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20 February 2025

George Economy
Project Manager
Savills Australia
Level 25, Governor Phillip Tower, 1 Farrer Place
Sydney NSW 2000

Our Reference: 23-0475 ACH report

Re: Aboriginal Heritage Due Diligence Assessment for Rouse Hill School Upgrade

Dear George,

Savills and School Infrastructure NSW (SINSW) engaged GML Heritage Pty Ltd (GML) to undertake Aboriginal cultural heritage (ACH) work for the Rouse Hill High School Upgrade project. The project involves the construction of a new school building, installation of services and associated landscaping works within the southern portion of the school (Figure 1). We understand that the Rouse Hill High School was constructed c2009, with buildings, playing fields and landscaping undertaken.

As part of the project's feasibility due diligence study, Archaeological Management & Consulting Group (AMAC Group) prepared a Preliminary Indigenous Heritage Assessment and Impact (PIHAI) report: AMAC Group 2023, Rouse Hill School Upgrade, Preliminary Indigenous Heritage Assessment and Impact Report.

AMAC Group 2023 assessed the Aboriginal archaeological sensitivity for the entirety of Rouse Hill High School. AMAC Group determined that the school has a low-moderate potential for subsurface Aboriginal objects and/or deposits, particularly in relatively less disturbed areas associated with the western sports field. AMAC Group's analysis was based on the inferred possible presence of residual Blacktown A1 and A2 topsoil horizons (bt1 and bt2 soils).

The purpose of this short report is to provide further assessment of the Aboriginal archaeological potential with specific reference to the proposed works zone (defined as the study area and shown in Figure 1). This report will identify potential impacts to Aboriginal heritage and provide appropriate management measures for the project, informed by the recent outcomes from soil analysis within the study area.

It has been prepared in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (OEH 2010; Code of Practice).

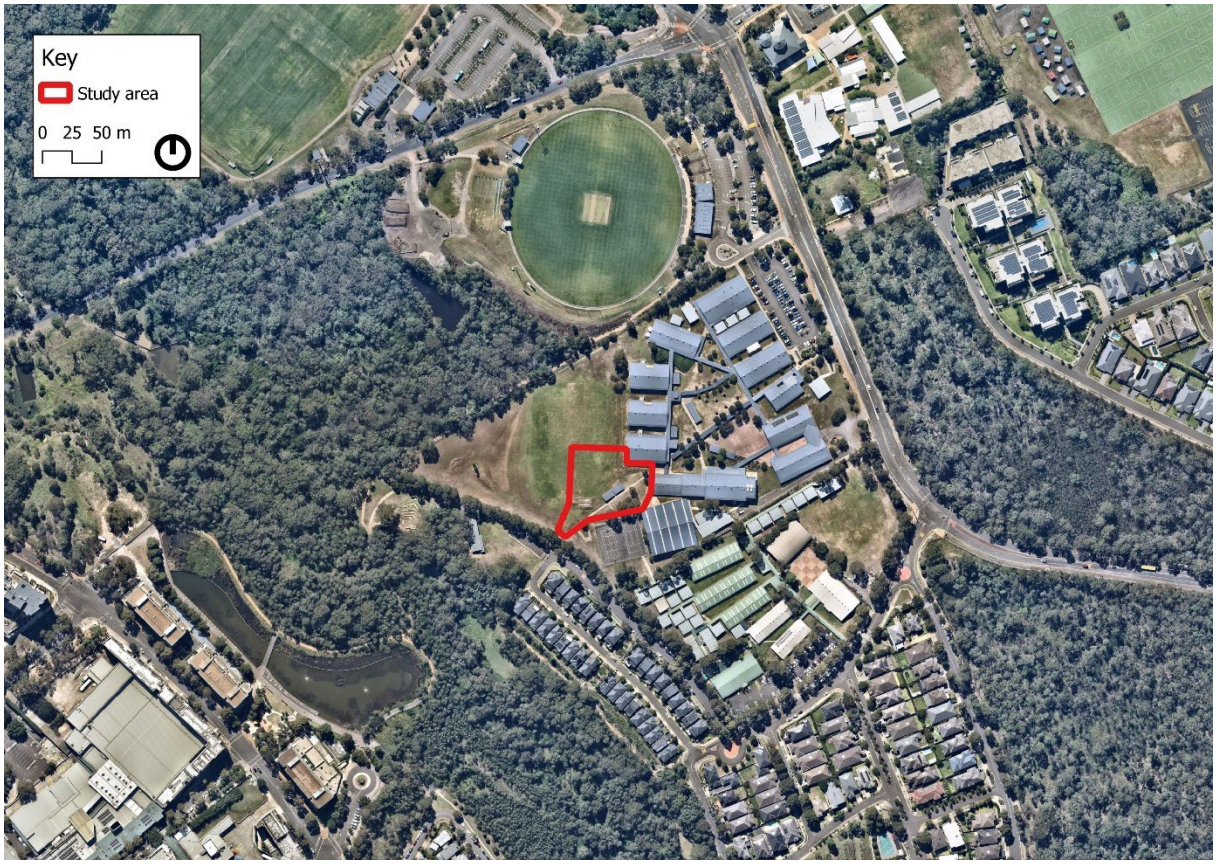

Figure 1 Rouse Hill High School. The extent of the school's upgrade project, the study area, is outlined in red. The proposed new school building will be located within this area. (Source: Nearmap 2024, with GML additions)

Analysis of extant site information

To undertake the archaeological assessment and prepare management and mitigation measures for Aboriginal cultural heritage, we have compiled information on the study area. To make further informed decisions on the potential of the study area to hold residual Blacktown topsoils, we have relied on two reports:

- Douglas Partners 2022, Report on Detailed Site Investigation (Contamination), Rouse Hill High School Upgrade 240 Withers Road, Rouse Hill.
- GML 2024, Soil analysis results for Rouse Hill High School Upgrade.

A summary overview of the regional Aboriginal archaeological and environmental contexts is provided below. Detailed information is provided in AMAC Group 2023.

The study area is situated within the Cumberland Plain, a biogeographical region characterised by a dense drainage network of creek line tributaries which feed into the Hawkesbury River. Creeks have eroded the underlying Ashfield shale and Hawkesbury sandstone geologies to create the gently rolling hills and low-lying plains visible today. These geologies also the primary parent material for the residual Blacktown soil landscape, which is mapped across the study area. These soils are characterised by 10–30cm of brown clay/silty loam topsoils (A horizons) overlying clay subsoils (B horizons). Prior to colonisation, the region was dominated by woodland and forest ecologies well adapted to the clay-rich soils. These ecosystems would have provided local Aboriginal people with abundant food, water and timber resources.

A wide variety of ACH site types, both tangible and intangible, have been recorded in the region (Figure 2). The spatial distribution of these sites shows a strong relationship between Aboriginal land use and proximity to watercourses. Most Aboriginal sites are located within 200m of watercourses on floodplain, terrace, lower or mid-slope landforms. The study area is situated atop a spur that rises to a shallow ridgeline at the approximate location of Withers Road. Caddies Creek is 100m southwest and the study area was flanked by two unnamed tributaries—one 25m north and the other 140m southeast (Figure 3). Therefore, the study area is in a landform context with proven archaeological sensitivity. The Aboriginal Heritage Information Management System (AHIMS) results suggest that the study area is most likely associated with stone artefact sites if present.

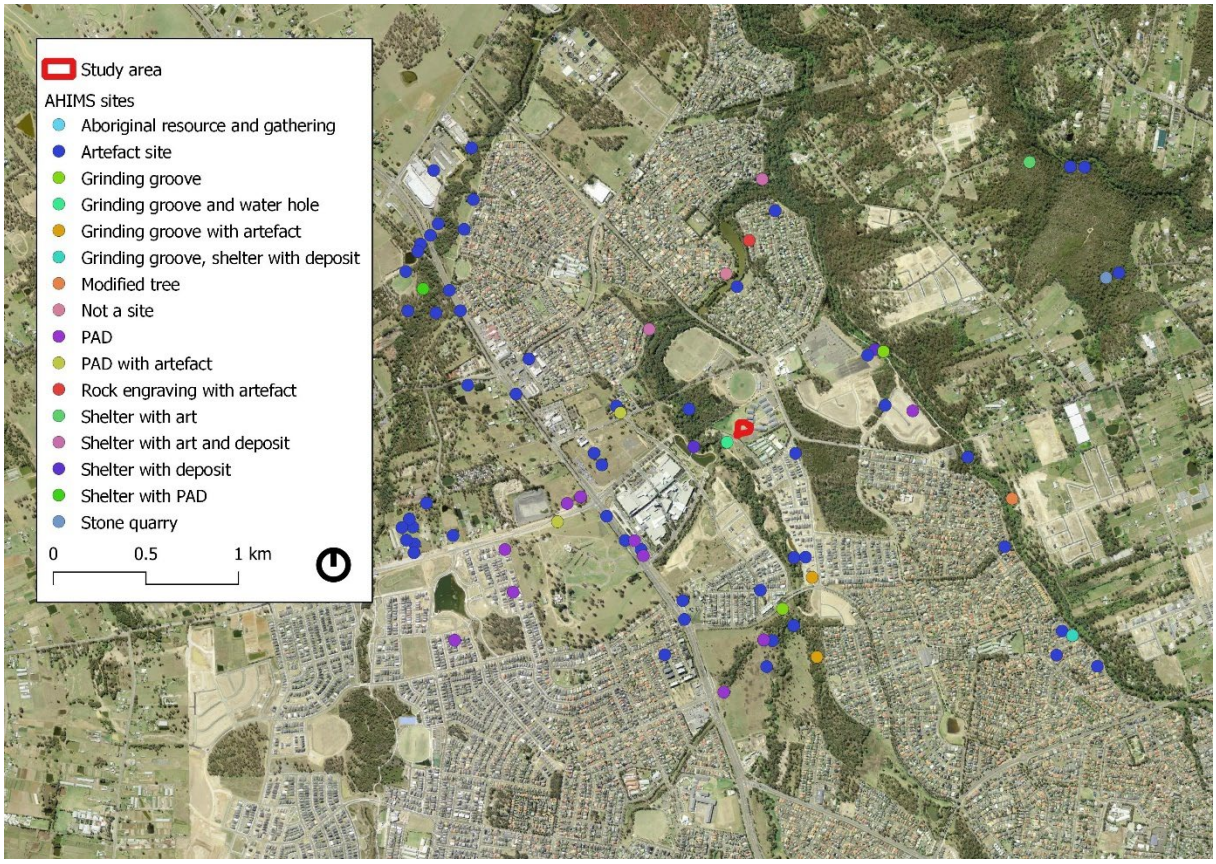

Figure 2 AHIMS results, from search conducted on 11 April 2024. (Source: Heritage NSW AHIMS, SIX Maps 2024 with GML overlay)

Figure 3 Hydrology and contour intervals derived from publicly available data and historical aerials. The tributaries of Caddies Creek were dammed between 1955 and 1965 and infilled during the development of Rouse Hill. Prior to these modifications, these would have been ephemeral first order creek lines. (Source: Nearmap 2024 with GML additions)

The study area has been heavily disturbed by historical land uses. Until the 1970s, grazing was the primary land use within the study area. Land clearing, cattle trample and damming would have had minor effects on soil integrity by increasing erosion rates but otherwise the area remained relatively undisturbed from an archaeological perspective. The construction of Mungerie Park Golf Course would have required extensive landscaping, excavation and infilling, significantly altering landforms and soils throughout the area.

Despite these impacts, AMBS recorded two Aboriginal sites during a 1998 survey: 45-5-2451 'MG-GG-1' and 45-5-2449 'MP-OS-3'. The location of these two sites is shown in Figure 4.

The former site consisted of at least three axe grinding grooves situated atop a large sandstone boulder approximately 50m north of Caddies Creek. A possible fourth faint groove was also recorded. The site was also registered in association with a 'water hole', possibly referring to Caddies Creek.

The latter site comprised four silcrete artefacts identified across a 45m long surface exposure associated with an informal vehicle track. AMBS also noted the potential for subsurface potential archaeological deposit (PAD) and recommended that test excavations be undertaken prior to any development. The study area's proximity to 45-5-2449, in a similar landform and soil context, indicates it held similar potential. Unfortunately, reports connected to AMBS's survey were unavailable during the preparation for this report, and it is unknown whether their survey extended into what is now Rouse Hill High School.

A Section 90 consent (#2538) was granted on 13 October 2004 prior to the development of the Rouse Hill Regional Centre Eastern Lands. This consent covered the study area and allowed for partial impact to both known and unknown Aboriginal objects associated with AHIMS site 45-5-2449. No records of any archaeological test excavations, in accordance with AMBS's 1998 recommendations, could be identified during the preparation of this report. The fact that the consent covers the study area implies that it had been subject to prior Aboriginal archaeological assessment (perhaps AMBS's 1998 survey) and that this assessment/s had not identified Aboriginal sites within the area.

The construction of Rouse Hill High School would have required extensive subsurface excavation, levelling, infilling and landscaping. These activities would likely have removed any remaining natural Blacktown soils, and any Aboriginal archaeological material they may have contained, across the development footprint. The construction of the sports field would have involved the partial excavation of the natural slopes and introduction of levelling fills to create a flat field.

Geotechnical investigations (Douglas Partners 2022) undertaken to inform the Rouse Hill High School Upgrade project have recorded a subsurface stratigraphy of imported fills/topsoils overlying truncated B horizon clays across the entire study area. This indicates historical land uses have resulted in the complete removal of all natural topsoils and any Aboriginal archaeological material they may have contained.

To further understand the nature of residual soils associated with the study area GML undertook sedimentary analysis through a program of hand augering. The report concluded:

> The hand auger work has confirmed that the study area comprises a stratigraphy composed of introduced topsoils, overlying introduced fills and/or natural B horizon subsoils. While more variation in subsurface layers was observed compared to Douglas Partners' 2022 analysis, the broad depositional units/contexts are consistent. Therefore, our 2024 results support the findings of the 2022 prior assessment. (GML 2024:9)

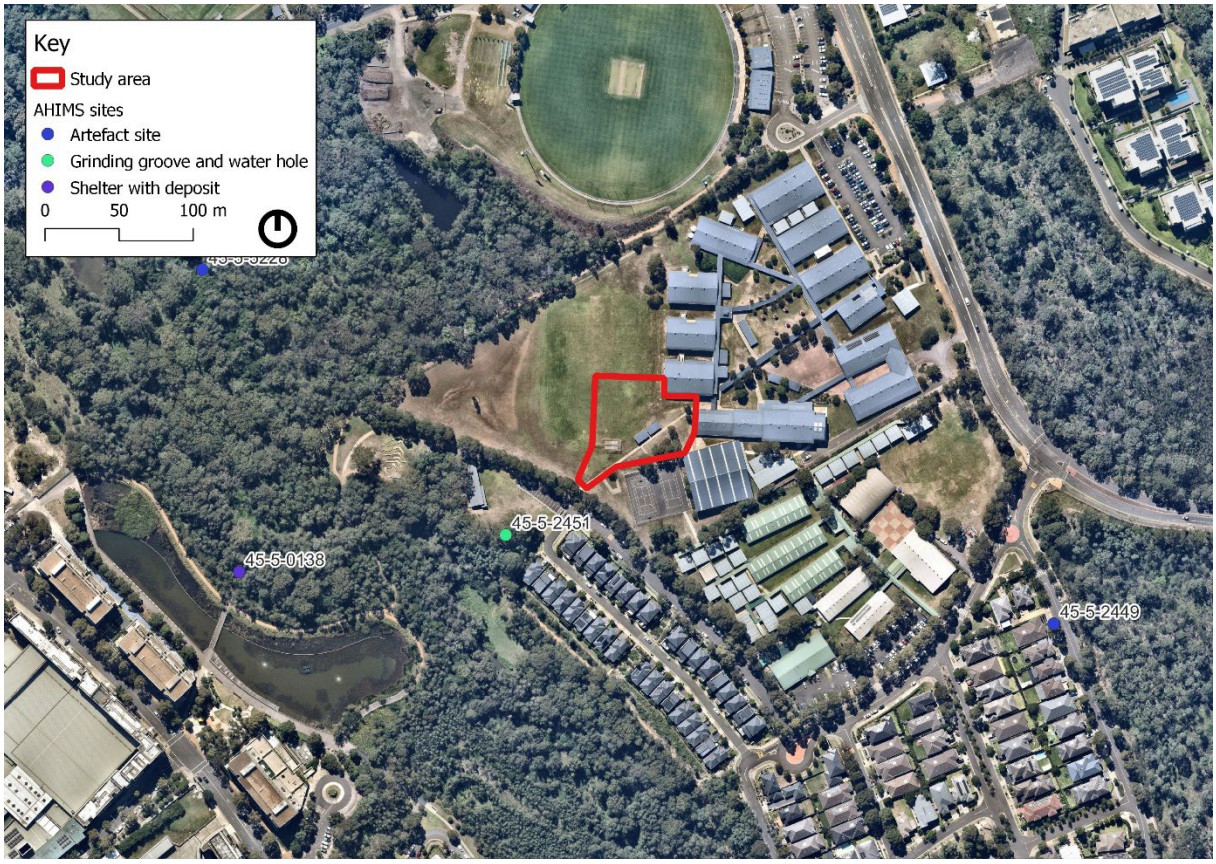

Figure 4 AHIMS sites close to the study area. 45-5-5228 is almost 1.2km north, near the confluence of Caddies and Smalls creeks—the coordinate data supplied to AHIMS appears to be incorrect. (Source: Nearmap 2024 with GML overlay)

Study area inspection

A study area inspection was undertaken by Jacob Kiefel on 8 April 2024, to observe current site conditions and record any evidence of former land use and development activities that might have affected the study area. A photographic review of the study area is provided in Figure 5 to Figure 10. The following observations were made:

- The inspection did not identify any Aboriginal objects, or areas with archaeological potential.
- The study area has previously been impacted by the construction of a concrete footpath, a covered seating area, cricket nets and a levelled sports field.
- Extensive landscaping is visible across the study area, to accommodate this construction. Notably, the landform appears significantly cut in association with the level sports field and covered seating area.

- Turf grass cover meant surface visibility was limited to isolated exposures. Exotic gravels were observed, and the overall physical characteristics of the soil material do not resemble those of a natural Blacktown soil profile. This supports the conclusions of the geotechnical studies.

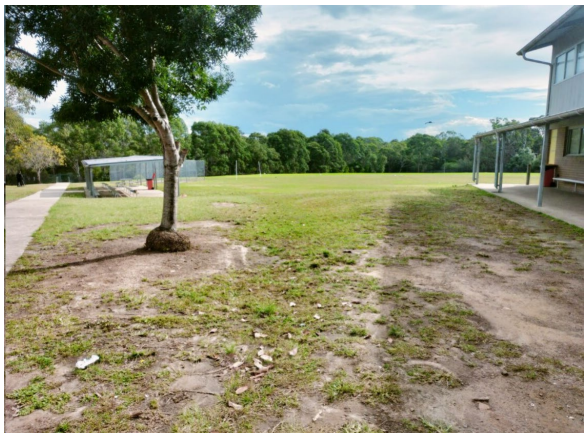

Figure 5 South-facing photo across the study area. Note the soil exposures, construction of the concrete pathways, covered seating area and school building. The tree was planted during the construction of Rouse Hill High School.

Figure 6 Close-up of exposure visible in previous figure. Gravels include concrete, plastic and miscellaneous rocks (including ironstone). This is not a natural soil profile. No Aboriginal objects were observed on any of the surface exposures.

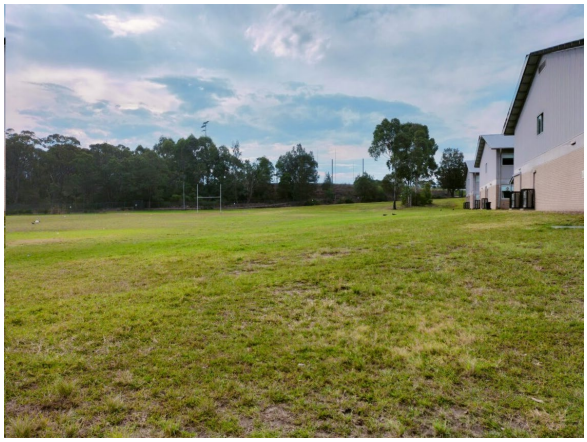

Figure 7 North-westward facing photograph showing the natural sloping landform cut by the levelled sports field. The landform has also been levelled around the school building visible to the right.

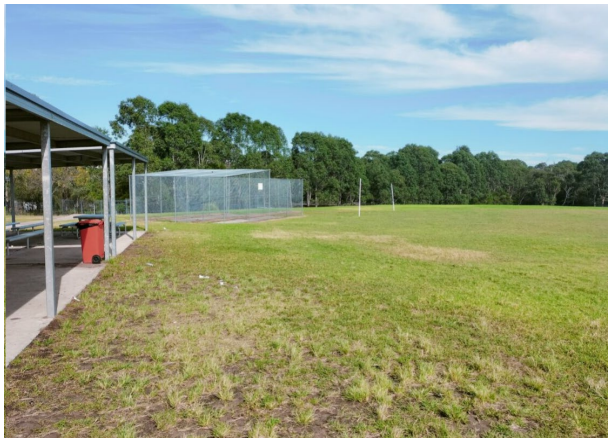

Figure 8 South-westward facing photo of study area. Note the covered seating area, cricket nets and sports field. The construction of these has involved some degree of cut and fill to the landform.

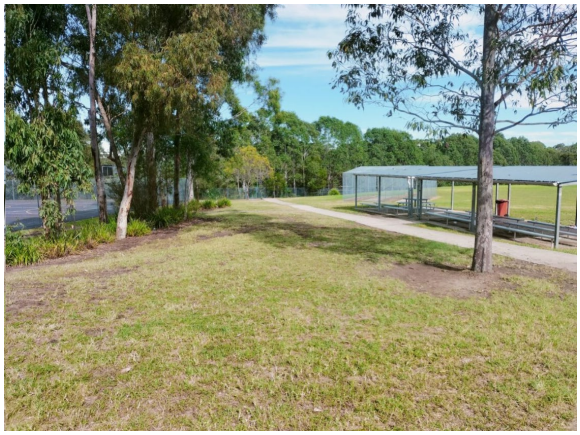

Figure 9 South-westward facing photo of the study area. The trees were planted following the construction of Rouse Hill High School. AMAC Group 2023 identified a natural soil profile at this location; however, geotechnical investigations have demonstrated the area is underlain by introduced topsoils.

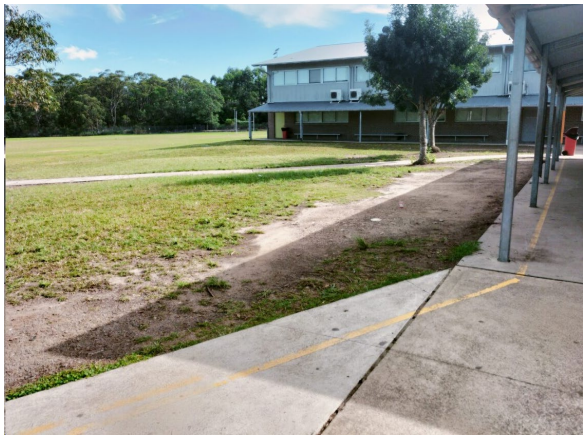

Figure 10 West facing photo of the study area. Note the levelled landform in association with school buildings.

Conclusions

The study area is positioned on a spur approximately 100m north of Caddies Creek and between two first order creek line tributaries. This landform context would have been a past focus for Aboriginal activities. A wide range of ACH site types have been recorded by archaeological surveys and consequent test excavations throughout Rouse Hill. However, no Aboriginal objects have ever been identified within the study area. There are no registered AHIMS sites inside the study area.

Development activities have resulted in extensive landform modification across the study area. The results of both the desktop and visual inspection have not identified any Aboriginal objects, or landforms with Aboriginal archaeological potential. Two studies have confirmed the presence of fills, over cut B horizon clays. Neither report identified residual Blacktown topsoil (bt1 or bt2) horizons.

All original landforms and soils have been altered, and we conclude that the study area contains no remaining landscape features with Aboriginal archaeological potential. The study area has been assessed as holding nil-to-low archaeological potential for Aboriginal objects within an intact landscape context. Any Aboriginal objects present would be displaced items, removed from their original depositional context.

The construction of the new school building will require disturbance to the ground surface.

However, given the assessment of low or nil potential, we do not recommend further Aboriginal archaeological investigations or assessment in connection with Aboriginal objects. In line with the Due Diligence Code, the proposed works can proceed with 'caution'.

Heritage recommendations

The proposed development can proceed with caution. If, during the process of works, an Aboriginal site or object is suspected or identified, the following Aboriginal unexpected finds protocol should be enacted:

- Stop work order—all works should cease immediately in the area surrounding the suspected objects. Any identified Aboriginal object(s) should be left in situ and not disturbed in accordance with the requirements of Section 89A of the *National Parks and Wildlife Act 1974* (NSW) (the NPW Act). Heritage NSW and School Infrastructure Heritage should be notified immediately and an archaeologist experienced in the identification of Aboriginal cultural material should inspect the objects.
  - If the suspected objects are not Aboriginal in origin or manufacture (as defined under the NPW Act), they should be recorded, and the location noted. Works may continue.
  - If the objects are confirmed to be of Aboriginal origin, the site should be registered on the AHIMS administered by Heritage NSW.
- If an Aboriginal object is identified, an Aboriginal heritage impact permit under Section 90 of the NPW Act would be required. As a likely displaced object, the extent of any works exclusion zone would need to be determined through discussion with Heritage NSW and Aboriginal community representatives.
- In the unlikely event that human remains were to be discovered at any time during the works, the works must cease immediately in the surrounding area. The findings would need to be reported immediately to the New South Wales Coroner's Office and/or the New South Wales Police.

I trust this letter provides clear direction for the future management of ACH at the Rouse Hill High School. Should you require further advice, please contact GML as needed.

Yours sincerely,

Jacob Kiefel

Consultant

GML Heritage Pty Ltd