

# **Central Interceptor settlement monitoring point (SMP) installation: final report (HNZPTA authority 2021/692)**

**report to  
Heritage New Zealand Pouhere Taonga  
and  
Ghella Abergeldie JV**

**Hayley Glover and Matthew Campbell**



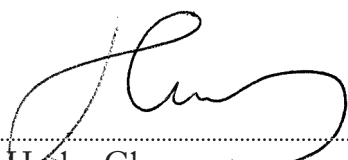
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Hayley Glover and Matthew Campbell

Ghella Abergeldie JV, on behalf of Watercare Services Ltd (Watercare), are constructing the Central Interceptor, a wastewater tunnel that will run between the Māngere Wastewater Treatment Plant and Grey Lynn. The 14.7 km long tunnel will run between 15 and 110 metres below ground. It will cross the Manukau Harbour about 15 metres under the seabed. Along the route it will connect to the existing wastewater network, which will divert flows and overflows into the tunnel. In the older parts of central Auckland, waste-water and storm-water flow into a combined network of pipes which were designed to direct overflows into nearby creeks and streams. The Central Interceptor is a large wastewater tunnel project that will reduce overflows of wastewater from central Auckland into the city's waterways, helping to make them cleaner. The Central Interceptor will store and convey wastewater to the Māngere Wastewater Treatment Plant to be processed.

As part of this project, settlement monitoring points (SMPs) were required to be installed at regular intervals along the route to measure any ground settlement caused by tunnel boring. Two arrays of SMPs were installed in Ambury Regional Park (Lot 3 DP 156421), which is part of a significant archaeological landscape. Ghella Abergeldie JV applied to Heritage New Zealand Pouhere Taonga (HNZPTA) for an archaeological authority to modify or destroy any archaeological features encountered during works under section 44 of the Heritage New Zealand Pouhere Taonga Act (2014). Authority 2021/692 was granted by HNZPT on 14 June 2021.

## Methodology

Works took place on 14 July 2021 and were monitored by Hayley Glover of CFG Heritage Ltd. Works consisted of markers being installed in a row on the tunnel centreline, then at 2, 5, 10, 25, 50, and 75 m on each side. This was done in two locations (Figure 2), but one of the 75 m markers could not be dug, making the total number of markers installed 25. The locations were assessed by Matthew Campbell of CFG Heritage and chosen with the goal of avoiding any archaeological features (Campbell 2021).

To install the markers, a spade width square was dug to no deeper than 300 mm. A short rod was hammered into the exposed ground surface and a section of hard plastic tubing was pressed into the soil to protect the rod. The hole was then filled with soil again and covered with a toby set level with the ground.

## Background

The stone fields sites of South Auckland are nationally significant archaeological landscapes and have figured heavily in discussions of pre-European Māori gardening. As little as 200 of the original 3000 or so hectares of stone fields in the Auckland Volcanic field may survive, mostly at Ōtuataua, Matukutureia / McLaughlin's Mountain, Puketutu Island and



Figure 1. Route of the Central Interceptor, Ambury Regional Park is highlighted.

Ambury Regional Park, all on, or near, the Manukau Harbour. Many of the tūpuna maunga also had associated stone fields but these have been quarried away or built over.

Several sites at Ambury Regional Park were recorded by Cramond and Nevin (1981) as part of a wider assessment of the proposed high pressure gas pipeline from Marsden Point to Auckland. Rickard et al. (1983) noted that Ambury Regional Park has long been in public ownership and has received a great deal of archaeological attention. The stone field is associated with Te Pane o Mataaho / Māngere Mountain, though modern housing has destroyed features between the mountain and the remaining stoneworks. Rickard et al. mapped the surface stone alignments and mounds, which they generally interpreted as evidence of housing and horticulture. There are dense middens adjacent to the harbour and shell is commonly present in the garden areas where it is presumed to have been used as a soil additive or mulch, though it may just be the result of site occupation. Other parts of the park are free of surface stone and stone features. They noted that it was, therefore, unclear how or if the patterns observable in the stone alignments extend to the rest of the park.



Figure 2. Overview of the Central Interceptor route and SMP array locations in Ambury Regional Park, showing recorded archaeological sites.

Two excavations were undertaken as mitigation of the gas pipeline installation. Excavations at sites R11/1123 and R11/1129, in 1982 (Lilburn 1982) significantly modified Rickard et al's interpretation. Two areas previously interpreted as stone structures were shown to be natural features; in another there was evidence of limited clearance of stone to create gardens.

Brassey and Addis (1983) also excavated site R11/736 which, prior to excavation, had been interpreted as a small coastal settlement with shell midden, house sites, pits and a possible stone wall and crop marks. The midden was shown to be European in origin and many of the features previously recorded were shown to be natural. Pre-European middens were found that were not previously visible on the surface, one of which was associated with an obsidian working floor containing 760 obsidian flakes, of which roughly a third had clearly been used and another third may have been used. The midden was almost entirely tuangi (*Austrovenus*

*stutchburyi*) with a few oyster and occasional examples of other species. No fish bone was recovered from the middens. No structural evidence suggesting permanent occupation was found and the site is interpreted as being primarily used for the exploitation of marine resources. Occupation was temporary and not associated with gardening.

The park was again mapped by Sewell in 1995. She concluded that the considerable evidence of horticulture and habitation remained but that 19th and 20th century European farming, along with various pipeline installations has damaged much of the evidence.

Ambury Regional Park, like many of the stone fields, e.g., Wiri Oil Terminal (R11/1187, Cramond et al. 1982; Bulmer 1983), the Wiri Railway site, (R11/1188 Veart et al. 1984; Coates 1992), Puhinui on the Matukutureia / McLaughlins Mountain stone field (R11/25, Lawlor 1981), has been over-interpreted on the basis of visible surface features. It seems certain that the stone fields were used for gardening but the interpretation of them as major villages can no longer be supported. That the fertile soils of South Auckland were gardened by pre-European Maori is indisputable, but occupation would generally have been at the whanau and hapū level (Sullivan 1985).

## Summary of assessment

The array location chosen at CH0865 was 5 m north of the stone wall alongside the driveway to the Ambury Park Centre, running parallel to the wall (Figure 3). Probing did not detect any shell along this alignment and the area had been modified by the stone wall and driveway (the wall is not currently recorded as an archaeological site in the SRS).

The array location at CH1280 was south of the stone wall to the north of the end of Kiekie Road, 5 m south of the wall at the eastern end of the array and 10 m south of the wall



Figure 3. The tunnel array at CH0865 looking west.





Figure 4. The tunnel array at CH1280 looking west.

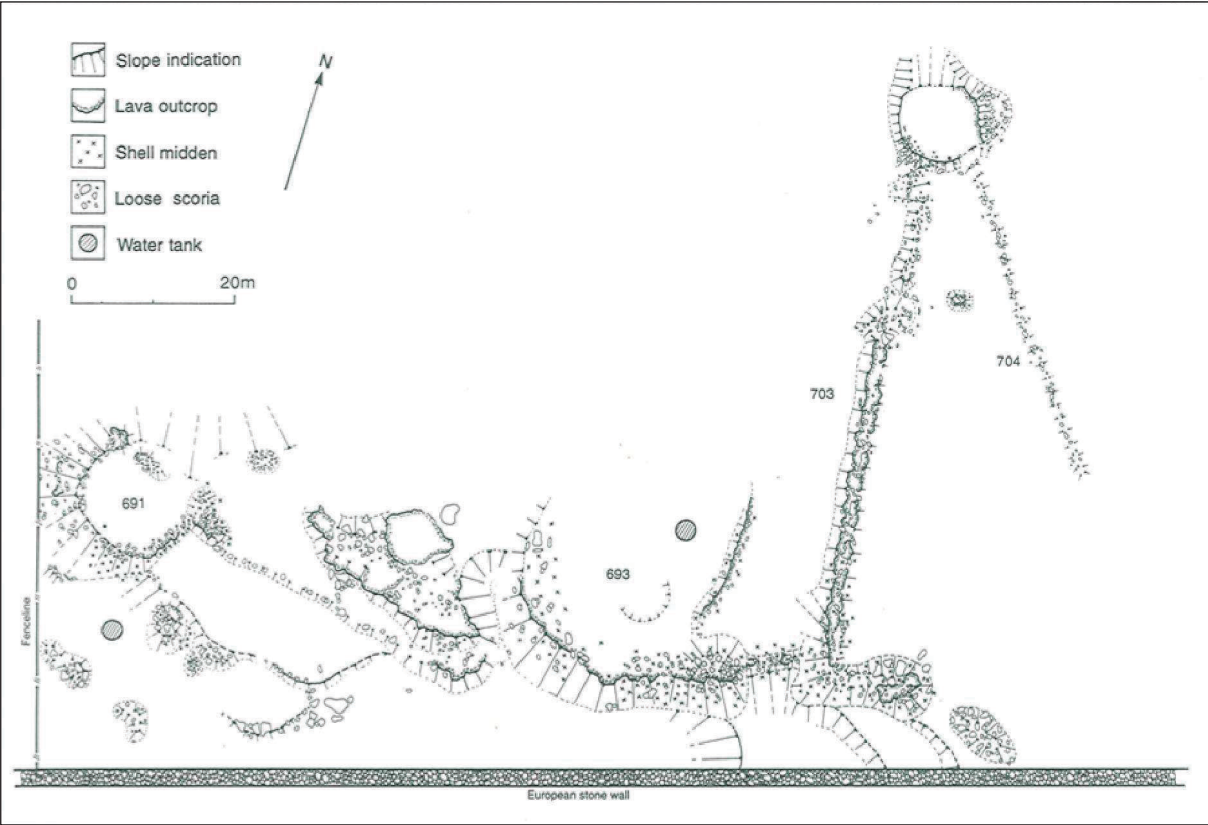


Figure 5. Sewell's (1995: Figure 6) shows R11/691, R11/693, R11/703 north of the stone wall.

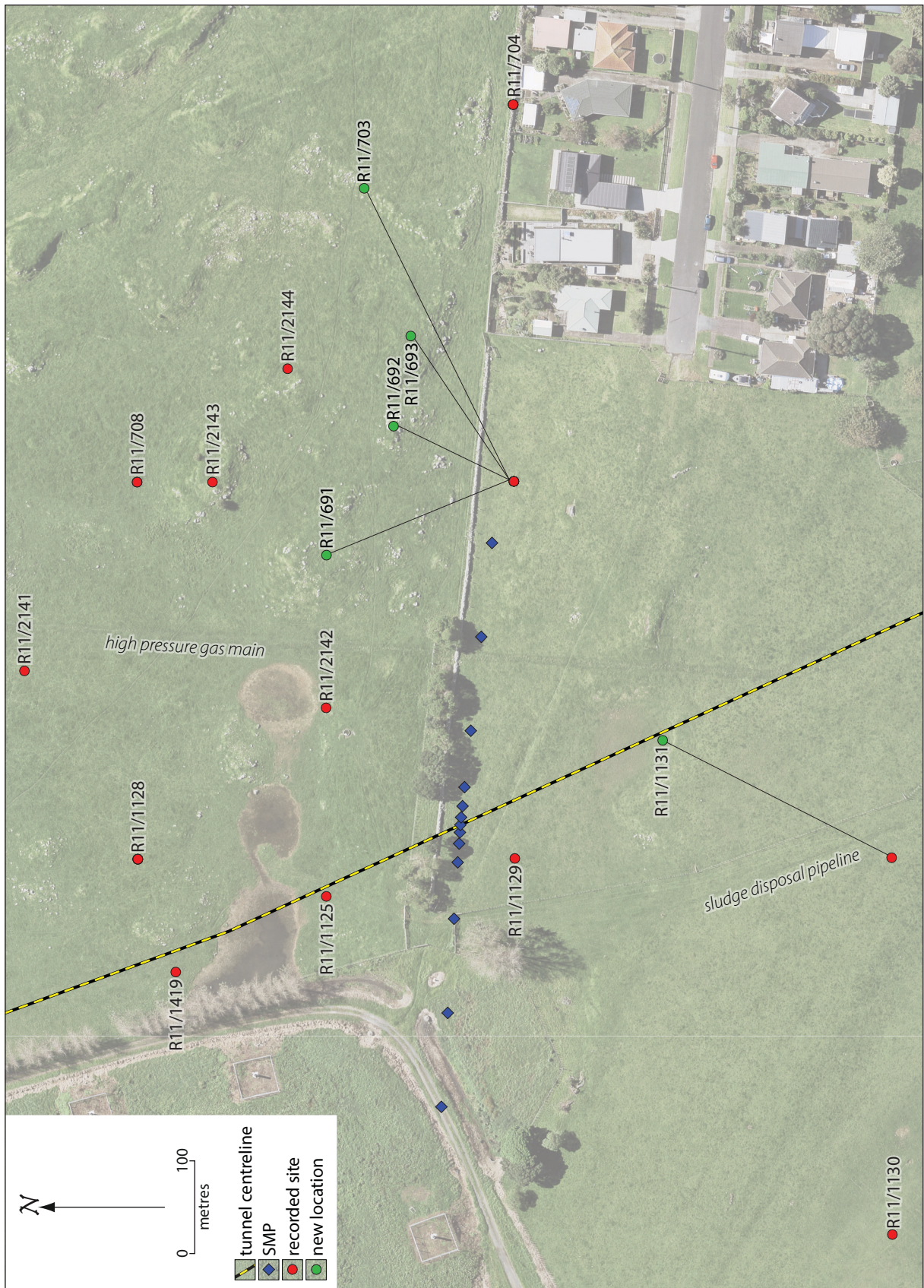


Figure 6. The tunnel array at CH1280 showing the stone wall and sites recorded nearby.



Figure 7. The tunnel array at CH0865 showing the stone wall and sites recorded nearby.



*Figure 8. R11/703, stone row, looking north.*

at its western end (Figure 4), continuing 60 m to the west (the wall is not currently recorded as an archaeological site in the SRS). Probing during assessment did not detect any shell along this alignment.

Several sites have previously been recorded in the paddock south of the wall (Kiekie Paddock in Sewell's 1995 report), including R11/691, R11/692, R11/693, R11/703, R11/1129, R11/1130 and R11/1131. The first four of these were clearly located north of the stone wall (Big Rocky Paddock in Sewell 1995 (Figure 5) – the fence between Big Rocky Paddock and Little Rocky Paddock has been removed since Sewell's site visit). The locations of these were updated in the SRS (Figure 6). R11/1131 was relocated 55 m south of the stone wall; it remained as described in the original site record by Cramond. Although it was convincing as an archaeological site, this narrow 'terrace' and small 'scarp' appeared natural. Its location was updated in the SRS. R11/1129 and R11/1130 could not be relocated. Cramond, in the site records, located these with respect to "a finger of reclaimed land" but it was not clear where that is. It is possible that the sites were destroyed by the high pressure gas main installation.

Ambury Regional Park has been extensively archaeologically surveyed (Cramond and Nevin 1981; Rickard et al. 1983; Sewell 1995). From the site descriptions, and particularly the plans proved by Sewell (1995), it is clear that many of the stone features recorded as sites have become grassed over and are no longer clearly readable as archaeological features and several have been damaged or destroyed by utilities installation. The record is quite confusing, due in part to the original records being located on 100 yd or 100 m grid references, and it is probable that some sites have been recorded twice. As the limited excavation that has taken place indicates (Lilburn 1982; Brassey and Adds 1983) it is probable that some features recorded as archaeological are, in fact, natural, while unrecorded subsurface features will be common.



Figure 9. Typical pit dug for installation.



Figure 10. Toby after SMP installed.



*Figure 11. Shell and plastic fill in western-most pits of CH1280.*

## Results

All earthworks associated with the SMP installation were subject to archaeological monitoring. The locations of the markers are shown in Figure 6 and Figure 7.

No archaeological features or material were identified during the limited earthworks for the SMP installation (Figure 9 and Figure 10). The two western-most pits at CH1280 had scatters of whole, un-opened tuangi. These shells were not of archaeological origin and were intermixed with modern rubbish like plastic bread tags and medical tape (Figure 11).

## Summary

No archaeological features or material were encountered during works for the SMP installation at Ambury Farm. Excavations were very limited in terms of area affected, and were successful in avoiding the known archaeological features as well as any unrecorded sub-surface remains.

As no archaeological material was identified during works, no further analysis is required. This report has been written to satisfy condition 7 of the authority.

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