

27 July 2017

Gerard Coffey
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Civil Infrastructure Delivery, Infrastructure Finance and Capital Works
Chief Minister, Treasury and Economic Development Directorate
ACT Government

By email: Gerard.Coffey@act.gov.au

Dear Gerard,

Contamination Due Diligence Assessment

1.0 Introduction

In accordance with Project Change Record (PCR) 003, dated 20 March 2017, AECOM Australia Pty Ltd (AECOM) has undertaken a contamination due diligence assessment for the Canberra Brickworks Precinct (CBP) Access Road and Dudley Street Upgrade (the Proposal). The Proposal may require ground disturbance in an area of land that is listed on the ACT Environment Protection Authority (EPA) contaminated lands register, which may trigger assessment in the Impact Track, under the *ACT Planning and Development Act 2007*.

The contamination due diligence assessment is therefore required to support the preparation of an Environmental Impact Assessment (EIA) for the Proposal. The proposal Area is shown below.

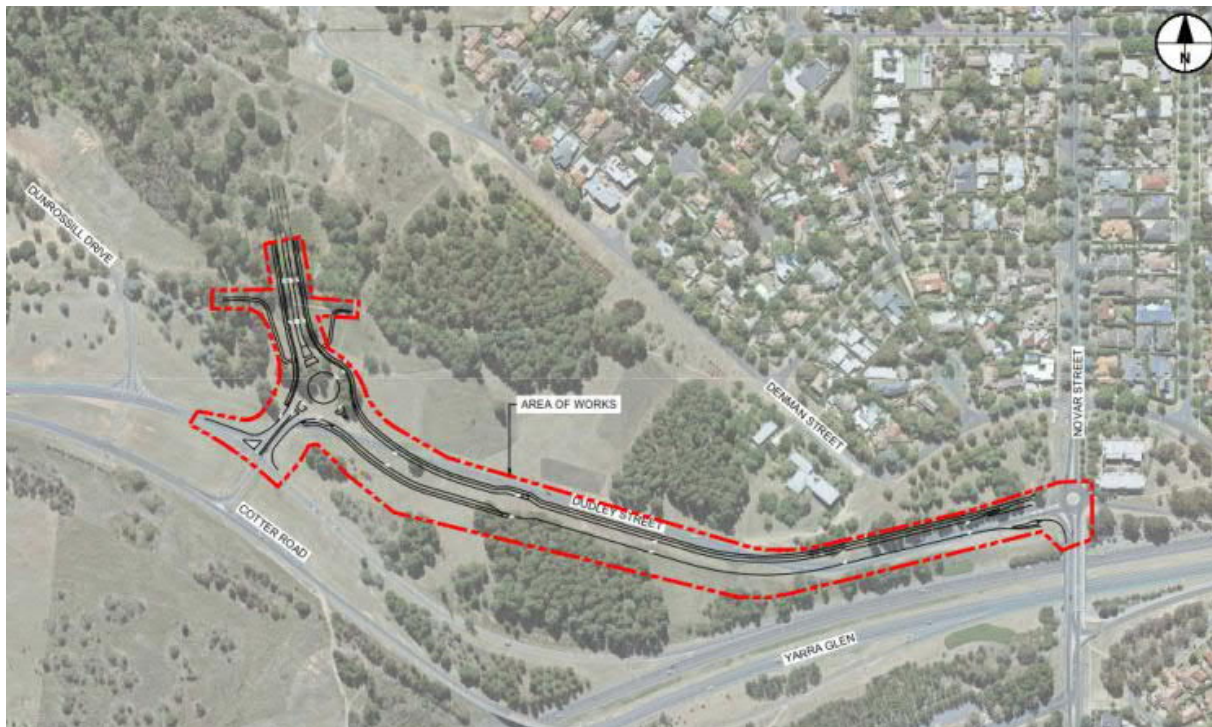


Figure 1 Site Location and Proposal layout (extracted from AECOM, 2017. Planning Approvals Advice, CBP Access Road and Dudley Street Upgrade, AECOM, 23 May 2017)

2.0 Scope of Work

AECOM has undertaken a review of available to identify potential constraints to the Proposal associated with contamination.

The documents reviewed comprised:

- SMEC, 2014. Preliminary (Environmental) Site Investigation Canberra Brickworks, SMEC Australia Pty Ltd, 18 February 2014.
- SMEC, 2016. Canberra Brickworks: Detailed Environmental and Geotechnical Site Investigation Canberra Brickworks Precinct, Yarralumla, ACT 3002523, SMEC Australia Pty Ltd, 31 October 2016.
- Contaminated Land Search Block 1 Section 127 Yarralumla Canberra Central, ACT Government, 13 July 2017.
- Robson, 2015. Contaminant Management Plan (CMP) Canberra Brickworks Remediation Project Portions of Blocks 1 and 20 Section 120 and Block 1, Section 127 Yarralumla, ACT 2600. Robson Environmental Pty Ltd, 2 December 2012.¹

3.0 SMEC, 2014

SMEC (2014) was undertaken to provide preliminary data regarding contamination across the Canberra brickworks area and surrounding land, rather than to assess the site for a particular land use. The Proposal Area is located within a portion of the SMEC (2014) site referred to as the 'Southern Area' (see below), which was identified as former grazing land (now planted tree groves and open grassland) with road infrastructure (Dudley Street, Cotter Road and Yarra Glen).

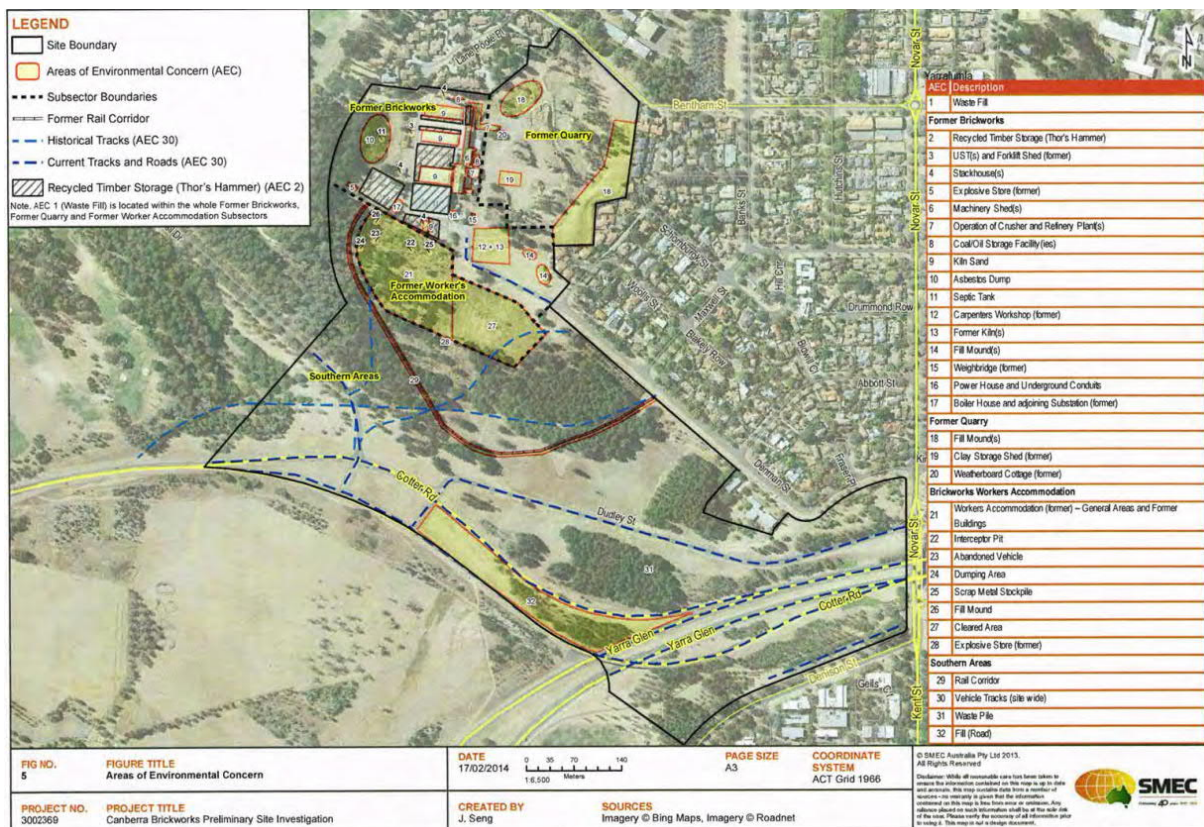


Figure 2 SMEC (2014) study area and Areas of Environmental Concern (extracted from SMEC, 2014)

¹ Note: a further revision of this document, dated 3 March 2016, is referenced in correspondence from the ACT EPA. This revision was not available for review.

A former railway line was identified within the Southern Area, traversing the northern extent of the Proposal Area. Based on aerial photographs provided in SMEC (2014), the railway line is visible from 1951 (first available photograph) until 1979, but does not appear to be operational. SMEC (2014) indicates that the railway line was only operational for a short period in the 1920s and was free of railway infrastructure (track, ballast, sleepers) at the time of preparing the preliminary site investigation (PSI).

SMEC (2014) identified three areas of environmental concern (AEC) applicable to the Proposal Area as detailed in Table 1.

Table 1 Areas of Environmental Concern (SMEC, 2014)

AEC No.	Sources of contamination	Contaminants of potential Concern (CoPC)
29 - Railway line	Treated timber railway sleepers Asbestos from brake pads Vegetation control	Pesticides, including heavy metals, Polycyclic Aromatic hydrocarbons (PAHs)* Asbestos containing materials [ACM] Herbicides
30 – Vehicle tracks (site wide)	Spills and leaks	Total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylenes (BTEX), PAHs
32 – Fill (Road)	Fill at TP02	TPH, BTEX, PAHs, Phenols, polychlorinated biphenyls (PCBs), herbicides, pesticides, asbestos

* Not specifically identified as a CoPC in this AEC but identified as a CoPC associated with timber treatment.

Limited intrusive investigation was undertaken as part of SMEC (2014), which included the excavation of five test pits in the vicinity of the Proposal Area:

- TP12, TP13 and TP14 along the Railway Corridor; and
- TP02 and TP03 in the vicinity of Cotter Road.

Of the five locations, fill was encountered in one test pit (TP02), described as silty cobbles to gravelly sand with traces of brick and bitumen. The presence of fill was considered likely to be associated with road construction activities. SMEC (2014) stated that concentrations of contaminants of Potential Concern (CoPC) were below the adopted health investigations levels (HILs) for low-density residential land use and were generally below the laboratory limits of reporting (LOR).

Overall, SMEC (2014) concluded that the potential for contamination in the Southern Area was low.

4.0 SMEC, 2016

The SMEC (2016) study area boundary does not include the Proposal Area, with the exception of the north-easternmost corner, which is marginally inside Block 7 of Section 102. As such, the investigations completed as part of SMEC (2016) do not directly relate to the Proposal Area (refer below). Ground penetrating radar (GPR) survey was completed at the SMEC (2016) study area boundary in the vicinity of the Proposal Area to identify potential archaeological remains. This area was found to be unsuitable for GPR and the area surveyed was limited.



Figure 3 Site Area and Areas of Environmental Concern (extracted from SMEC, 2016)

SMEC (2016) did not identify any AEC in the southern portion of the study area in the vicinity of the Proposal Area.

5.0 Contaminated Land Search

AECOM undertook a Contaminated land Search for Block 1 in Section 127 Yarralumla Canberra Central, which is partly within the Proposal Area. The search identified that the block is recorded on the Environment Protection Authority (EPA) contaminated sites database as historic landfilling activities undertaken within adjacent Blocks 1 and 20 in Section 102 may have impacted in Block 1 in Section 127. The registered block in relation to the Proposal Area is shown below.

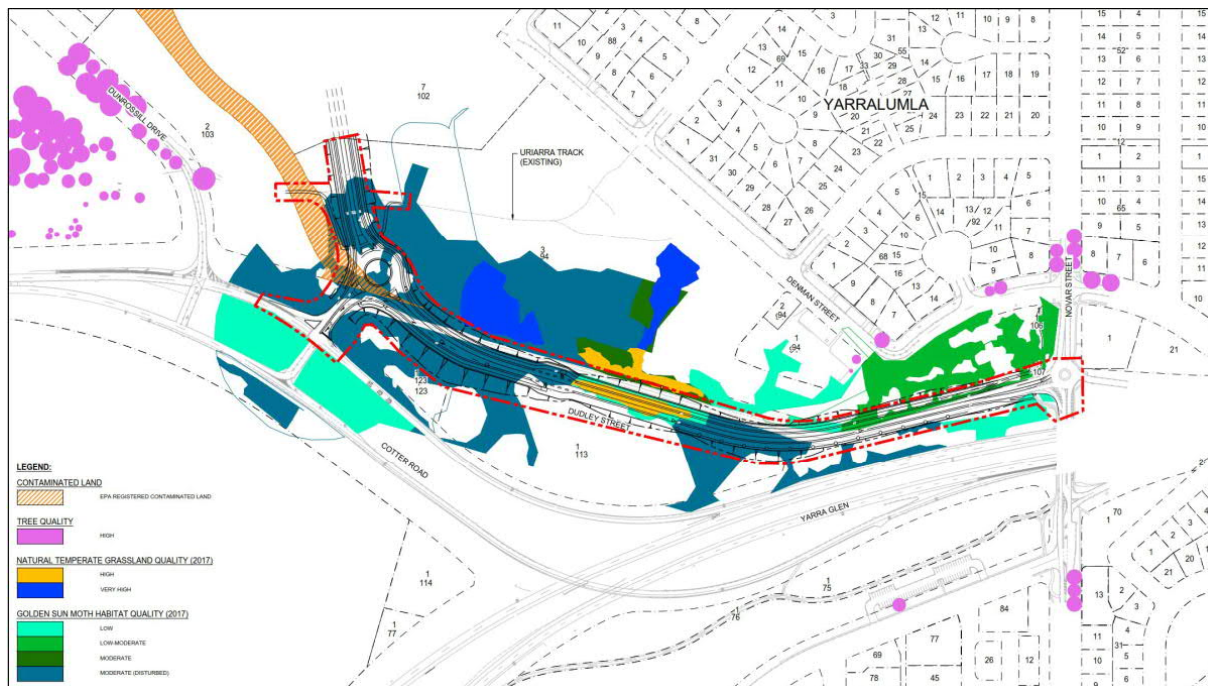


Figure 4 Registered Contaminated Site and Proposal Area boundary (extracted from AECOM, 2017)

The search results noted the following:

- Contamination on Blocks 1 and 20 in Section 102 Yarralumla and Block 1 in Section 127 Yarralumla, were notified to EPA under Section 23A of the Environment Protection Act 1997.
- A subsequent development approval for remediation of the above the above Blocks was submitted. In 2014, the EPA required that the site be assessed and remediated by a suitably qualified environmental consultant and the works be independently audited by an EPA approved contaminated land auditor.
- As a result of a statutory audit notification on 1 March 2016, the above blocks including Block 1 of Section 127 were recorded on the register of contaminated sites.
- A Section B audit was undertaken to determine the appropriateness of a management plan for interim management of the site prior to a decision on land use being made for the site. The Section B site audit statement (SAS) and site audit report (SAR) were issued on 7 March 2016 and concluded that the management plan² was appropriate to prevent exposure to asbestos contaminated fill managed beneath a clean capping layer, pending a future land use decision.
- The EPA supported the Auditor's findings, subject to:
 - The site being managed in accordance with the contaminant management plan.
 - All future assessments and remedial work being subject to an independent site audit.
 - A section A SAS must be reviewed and approved by EPA prior to the site being used for any other use.
- An Environmental Protection Agreement exists between ACT Property Group and EPA for ongoing management of the site.

The Contaminated Land Search results also indicated that EPA has no information on contamination of Block 1 in Section 127 other than that described above, although it is noted that this does not absolutely rule out the possibility of contamination and is not a warranty that there is no contamination.

² Contaminant Management Plan (CMP) Canberra Brickworks Remediation Project Portions of Blocks 1 and 20 Section 102 and Block 1, Section 127 Yarralumla, ACT 2600, dated 3 March 2016, prepared by Robson Environmental Pty Ltd.

6.0 Robson, 2015

The contaminant management plan (Robson, 2015) relates to the encapsulation and management of asbestos impacted fill materials in a portion of the Canberra Brickworks Precinct referred to as the Asbestos Dump, shown in red and marked as 'SITE' on the figure below. The presence of the Asbestos Dump was reportedly identified in aerial photographs from the 1980s. The source of the dumped material is unknown but thought likely to have been external to the Brickworks. Works undertaken by Robson Laboratories Pty Ltd (now Robson Environmental Pty Ltd) in 2006 confirmed that no other industrial contaminants were detected in soil at concentration greater than the HILs for low-density residential land use. The Asbestos Dump is partially located in the northern portion of Block 1 in Section 127, some 400 m to the north of the Proposal Area.

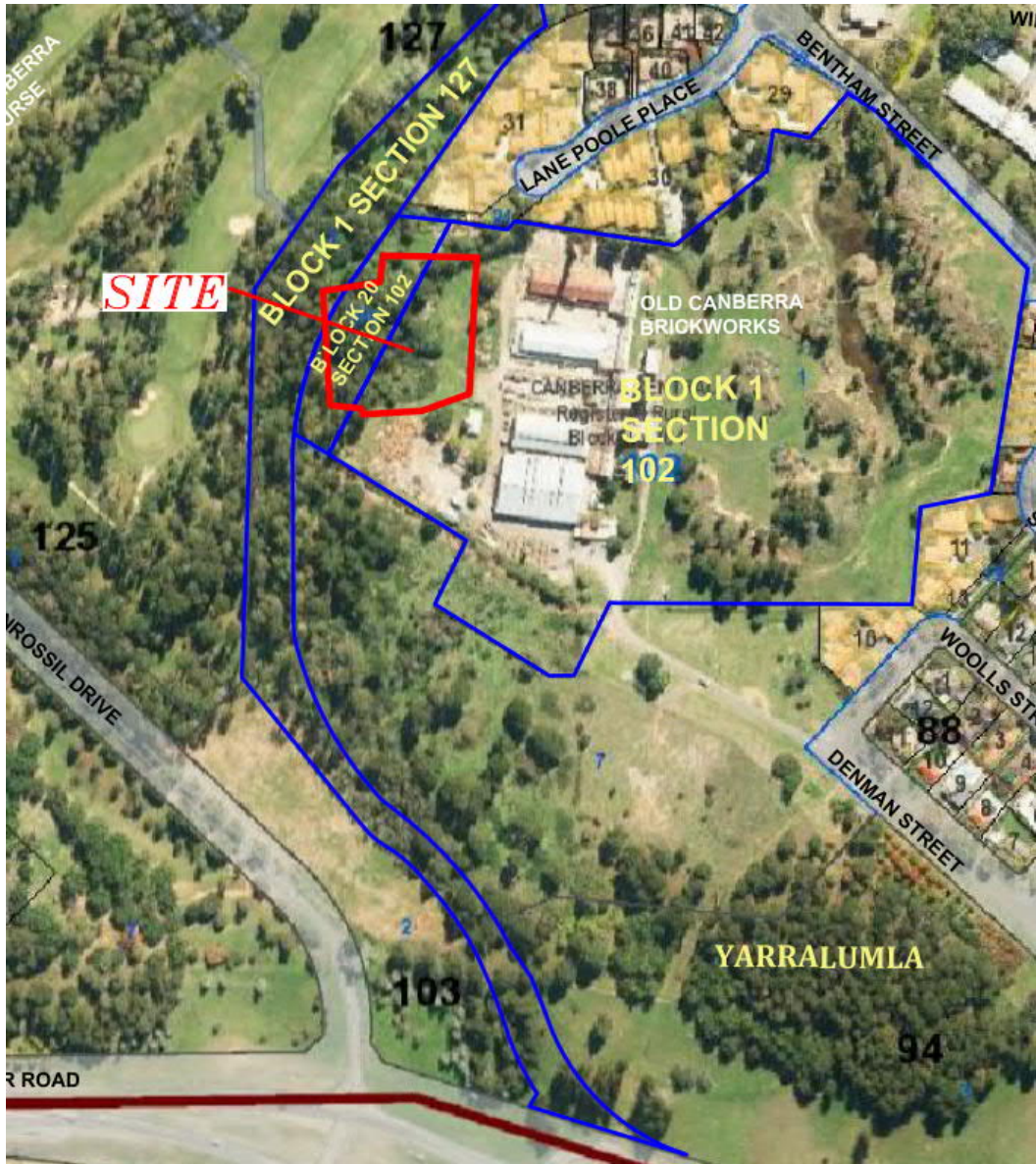


Figure 5 Location of Asbestos Dump (extracted from Robson, 2015)

A remediation action plan (RAP) was prepared in 2014 and throughout 2015 the Asbestos Dump was capped. The capping layer consisted of a geofabric layer, laid directly over areas of known ACM, and a minimum of 0.5 m of imported virgin excavated natural material (VENM) over the geofabric. The surface was then seeded to minimise erosion. Robson (2015) noted that the ACM impacted fill comprised an area of approximately 1260 m². The capping layer was installed over an area covering the known ACM impacts and up to halfway to the nearest, non-impacted test pit locations, totalling approximately 2700 m². Figure 3 from Robson (2015) shows that both the known ACM impacted area and the capped area are not located within Block 1 of Section 127, as shown below.



Figure 6 Location of Asbestos Dump capped area (extracted from Robson, 2015)

7.0 Summary and Conclusions

The available information indicates that the likelihood of contamination that would impact on development being present within the Proposal Area is low, based on the following:

- Concentrations of CoPC were not identified above assessment criteria for residential land use in test pits completed in the vicinity of the Proposal Area as part of SMEC (2014), including in TP02, adjacent Cotter Road, where fill materials were observed.
- No significant contamination or potential sources of contamination were identified in the southern portion of the SMEC (2016) study area.
- The EPA holds no information on contamination within Block 1 in Section 127 other than the Asbestos Dump, which is located some 400m to the north of the Proposal Area.
- ACM impacted areas within the Asbestos Dump are not within the Block and this site is managed via a CMP to prevent exposure to ACM.

As a result, AECOM concludes that contamination is unlikely to present any significant environmental constraints to the Proposal. Construction works associated with the Proposal should be covered by a Construction Environmental Management Plan, which should include an Unexpected Finds Protocol to be implemented in the unlikely event that indicators of contamination are encountered.

Please do not hesitate to contact the undersigned in further information is required.

Yours faithfully

Susan Dillon
Associate Director – Environment