nails type unidentified
T2 S 1	2	1860-1925	bottles- 1 dark amber, 2 piece mould, 1 green with deep kickup
T2 S 1			small fragment burnt wood

Trench/Spit/Fill	Num.	Date	Description
Trench/Split/Fill			
T2 S2	1		shard concrete mortar
T2 S2	1		shard whitebodied ware white glazed both sides
T2 S4			no cultural material in spit 4
T2 S6	2		pieces blue metal
T2 S6	2		pieces pea gravel
T2 S6	4		shards concrete mortar
T2 S6	1		fragment dark red brick
T2 S6	1		fragment orange brick
T2 S6	1		large fragment cement
T2 S6	4		pieces melted glass
T2 S6	1		pieces sheet metal
T2 S6	2		nail/wire fragments
T2 S6	1		piece bone Skull ?
T2 S6	1	1891>	shard ironstone, 3rd period floral moulding plate white glazed
T2 S6	1	1880-1925	bottle green turn paste
T2 sur	4		pieces concrete
T2 sur	1		fragment brick
T2 sur	1		fragment lime
T2 sur	2		fragment burnt wood
Ash Layer	4	1915>	shards amber brown crown seal bottle - auto
Ash Layer	3		pieces thin metal strap with rounded end - from penknife?
Ash Layer	1		piece thin ivory strap with rounded end - from cutlery set or penknife?
Ash Layer			pieces metal sheet from tin
Ash Layer			miscellaneous metal
Ash Layer	1		short metal strap
Ash Layer	1	1870>	wire nail - possibly flat headed
Ash Layer	3	1880-1925	pieces metal strap
Ash Layer	8		shards light green turn paste bottle
Ash Layer	2		shards window glass 2mm from fill 4
Fill 1, white	1		shards window glass 2.8mm from fill 4 ?
Fill 1, white	1		large eye bolt
Fill 1, white rubble			large iron/steel rod
Fill 1, white	1	1860-1925	grey concrete paving 3mm thick
			light green applied rim stopper lip bottle with down tooled lip & string rim ..KE... embossed on body

Trench/Spit/Fill

	Num.	Date	Description
Fill 1, white	1	1900>	light blue auto bottle
Fill 1, white	1		clear bottle
Fill 1, white	1		light green bottle
Fill 1, white	1		marble with flashes inside (modern type)
Fill 1, white rubble	1		bone (vertebrae) poss sheep/pig
Fill 2 Bag 2	2		shard whitebodied ware from plate, white glazed both sides
Fill 2 Bag 2	1		pieces metal slag
Fill 2 Bag 2	1		galvanised strap 39mm wide
Fill 2 Bag 2	1		railway spike
Fill 2 Bag 2	1		misc metal mostly not sheet
Fill 2 Bag 2	1		piece pumice from a fire
Fill 2 Bag 2	1	1870-1920	metal mostly nails, 1 washer, 1 roofing nail, nails mostly appear to be rosehead
Fill 2 Bag 2	1	1890>	piece ceramic electric insulation - domestic (fill 3?)
Fill 2 Bag 2	1	1915>	corwn seal bottle cap
Fill 2 Bag 2	1		shard sandy mortar limewashed beige
Fill 2 Bag 2	3		shards rib bone probably sheep/pig
Fill 2 Bag 2	2		shards shell, 2 different types bivalve
Fill 2 Bag 2	1	1905>	copper hook from hook & eye clothing set
Fill 2 Bag 2	1		shard refined earthenware white glazed one side, honey glazed other, rim shard from plate
Fill 2 Bag 2	1		shard earthenware plate rim white glazed both sides
Fill 2 Bag 2	1	1875-1914	along rim both sides with scrolls undertreath on outside
Fill 2 Bag 2	1	1875-1914	shard whitebodied ware plate rim, blue transfer print
Fill 2 Bag 2	1	1860-1925	shard window glass 2mm thick
Fill 2 Bag 2	3	1860-1925	bottle olive green, applied lip with shoulder mould & stretched neck bottles, 1 light green, 2 green (1 iron mould)
Fill 2 Bag 3	1		goblet wine glass
Fill 2 Bag 3	1		large metal ring Diam 13.3cm inner diam 4.5cm
Fill 2 Bag 3	1	1870-1990s	misc metal, not sheet
Fill 2 Bag 3	1		nail probably rosehead
Fill 2 Bag 3	2		square cut flat headed copper nail
Fill 2 Bag 3	1		shards orange brick
Fill 2 Bag 3	1		shard white mortar
Fill 2 Bag 3	1		shard cement wall
Fill 2 Bag 3	13		shards melted glass some large lumps

Trench/Spit/Fill	Num.	Date	Description
Fill 2 Bag 3	1		bone, probably sheep/pig
Fill 2 Bag 3	1		shard whitebodied ware white glazed both sides, rim of large bowl or chamber pot
Fill 2 Bag 3	1		shard refined whitebodied ware, plate rim both sides glazed white
Fill 2 Bag 3	1		shard refined whitebodied ware, plate rim both sides glazed white
Fill 2 Bag 3	3		bottles, 1 clear embossed ..CK.., 1 light green, 1 green
Fill 2 Bag 3	1		shard earthenware glazed light brown both sides
Fill 2 Bag 4	1		bone , vertebrae, probably sheep/pig
Fill 2 Bag 4	4		shards melted glass some big lumps
Fill 2 Bag 4	1		shard dark red brick same as bag 1
Fill 2 Bag 4	1		shard red wire cut brick
Fill 2 Bag 4	1		shard brick light orange/red flecked, no frog, pressed 10.4cm wide, 6.9cm high
Fill 2 Bag 4	1	1800-1925	shard clear bottle stopper
Fill 2 Bag 4	3		shards window glass 2mm thick
Fill 2 Bag 4	1		bottles- 1 olive green iron moulded, dark amber moulded, 1 green, 1 clear iron moulded, 1 clear with flared finish
Fill 2 Bag 4	5	1860-1925	several pieces of metal sheet poss from a bucket
Fill 3b	1		pieces of wire
Fill 3b	4		piece of wide metal strap 34 mm wide
Fill 3b	1		pieces of thinner metal strap 27mm wide
Fill 3b	1		pieces of galvanised metal strap 33mm wide
Fill 3b	1		wire oval ring - fastening or construction
Fill 3b	4	1870-1900	wire nails roseheaded
Fill 3b	2		pieces burnt wood
Fill 3b	1		piece metal 17mm wide could be part of knife blade from cutlery set
Fill 3b	3		several
Fill 3b	1		shards bone - from long bones
Fill 3b	1		bone knife handle - from cutlery set
Fill 3b	1		shard copper ruler
Fill 3b	1		copper cap
Fill 3b	2		shards window glass 2mm thick
Fill 3b	4	1860-1925	shards olive green bottle glass shoulder mould pulled neck 1860-1925
Fill 3b	3		shards clear bottle glass possibly wide mouthed
Fill 3b	2		shards window glass 0.5mm wide
Fill 3b	2	1850->	shards whitebodied ware from plate - white glazed

Trench/Spit/Fill	Num.	Date	Description
Fill 3b	1	1875-1914	shard whitebodied ware probably plate - green transfer print, design unidentifiable 1875-1914
Fill 4 bag 1	1		piece flat concrete 2.6cm thick with hole drilled through it
Fill 4 bag 1			sample brick paver 3.7cm thick 10.6cm wide
Fill 4 bag 1			almost no frog. 7.8cm high, 10.9cm wide only one of these
Fill 4 bag 1			wire netting thick slanted rectangular shaped holes, made from sheet of thin metal cut, then pulled apart, not type used for fences.
Fill 4 bag 1			rectangular shaped wood with flat banded wire nail
Fill 4 bag 1			more wire netting in bag 1 but with holes filled with concrete - reinforcing
Fill 4 bag 2			grey concrete plaster 10mm thick
Fill 4 bag 2			burnt wood
Fill 4 bag 2			part of door hinge
Fill 4 bag 2			part T door hinge
Fill 4 bag 2			bone sheep/pig rib
Fill 4 bag 2			white mortar, painted grey (milk paint)
Fill 4 bag 2			moulded concrete
Fill 4 bag 2			sandy mortar limewashed beige
Fill 4 bag 2			sandy mortar limewashed pink
Fill 4 bag 2			nail possibly rosehead
Fill 4 bag 2			screw (iron)
Fill 4 bag 2			wrought, square shafted nail with large flat head
Fill 4 bag 2			shard whitebodied ware, cup base white glazed both sides
Fill 4 bag 2			shard earthenware honey glazed with sides (large canister)
Fill 4 bag 2			shards window glass, 2mm thick
Fill 4 bag 2			shards of 7 bottles, 1 olive green iron moulded, 1 thin pharmaceutical vial, 1 clear panelled pharmaceutical, 2 light green 1 green (iron moulded), turn paste listed below
Fill 4 bag 2			shard light green turn paste bottle
Fill 4 bag 2			more iron mesh with concrete
Fill 4 bag 2			misc metal corroded together
Fill 4 bag 2			door hinge
Fill 4 bag 3	3	1870-1900s	some thicker metal sheeting (not tin cans)
Fill 4 Bag 3	1		nails all appear to be roseheads
Fill 4 Bag 3	1		piece burnt wood
Fill 4 Bag 3	2		shard bone sheep/pig, shard bird bone poss chicken

Trench/Spit/Fill

	Num. Date	Description
Fill 4 Bag 3	1	shard white mortar, limewashed beige,
Fill 4 Bag 3		beige paint on plaster
Fill 4 Bag 3		sandy mortar , limewashed beige,
Fill 4 Bag 3	1	oyster shell
Fill 4 Bag 3	1	slate pencil, slate half round with shaped wedge end
Fill 4 Bag 3	4	shards window glass, 2mm thick
Fill 4 Bag 3	1	shard window glass, 3mm thick
Fill 4 Bag 3	1	light green bottle rim with flattened string rim & down tooled lip
Fill 4 Bag 3	1	olive green bottle, 2 shards iron moulded
Fill 4 Bag 3	1	olive green bottle, 2 shards iron moulded
Fill 4 Bag 3	<1914	bowl shard from clay pipe, plain
Fill 4 Bag 3		whitebodied ware plate shard rim, blue band transfer print, bands 1 thick, 1 thin
Fill 4 Bag 3	1	shard white glazed porcelain
Fill 4 Bag 3	1	shard whitebodied ware white glazed both sides
Fill 4 Bag 3	1	shard blue banded ware , blue glazed both sides
Fill 4 Bag 3	1	Brick wire cut orange 76mm high
Fill 5 Bag 2	1	Brick dark red pressed 86mm high or wide
Fill 5 Bag 2	1	brick paver ? red 19mm thick flat 75mm wide
Fill 5 Bag 2		mortar - yellow
Fill 5 Bag 2		mortar yellow with white milk paint
Fill 5 Bag 2		tile grey/ beige rectangular 75mm wide
Fill 5 Bag 2		window putty
Fill 5 Bag 2		metal alloy sheet thin
Fill 5 Bag 2		pieces metal sheet miscellaneous
Fill 5 Bag 2	1870-1900s	metal mostly nails, those identifiable all rosehead
Fill 5 Bag 2		window glass mainly 3mm thick, some 2mm & 1.5mm
Fill 5 Bag 2		moulded, 1 light green bottle shard remainder listed below
Fill 5 Bag 2		1 wide mouthed bottle vase with turned out lip
Fill 5 Bag 2		3 shards from possibly 3 different clear bottles
Fill 5 Bag 2	1860-1925	1 olive green moulded bottle
Fill 5 Bag 2	1870-1930	glass marble from soft drink Codd's bottle
Fill 5 bag 3		terracotta plant pot
Fill 5 bag 3		metal strap
Fill 5 bag 3		burnt wood & unburnt wood
Fill 5 bag 3	1	piece thin metal alloy

Trench/Spit/Fill

	Num.	Date	Description
Fill 5 bag 3			galvanised iron strip 33 mm wide
Fill 5 bag 3			metal strip 33 mm wide
Fill 5 bag 3			galvanised strip 11mm wide
Fill 5 bag 3			L shaped metal rod
Fill 5 bag 3			miscellaneous sheet metal probably from tins
Fill 5 bag 3			lots of nails & screws, appear to be roseheaded, 1 roseheaded rectangular
Fill 5 bag 3		1870-1900s	mosaic tile with glazed flower pattern
Fill 5 bag 3			white transfer tile
Fill 5 bag 3			grey concrete (flat)
Fill 5 bag 3			beige, white & pink lime washed mortar
Fill 5 bag 3			piece of wrapping material from metal
Fill 5 bag 3			bones, sheep/pig vertebrae, skull, bird bones (chicken)
Fill 5 bag 3			1 crown seal bottle cap
Fill 5 bag 3		1	1 Ca1915>
Fill 5 bag 3			slate pencil
Fill 5 bag 3			shard whitebodied plate, white glazed
Fill 5 bag 3			shard refined earthenware, white glazed
Fill 5 bag 3			shard refined earthenware, white glazed
Fill 5 bag 3			Chinese scene
Fill 5 bag 3			shard whitebodied ware blue transfer print blue banded 1 thick 1 thin
Fill 5 bag 3			shard earthenware glazed brown knob from container lid
Fill 5 bag 3			shard refined earthenware glazed purple transfer print small section of scene
Fill 5 bag 3			shard glazed blue ware , glazed both sides, cup bowl rim
Fill 5 bag 3			window glass 2.5mm, 2mm 1.5mm thick
Fill 5 bag 3			shard yellow glass
Fill 5 bag 3			shard window glass engraved with flowers (Gilly flowers)
Fill 5 bag 3			shard blue milk glass from bottle or small container
Fill 5 bag 3			at least 9 bottles possibly 12; 1 shard olive green case gin, 1 green moulded, 4 4 clear shards remainder listed below
Fill 5 bag 3			Brown auto bottle shard
Fill 5 bag 3			1 olive green shoulder moulded, shaped neck, added lip bottle with down tooled lip & rounded string rim
Fill 5 bag 3			2 codd's bottles one marked CANNINGTON SHAW Co Ld MAKERS
Fill 5 bag 3			St HELENS 5629 on base
Fill 5 bag 3			1 blue green small bottle with bottom cup, oval trademark as ketchup
Fill 5 bag 3			1 1820-1925
Fill 5 bag 3			1 1865-1925
Fill 5 bag 3			2 1913-1930
Fill 5 bag 3			1 1820-1925

Trench/Spit/Fill

Trench/Spit/Fill	Num.	Date	Description
Fill 5 bag 3	1	1880-1925	1 green turn paste bottle
Fill 5 bag 3			brick pressed- two from same area pink/red 22.5mmL 7.9mm high, 10.9mm wide rectangular shallow frog associated with yellow mortar from Fill 2
Fill 5, bag 1			shard glass blue & white glazed on inside - canister? from fill 2
Fill 5, bag 1			milk glass tile on plaster from fill 4?
Fill 5, bag 1			plaster limewashed beige & pink & white from fill 4?
Fill 5, bag 1			white mortar painted grey and white
Fill 5, bag 1			light grey concrete moulding (from door surround)
Fill 5, bag 1			concrete mortar painted? dark blue
Fill 5, bag 1			sandy mortar painted ? yellow
Fill 5, bag 1			bitumen
Fill 5, bag 1			brick, pressed orange/red flecks no frog colonial 7.5cm high or thick
Fill 5, bag 1			brick red, pressed no frog, 10.7 cm wide 7.2cm high
Fill 5, bag 1			mosaic tiles beige, white, yellow, red & black triangles
Fill 5, bag 1			burnt wood
Fill 5, bag 1			white ceramic insulators for domestic electric wiring
Fill 5, bag 1			bones sheep/pig, bird(chicken) 1 tooth
Fill 5, bag 1			wire some twisted into a cord
Fill 5, bag 1			miscellaneous metal sheet
Fill 5, bag 1			small tin- D 53mm smaller thin tobacco tin
Fill 5, bag 1			thin copper wire
Fill 5, bag 1			Bar metal 35mm width
Fill 5, bag 1			metal strap bolted with nails, bolts or rivets 25mm wide
Fill 5, bag 1			metal strap with remains of wrapping insulation material around it
Fill 5, bag 1			possible metal trouser button
Fill 5, bag 1			screws, washers but mainly roseheaded wire nails of different sizes,
Fill 5, bag 1			1870-1900s 1 large flat headed nail
Fill 5, bag 1			oyster shell
Fill 5, bag 1			shard terracotta plant pot
Fill 5, bag 1			thin metal alloy sheet
Fill 5, bag 1			window putty
Fill 5, bag 1			metal straps wrapped around concrete
Fill 5, bag 1			lead sheet
Fill 5, bag 1			white milk glass 1.8mm thick
Fill 5, bag 1			shard whitebodied ware, white glazed both sides

Trench/Spit/Fill	Num.	Date	Description
Fill 5, bag 1	1	1875-1914	shard thick white-bodied ware plate grey/blue transfer print of scrolls & lines
Fill 5, bag 1	1		shard stoneware white glazed one side, grey glazed other
Fill 5, bag 1			mainly window glass 2mm some 1.5mm
Fill 5, bag 1		ca1900-1930	at least 11 bottles, 2 green, 1 blue green, 1 clear & the following
Fill 5, bag 1		1860-1925	1 light green 2 piece mould with bottom cup
Fill 5, bag 1		1860-1925	1 light green with bottom dome kick up
Fill 5, bag 1			1 olive green shoulder mould with shaped neck
Fill 5, bag 1			1 light green Pharmaceutical
Fill 6/ Garden	2		2 clear Pharmaceutical
Fill 6/ Garden			shards milk glass tile set into plaster
Fill 6/ Garden			shard white plaster lime washed pink
Fill 6/ Garden	1		shard white plaster lime washed pink
Fill 6/ Garden	1		shard rounded grey cement
Fill 6/ Garden	1		charcoal
Fill 6/ Garden	1		piece wire
Fill 6/ Garden	1	1860-1925	shard window glass 2mm thick
Fill 6/ Garden	1	1910-1930	shard green bottle glass - some in layer 6
Garden	3		round tin can, tobacco tin shape in several 6
Garden			pieces of chromed metal sheet with white paint ?
Garden			pieces thin metal sheet with accretions
Garden	2		pieces misc metal
Garden	2		pieces thin metal alloy from flat circular object
Garden	2		shards sheep/pig rib bone
Garden	2		shards bird bone, chicken probably
Garden	1		square nut
Garden	2	1870-1900	wire nails with large roseheads
Garden	1	1870-1900	wire nail with med rosehead
Garden	3	1870-1900	wire nails with small roseheads
Garden	1		thin semi circular metal tabs or furniture facing with two round nail holes
Garden	1		piece of thin twine in a bundle
Garden	2		pieces wire
Garden			shard cement mortar
Garden			shards plaster lime washed white
Garden			shard plaster lime washed pink

Trench/Spit/Fill

	Num. Date	Description
Garden	1	copper thimble
Garden	1	green glass shanked button
Garden	1 1870-1910	metal shanked button
Garden	1 1862-1930	piece lead bottle sealing capsule with part of a trade mark R. Y COY
Garden	3 1860-1915	m
Garden	2 1860-1925	shards green bottle glass
Garden	2	shards blue green bottle glass
Garden	1	shards thick clear glass - not auto
Garden	1	shard thin clear glass from ornament ?
Garden	1 1860-1925	shard clear bottle glass
Garden	1 1860-1925	shard clear bottle glass
Garden	2	shards light green bottle glass from bottle with at least 1 panel - probably pharmaceutical
Garden	5 1860-1925	shards green bottle glass
Garden	3 1820-1930	shards cobalt blue prism bottle with panels
Garden	4 1860-1925	shards olive green bottle glass made in metal moulds, probably case gin bottle as has panels
Garden	5 ca1915>	shards brown bottle glass auto
Garden	1 ca1915>	amber brown crown seal bottle top and cap
Garden	1	shard clear flat glass 3.5m thick could be from a bottle
Garden	2	shards clear window glass 1.8mm thick
Garden	9	shards clear window glass 2mm thick
Garden	2	shards terracotta plant pot
Garden	1	shard stoneware from canister, glazed white inside brown outside
Garden	1	shard earthenware, high gloss brown glaze on outside, white glaze inside from large container
Garden	1	shard stoneware rim of canister, white glazed inside & out
Garden	1 1850>	shard whitebodied ware glazed white both sides
Garden	1 1850>	shard whitebodied ware plate rim white glazed both sides
Garden	1 1850>	shard fine whitebodied plate white glaze both sides
Garden	1 1875-1914	shard whitebodied ware plate green glazed floral transfer pattern around plate edge
Garden	1 1875-1914	shard whitebodied ware cup rim blue banded transfer pattern, thick, 1 thin outside, 1 thin inside
Garden	1 1875-1914	shard fine whitebodied ware with blue transfer print of circular lines on 1 side - small plate or saucer

Trench/Spit/Fill	Num. Date	Description
Garden	1 1875-1914	shard whitebodied ware plate rim with blue transfer print pattern one side, of triangles around rim with geometric floral patten inside rim.
Garden	1	soil sample
Orange Lay	1 1900>	clear auto bottle , pharmaceutical type with short neck, rounded
Yellow Lay	2	shoulder & rounded string rim
Yellow Lay		shards milk glass from 2c
Yellow Lay		misc metal some metal sheeting, (not tin)
Yellow Lay	4 1870-1900s	black painted concrete mortar on dark red brick
Yellow Lay	1 1915>	nails, all appear to be roseheads
Yellow Lay	1 1870-1930	misc metal some metal sheeting, (not tin)
Yellow Lay	1	glass marble from Codd's bottle
Yellow Lay	1	shard earthenware plate white glazed both sides
Yellow Lay	1	shard clear bottle ?
Yellow Lay	1	drinking glass goblet, clear plain
T 2 S 7	4	bone , bird (chicken)
T 2 S 7	5	shards leg bone (cattle)
T 2 S 7	2	pieces burnt wood
T 2 S 7	1	metal straps
T 2 S 7	3	small metal dish or cup Diam 58mm
T 2 S 7	5	brick fragment, dark red, red & orange
T 2 S 7	1	nail/wire nails poss rosehead
T 2 S 7	1	bivalve shell
T 2 S 7	1	shard yellow material, very thin could be a resin coating
T 2 S 7	1	shard porcelain cup base, white glazed
T 2 S 7	1	shard light blue Codd's bottle
T 2 S 7	1	shard green bottle