

GEOPHYSICAL SURVEYS

at the West End Cemetery, Townsville: An Application of Three Techniques

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Abstract

Geophysical surveys were undertaken at Townsville's West End Cemetery to examine the cultural and/or ethnic association of graves and to test the potential use of different forms of geophysical prospection on archaeological sites in north Queensland environments. Surveys focused on an area of the cemetery known as 'E Block', which contained little physical or historical evidence for burials but was believed to have been used for the interment of 'non-Christian' individuals. While results from the resistivity and ground penetrating radar surveys were inconclusive, the magnetometry surveys located the graves of 65 individuals. Details on each individual's cultural attributes derived from the cemetery's burial register indicated that they were from a diverse range of ethnic and cultural backgrounds, many of which were previously unrepresented amongst extant grave markers. Results provided information that could not be gained from any other source, and enabled the critical examination of aspects of the cemetery including the past management regime, the spatial patterning of graves and whether or not an individual's ethnic, social or economic characteristics contributed to their spatial placement.

Introduction

This paper presents the results of geophysical surveys undertaken at the West End Cemetery in Townsville, Queensland. The surveys were performed with the dual purposes of generating spatial data to assist the examination of the cultural and/or ethnic associations of graves within the cemetery grounds, as well as to test the potential of several forms of remote sensing techniques within that environment. The surveys focused on E Block, an area with few extant memorials or physical indicators and limited historical information, but widely believed, by the local community, to be the 'non-Christian' sector of the original cemetery.

Historical Background

The West End Cemetery was established in 1866, shortly after the establishment of Townsville. Initially surveyed beyond the town boundary, the grounds are located at the base of Castle Hill and are bounded by Francis Street to the north and Church Street to the west (Figure 1). The grounds appear to have been in use from as early as 1868 with records indicating that a cemetery committee had been formed and public donations collected for the fencing of the area (*Cleveland Bay Express* 26 September, 1868). There are no known burial records for the first four years.

In 1872 Trustees were appointed to manage the cemetery (*Queensland Government Gazette* 31 August 1872:1372) with

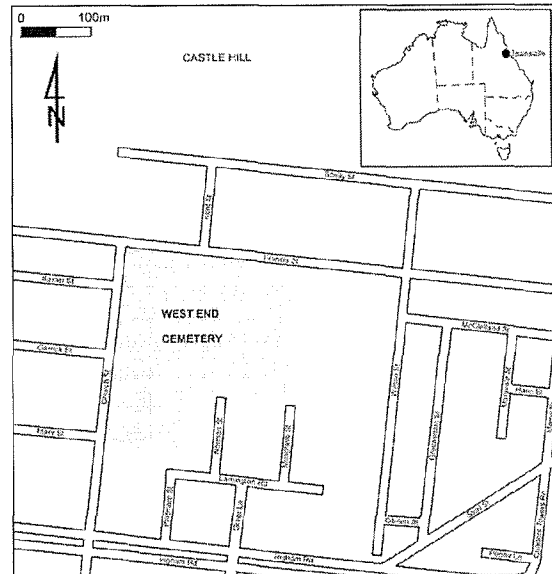


Figure 1 Suburb of West End, Townsville, showing location of West End Cemetery (after Anon. 2001:Map 35).

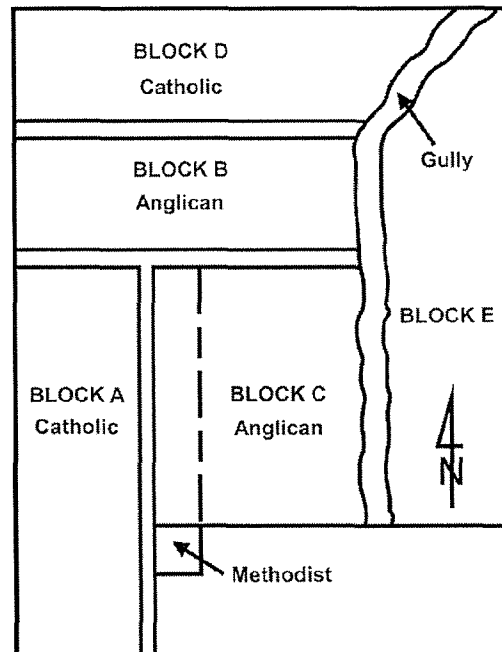


Figure 2 Redrawn sketch plan of the possible past layout of the West End Cemetery. Sketch may have been based on an old survey plan (after Bell and Young 1997:4).

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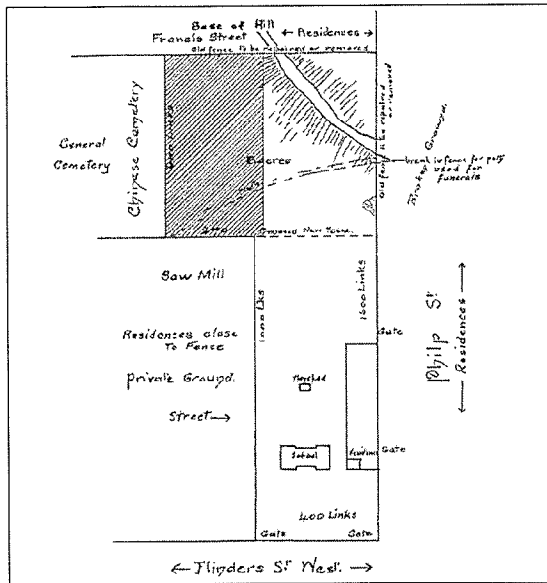


Figure 3 1900 sketch map of Townsville West State School and 'Chinese Cemetery' (E Block) (Stuart 1987:7).

records being maintained from late 1873 onwards. The site was managed according to the *Queensland Cemetery Act 1865*, with a set of local cemetery rules based on this act being published in the *Queensland Government Gazette* (26 July 1873:1235-1236). Among their responsibilities, the Trustees were to create and maintain a plan of the position of all graves, which was to be available for public inspection.

A sketch plan of the West End Cemetery held by the sexton provides perhaps the only historical link for the formal designation of denominational areas in the cemetery (Figure 2). This plan was redrawn by Bell and Young (1997), who suggest that the sketch may have been based on an old survey plan of the grounds (P. Bell, pers. comm., 2 October 2007). The plan shows that the land to the west of the gully that runs approximately north-south through the cemetery was used for the burial of Christian individuals and was divided into Anglican, Catholic and Methodist areas (A-D Blocks). The land to the east of the gully (E Block) is not labelled as an area for any particular denomination and may have been intended for the burial of individuals who were non-Christian.

A sketch map drawn in 1900 of the neighbouring Townsville West State School provides further information on the individuals buried in E Block (Figure 3) (Stuart 1987:7). The map labels the area as the 'Chinese Cemetery' with a pathway providing access to the area from the school grounds. A significant Chinese population lived in Townsville from its establishment (Harvey 2001); more than 200 individuals have been identified as Chinese in the post-1873 West End Cemetery Burial Register.

In 1902 a new cemetery reserve was established in the suburb of German Gardens (later renamed Belgian Gardens), both as a result of the declining space in the West End Cemetery and owing to concerns regarding the possible contamination of the creek which ran through the site. Although officially closed in 1925 (*Queensland Government Gazette* 4 April 1925:1642), burials continue to be undertaken at the cemetery in family-owned plots.



Figure 4 Two *in situ* grave markers (1597/4136), West End Cemetery. Scale=1cm intervals (Photograph: David Roe).

Between its closure and the 1990s the cemetery fell into general disrepair. This was largely due to the high cost of maintaining two cemeteries, with a large share of funds used at the 'working' Belgian Gardens Cemetery. From at least the 1950s the Trustees requested financial assistance from the Townsville City Council for the upkeep of the West End Cemetery (Townsville Cemetery Trust 18 November 1955; see also 16 May 1958, 29 January 1964). In 1969 the Townsville City Council approved \$1500 of annual financial assistance for the upkeep and maintenance of the cemetery (Townsville Cemetery Trust 23 April 1969).

In 1955 the Trustees asked for permission from the Queensland Lands Department to sell all the land in E Block (Townsville Cemetery Trust 8 November 1955) to ease the financial burden. In this correspondence the Trustees indicated that 36 burials with 16 monuments were present in E Block. The proposal was declined, with the Lands Department claiming that at least 40 burials were in the area (Land Administration Board 9 February 1956). A second attempt by the Trustees to divest themselves of E Block was made in 1965 when they asked the Townsville City Council to take over the area with a view to subdividing it into residential blocks (Townsville Cemetery Trust 25 May 1965, 30 March 1967). The correspondence indicated that just 26 burials were present in the area. The proposal was rejected due to the high costs associated with exhumation, reinterment and redevelopment (Bell and Young 1997:8) and effectively ended further attempts to relinquish land from the cemetery grounds. These sources provide information on the potential numbers of graves in E Block; however, the discrepancies in the burial numbers justified further research in the area.

In 1994 the site was listed on the Queensland Heritage Register (Lucas 1994). In 1996 the Townsville City Council commissioned the formulation of a Conservation Strategy to provide direction and guidelines for the care and maintenance of the cemetery grounds (Bell and Young 1997).

The research and fieldwork relating to this paper were undertaken between February and October 2004.



Figure 5 Aerial photograph of West End Cemetery, 2001 (after Townsville City Council, Land Information Unit).



Figure 6 Aerial photograph of E Block, West End Cemetery, 2001. Letters indicate locations of monument groupings listed in text (after Townsville City Council, Land Information Unit).

Site Background

The official record of burials in the cemetery is the West End Cemetery Burial Register, which documents burials conducted between 1873 and 1989. Information in the Register includes the deceased's name, place of birth, date of death, religious affiliation, and burial number. A cast-iron marker (grave marker) with the individual's burial number was placed in the ground at either the foot or head of each grave (Figure 4). Individuals could be located by using the number recorded in the Register and then referring to the cemetery plan which showed the positions of the markers and burials. Unfortunately this plan has been lost.

The Register records the interment of approximately 7900 individuals at the cemetery. There are 2210 individuals each marked by a monumental grave, accounting for approximately 28% of the total number of burials. The remaining 5690 burials (72% of the total) are either physically marked with an *in situ* numbered grave marker, but no monument (numbered grave), or are not now marked by either a monument or grave marker (unmarked grave).

As noted above, the cemetery grounds are divided into a western section (Blocks A-D) and an eastern section (Block E) by a deep natural gully running from the north to the south (Figure 5). Blocks A-D contain monuments which were erected for individuals of various Christian denominations, as well as areas with no monuments, which include numbered and unmarked graves. Although the historical record indicates there were separate areas for the different denominations, there is no immediate physical evidence of distinct clusters for other cultural and/or ethnic associations within these. The distribution of numbered and unmarked graves between monumental graves suggests that the socio-economic status of individuals does not

appear to have been a factor contributing to the spatial patterning of burials in Blocks A-D at the cemetery.

E Block is different in terms of its monument distribution pattern as it contains very few extant monuments and those present are clustered into distinct groups (Figure 6). These include a line of 14 monuments along the western edge of the area and along the eastern rim of the gully (A); a monument foundation (unknown individual) (B); two monuments erected for a Japanese sailor (C); and two monuments marking the graves of three individuals and one monument for four individuals (D). The 20 monuments that stand in E Block record the deaths of 33 individuals; 14 monuments being for individuals of Christian affiliation, three for individuals of Jewish-Hebrew faith, one for an individual/s whose affiliation/s we cannot determine (monument foundation), while the remaining two monuments were for the Japanese sailor (C) listed as having an unknown affiliation. Importantly, of these monuments, the three erected for those of Jewish-Hebrew affiliation and possibly the monument foundation are the only physical evidence for the possible past use of the area for the burial of individuals who were not Christian. The burials in E Block were undertaken between 1887 and 1946.

Three graves without monuments but with grave markers visible on the surface were also identified. Importantly, the number of burials physically marked in the area is less than the 36 listed by the Trustees in 1955 during their attempt to sell the land. This suggests that at least three burials may have been 'lost' between 1955 and the present day. No further physical evidence is present to indicate different cultural and/or ethnic groups in E Block even though the Register indicates a wide range of culturally distinct groups are represented by the interments in

