

Place Name	<i>Cement Creek Plantation</i>		
Other Names		Place No.	.614
Street No	Street Name	Workshop Nos.	
Locality	Warburton (near)	YRX/25	
	Easting: 339000	Northing: 5824500	
Description	<p>An extensive plantation containing plots of Californian Redwood (<i>Sequoia sempervirens</i>), Douglas fir (<i>Pseudotsuga menziesii</i>) and <i>Pinus radiata</i>, with access tracks intersecting the plantation. The plantation is adjacent to the Cement Creek caretaker's residence. Marking tape, numbered plot pegs, and collars on tree trunks can be observed throughout the plantation. The collars or tubing are placed around selected tree trunks, and were originally used to collect runoff via a hose into a measuring drum. (McCann 1993: 127)</p> <p>The caretaker's residence is located adjacent to the Cement Creek pine plantations, and is a small fibro-cement cottage with cement roofing. (McCann 1993: 127)</p>		
Details			
Condition	Excellent	Ownership	Melbourne Water
Threats	Natural decline	Integrity	Intact
Functions	Key elements		
History	<p>The conifer plantations in the Cement Creek Catchment were established by the Board of Works from 1930, following clearing of the original eucalypt forest. By the late 1920s, the cleared areas had become overgrown with scrub and other weeds such as blackberry. Between 1929 and 1934, exotic conifers were progressively planted, basically as a weed control measure. The species that thrived included Bishop's pine (<i>Pinus muricata</i>), Douglas fir and Californian Redwood. (Langford and O'Shaughnessy, 1977:6) The Board undertook an extensive regeneration program in the Catchments at this time, particularly in areas that were failing to revegetate naturally through destruction by frequent fires. A wide variety of species were used but, in general, the Board utilised the seed and technology that was available for forest regeneration at that time. (O'Shaughnessy: pers com)</p> <p>Further areas were planted with <i>Pinus radiata</i>, Western Red Cedar and Redwood in 1960-63, and assessed in 1976. While the redwood species grew vigorously, the <i>Radiata</i> pine was of poor quality. The conifer plantations effectively suppressed any understorey vegetation. (Langford and O'Shaughnessy, 1977:6)</p> <p>The plantations were selected for experimental purposes as part of the Board's forest hydrology research program begun at Coranderk in the 1950s. (See Maroondah report McCann 1993) The Cement Creek plantation provided small plots in which to study the canopy interception results in comparison with the native forest trees in the Coranderk area. The main aims of the research were to establish the relationship between vegetation type and water yield, and to evaluate the effect of forest operations on water yield and quality. Whilst the main focus was to establish data for different types of native forest catchment qualities, conifer plantations were included to give comparative data. The experiments undertaken at Coranderk and Cement Creek included recording hydrological processes such as throughfall, stem flow and canopy interception. In all, the 1960s-70s program involving Cement Creek included five native forest communities and three conifer plantations. (Langford and O'Shaughnessy, 1977: 1)</p> <p>Throughfall was measured by division of the plots into a square grid of 16 positions in each plot. All positions were numbered, troughs placed to collect throughfall, and measurements carried out weekly. Stemflow involved collecting water running down the stems of selected trees by a collar diverting water into a collection hose at the front, or by a spiral wound around the tree. (Langford and O'Shaughnessy, 1977: 14-15)</p>		

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Statement of Significance The Cement Creek plantation is of state significance due to its associations with the extensive revegetation program conducted by the MMBW in the 1920s and 1930s, following clearing of areas of the forested catchments through fires and logging. It demonstrates the scientific knowledge and availability of seed at that time, when the understanding of mountain ash regeneration was not well developed and the attitude towards revegetation with exotic tree species probably also reflected nineteenth century cultural attitudes towards aesthetic plantings. (McCann 1993: 127; Historic Places Branch)

The plantations of particular interest for its use as part of the Board's forest hydrology research program, established in the 1940s and commenced at Coranderrk in the 1950s. The plantation represents the Board's utilisation of conifer species already growing in the Cement Creek catchment, in order to acquire comparative data on canopy interception. (McCann 1993: 127)

The caretaker's residence is associated with an earlier phase of settlement when the area was farmed. (McCann 1993: 127)

Level State significance

Existing and Recommended Heritage Protection

Register	Reference	Zoning	Status
Historic Places Branch Database	1019		Listed
Planning Scheme	0		Recommended
Register of the National Estate	x		Recommended
Victorian Heritage Register	x		Recommended

Conservation Recommendations

Extent Extent of the surviving plantation area as shown on the HPB map, plus an area of 200 metres around the plantation.

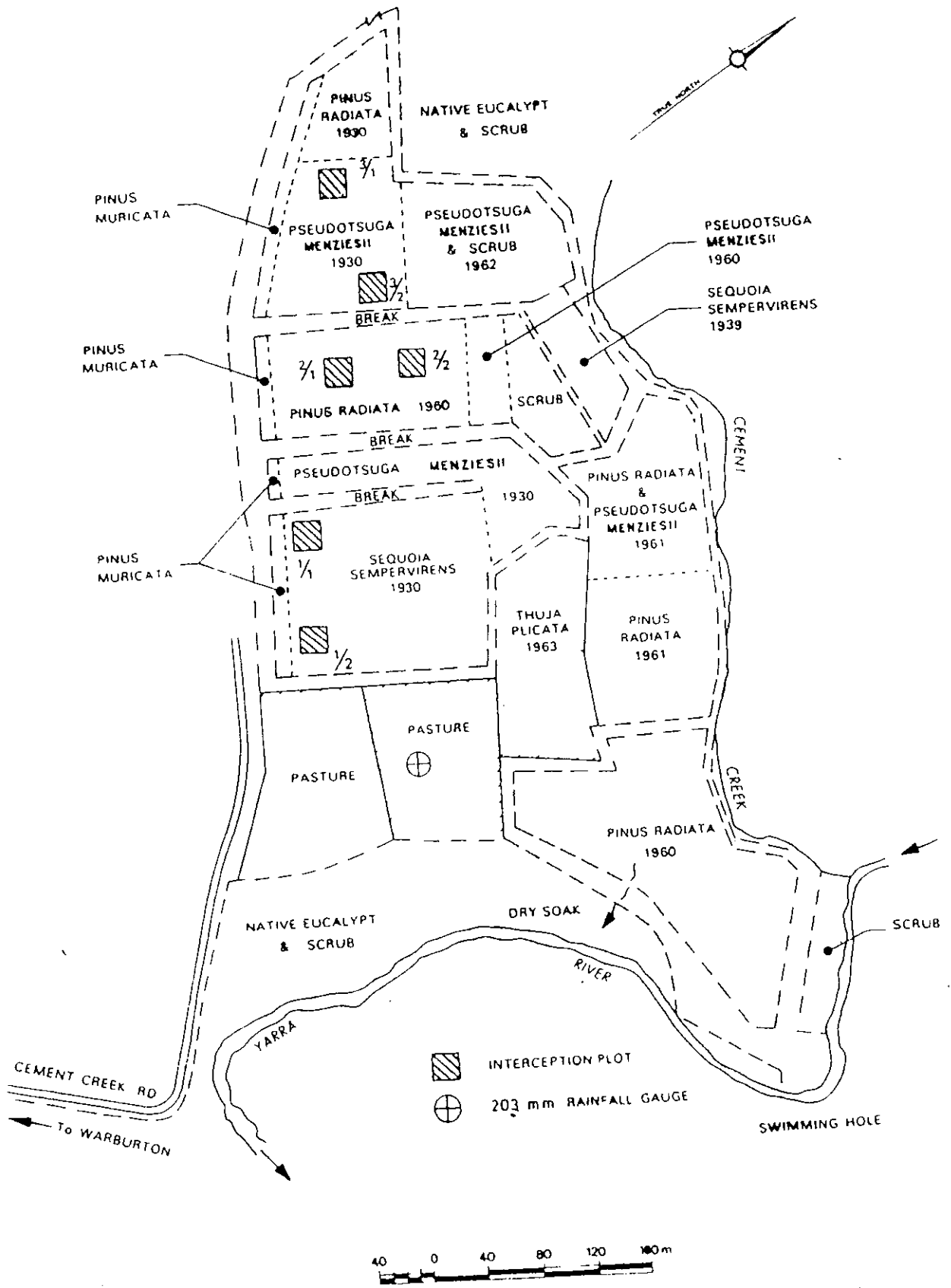
Extra Research? No further research requirements have been identified.

Bibliography **Author/Date/Title/Publisher/City/Page**

(1993). O'Shaughnessy pers com

Langford, K & O'Shaughnessy (eds), (1978), A Study of Canopy Interception in Native Forests and Conifer Plantations, MMBW.

McCann, J., (1993), Melbourne Water Historic Places Report. A study of Melbourne Water and related places in the forests of the Central Highlands of Victoria. AHC & DNCR



CEMENT CREEK INTERCEPTION PLOTS

FIGURE 3

Sources: Linnartsson & D'Saustina