

**Proposed Eastern Creek Business Hub
Western Sydney Parklands
Rooty Hill Road South,
City of Blacktown LGA, NSW**
Aboriginal Cultural Heritage Assessment - Addendum

Prepared on behalf of Western Sydney Parklands Trust

February 2013

Stuart Elder

KAYANDEL
ARCHAEOLOGICAL SERVICES



Suite 203, 1 Centennial Drive
Campbelltown NSW2560
☎ 02 4627 8622
☎ 02 4627 8633
✉ Info@kayandel.com.au

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Disclaimer: This archaeological assessment and the management recommendations contained herein, will be independently reviewed by the Planning & Aboriginal Heritage Section of the NSW Office of Environment & Heritage (OEH), and the relevant Aboriginal community.

OEH and the Aboriginal community will make consideration of the findings of the consultant's report and the recommendations in relation to the management of cultural heritage. Formal approval for all actions outlined should be sought from the relevant authority prior to the completion of any works. At no time should automatic approval of the management recommendations stated herein be assumed.

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1 INTRODUCTION

This addendum to the Aboriginal Cultural Heritage Assessment (ACHA) by Kayandel Archaeological Services (KAS) for the proposed Eastern Creek Business Hub (ECBH), follows a request for further information by the Department of Planning & Infrastructure (DoPI), outlined in a letter to the proponent dated 23rd November 2012. Item 5 of Schedule 3 of the letter states:

The Aboriginal Cultural Heritage Assessment, prepared by Kayandel Archaeological Services makes reference to a site inspection and certain parts of the site being subject to heavy, moderate and light disturbance from past activities. The assessment should provide a description of each of these classifications and identify their location on a site map. Also, provide the rationale including a description of the landscape setting and the nature of any archaeological evidence to support the location and extent of the potential archaeological sites (PAD).

This request is on foot of a submission to the DoPI from the Office of Environment and Heritage (OEH) of 9th November 2012.

The responses to these submission comments are addressed in-turn in the following sections.

2 CLASSIFICATIONS OF SITE DISTURBANCE

Clause 80B (4) of the *National Parks and Wildlife Regulation, 2009* (as at 1st October 2011) defines some of the activities which may constitute disturbance:

For the purposes of this clause, land is "disturbed" if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable. Examples of activities that may have disturbed land include the following:

- (a) soil ploughing,*
- (b) construction of rural infrastructure (such as dams and fences),*
- (c) construction of roads, trails and tracks (including fire trails and tracks and walking tracks),*
- (d) clearing of vegetation,*
- (e) construction of buildings and the erection of other structures,*
- (f) construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure),*
- (g) substantial grazing involving the construction of rural infrastructure,*
- (h) construction of earthworks associated with anything referred to in paragraphs (a)-(g).*

Disturbance factors in this case relate to the degree to which the ground surface, and sub-surface soil layers, have been altered or otherwise interfered with, through the actions of past human activity. The points of reference used in this analysis were 1943 aerial images, current Google Maps satellite imagery, and the physical traces noted during field inspections.

2.1 Heavy disturbance

Areas of heavy disturbance are those parts of the proposed development site which have been identified as having had the most severe impact on buried soils, and are identified on Figure 1 with red horizontal/vertical crosshatching.

Specific heavy disturbance instances include:

- ✦ Buildings;
- ✦ Roads;
- ✦ Drainage;
- ✦ Jemena Eastern Gas Pipeline.

Aboriginal objects and/or sub-surface cultural deposits that may have existed in the areas of heavy disturbance, could have been moved from their previous locations and deposited elsewhere in the vicinity, or removed from the site altogether.

2.2 Moderate disturbance

Areas of moderate disturbance are identified on Figure 1 with yellow diagonal crosshatching, and have resulted from less-intrusive, mostly agricultural and horticultural activities over larger areas, including:

- ✦ Market gardening;
- ✦ Ploughing;
- ✦ Vegetation clearance.

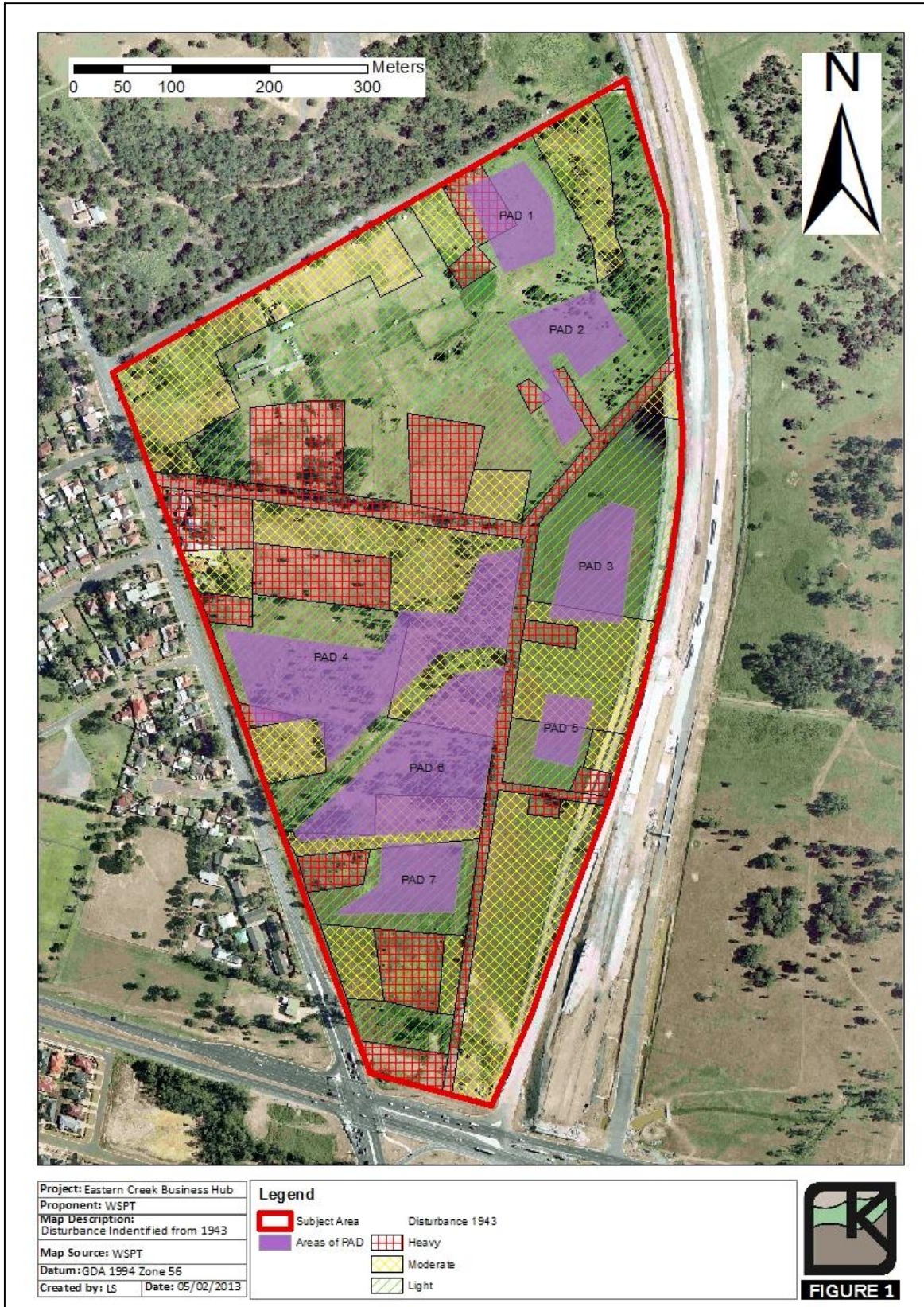
Aboriginal objects which may have existed in these locations may have been buried or brought to the surface during moderate disturbance activities, but would generally not have been transported far from their original locations.

2.3 Light disturbance

Light disturbance areas are denoted on Figure 1 by green diagonal striping, and refer to infrequent or non-intrusive activities, such as:

- ✦ Domestic gardening and lawn maintenance;
- ✦ Animal grazing;
- ✦ Scrub-clearance.

Aboriginal objects that may have existed on the ground surface could potentially have been moved, removed (collected) or accidentally damaged.



3 ARCHAEOLOGICAL SIGNIFICANCE

In Section 7.3 of the ACHA, it is stated that:

Due to the highly disturbed nature of the surface over much of the subject area, the archaeological significance of the subject area is considered low to moderate. Only parts of the central belt, the northeastern and northwestern corners of the subject area have the potential for finding undisturbed surface archaeological sites.

Scientific or archaeological significance may be assessed by placing a site, feature or landscape in a broader regional context and by assessing its individual merits in the context of current archaeological discourse. This type of significance relates to the ability of a site to answer current and future research questions, which may be influenced by physical condition (integrity), information potential, rarity and/or representativeness.

For the purposes of this assessment, the levels of archaeological significance may be classified as:

- ✦ High: a site which exhibits 'rare' or unusual characteristics when compared to surrounding site types, has substantial buried deposits, or the potential to produce evidence for occupation or other activity that pre-dates most or all neighbouring sites;
- ✦ Moderate: a site which has been subject to minimal disturbance, and may contain artefacts and/or occupation deposits which will positively influence the understanding of local Aboriginal occupation and landuse patterns;
- ✦ Low: a site which may have been subject to heavy disturbance, and which will therefore not add significantly to the understanding of local Aboriginal occupation and landuse patterns.

4 JUSTIFICATION FOR TEST PITTING

4.1 Wider Archaeological Landscape

To the east of the study area, archaeological surveys carried out as part of the neighbouring Buncarabee Precinct project area, 18 previously unidentified lithic scatters and 5 areas of PAD were recorded (JMCD CHM 2006 & 2007). There were also 52 previously-identified sites within the greater Western Sydney parklands study area (JMCD CHM 2006, p. 14).

The landscape setting of the Buncarabee Precinct study area largely mirrors that of the ECBH site as both study areas feature floodplain or 'creek flats' of the Eastern Creek corridor.

4.2 Previous Predictive model

Eastern Creek, as it presently exists to the east of the ECBH study area, is a third-order stream. One element of the predictive model proposed for the Buncarabee Precinct, based on extensive survey and excavation work carried out on the Cumberland Plain between 1993 and 2005, suggested that archaeological evidence along third-order watercourses would represent sites of more frequent and repeated occupation, such as knapping floors (JMCD CHM 2006, p. 9). In addition, open artefact scatters were likely to be present, with more complex and higher density sites expected in close proximity to large permanent water sources (JMCD CHM 2006, p. 13).

4.3 Identified palaeo-watercourses

A very prominent palaeochannel system exists to the west of Eastern Creek, representing an earlier route of Eastern Creek with good potential for the location of older Aboriginal sites (JMcD CHM 2006, p. 5).

Sections 4.3 and 4.4.1 of the ACHA note that a palaeochannel runs diagonally across the centre of the subject area (KAS 2012, pp. 15 & 18). It can be identified on the 1943 aerial photograph as a faint meandering depression roughly oriented northeast-southwest, between Rooty Hill Road South and Belmore Road. In more recent times, the channel has been reopened, straightened, and now serves as a drainage channel flowing southwest to northeast until it meets Belmore Road, where it runs perpendicular and passes underneath the M7 Westlink Motorway. The palaeochannel originally joined the former course of Eastern Creek, forming a confluence near the present alignment of the M7.

Eastern Creek itself has changed course over time; meander scars are visible on the 1943 aerial photograph approximately 250-350m west of the present course, but are mostly obscured on current aerial imagery by the M7 Westlink motorway.

Taking into account the identified palaeochannel and former course of Eastern Creek, PADs 2-7 are all within 150m of one or both watercourses, with only PAD 1 at a distance of more than 250m.

5 IDENTIFICATION OF SITES OF POTENTIAL ARCHAEOLOGICAL DEPOSIT (PAD)

Areas within the ECBH study area with the potential to contain archaeological deposits were identified due to their lower exposure to disturbance through prior land use, using current and historic mapping, 1943 aerial photography (SIX Maps – NSW Land & Property Information), and currently-available satellite imagery from a variety of sources (Google Maps; SIX Maps).

The outline of each PAD site therefore reflects those areas not previously occupied by dwellings and associated structures, driveways, roads, etc., and have not otherwise been subjected to regular tillage, or high-impact disturbances such as the Jemena Gas Pipeline.

Each PAD site was assessed on the basis of landscape setting, level of previous disturbance, and the predictive models for this and neighbouring developments.

A description of each PAD site and its landscape setting follows.

5.1 PAD 1

PAD site 1 is a c. 6,800m² area located in the extreme northeast of the ECBH site, and occupies the base of the slope of Rooty Hill, sloping gently from northwest to southeast. It is bounded to the north by Church Lane, to the east by an area of wetland, to the south by largely open ground, and to the west by horse paddocks.

It lies between 550m and 700m west of the present course of Eastern Creek, though is approximately 350m north of the identified palaeochannel, and 260-380m west of the identified former course of Eastern Creek.

At the time of the field survey, PAD 1 was an open area covered in dense, knee-deep scrub grass, but was mostly wooded at the time of the 1943 aerial photograph.

PAD 1 is proposed for open space/Cumberland Plain Woodland (CPW) conservation zone, and will not be impacted by the development.

5.2 PAD 2

PAD 2 covers approximately 8,120m², and is located to the south, adjacent to the former Belmore Road. The site is largely flat ground on the floodplain of Eastern Creek. The site is bounded to the north by open ground with patchy trees, to the east by patchy remnant forest, to the south by the former Belmore Road, and to the west by open grassland.

It lies 470-650m west of the present course of Eastern Creek, but is 130-200m northwest of the identified palaeochannel, and 200-300m from the identified former course of Eastern Creek.

At the time of the field survey, PAD 2 was open area covered in dense, knee-deep scrub grass, but was partially wooded at the time of the 1943 aerial photograph.

PAD 2 lies within the same open space/ CPW conservation zone as PAD 1, and will not be impacted by the development.

5.3 PAD 3

PAD 3 is some 7,550m², and situated in the eastern zone of the ECBH site. It is largely flat, open grassland on the floodplain of Eastern Creek, and is bounded to the north and west by the easement of the Jemena Gas Pipeline, to the east by the M7 Westlink Motorway, and to the south by open grassland a drainage channel.

It lies approximately 280-360m west of the present course of Eastern Creek, but would have bordered the identified palaeochannel at its southern end, and would be approximately 140-210m from the line of the identified former course of Eastern Creek.

PAD 3 lies within an area designated largely as open space/CPW conservation zone, but would be partially impacted by the proposed drainage detention basin.

5.4 PAD 4

PAD 4 is the most extensive site at roughly 22,778m². It occupies much of the central belt of the ECBH site west of Belmore Road, and avoids the curtilage of structures formerly situated on the southern side of Beggs Road. The site is largely open grassland, with patchy trees, and has a barely-perceptible northwest to southeast slope.

The site is bounded to the north and east by open grassland with patchy trees, to the south by the northeast-southwest orientated drainage channel (former palaeochannel), and to the west by Rooty Hill Road South.

It lies approximately 600-700m west of the present course of Eastern Creek, but would have bordered the palaeochannel to the north, and been approximately 200-450m from the identified former course of Eastern Creek.

PAD 4 will be impacted by buildings, a road, and an area of hard-standing.

5.5 PAD 5

PAD 5 is a small plot covering around 3,100m², situated to the south of PAD 3, on the eastern side of Belmore Road. It is an area of flat, open grassland with sparse trees, and is bounded by open grassland and a drainage channel to the north, the M7 Westlink Motorway corridor to the east, open grassland to the south, and the Jemena Gas Pipeline easement to the west.

It lies approximately 340-400m west of the present course of Eastern Creek, but is roughly 65-175m southeast of the palaeochannel, and wholly within 100m of the identified former course of Eastern Creek.

PAD 5 is in an area designated largely as open space/CPW conservation zone, but would be partially impacted by the proposed drainage detention basin.

5.6 PAD 6

PAD 6 is the second largest at approximately 19,456m², and is an area of largely flat grassland with patchy trees, on the edge of the floodplain of Eastern Creek.

The site is bounded to the north and west by the identified former palaeochannel (present drainage channel), to the east by Belmore Road, and to the south by PAD 7 set within open scrub grassland with patchy trees.

It lies approximately 500-700m west of the present course of Eastern Creek, but bordered the palaeochannel along its southern banks, and is roughly 100-300m west of the identified former course of Eastern Creek.

The central area falls into a proposed CPW conservation zone, but the rest will be impacted by buildings and hard-standing areas.

5.7 PAD 7

PAD 7 is a smaller area of c. 6,230m², located at the southern end of the proposed development. It is largely flat, open grassland with patchy trees, and is bounded to the north by PAD 6, to the east by Belmore Road, to the south by open grassland, and to the west by more open grassland and Rooty Hill Road South.

It lies approximately 500-670m west of the present course of Eastern Creek, 75-115m southeast of the identified palaeochannel, and wholly within 150m of the identified former course of Eastern Creek.

PAD 7 will be impacted almost entirely by a building and areas of hard-standing.

6 DISCUSSION

This addendum document has sought to justify not only the definition of the PAD sites within the study area, but also the need to carry out intrusive archaeological investigation, in the form of test pitting.

Aboriginal sites are known to occur in the vicinity of the study area within 150m of watercourses, so it is reasonable to expect *in-situ* or disturbed open artefact scatters, as well as sub-surface deposits of archaeological material in areas where limited ground disturbance has taken place. The PAD sites, as defined, represent the areas of least disturbance, and therefore have the highest potential to contain Aboriginal objects.

At the time of the field survey, vegetation cover was so dense as to prevent the identification of Aboriginal objects which may have been present on the surface. Were the development to proceed as planned, without further investigation, it would have the potential to harm as-yet unidentified Aboriginal objects and/or places.

Test excavations, therefore, would be the best method of determining whether or not Aboriginal artefact scatters and/or other site types may be present within the identified PAD sites, and the nature and extent to which they may occur.

7 REFERENCES

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