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[REDACTED] Some of what I have drafted for southern Bungarribee where the Zoo will go I append below.

[REDACTED] Some very nice silicified wood has been found at Bungarribee. That it has escaped documentation I feel is related to the fact discussed herein that consultants are not being stipulated to report ALL that they find of interest.

I have been gathering information on the WHOLE of Bungarribee over quite some time. During that time I have written to Blacktown Council first off, then later on in case anything had changed, asked did they know of anyone else interested in studying any aspect of the past or the environment there. Each time they did not. Do you know or have heard of anyone, please?

For the bigger picture there is still unresolved the matter that some locals says there was an original statement made to the public by the former Premier Bob Carr that this land would ALL be made part of Western Sydney Parklands, would be "open space, and would never to be developed".

This history is running VERY CLOSE PARALLEL to the case of the Upper Castlereagh river flats where the original perception given to the public was that after quarrying has finished (it finished some months ago in 2015) the empty holes would become the Penrith Lakes and it would all be a big public park. But now that the time draws near for that there is talk of putting thousands of people/houses in there.

Similar was the case of the land directly south of Bungarribee over the other side of the Great Western Highway. The State Government got control for that and some thought it was going to be added to the Western Sydney Parklands. Instead it has turned into giant warehouse buildings I show herein.

Re that Bob Carr "made a promise" that all Bungarribee would remain open space, and would never to be developed - did he really do that, as locals claim happened? Have you anything in regard to that, please? He was written to about this but did not reply.

Also is it true that the land for the Zoo currently has "natural" kangaroos? Will they be pushed to the rest of the Super Park, or will they be accommodated in the Australiana part of the new zoo?

EIS'es if they are done well are potentially one of the best sources of information for writers like me.

One problem would seem often to be poor/inadequate Director General's statement of requirements. For example such typically states "one electronic copy of all the documents" without specifying the nature of the documents. Is there any GUIDELINES anywhere issued to proponents for how to prepare such documents? Fortunately they all seem to submit them in PDF but how do they even know to do that? But is there stipulation or quality control on the nature of the PDFs? Some are far better than others in various respects. In the past the text in figures sometimes couldn't be read at all in some DAs .. but this seems to be improving and I have not seen a case of that for some time. One big deficiency I think is the submission/uploading of some PDF which are SCANNED material (even when it is solely text). Wherever possible text in

PDFs should be character-coded and NOT scanned and NOT locked. To do otherwise may greatly lessen the usefulness of information for its reworkability/re-use.

I did a Policy degree specialisation on all this sort of thing the acquisition, storage, and accessibility/re-usability of Government-held information at UNSW, Kensington. Some NSW departments/agencies are far far better at it than others.

The parts of EISs that I use most are heritage and natural history surveys .. and the more historical the heritage surveys are the better. I doubt there is any requirement whatsoever that is mandatory to include historical work in heritage reports. Some consultants do heaps - some do very little, and the Sydney Zoo case is at the lesser end of the scale. It Planning/DoPE or whatever it is called now could ENCOURAGE greater inclusion of history that would be good.

Bear in mind there are NOT many shots of the arrow or bites of the apple in all this. ONLY when there is MAJOR redevelopment will it come up that someone in government or commerce is likely to review history. The cost of individual history interestees doing it ... to get land title records etc. ... is prohibitive.

In Aboriginal surveys I have noticed wide variations. Is there anyone at all in Government doing quality control on these reports?

ALL the data that the consultant gets in a study should be included .. and often it is, but NOT always.

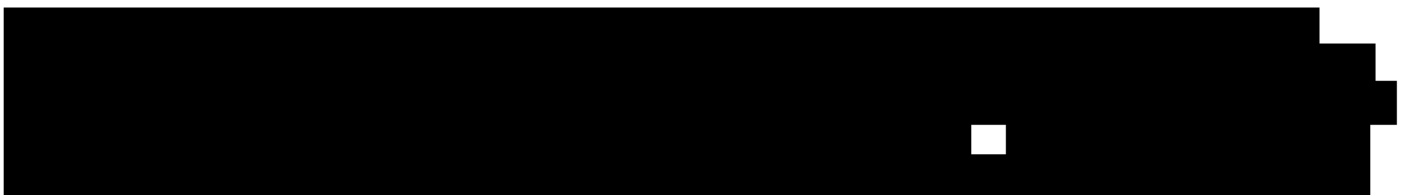
In the Sydney Zoo case, I note a small number of difficulties and could you perhaps get these resolved for me?

In the Sydney Zoo case an AHIMS register search was done (p. 11 in the report) on 26 June 2015 and was search # 179265 - but it does not seem to have been included. If there are no guidelines being issued by Government then probably such does not HAVE to be submitted, yet most consultants I think would now do so as common practice (and if a DG directive was given that ALL information obtained during studies must be submitted then deficiencies like this would be cured).

Search # 179265 apparently returned 25 site records (typically an area bigger than DA-area is generally searched for records).

The main problem with the Zoo report for artefact sites was that "Figure 3: Results of OEH AHIMS site register search" put dots on the landscape BUT did not number them in any way. The repercussions of that, in making it harder to correlate with any other environmental data, I go into further below in detail.

This is the sort of thing that any quality controller, if there was one, should be picking up on .. in my opinion.



I am aware of an objection to the Zoo if it will bring in foreign plants for the foreign animals to eat - that such vegetation could shed seeds that will go down Eastern and South Creek to the

Hawkesbury, and potentially Africanise the vegetation along the way. Are foreign plants to be brought in, and if so can their seeds be prevented from going wild?

Before yourself, I sent some enquiries re Zoo EIS matters to WSP. There was no reply, but this is not unusual for WSP. Have you heard before about poor responsiveness from WSP, please?

Some examples I can give of unsuccessful-to-date information-seeking from WSP include:

* What will happen to Bungarribee silcrete (or maybe such found in WSP elsewhere)? Has any already been given to WSP to keep? Years ago legislators wrote such words that all Cumberland Plain artefacts should go to the Australian Museum - but the museum has refused to take them ... there could be millions of them and the museum, basically, is now full up it would seem. In particular I would like to see any silicified wood from Bungarribee (I am aware, pers. comm. that some has been found there) as I have a webpage on silicified wood of the Sydney region, viz. <https://dl.dropboxusercontent.com/u/5737284/sil-wood-sydney.htm> , and would like to add there any photos of Bungarribee material.

* Information I collected from locals included that there had been a very long-lasting Aboriginal (or Aboriginal descendants) groups somewhere at Devil's Back. Possibly squatters, possibly not. Except for a single informant, no other person is known to know of that. I have investigated a similar (but very well known about) claim in regard to the western end of Narrabeen Lagoon, where the building of the National Fitness Camp is claimed to have dislodged a group of people long camped there (officially regarded as squatters?) and trucked them west (to Blacktown?). For my investigation of that matter please see in my Narrabeen file findable at <https://dl.dropboxusercontent.com/u/5737284/narrabeen-p2p.htm> For that matter, the supposed long-lasting camp near Middle Creek at the western end of Narrabeen Lagoon it has been to date impossible to find any government department that knows anything at all - despite it being thought (by the chief teller of this story, Prof. Dennis Foley who says he witnessed the destroyed camp as a child) that it was government who destroyed the camp and trucked the people west.

* Between Devil's Back and Elizabeth Drive it pretty certainly seems there once operated a quarry. Many people remember that quarry and one has told me that it was the source of the material used to re-surface Elizabeth Drive back when that was the road to Wallacia, back before Princess Elizabeth was Queen or Princess and the road re-named for her. Seemingly that area has never had any development of note since the time the quarry was operated, so where is the quarry? WSP was asked that a number of times and although someone had at least heard of some quarrying once in the area, the quarry has never been relocated.

* At or near Devil's Back, WSP has constructed a nice memorial (from memory comprising a square of big rocks with one central big rock to which a brass plaque of the dog's fame is attached) to the dog known as Ginger Meggs. I have a number of times asked "Is the dog's body really there?" but got no answer. Elsewhere there is a bronze statue to the same dog but I have not yet been to see it.

[illegible]

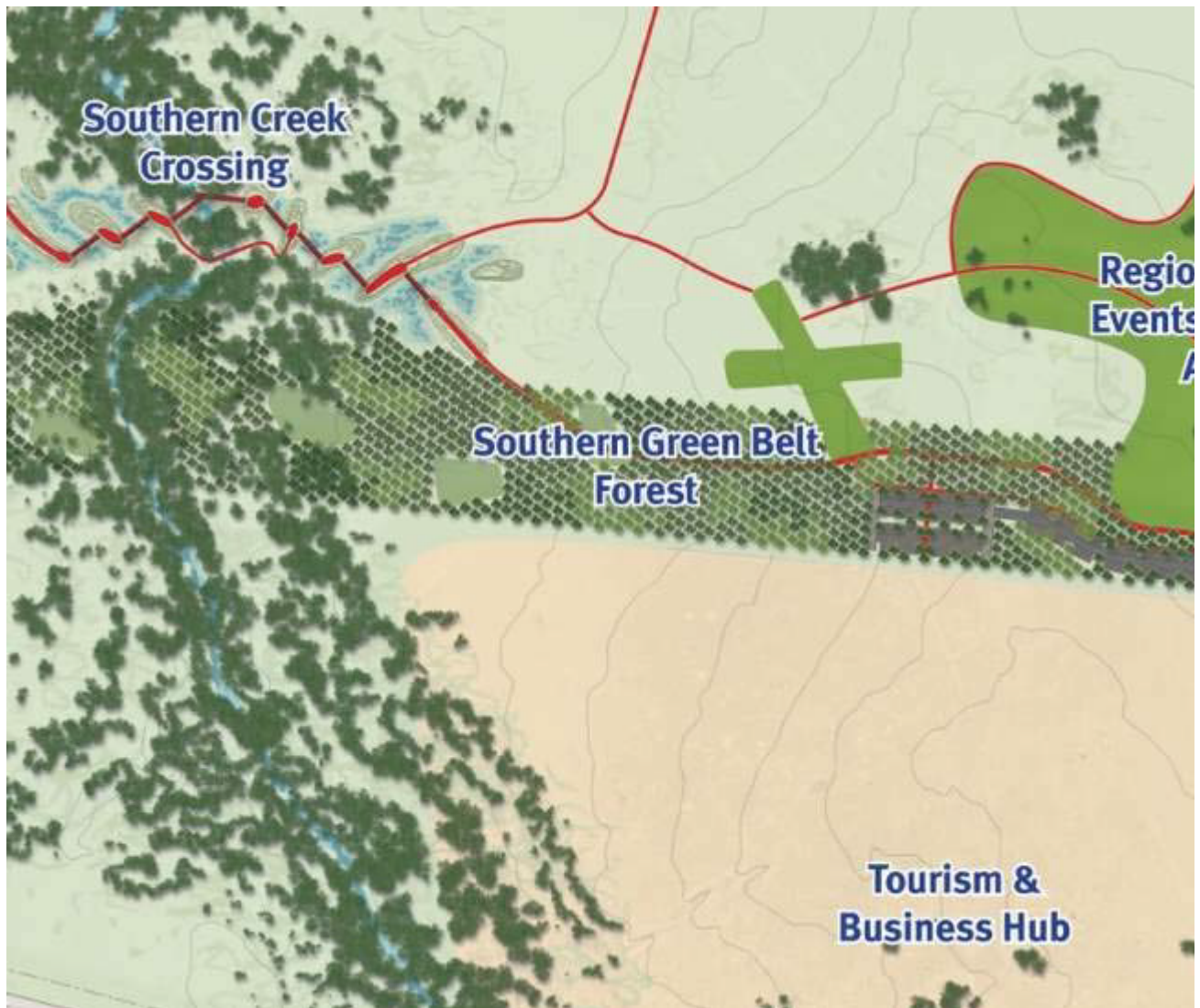
..... DRAFT being formed for Sydney Zoo, as sydney-zoo.htm
.....

Located in the southern part of the former Bungarribee estate in Blacktown LGA, formerly owned by the Overseas Telecommunications Commission (and later shown on the street directory as Telstra land).

A Zoo, called variously Sydney Zoo or Blacktown Zoo with roaming lions, elephants and giraffes, for the Bungarribee area has been for some time in the news.



A zoo at Bungarribee fits in with earlier Government announcements that the southern area of the former Bungarribee estate (passed to the NSW Government by the Commonwealth) would be used for "tourism/business", where I think there was also discussion that environmental-education /conservation type "business" would be the sort of business preferred to go on there, .e.g. "Tourism and Business Hub" on this plan:



A big zoo would seem to a very good fit for the government-expressed requirements(?).

This could help conserve species becoming endangered in Africa?

Who first suggested all this has not yet been discovered but the idea has likely been around for some time.

Besides glass to protect humans it is also suggested that "Elevated walkways will give visitors a treetop view of African animals like cheetahs, elephants, zebras, giraffes and rhinoceros". Giraffes, which have long necks, might reach up to the walkings and nibble offerings? But more likely officialdom would erect signage "Do not feed the giraffes" I think.

The publicity has also said there will be "underwater glass viewing areas" for seeing such as hippopotami, crocodiles and other aquatic life.

It is all expected to commence being built soon. It is predicted that it could attract as much as 745,000 people and \$45M per annum.

It will be run by It will be run by John Burgess apparently, the man who set up the Sydney Aquarium.

Those involved so far include Burgess's company, "Sydney Zoo" and Western Sydney Parklands Trust and Blacktown Council. Blacktown Mayor, Councillor Stephen Bali said the Council was incredibly proud to be associated with the new Zoo. Cr. Bali added "Blacktown is fast becoming an entertainment epicentre."

The new zoo will run programs to increase awareness about issues such as poaching and habitat destruction.

Although being designed for African species with high tourist attraction potential, the new establishment will also assist Australian native species as well. It will have extensive veterinary capabilities in-house that can assist animal rescue programs and "give our native animals the best chance of survival💎".

Further "partnering" is anticipated with "Western Sydney" and Sydney area universities, the Australian Wildlife Conservancy, and Muru Mittigar (a quarries-funded centre set up at Upper Castlereagh to promote Aboriginal information and to grow native plant species).

There is already a wildlife park nearby, Featherdale, but that has declared it does not fear, and can easily survive, any competition: "Featherdale is a born and bred local in western Sydney so any investment into tourism into the area we welcome with open arms. Featherdale will do more than survive. We're an extremely successful business that the locals just love (us). We don't see it as having an impact because what we're doing, we do better than anyone and we have plans to do more in the future" (Featherdale Wildlife Park general curator Chad Staples).

The proponents hired JBA to conduct community consultation on the project and they have established website: <http://talksydneyzoo.com> JBA have been contacted that I have been looking for some years for anyone else who is or has been interested in the history of this area.

JBA did not reply. The JBA website has a "[Sydney Zoo proposal flyover](#)" (<http://youtu.be/JCN3yKMW1BA>). It was unfunctional in January 2016 but will likely be fixed. However it also links to <http://www.bungarribeeprecinct.com.au> which in turn shows a sizeable video "See our latest vision of the new Super Park here" for the super-park. This states "Since last year's community consultation on the Bungarribee Master Plan the Trust has been working hard to further progress the design of your Super Park!" (Website designed by [Straight Talk](#) (another PR company) and designed by [Jebediah Cole](#)). It also links to <http://westernsydneparklands.com.au/about-us/parklands-projects/bungarribee-precinct-activation> (and that too links to a useful future-drive-through at <https://www.youtube.com/watch?v=m9H1-sVYZsM&feature=youtu.be> , called "A glimpse into the future of Bungarribee Super Park in Western Sydney Parklands". That latter does not mention any zoo .. is this because it predates the Zoo proposal or is the zoo not regarded as part of the "Super Park"?

Consulting Earth Scientists dug pits and drilled holes for soil sampling across the Zoo proposal area. Soil sample locations as far as practicable, were evenly distributed across the site, although they mention that "The presence of soft ground and dense population of trees within the vicinity of Eastern Creek imposed some limitations". Drilling went to 8m or more. A bore at test pit 10 (TP10) has been left open as a groundwater monitoring location.

At all locations they found they recorded the same sequence penetrated - grass covered, dark brown, topsoil to a maximum depth of 0.3 m, then orange / brown soil down to what they called firming " firm shaley clay" (weathered shale) to a maximum depth of 1.5 m. That clay was then underlain by weathered Bringelly Shale at all tested points across the site. Groundwater presence is found at 4-5m depth.

Consulting Earth Scientists encountered nothing at all suggestive of the Tertiary.

But did they test in the vicinity of 45-5-4433? For around there eighteen artefacts (mainly silcrete) and " silcrete gravels" have been recorded by archaeologists.

Their plan showing test sites is their Figure 3 in Appendix H. That shows there was no test site in the vegetated zone along Eastern Creek apart from one (TP01) Otherwise, the 16 test sites are evenly spread across the Zoo proposal area. Comparing Figure 3 in Appendix H to the archaeologist report for site 45-5-4433 (a.k.a. 45-5-3526 [since lost] and BP-AS-6) it is seen that this site is well away from the poorly tested vegetated zone near Eastern Creek and should be not very far from one of the Consulting Earth Scientists test sites.

However in attempting to make such comparison there immediately arises the problem of the "deficiencies" in the archaeological reporting. To be more detailed, the archaeological report (Appendix M) shows the Aboriginal sites around the area in a map on Page 12 - but on that map it has not numbered any of the sites. I have scanned through the entire Appendix M report and cannot find anywhere that the site 45-5-4433 is depicted on any map therein. Without a map one is only left with coordinates to locate it (and the report discusses site loss there once already, because of erroneous coordinates it would seem).

If anyone were standardising/quality-checking reporting requirements for Aboriginal archaeological reporting (which has been another of the never-so-far answered questions .. or is there any quality control happening?) I would suggest that requirement should be that ALL sites are shown and numbered on aerial view maps. In fact many or most consultants are already doing that - but Appendix M did not do it for 45-5-4433.

Also of note, the Appendix M report states re doing a "AHIMS site register search", report M states "An extensive search of the Aboriginal Heritage Information System (AHIMS) was undertaken on 26 June 2015 (# 179265) to determine whether Aboriginal sites had been recorded within Bungaribee Precinct." [That would seem a bit of a 'nonsense' in itself - for OF COURSE they knew already that there were sites there and they didn't need to determine "whether Aboriginal sites had been recorded within Bungaribee Precinct."]

On further reading one learns that they must have already known there were Aboriginal sites already recorded within Bungaribee Precinct, because:

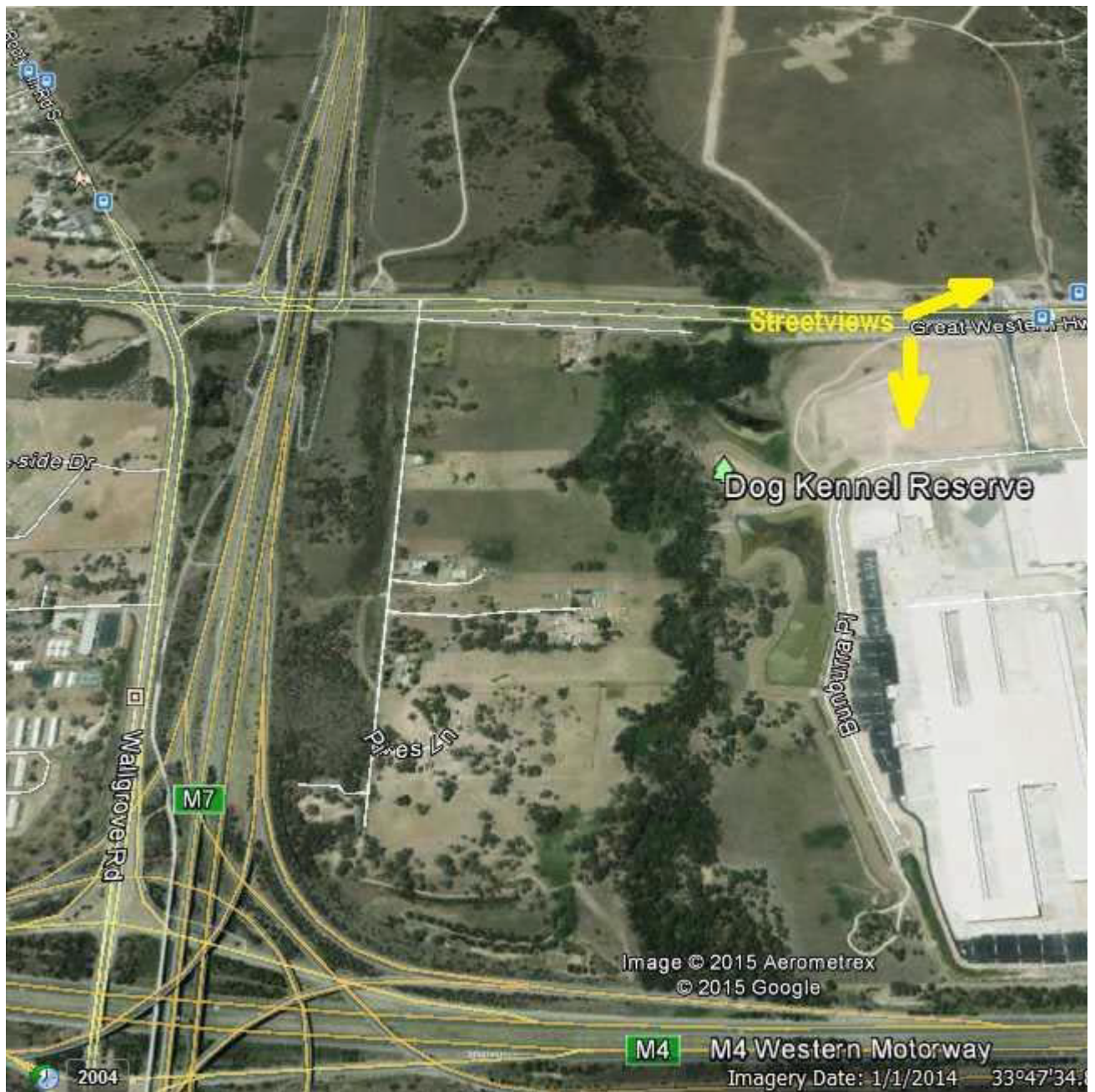
- * They had done earlier work there themselves, and
- * They themselves had done site recording earlier on there to the AHIMS system!

The 'extensive search' yielded an AHIMS report on 25 sites. Many archaeological survey reports now list/tabulate AHIMS data request reports (I can send examples of this if of interest) but Appendix M did not do that.

In the Appendix L_ Non-Aboriginal Statement of Heritage Impact.pdf (by Artefact Heritage of Pyrmont) note Figure 1, viz. below. I add it below in conjunction with an aerial view which Google Earth dates as 1/1/2014 (along with two streetview

directions). It is clear that the aerial view in Figure 1 could not possibly be of "DATE 26/06/2015" as readers of the report might be lead to think.





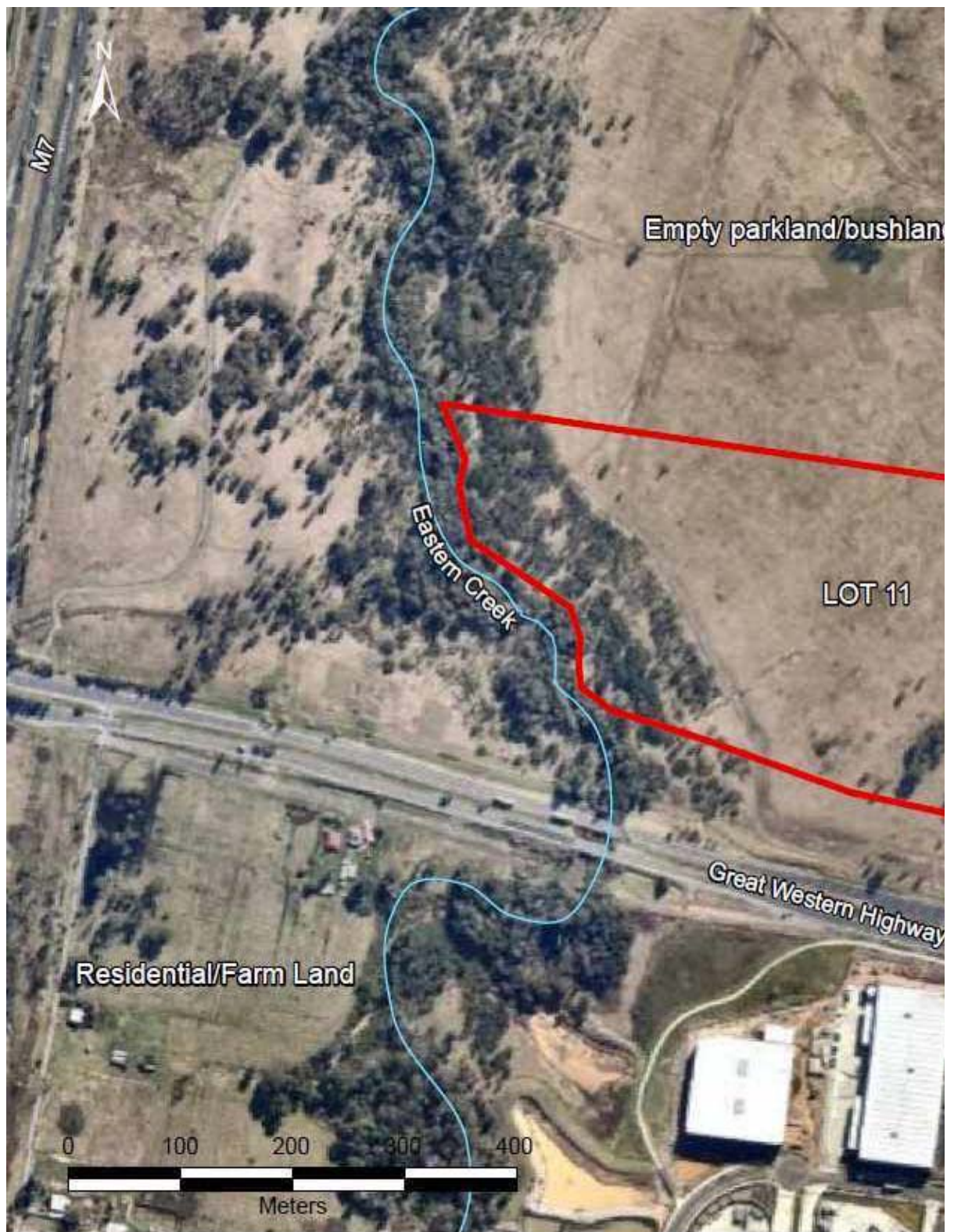
The history of the (unstated) difference is, briefly, that the land there south of Great Western Highway was acquired by the State ... many people thought to be added to open space reserves, perhaps as part of the roughly N-S trending West Sydney Parklands strip.

Instead, however, it was decided to "flog off" that land and it has become now the place off immense commercial buildings (e.g. transport logistics for goods being road-trained to Sydney I was told).





From the street view point in the above 1/1/2014 aerial view. One the Great Western Highway driving east, and looking left (north into the former OTC entrance driveway - which is to become "Sydney Zoo", and right (south) at the massive new commercial buildings.



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Title:

Figure 2: Site Layout Plan

Source: NearMaps 2015



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Title:

Figure 2: Site Layout Plan

Source: NearMaps 2015

The same area as shown by the contamination consultant in Appendix H (report written by J. Dobson with Consulting Earth Scientists of Pymble, www.consultingearth.com.au). The "Date" given is same as, or close to, the imagery date - as confirmed by below Google Earth image of similar age. Shows the rapid changes on the southern side of the Great Western Highway.



Near identical to the above - a Google Earth image in July 2015.



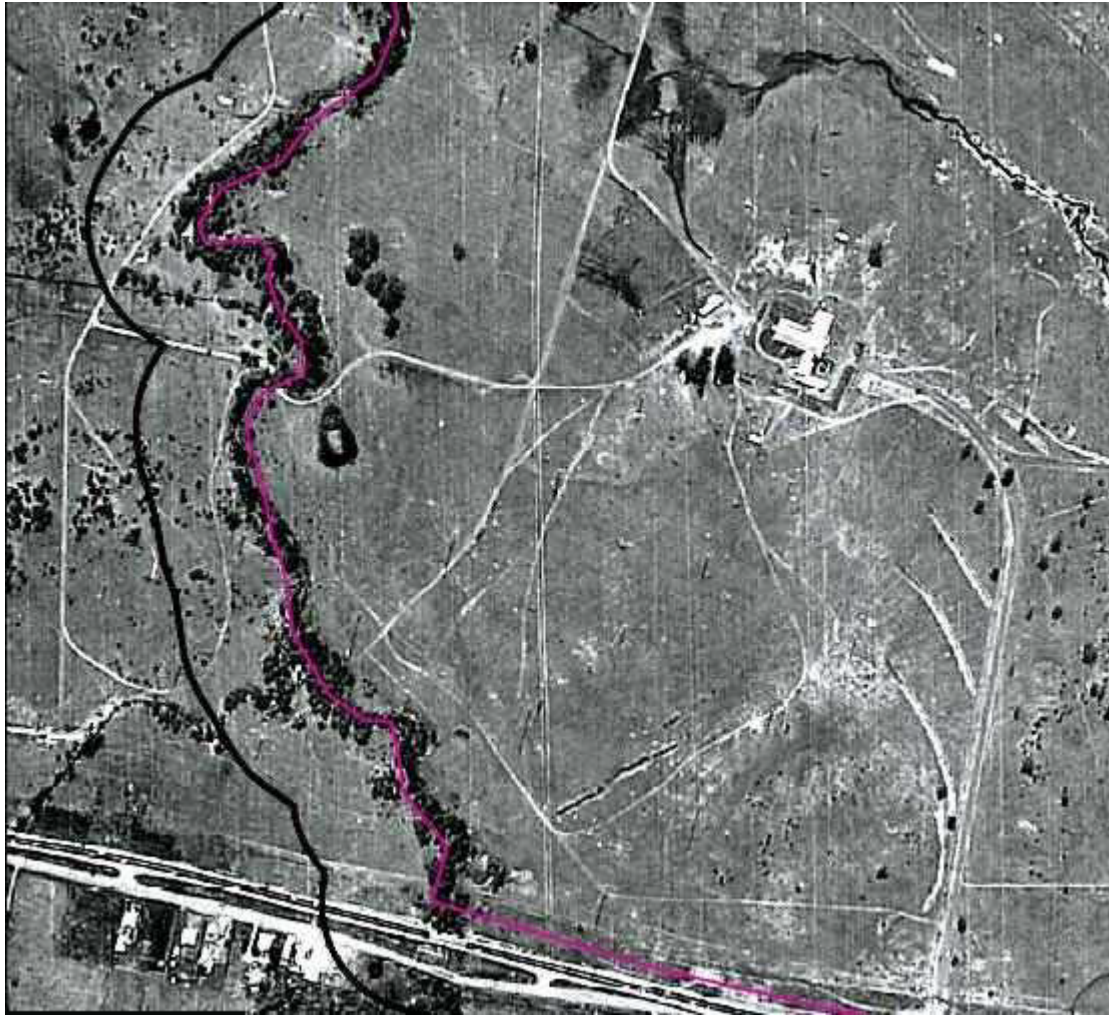


Illustrating disadvantage of plotting data on wrong-date background. The above is the Appendix M plot of a place (Bungaribee south) salvage excavated in 2015, but plotted on 2009 background. The below is how the area really looks now. Making the comparison is not totally easy, as there has been tree growth and other changes.





Same area in 1991 and 1970, when the OTC buildings were still standing. The main road into OTC, running up from the Great Western Highway then curving westwards is still remaining easily distinguishable but the lesser road that came in from the east off Doonside Road (seemginly well used in 1970) is now becoming obscured or overshadowed by other changes.





Interesting former (1965) radiating pattern - presumably a stock feeding/watering point?). Also why the 'radial' ditch (at lower left)?



The ditch is still there (and has been there since at least 1956).



A 1956 air photo (wartime landing strip is at upper right - now a dog walkers' area) suggesting the small creek just north of the OTC flared out and did not channel across the alluvial flat. Drainage from OTC also flowed down to that overflow area it would seem - as shown with yellow arrow above - from the point "C" as shown of the below ground view. The "Bugarabee South salvage" digging (shown below) was besides this small ?unnamed waterway. Does this indicate very low terracing. If so is any of the terracing clearly alluvial?



Bungaribee dog Heaven - where dogs can run on the former airstrip made by the RAAF in WWII.



The assumed drainage path from point "C" at OTC (also shown above from air in 1956) down to overflow area on alluvial flats from the small unnamed waterway that is north (and east) of the OTC buildings site.



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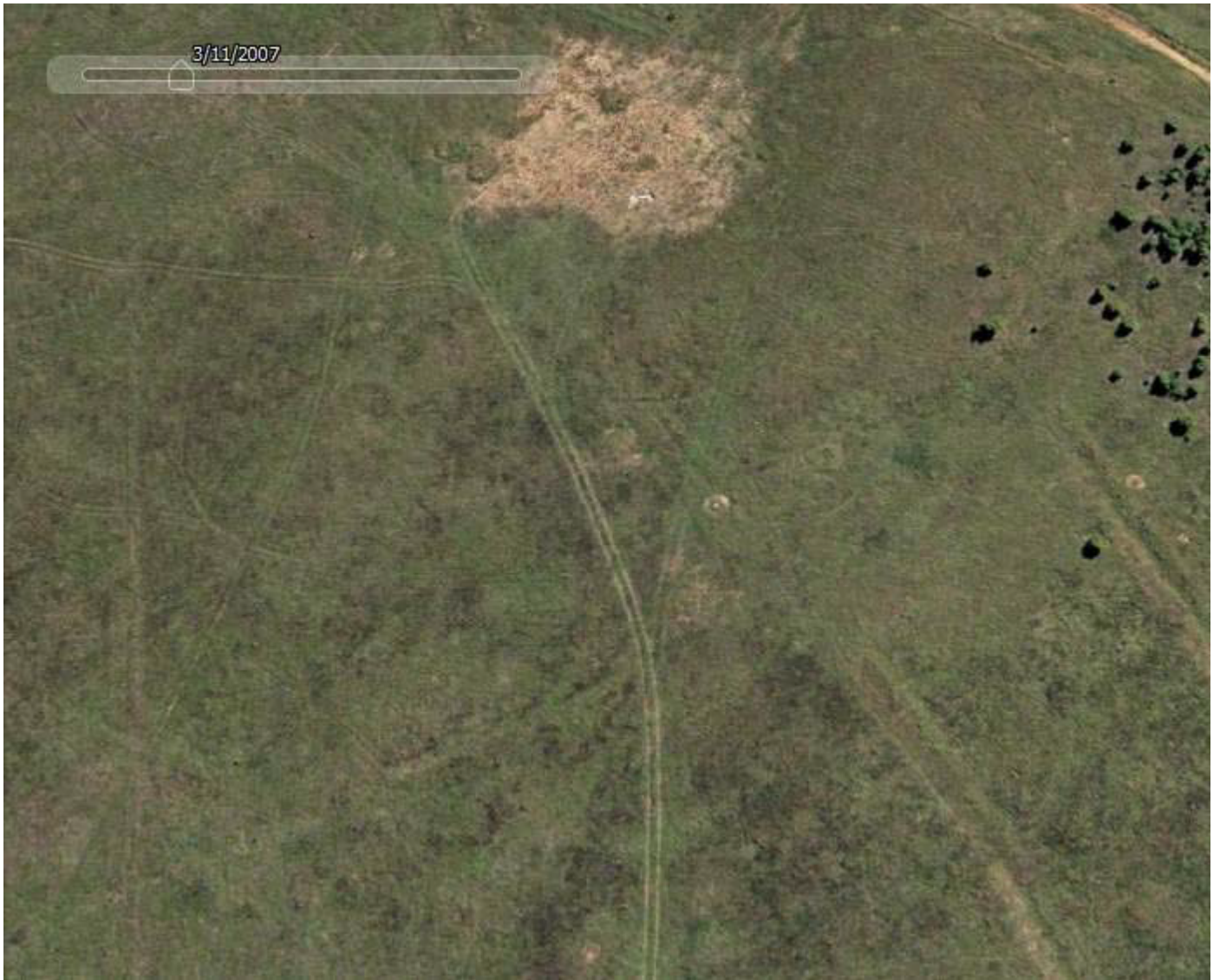
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This looks more suggesting of digging there - in December 2014 About 15 digging spots seem evident. (This pattern had faded away by April 2015)

The actual Appendix M report heading pertaining to this work is "Artefact 2015 ♦ Bungarribee Precinct Masterplan Salvage Excavation" and it states "A total of fifty-five one x one metre excavation units were excavated within the study area in two locations named "Bungarribee North" and "Bungarribee South". It does not say how many at each. Presumably the digging was in late 2014 and "2015" is the date of the report about it.





The main new feature seen north of the Great Western Highway









The area immediately north of there has been changing too. (The bright disturbance patch of 2007 is faded in 2013, gone in 2015).



A second ?anomaly/?deficiency I noted in the report, but cannot quite figure out yet, is in regard to the OTC transmission station.

.....

According to this report, the site of the former OTC transmission station buildings (located approximately 200 m to the north of the Sydney Zoo study area so not of critical concern anyway) were closed in the 1990s; and the transmission towers and station buildings were demolished in 2001. The report states that "In 2000 Austral Archaeology identified the extant remains of the OTC transmission station including the main station building, a storage shed and several workshops Although the site was assessed as unlikely to yield further archaeological material other than

what is visible, Austral noted that the area may have low archaeological potential to yield subsurface material associated with early use of this land such as 1826 land boundary markers, and/or OTC related infrastructure not presently visible due to both poor ground surface visibility and OTC practice of removed disused buildings/structures [Austral 2000: 52]. Austral (2000: 59) recommended that the OTC transmission station buildings should be subject to archival recording prior to removal. Austral (2000: 59) additionally recommended that archaeological monitoring should be conducted during removal of the OTC transmission station buildings".

Did that take place? If so that additional work I cannot find referenced in this recent Artefact Heritage report.

The Artefact Heritage report goes on: "Following removal of the OTC transmission station buildings in 2001, GML (2007: 32) assessed the OTC transmission station building sites as demonstrating high archaeological potential."

Thus by 2007 we have someone still saying there was high archaeological potential" - DESPITE demolition/removal.

It then says "However, based on the comprehensive archival recording and monitoring during removal of the structures in 2001 (Austral 2000: 59), the OTC transmission station site and associated concrete tower footings in the current study area no longer demonstrate research potential and no further archaeological investigation of the site should take place".

How can a 2000 report (Austral 2000: 59) serve as such a reference for something stated to have happened in 2001?

Maybe there is some logical explanation for this -- but again this is the sort of "curious"/anomalous seeming thing, like Figure 1, than anyone doing quality control might well note.

However this seems to get still worse when the report later on states "Due to the demolition of the OTC transmission station, including removal of the former towers within the current study area, Artefact Heritage (2014) determined that the OTC transmission station site no longer demonstrated aesthetic significance, research potential or representativeness".

For the list of references cites no "Artefact Heritage, 2014".

That would then seem to be leaving us with two apparent bits of work that are not in the list of references, i.e. the stated 2014 determination by Artefact Heritage that the OTC transmission station site no longer has any continuing reason for interest, plus the presumed-carried-out archival work which an earlier-given reference does state should have been done.

Apart from these two noted oddities (and are they deficiencies?), the report "Non-Aboriginal Statement of Heritage Impacts" gives a good standard review of the past of the area.

[REDACTED]

██████████

- Bungarribee Estate

11/11/2016

But is there **anywhere** in the coming considerations that fuller Commonwealth/OTC history can or will be compiled please?

It is arguably at MAJOR PROJECT stage of radical land use change that the best chance comes about for taking an as-full-as-possible stock of history. This is an argument and desirable expectation which I subscribe to.

It is nice if the the extant gate entrance for the former OTC transmission station is to be retained/restored, but I think much more could possibly be done.

For a start .. I would think .. try and find the people who worked there who are still alive (possibilities of oral history). But also I would expect that the already existing Commonwealth archives on this area could prove to be very much richer ground for mining historical information than has so far been extracted into this Appendix L.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

For the still older (Aboriginal) history of the place, there has been supplied a "[Appendix M Aboriginal Archaeological Survey Report.pdf](#)" which was also done by Artefact Heritage of Pymont.

This report also has strong ?anomalies.

The consultant did the usual arrangements inviting invitations to register as an Aboriginal stakeholder.

That attracted most of the typically Darug known interest groups on the Cumberland Plain, namely:

- Daraug Aboriginal Cultural Heritage Assessments (DACHA)
- Darug Land Observations (DLO)
- Darug Consultants and Archaeological Assessments (DCAA)
- Darug Custodian Aboriginal Corporation (DCAC)

However it also attracted NUMEROUS other registered Aboriginal stakeholders, including:

- Walbunja
- Badu CHTS
- Dharug
- Eora
- Gangangarra
- Ngarigo
- Nundagurri
- Walgalu
- Wandandian
- Yerramurra
- Murrin
- Djiringanji
- Thauaira
- Ngunawal
- Kuringgai
- Bidawal
- Tharawal
- Elouera
- Goobah Developments
- Wullung
- Murramarang
- Biamanga
- Gulaga
- Murrumbul
- Cullendulla
- Munyanga
- HSB Consultants
- AAS/ Rane Consultants
- Wingikara CHTS
- Bilinga CHTS
- Gunjeewong Cultural Heritage Aboriginal Corporation
- Murri Bidgee Mullangari Aboriginal Corporation
- Gulla Gunar Elders
- Golangaya Elders
- Cuwur Murre
- Bulling Gang
- Walbunja Elders
- Merrigarn Indigenous Corporation
- Corroboree Aboriginal Corporation
- Wurrumay Consultants
- Kawal Cultural Services

What is going on with this?

And what does "Dharug" mean in the listing given (the above listing)? I have seen numerous Aboriginal archaeological consultant reports for the Cumberland Plain but have never before seen anything even remotely like this.

It is stated that "Any comments received from Aboriginal stakeholders on the cultural significance of the study area would be attached with the final version of this report." However, the report is not called a "draft" report, so who up until where that is stated would be suspected there was any final version of this report" yet to come.

The report mentions the significance of Plumpton Ridge as a regional silcrete source, but under "Soils" --- Why on earth would anyone discuss silcrete under 'Soils'? It is important to mention Plumpton Ridge though, and as the report states "Jo McDonald Cultural Heritage Management (JMcDCHM) (2007) suggests that the gravels used in the construction of the landing strip were sourced from Plumpton Ridge".

Further curiosity (to me anyway) is found in this statement: "A portion of WSPAD1 within the Bunya residential area, north of Bungarribee Creek, was excavated as part of impact mitigation prior to development of that area (JMcD CHM 2011). The portion of excavated PAD is recorded on the AHIMS sites register with the site name WSP PAD AHIMS #45-5-3883. A total of 41 one metre square pits and 82 square metres of open area was excavated within AHIMS #45-5-3883. The excavation retrieved a total of 5, 535 artefacts, 1, 083 pieces of silcrete and silicified tuff crenate affected by heat shatter, and 11,751 pieces of silcrete gravel. No report for the excavation at AHIMS site 45-5-3883 was available at the time this document was prepared."

Is this unusual ... that an excavation retrieving "a total of 5, 535 artefacts, 1, 083 pieces of silcrete and silicified tuff crenate affected by heat shatter, and 11,751 pieces of silcrete gravel", stated to have been done in 2011 would have no report available in 2015?

Three recorded Aboriginal sites in the study area are AHIMS 45-4-0455, 45-4-0465, 45-4-4433. The last of these was recorded by Artefact Heritage "to relocate AHIMS # 45-5-3526 which had previously been recorded with inaccurate coordinates".

The report reveals that Artefact Heritage had done previous work in the Bungarribee Precinct, in 2012, and in (or resulting from) that work a total of 73 artefacts were retrieved from 35 salvage excavation squares across AHIMS #45-5-3255, and 17 artefacts were retrieved from surface collection across AHIMS #45-5-3256.

Also, apparently in 2015 and resulting from previous recommendations by Artefact, a "Bungarribee North salvage" was done which recovered a total of 287 stone artefacts, weighing 148.35 grams in total. Artefact analysis showed that knapping had taken place there. Interestingly, Artefact states that at that site "all of the tools were composed of mudstone. No silcrete tools were identified". There is not a report reference given for this work, and if it was done in 2015 perhaps no report is yet completed/available? (This is referred to, for interest to Zoo EIS matters, but is not within the Sydney Zoo proposal area).

It is interesting/curious to compare the JMcD CHM (2011) salvage excavation and Bungarribee North salvage not far away. While the JMcD CHM (2011) excavation contained a significant proportion of silcrete tools within its artefact assemblage (the norm for most of the Cumberland Plain I would think), the Bungarribee North assemblage was reported by Artefact Heritage to be composed completely of mudstone artefacts. I cannot think of any other case well east of Emu Plains where the "mudstone" (presumably the chert of Permian siliceous claystone of earlier workers) has been found to predominate.

Also in 2015 Artefact Heritage did the "Bungarribee South salvage" (also not in the Zoo proposal area). That recovered 346 stone artefacts, weighing 935.76 grams. It too may await detailed reportage along with the Bungarribee North salvage work?

For the Sydney Zoo proposal assessment exercise, Artefact Heritage spent one day on field work, 3 August 2015.

It is stated that "A non-differential GPS was also used to track the path of the survey team and to record the geographical coordinates of Aboriginal sites and landscape features" - yet a plot of where they walked is not presented.

The three registered AHIMS sites were inspected during the survey but nothing was found. That then means the

The artefacts recorded at these sites were not relocated. That then means the chert point + chert flake + silcrete flake (45-5-0455); the three silcrete artefacts (45-5-0465) and whatever is earlier noted for 45-5-4433 (16 artefacts) are all now missing and no further fragments were noted in the vicinity whilst looking.

Near to the third of the above three sites, Artefact Heritage did detect "Two silcrete artefacts and numerous natural silcrete gravels".

That means 22 artefacts previously recorded, when checked up on, cannot now be found. But they did find two new ones, so those unaccounted for are 20. However they possibly are not really "lost" or taken by others, or destroyed, as Artefact Heritage suggest that non-observances during the 2015 revisit might have been only because of the dense grass cover there now.

For the sites where previously recorded artefacts were not found again (45-5-0455, 45-5-0465 and 45-5-4433) it was recommended that no further archaeological investigation is needed. These sites are now *de facto* write-offs.

They however recommended two PADs are worthy of more consideration.

Presumably, funding permitting, there will be some more excavation - and the PAD on the crest of the local highest ground seems especially prospective.

References given do detail earlier Artefact Heritage work done in the area, i.e.

Artefact Heritage, 2012. Bungarabee Creek Carrier, Western Sydney Parklands: Aboriginal Heritage Due Diligence Assessment. Report to GHD.

Artefact Heritage, 2014a. Bungarabee Precinct Masterplan Archaeological Survey Report, Report to Western Sydney Parklands trust

Artefact Heritage, 2014b. Bungarabee Wastewater Trunk Pipeline, Western Sydney Parklands, Archaeological Survey Excavation Report, Report to AT & L

Artefact Heritage, 2015. Bungarabee Precinct Masterplan Stages 1, 2 and 3. Archaeological Salvage excavation report, Report to WSPT

Thus some reporting on the referred to salvage excavation work in 2015 has already been made to government (WSPT).

Consulting Earth Scientists dug pits and drilled holes for soil sampling. Soil sample locations as far as practicable, were evenly distributed across the site, although they mention that "The presence of soft ground and dense population of trees within the vicinity of Eastern Creek imposed some limitations". Drilling went to 8m or more. A bore at test pit 10 (TP10) has been left open as a groundwater monitoring location.

At all locations they found they recorded the same sequence penetrated - grass covered, dark brown, topsoil to a maximum depth of 0.3 m, then orange/brown soil down to what they called firming "firm shaley clay" (weathered shale) to a maximum depth of 1.5 m. That clay was then underlain by weathered Bringelly Shale at all tested points across the site. Groundwater presence is found at 4-5m depth.

Consulting Earth Scientists encountered nothing at all suggestive of the Tertiary.

But did they test in the vicinity of 45-5-4433? For around there eighteen artefacts (mainly silcrete) and "silcrete gravels" have been recorded by archaeologists.

Their plan showing test sites is Figure 3 in Appendix H. That shows there was no test site in the vegetated zone along Eastern Creek apart from one (TP01). Otherwise, the 16 test sites are evenly spread across the Zoo proposal area. Comparing Figure 3 in Appendix H to the archaeologist report for site 45-5-4433 (a.k.a. 45-5-3526 [since lost] and BP-AS-6) it is seen that this site is well away from the poorly tested vegetated zone near Eastern Creek and should be not very far from one of the Consulting Earth Scientists test sites.

However in attempting to make such comparison there immediately arises the problem of the "deficiencies" in the archaeological reporting which I wish to address here.

To be more detailed, the archaeological report (Appendix M) shows the Aboriginal sites around the area in a map on Page 12 - but on that map it has not numbered any of the sites.

I have scanned through the entire Appendix M report and cannot yet find anywhere that the site 45-5-4433 is depicted on a map.