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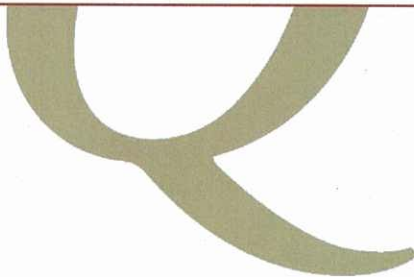
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Survey of a Proposed QFRS
Facility, Ripley Road, Ipswich
– Technical Advisor's Report

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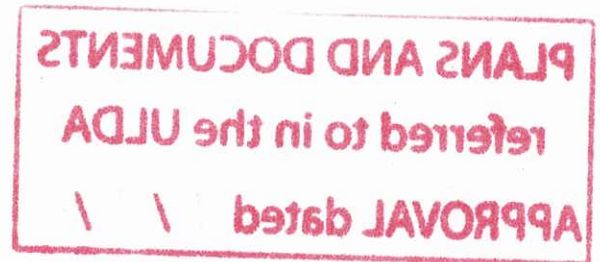
Aboriginal Cultural Heritage Survey of a Proposed QFRS Facility, Ripley Road, Ipswich – Technical Advisor's Report

Author's Declaration

This report has been prepared in accordance with UniQuest's Quality Management System, which is compliant with AS/NZS ISO 9000:2000.

The work and opinions expressed in this report are those of the Author.

Signed by **Dr Andrew Sneddon**



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Author signature

UniQuest Project No: **16415**

Signed for and on behalf of UniQuest Pty Limited



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Gary Heyden – General Manager
UniQuest Signatory

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1. INTRODUCTION

UniQuest Pty Limited has been engaged to provide archaeological technical advisory services in relation to an Aboriginal cultural heritage survey of part of proposed Lot 2 on RP 198203 ('the site'), at Ripley Valley, approximately 4km south of the Ipswich CBD, Queensland. The site is located on Ripley Road (Figures 1 and 2) and it is approximately 2 hectares in area.

The Aboriginal Party and Traditional Owners of the site are the Jagera People #2. This report has been prepared by UniQuest as 'technical advisors' to the Traditional Owners. Representatives of the Jagera People, employed by Jagera Daran Pty Ltd, carried out the survey with Dr Andrew Sneddon of the UQ Culture & Heritage Unit (for UniQuest). This report has been reviewed by Jagera Daran Pty Ltd.

The Queensland Fire and Rescue Service (QFRS) is investigating the potential development of the site for the construction of a new emergency services facility. The works would involve the construction of new built form and hard stand across much of the site. This would entail ground disturbance and the movement of heavy machinery across most of the site, with the potential to impact on the potential Aboriginal cultural resource. (Note: almost all of proposed Lot 2 on RP 198203 would be unaffected by the proposed works, 'the site' comprising only a very small part of the proposed lot).

Prior to the survey, a search was made by the QFRS of the Queensland Aboriginal Cultural Heritage Database. No Aboriginal archaeological sites have previously been recorded on the site. However, five artefact scatters were added to the Database in 1994-5, being located 200-300m to its east (Figure 3).

The site slopes gently from west to east with a distinct north-south slope in the northern half of the site (Figure 4). An ephemeral creek runs along the southern part of the site and at the time of survey very shallow water had gathered at the eastern end of this creek, encouraging the growth of grass on the site's southeast corner (Figure 6). An elongated hill is located c300m to the site's east, creating a north-south oriented gully and creek line c250m east of the site (Figure 4). A transmission line has been constructed along the gully and at the time of survey a chain of ponds had formed along the creek line (Figure 7). It is here that the artefact scatters on the Queensland Aboriginal Cultural Heritage Database had been previously identified.

The site showed clear signs of having been cleared of trees in the past (Figures 8 and 9). It is now lightly covered with eucalyptus trees c 5-20 years old (principally River Red Gum (*Eucalyptus camaldulensis*) with some possible Tallow Wood (*Eucalyptus microcorys* F Muell.) and Red Ironbark (*Eucalyptus sideroxylon*)). The under-storey is characterised by introduced pasture grasses (mainly Buffel grass). The site is presently used as a horse paddock. The site's western edge (a strip c5m wide following Ripley Road) has been previously disturbed in the construction of the road.

The site is located c20km outside the southeastern edge of what was known in the mid-nineteenth century as the 'Rosewood Scrub District' – an area of historically dense vine forest dominated by hoop pine, rosewood, crows ash, brigalow and red cedar. The forest was a rich source of food for the Aboriginal inhabitants of the wider area. It was systematically cleared through the later nineteenth century, to make way for pasture (Figure 5). Prior to non-Aboriginal settlement, the site will have been characterized by more open woodland than the extremely dense Rosewood Scrub to its west. The site is within the Bremer River catchment which historically, around Ipswich, included eucalypt forest. In areas of more open under-storey there would have been native grasses and, in better-watered areas, sedges.

The site is characterised by patches of shallow sandy fluvial deposits and very shallow loam over a clayey substrate. The site was virtually devoid of surface stone that might have been a source for stone tool manufacture, in those places where visibility allowed for this to be determined.

Visibility at the time of survey was very poor (usually less than 20% but increasing to 50% in places) (Figures 6 and 9). In one c30 x 30m area where water had gathered in the creek line the visibility was nil (Figure 6).

2. SURVEY METHODOLOGY AND RESULTS

The survey methodology (and the conclusions and recommendations of this report) draws on a predictive approach developed for open landscapes by White and McDonald (2010), supported by observations made for survey work undertaken in South-East Queensland by the UQ Culture & Heritage Unit over the last 13 years. In summary:

- In open landscapes Aboriginal people 'camped in innumerable configurations, discarding cultural materials in the many places they occupied, visited or travelled through' (White and McDonald 2010:29).
- Artefact locations can be determined by both cultural and environmental factors.
- The presence or absence of surface artefacts will commonly but will not always correlate with sub-surface archaeological finds.
- Stream order variables correlate with artefact density and distribution. Areas associated with larger ('higher order') streams tend to have higher artefact densities than those of smaller streams. First order stream landscapes (small streams) have very low average artefact densities and sparse artefact distributions. Conversely, higher order stream landscapes (perennial creeks, rivers) tend to have high artefact densities and more continuous distributions. Landscapes associated with ephemeral water supplies can be clearly distinguished (in terms of artefact densities and continuity) from landscapes with more substantial and/or permanent water supply.
- Landform strongly influences artefact distribution. Artefact densities tend to be lowest on upper slopes and ridge tops where there occurs sparse discontinuous scatters, and higher on lower slopes and terraces. Artefact densities increase towards lower positions in valleys. Creek flats have fairly low artefact densities, possibly because they are low-lying and less well drained and/or because flooding removes artefacts. Mean artefact densities are highest on terraces.

- Distance from water is a useful predictor of artefact locations. In 1st order landscapes there is no significant difference in artefact distribution with distance from water. In 2nd order landscapes, artefact density is highest within 50m of water, declining with increasing distance from water. In 4th order landscapes, higher artefact densities occur 51-100m from 4th order streams, while densities are lower closer to water and decline with increasing distance more than 100m from water. These findings challenge previous assumptions that 'sites' would be found within 50m of water. Rather, the model suggests that the highest mean artefact density within 50m of water occurs only in relation to 2nd order streams and that 51-100m from water may be a more important distance for 4th order streams. Also, the evidence obtained by White and McDonald from excavation suggests that the data obtained from surface survey within 50m of streams are biased by the effects of erosion/sheet wash exposing artefact bearing deposits.
- The relationship between distance from lithic resources and artefact densities/locations is a complex one. With respect to the area studied by White and McDonald, distance from stone resources may not have influenced artefact distribution as one might expect, possibly because the larger streams were some distance from the stone resources (4-6km) (people may have transport their stones to the water source over those distances and worked them there). In fact, in the area surveyed by White and McDonald, artefact discard increased with increasing distance from known stone resources. This is contrary to previous expectations based on the theory of 'distance decay' that says people will discard less frequently with increasing distance from stone resources.

On the basis of the above modelling and recent land uses the technical advisor (Dr Sneddon) assessed the site's potential for in situ and scientifically significant archaeological resources (as distinct from broader cultural heritage) as low-to-moderate on the following grounds:

- There is evidence of an ephemeral first order stream on the south of the site but the above predictive model suggests that this does not necessarily result in significantly increased densities of artefacts in the surrounding landscape.
- The site is located c250m from a higher order stream (second or possibly third order), which is outside the distance in which significantly higher densities of artefacts typically occur (based on distance to water sources). However, given the closeness of the two water sources described above to the site, this might increase the potential for artefacts to occur and thus the surface survey sought to maximise surface coverage.

- The northern half of the site slopes from north to south with the wider trend being a west-to-east slope. On the upper slopes, where the bulk of the ground disturbance would occur in the construction of the QFRS facility, fewer artefacts might be expected. If artefacts were to occur they might be expected to have accumulated on the lower slopes towards the ephemeral water course and at the southeastern side of the site.

Jagera Daran Pty Ltd augmented the above predictive model with the following observations:

- Bundamba Creek is 1.8km east of the site with Deebing Creek 1.8km to its west.
- There are lithic sources (chalcedony, silcrete and chert) 3.2km away at Yamanto, at Queens Park in Ipswich, and near Warrill Creek (7.8km away) where the resource ranges from massive boulders of chalcedony down to cobbles.
- The site sits in a landscape on a ridge between two major creek lines which connect the site to firstly the Bremer River and then the Brisbane River.
- The wetlands in the Ripley Valley would have experienced high levels of Aboriginal movement.

Representatives of the Jagera People, accompanied by a representative of Jagera Daran Pty Ltd, carried out the survey in company with Dr Andrew Sneddon (technical advisor) and a representative of the QFRS. The survey team walked the site in c20m wide transects. The team achieved almost 100% site coverage (in terms of ground walked) but visibility was very poor-to-poor across large parts of the site. Visibility was best at the northern 25% of the site, where the bulk of ground disturbance would occur during the proposed works.

Having completed the survey of the site, the survey team attempted to re-locate the artefact scatters identified by surveys in 1994-5 but these attempts were unsuccessful due to a combination of inaccurate GPS readings (dating to 1994-5), vegetation cover and inaccessibility (the sites were on the opposite side of the creek). One quartzite flake (14mm max dim) was identified on the western base of the hill c250m to the site's east. The author was informed by one of the Jagera People that it was found on the opposite side of the creek on the eroding bank (the banks of the creek showed signs of grading and clearing to keep the channel clear and it is not possible to say whether it derived from a surface or sub-surface context – See for example the land-forming in Figure 7). No other sites or artefacts were found.

3. CONCLUSION AND RECOMMENDATIONS

Based on the above modelling augmented by the above observations, Jagera Daran Pty Ltd has assessed the potential for Aboriginal cultural heritage to exist on the site as high.

The technical advisor (Dr Sneddon) agrees that the site's location in a relatively well-watered area with some middle-distance access to stone resources may increase the potential for Aboriginal cultural heritage in general terms. However, based on the predictive model and known past land uses, the above observations of Jagera Daran Pty Ltd, and the results of the surface survey he has assessed the potential for in situ, scientifically significant Aboriginal archaeology to exist on the site to be low. (Dr Sneddon's assessment confines itself to those of a 'technical advisor' ie the scientific values of the potential archaeological resource. Assessments of the wider cultural heritage values of the site and potential archaeological resource are in the hands of the traditional owners).

There is no impediment on Aboriginal cultural heritage grounds to the proposed development commencing.

Representatives of the Jagera People noted the proximity of the previously identified surface scatters to the site and have made the following recommendations:

- Prior to the works commencing, a mitigation strategy should be agreed between the QFRS and the Jagera People with respect to:
 - Monitoring of ground disturbance activities related to the construction of the proposed QFRS facility.
 - Possible preliminary test pit excavation to identify potential sub-surface archaeological/cultural material.
 - The collection and curation of any finds.
 - Potential lithic and residue analysis of any finds.
 - The appointment and use of an agreed 'technical advisor'.

- A representative of the Jagera People should monitor the initial stages of the ground disturbance works to ensure that harm to Aboriginal cultural heritage is minimised. The monitoring should continue until the top soil is removed and sterile 'natural' is encountered across the area that would experience ground disturbance as a result of the works.
- In some circumstances, the excavation of archaeological test pits is desirable prior to construction works commencing in order to ascertain the nature of potential sub-surface cultural heritage, and because the presence/absence of surface finds does not always correlate with sub-surface finds. The Jagera People have expressed a strong preference for test pit excavation prior to the works commencing and for the mitigation strategy to provide for this. The technical advisor on the surface survey (Dr Sneddon) considers that there is low potential for significant in situ archaeological material to be disturbed by the proposed works and that test pit excavation would have limited scientific value. Dr Sneddon's assessment limits itself to the 'scientific' values that may attach to the site. Responsibility for the assessment of broader cultural heritage values is in the hands of the Jagera People.
- If Aboriginal archaeology is exposed at any time during the site works, those works should cease immediately in the vicinity of the archaeology and Jagera Daran Pty Ltd must be immediately notified.

4. REFERENCES

B White and J McDonald, 'Lithic Artefact Distribution in the Rouse Hill Development Area, Cumberland Plain, New South Wales', *Australian Archaeology* No 70, 29-38.

http://www.ipswich.qld.gov.au/about_ipswich/environment/catchments_waterways/bremer_catc_hment/

<http://queenslandplaces.com.au/rosewood-and-rosewood-shire>

5. FIGURES

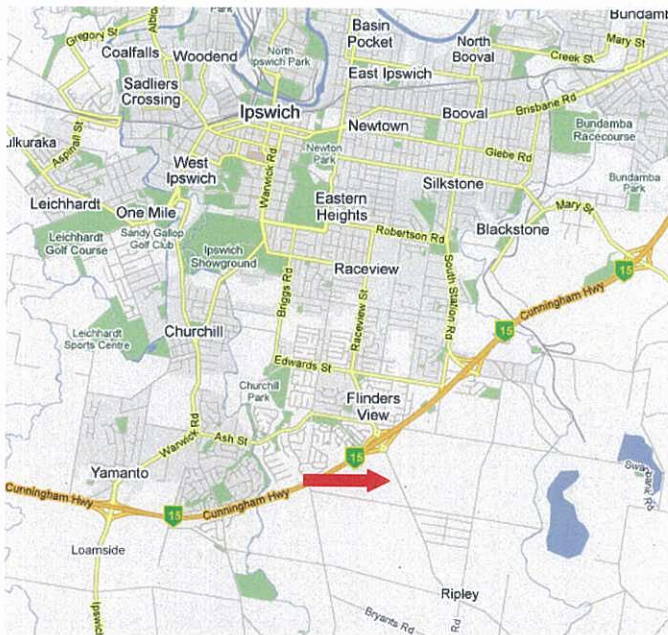


Figure 1 Plan showing the location of the site (arrowed) relative to Ipswich, Queensland

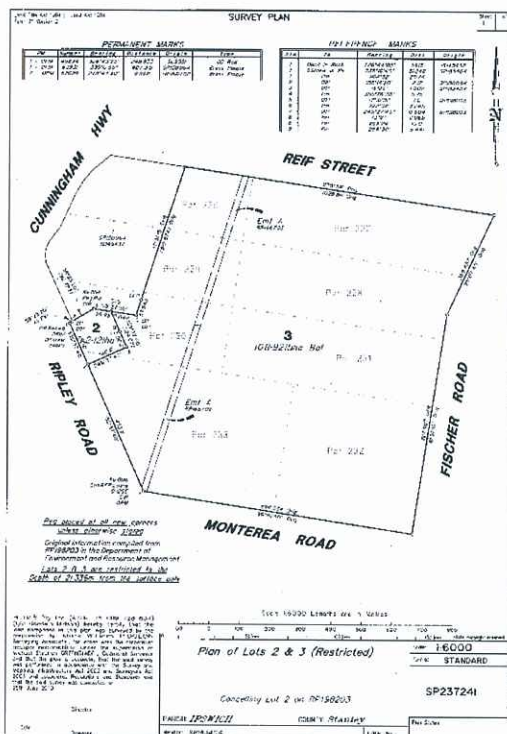


Figure 2 Plan of the proposed Lot 2 on RP198203 showing the location and shape of the site on Ripley Road (the small square marked '2').



Figure 3 Aerial photograph of the site (circled) showing the location of previously identified artefact scatters (stars). North to the top of the page. Source: Department of Environment and Resource Management.

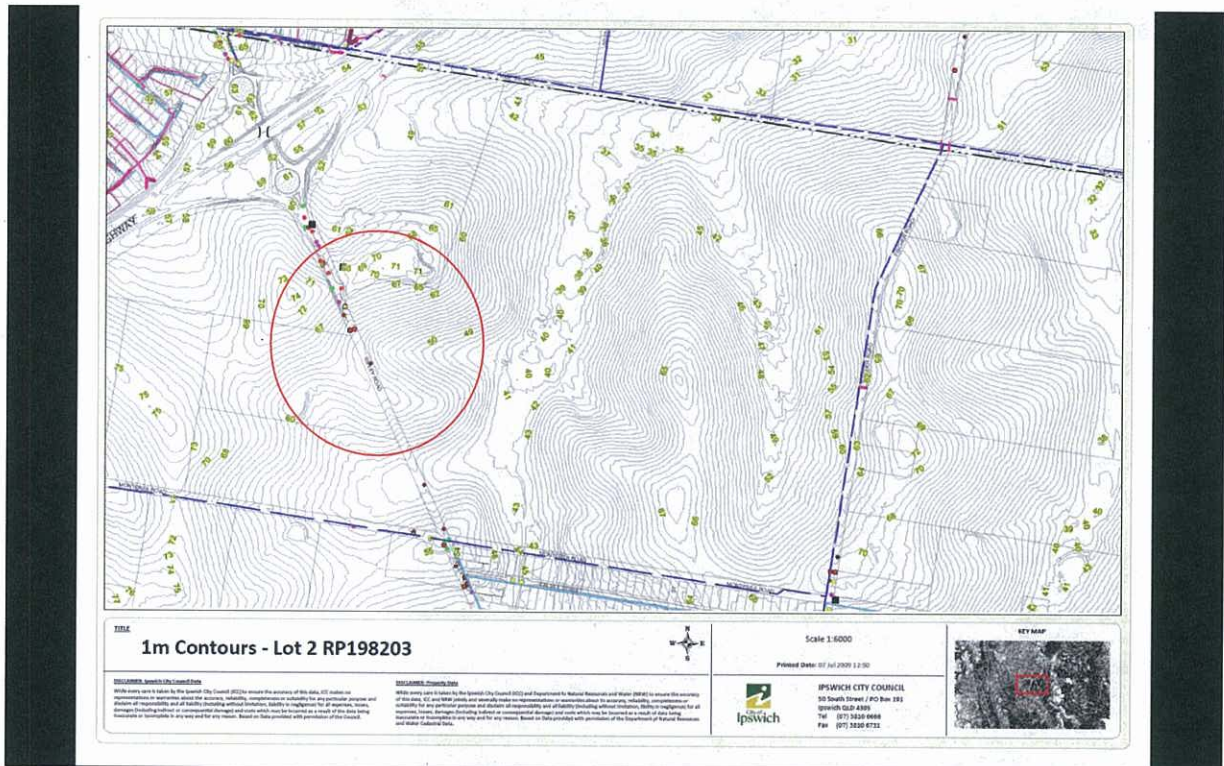


Figure 4 Contour plan showing the topography of the site (circled; north to the top of page).



Figure 5 Loggers clearing the Rosewood Scrub in the later nineteenth century
 (Source: <http://picture.ipswich.qld.gov.au:8080/awweb/html/copyright.html>)



Figure 6 View east from the western boundary of the site, along ephemeral creek on site's southern edge. Note the thick vegetation where the water has pooled.



Figure 7 Pond c250m west of the site in the vicinity of the previously identified sites.



Figure 8 Typical tree cover at the site (immature saplings and the occasional mature tree c20 years old).



Figure 9 View southeast across the central part of the site.



Figure 10 Quartzite artefact identified during the survey (c250m east of the site).

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