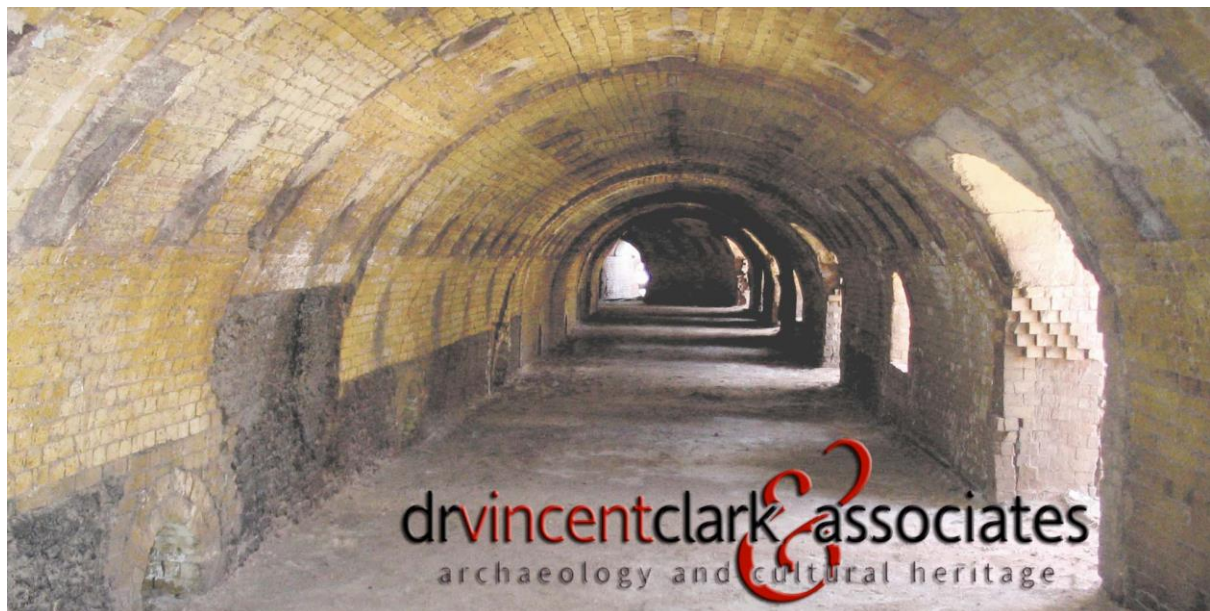


Update on archaeological investigations for CHMP 11935: mechanical excavation at Bulla 1 (VAHR 7822-3278) and radiocarbon dates from Lochton 7 (VAHR 7822-3274)

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19 February 2013

This public access version has been edited to omit details on the location of Aboriginal
cultural heritage



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Contents

1. Mechanical excavation at Bulla 1 (VAHR 7822-3278)	1
2. Radiocarbon dates from Lochton 7 (VAHR 7822-3274)	7

Figures

Figure 1: Mechanical excavator and sieve operating at Bulla 1	2
Figure 2: Profile of west wall of trench, showing disturbance including rabbit hole, up to 1m depth and then transition to reddish brown and yellow silt.....	3
Figure 3: Charcoal sample (MEP-2) collected from east wall of trench at 1.4m	3
Figure 4: Profile drawing of west wall of mechanically excavated pit	4
Figure 5: East wall of trench at completion of excavations	5
Figure 6: Medal commemorating coronation of King George V and Queen Mary, dated 1911, from MEP, 0.8m depth	5
Figure 7: Possible 'horse hoof core', from MEP, 1.2m depth.....	6
Figure 8: Quartzite scraper from MEP, 2.7m depth	6
Figure 9: TP3 at Lochton 7, west wall, showing depth of two dated charcoal samples	7

1. Mechanical excavation at Bulla 1 (VAHR 7822-3278)

As part of the 'complex assessment' for CHMP 11935, a trench was excavated mechanically within the area of a registered Aboriginal archaeological site (Bulla 1, VAHR 7822-3278), [REDACTED]. The decision to undertake this work was made at a meeting on 24 January 2013 involving the CHMP sponsor (VicRoads), the cultural heritage advisor (Dr Vincent Clark & Associates) and the registered Aboriginal party (Wurundjeri). The aim was to gain additional information which would inform the decision over which alignment should be chosen for the route of the Bulla bypass, particularly the bridge crossing of Deep Creek.

Five test pits excavated at Bulla 1 had verified the presence of subsurface artefact deposits in variable stratigraphic situations across the whole of this large site (see preliminary report). However, it remained unknown whether there were deeply buried archaeological deposits, perhaps on an ancient stream terrace, which could not be reached easily using hand excavation. This was thought to be possible because of the similar geography of Deep Creek to the Maribyrnong valley at Keilor, 12km to the south, where Pleistocene deposits at more than 7m depth prove human occupation of the area dating as far back as 31,000 BP. Therefore, the mechanical excavation sought to investigate the possibility of deeply buried archaeological remains.

The excavation took place on 4 and 12 February 2013, and involved the use of a 5½ tonne excavator (operated by Jason Tweedie) and a mechanical sieve (Figure 1). The excavator used a bucket with 1m width in combination with a ½m width bucket with teeth, which was used to break up the compacted soil. The trench was positioned close to the edge of the stream terrace, [REDACTED] near to a hand-excavated pit (TP13), in which lithic artefacts were contained in compacted sediment which had been deposited by flood waters in quite recent times (shown by the presence of 19th- and 20th-century material). The trench measured a minimum of 3m length and 1m width. Soil was excavated and artefacts collected in regular slices of 20cm; at lower depths, only selected amounts of soil were sieved.

The sediment in the upper level is the same as that found in TP11 and TP13, consisting of dark brown clayey silt which is highly compacted and contains plentiful lithic artefacts and some historical-period material. At a depth of approximately 1m, there is a distinctive change in the soil, to reddish brown coloured silt which is fine and has no clay content (Figure 2). Aboriginal artefacts are present in this context, but are less frequent and consist of different materials and forms. This second horizon was reached towards the end of the first day of excavation, after which the trench was temporarily back-filled.

After the mechanical digger had removed the loose fill, some limited hand excavation was carried out. This aimed to confirm the presence of artefacts within the red silt and to recover any dateable material. Both of these aims were accomplished: artefacts were located within the silt and two separate samples of charcoal were obtained, from 1.3m and 1.4m depth, which have been sent for radiocarbon testing (Figure 3). During the hand excavation, lighter, yellow coloured silt was revealed. Mechanical excavation then re-commenced, which removed the stratum of red silt.

Once the yellow silt was exposed across the trench, at a depth of approximately 1.4m, another brief hand excavation was carried out, to investigate whether artefacts were present within this soil, but none were found. The profile of the trench was drawn and mechanical excavation resumed (Figure 4). Selected amounts of soil were sieved. Artefacts were found between 1.5m and 2m depth, though this number dwindled below 2m. Excavation ceased at

3m, the maximum depth which the mechanical excavator could reach and maintain a consistent trench length (Figure 5).

Preliminary sorting of the artefacts has produced the following figures: a total of 239 lithic artefacts were collected. Historical-period artefacts (n=75) are present in the upper 1m but none are lower than this. A copper medallion dating from 1911 was found at 800mm depth, proving that this soil has been deposited in the last 100 years (Figure 6). The largest number of lithic artefacts are from the redeposited soil in the upper 1m (n=166; 69%). Though these are not '*in situ*', there are some patterns in the types of artefacts present: a concentration of silcrete artefacts (n=40) at 20-40cm and a concentration of quartz artefacts (n=65), otherwise rare, at 60-100cm. There are 70 lithic artefacts from a depth greater than 1m, the majority of which are quartzite. At a depth of 2.7m, a quartzite implement (scraper) made from stone of a banded grey colour was found (Figure 8), and another two small flaked artefacts were found at between 2.7m and 3m.

A number of conclusions may be made about the context, type and depth of material culture found during the mechanical excavations. First, the work confirms that there are deep archaeological deposits which lie beneath recently deposited sediment. Second, artefact deposits below 1m in depth appear to be *in situ*, which is suggested by consistency in the types of artefact present and the soil conditions. Third, attributes of artefacts from below 1m suggest that the deposits may be of considerable age (which may be confirmed by radiocarbon dating); these include what appears to be a 'horse hoof core' (at 1.2m) and a large scraper (at 2.7m). Finally, it is suspected that the archaeological deposits continue to depths of more than 3m, below the depth reached during the present investigations.



Figure 1: Mechanical excavator and sieve operating at Bulla 1



Figure 2: Profile of west wall of trench, showing disturbance including rabbit hole, up to 1m depth and then transition to reddish brown and yellow silt



Figure 3: Charcoal sample (MEP-2) collected from east wall of trench at 1.4m

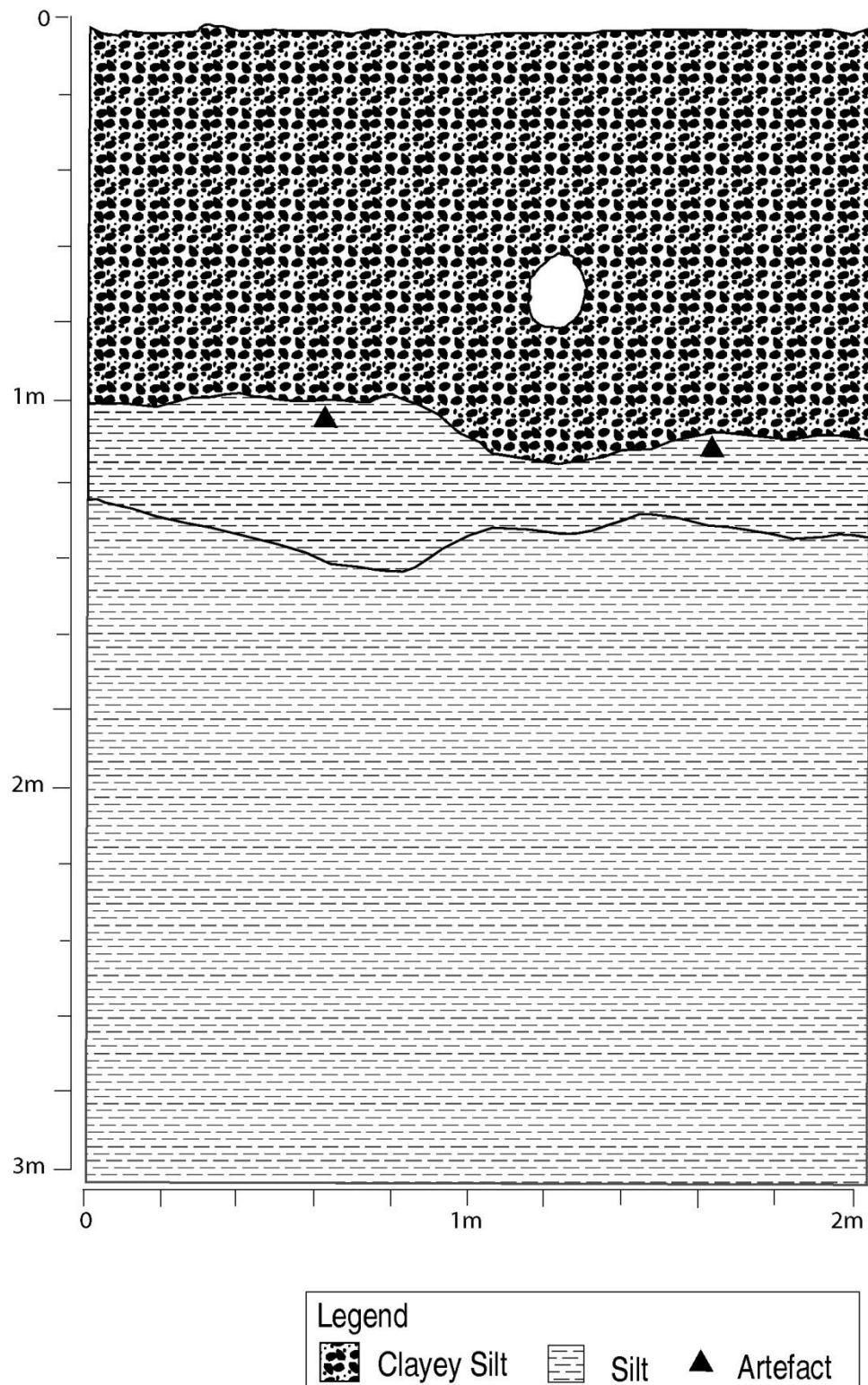


Figure 4: Profile drawing of west wall of mechanically excavated pit

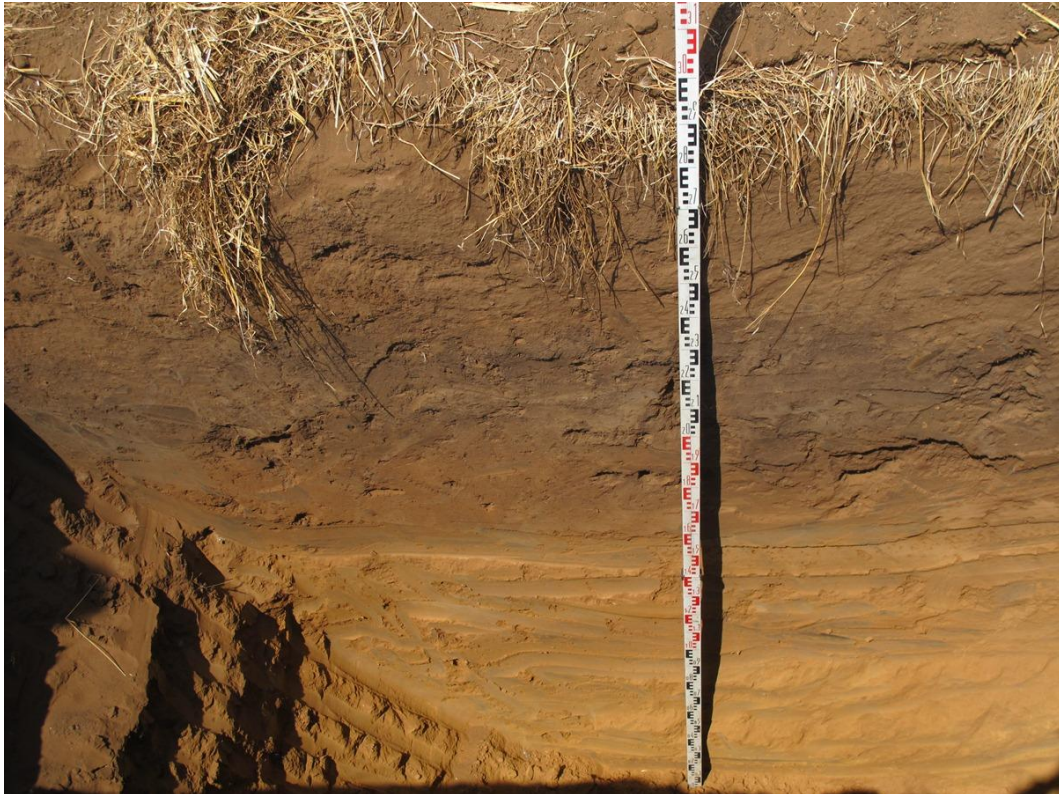


Figure 5: East wall of trench at completion of excavations



Figure 6: Medal commemorating coronation of King George V and Queen Mary, dated 1911, from MEP, 0.8m depth