

7 July 2020

Mr David Waddell
General Manager
135 Byng Street
Orange NSW 2800

Attn: Mark Hodges, Manager Building and Environment

Dear Mr Waddell,

DA 234/2018 129-133 Sale Street, Orange – Confirmation of Crown Development

Reference is made to DA234/2018 lodged on the 4 July 2018 for the demolition of the existing buildings at 129 – 133 Sale Street, Orange and category 1 remediation.

Thank you for notification of the Business Paper reporting the matter to Orange City Council's Planning and Development Committee meeting scheduled for this evening, received late Friday 3 July 2020. Unfortunately, we are unable to attend.

Health Infrastructure does not accept Conditions 2 and 3 as drafted in the Draft Notice of Determination. It remains our expert's opinion that due to the type of asbestos contamination in Caldwell House that it has it is not possible to remediate the site for future use of the building.

Health Infrastructure will review and respond to Council's report and we request a meeting with Council's contamination experts, and your relevant Environmental Health Officers in order to resolve the matter.

If you have any questions relating to the above, please do not hesitate to contact Rachel Mitchell, A/ Manager, Planning on 0438 220 252.

Yours sincerely



Gillian Geraghty

Executive Director, Rural and Regional



Demolition Cost Estimate and Peer Review

Caldwell House and Nurses Quarters

Prepared by Bradfield Baker
For
Andrew Crump
Orange City Council

15th January 2020, Rev 0

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1. Introduction

Bradfield Barker has been engaged by Orange City Council (OCC) to undertake a peer review of Development Application 234/2018 and provide an independent cost estimate for the historical building known as Caldwell House, located at 129 - 133 Sale Street, Orange, NSW 2800 (the site).

The Caldwell site comprises primarily of two buildings, being:

- Caldwell House, a heritage listed building (built circa 1930s).
- Nurses' Quarters building along Dalton Street (built circa 1970s).

The site has been listed within the Orange Local Environmental Plan 2011, owing to its historic and social significance.

Both buildings have not been occupied for several years. Numerous investigations have been undertaken by the applicant to provide a holistic condition assessment of the site and the buildings. These investigations have included planning, historical, structural, environmental reviews and remediation cost assessments. Most significantly is the proposed future use of Caldwell House, with emphasis on its current condition and ability to be remediated or retained.

DA 234/2018 has provided a range of demolition option and assessments; however, it is noted the applicant has provided a variant of these options, resulting in the applicant omitting the full details of retaining Caldwell House, primarily acknowledging purported environmental (contamination) and/or financial unviability.

Three options for recommended remediation of the site have been supported, namely:

- Option A – Complete demolition and asbestos remediation to both Nurses Quarters and Caldwell House.
- Option B - Demolition & asbestos remediation to both Nurses Quarters and Caldwell House, however, retain the front facade and Veranda of Caldwell House (to remain).
- Option C - Demolition of Nurses Quarters, full asbestos remediation of Caldwell House (Caldwell House to remain).

A summary of costings for both option A and B has been provided by the applicant. Option C was not provided. The applicant has substantiated options with quotes from two licenced demolition contractors and a quantity surveyor.

Bradfield Barker's engagement has been to review the above documentation submitted to council and provide an independent advice on the condition of the building. This included a general assessment of the viability of retaining the most significant areas of the site, primarily being the 1930's Caldwell House.

2. Scope of Study

This study purports to provide clarity and input to the strategy for the site and assist council in the decision-making process for the future possible re-use of the Caldwell House site and the Development Application currently before council.

It should be noted that Bradfield Barker has undertaken this due diligence impartially and present these finding based on our professional expertise.

The following scope of services were undertaken as part of this investigation:

- Review of development application DA 234/2018 and documents of most significance. Documents provided can be found in Appendix B
- Review the costings provided by the applicant (Option A and B) and provide commentary on its accuracy.
- Provide a high-level cost estimate for Option C – to retain Caldwell House (excluding the Nurses Quarters).
- Undertake a site inspection to provide a comprehensive understanding of the site surroundings, condition of the building and extent of Asbestos Containing Material (ACM).
- Provide a report and subsequent peer review based on the literature supplied and comment on its accuracy.

3. Site Inspection

On Monday 23rd December 2019, Hugh Lister-Barker (Bradfield Barker) inspected the site with the applicant's occupation hygienist, Greg Madafiglio from Envirowest Consulting, along with Duncan Baird, Construction Project Manager.

The following process and areas were undertaken as part of the site inspection:

- Site walk around the external perimeter of the building, both within and outside of the enclosed fenced areas.
- External walk to the rear of the site, including parking and extensions to Caldwell House
- High level visual inspection of the sub-floor space of Caldwell House, including observation of existing pipe lagging.
- Detailed internal visual inspection of the Nurses Quarters, including basement, all floors, building rises, ceiling and roof space.
- Detailed internal visual inspection of Caldwell House, including all both the ground and first floor, rooms, ceiling spaces.
- Visual internal inspection of the ceiling and roof of Caldwell House, including roof truss system and visual observation of presumed ACM.
- Visual observation of extent of presumed and tested ACM as pointed out by Greg Madafiglio and visually observed.

Photos of the site visit can be found in Appendix C.

Following the site inspection, the following noted:

3.1. Structural Integrity

The structural integrity of both the Nurses Quarters building and Caldwell House appears to be in sound structural condition (no significant damage to structural elements of the building), in line with report undertaken by Cook and Roe, Structural review of Caldwell House, 35086, dated 2 June 2018. It is therefore a fair assessment to conclude that there are no structural impediments that preclude the potential retention of Caldwell House.

3.2. Asbestos Contamination

The extent of asbestos contamination is reflected by the numerous hazardous material reports to date, performed by Envirowest Consulting. Hazardous Materials identified within the report include both friable and bonded asbestos. During the site visit, Greg Madafiglio pointed out various areas as both presumed (assumed ACM however not laboratory tested) asbestos and laboratory verified asbestos. It should be noted that the hazardous material reports provided by Envirowest Consulting appear to list significant areas of presumed asbestos that has not been NATA laboratory tested.

Nurses Quarters

The main extent of observed areas presuming ACM includes areas to lagging, boiler room, cement sheeting, rises and existing heating system. It was observed that a wet spray method of remediation has been applied to rises and service cupboards within the Nurses Quarters.

Caldwell House

Illegal trespass and disturbance of existing ACM was evident, particularly in the form of residual asbestos from the stripping of existing copper pipes in the building. The main extent of observed areas presuming asbestos containing material includes areas to floor corridors, carpets, ceiling, roof, vinyl flooring, lagging, boiler room, and existing heating system.

It was observed that as a result of trespass and stripping of copper piping, 200um+ plastic sheeting along with slization tape has been installed to seal the floor space to prevent the potential spread of ACM and reduce exposure to visitors.

It was also observed that plastic had been installed to the double brick air grills within the external perimeter of the building to prevent and/or minimise spreading of contamination.

4. Commentary on proposed retainment of Caldwell House

Following a review of the documents provided, site inspection, further consultation by Bradfield Barker and our professional experience on similarly contaminated sites, Bradfield Barker is of the opinion that Caldwell House can be remediated and retained to an acceptable level whereby the building retains its historical value and structural integrity

This is further supported through consultation made with an independent occupational hygienist to provide greater clarity to the asbestos extent and remediation required. A high-level review based on site photos was undertaken by the occupational hygienist/asbestos assessor, whom has 25 years' experience on undertaking significantly contaminated ACM building. The hygienist also reviewed the applicant's demolition contractor's submission and hygienist report (SERS)¹. This hygienist is well qualified and has industry experience on the retainment of similarly contaminated historical buildings.

The occupational hygienist advised that, based on similar project (Royal South Sydney Hospital Redevelopment Project) a building of this building age, construction and condition appear very similar including the level of asbestos contamination. The building was retained as part of the project. This included additional works at the Sydney project, involving the remediation of sub-floor soil also contaminated with asbestos.

The project intent was to retain the buildings due to the heritage restrictions on the total demolition which was achieved successfully.

To provide guidance on the approach, method and extent of the asbestos remediation, this would be based on an area by area basis. Examples to the extent of remediation would be to remove asbestos from accessible areas, seal non-accessible areas and apply standard asbestos control measures, PVA adhesive, administrative, signage etc.

Additionally, this finding is also supported within the applicant's submission, Option B provided in the SERS report issued by Carl Pump¹. This option concludes a similar position is viable and has provided further detail on the process required to refurbish the structure.

To be clear, it is in Bradfield Barkers professional opinion that the removal of asbestos and treatment of the Caldwell House building (and likely Nurses Quarters) could be sufficiently achieved so that demolition of the structure in its entirety is not required. This is therefore essentially, a cost issue.

1. G.J. Seib Pty Ltd, Cost Summary for Asbestos Removal, Demolition and associated building works and associated BOQ, dated 19th March 2019

5. Cost Estimate Peer Review

Bradfield Barker makes the following commentary on the documentation undertaken by G.J. Seib Pty Ltd Appendix 1 Estimate, dated June 2018².

5. The expected timeframe for the remediation and demolition of both buildings is 12-14 weeks, and for the remediation and partial retention of Caldwell House is approximately 20 weeks.

Bradfield Barker agrees that this timeframe is reasonable and reflective of works involved.

6. A Clearance Certificate cannot be obtained for any scenario other than the full remediation and demolition of the existing buildings.

Bradfield Barker suggests that this is not factually correct. Whilst the building will never be 100% asbestos free, it is our belief that an occupational hygienist could provide a clearance certificate, with conditions/exclusions to the extent capable of occupation.

The remediation required would be to the extent deemed necessary by the hygienist. These conditions on any future certificate would need to be incorporated into an ACM Management Plan, a standard and expected process for managing this type of risk.

7. No guarantee can be given that the retained buildings can acquire building insurance, given the on-going risk of friable asbestos being present in the structured [or premiums are at least expected to be high]

Whilst Bradfield Barker agrees that premiums may in fact be higher, this in an uncosted sum and if managed correctly, the insurance premium increase may not result in any significant increase in costs. Consideration would need to be made to the amount of asbestos remaining, which can be managed appropriately. Is therefore also a reasonable suggestion that these costs may be negatable or of not of great significance to deter a potential owner.

5.1. Comment on costings

The costings provided to Bradfield Barker, provided in both the Demex and Interactive Projects report have been provided in a m² rate. This is not typically how a demolition contractor would cost asbestos removal works as the nature of asbestos removal is dependent on type, concentration, location, accessibility and extent of the asbestos material. Typically, costings are performed on a time and resource-based assessment. It is therefore difficult to qualify the costing provided by the applicant in a bill of quantity nature.

However, specific commentary to the Demex costing includes:

- Option 1 – 7.5 Hand Scrape and remove 300mm soil, 870m², \$876,760.00. The extent and scope of this cost has not been sufficiently qualified, particularly to a time/resource based cost. It is noted that this cost is excluded from Option 2 and 3 which assumes mechanical demolition. Alternate contractor may utilise different methodology based on their assessment of the site.

² G.J. Seib Pty Ltd, Cost Summary for Asbestos Removal, Demolition and associated building works and associated BOQ, dated 19th March 2019

- A single lump sum costing is only provided in many locations without comment/breakdown of how costs were achieved. For example, Demex cost Option 1, line item 3 Accommodation is \$105,465.00. Further comment/breakdown on how this cost was itemised would be preferred.
- Given the significant cost is disposing of asbestos waste (landfill gate price), the contractor has provided an indicative metric weight of 2000 tonnes for disposal. Further breakdown of this line item would provide greater clarity to how this was achieved.

In general, however it appears both quotes do not reflect an unreasonable cost expected by the contractor given the extent and scope of works involved. Further accuracy and actual costs would not be qualified until a transparent probity and tender process is undertaken.

6. Cost Estimate Option C – Retain Caldwell House

The indicative cost estimate summary for Option C – Retaining Caldwell House is as follows:

Item	Summary	Total Cost (\$) Ex GST
1	Labour	\$870,360.00
2	Travel	\$60,000.00
3	Site Establishment	\$52,480.00
4	Consumables	\$100,000.00
5	Mobilisation	\$44,000.00
6	Administration	\$88,000.00
7	Asbestos	\$1,185,400.00
8	Plant	\$551,402.88
9	Tipping	\$1,200,000.00
10	Demobilisation	\$68,240.00
	Sub-Total Contract Cost	\$4,219,882.88
	Profit (10%)	\$421,988.29
	Overheads (5%)	\$210,994.14
	Contract Cost	\$4,852,865.31
	Project management (3%)	\$145,585.96
	Project Contingency (20%)	\$970,573.06
	Total Costs	\$5,969,024.33

7. Cost Estimate Summary – All Options

The below table summarises the total costings, deduced both from the applicant's costings summary along with the assessed costs for Option C.

Summary - All Options	Total Cost (\$) Ex GST
Option A Demolition of both Nurers Quarters & Caldwell House *	\$3,946,441.50
Option B Demolition of Nurers Quarters, Retain Caldwell House Front Facade*	\$4,924,272.00
Option C Demolition of Nurses Quarters, Retain Caldwell House	\$5,969,024.33

Note:

*Option A & B costings have been averages provided from Page 4 "Cost Summary – Site Remediation & Demolition Options", G.J Seib Pty Ltd report issued 19 March 2019

8. Conclusions

8.1. Asbestos Contamination

Following the site investigation, it is Bradfield Barkers professional opinion that the Caldwell House can be retained, with the extent of retainment to be assessed by an occupational hygienist/asbestos assessor. This opinion has been supported by consultation with a highly qualified hygienist with near identical experience on a similar contaminated Sydney Hospital site.

This remediation process would result in asbestos clearance certificate with conditions (i.e. an ongoing asbestos management plan would be required). It should however be noted that this, in effect would also allow for the building to retain its structural integrity.

It is noted that all asbestos removal works must be removed in accordance with Code of Practice guidelines, along with all other WHS legislative and relevant statutory requirements and notifications. The removal process of both friable and non-friable asbestos is a standard process performed by contractors.

The building has been occupied for over 60+ years with asbestos residing undisturbed. The buildings classification in terms of risk with hazardous materials has only escalated recently due to the disturbance of this asbestos. If an active ACM management plan and register had been in place, and asbestos had been progressively removed prior to trespass, it is reasonable to expect that the building would be fit for occupancy (pending NCC and building certifier approval). This method would have been significantly less expensive to treat than in its current condition.

8.2. Costings

Bradfield Barker notes that the applicant has provided costing from two reputable Class A licensed asbestos contractors.

It should be noted that the costings provided by the quantity surveyor have included a contingency factor of 20%, standard industry at this stage of investigation.

Whilst efforts have been made to present costs that reflect the likely actual cost, these costs remain variable due to nature of the demolition industry. It is recommended that a thorough tender evaluation be undertaken with a clearer scope to provide more certainty in the cost or remediation, to market conditions.

Following a more comprehensive and detailed scope of the remediation to contamination involved, it is likely that this understanding would ameliorate some of the financial risks and considerations involved. This could result in a contract price being below the prices provided by the applicant.

8.3. Structural Integrity

Owing to section 3.1, it is a fair assessment that there are no structural impediments that preclude the potential re-use of Caldwell House.

8.4. General

Following the completion of this report and subsequent investigations the following suggested recommendations would ameliorate uncertainty around the future reuse of Caldwell House:

- Due to the extent of both presumed and laboratory tested asbestos material within the building, a second, detailed opinion be engaged by a licensed asbestos assessor/occupational hygienist independent of the applicant, with relevant recent experience with the remediation of historically significant contaminated buildings.
- Given the numerous Hazardous Materials reports undertaken by Envirowest consulting, it would be recommended to undertake a high-level review of the registers undertaken to date, with comparisons of the laboratory and presumed asbestos content. This would provide a greater holistic understanding of the known vs presumed and extent of actual contamination.
- Given the extent of asbestos and cost of disposal, further investigation and strategy be undertaken to reduce the quantity of ACM being disposed off-site. It is noted that the disposal rate for ACM is prohibitively high, however future changes to the Environmental Protection Agency taxation of ACM may make the financial viability of remediation more acceptable.
- Review and response to 5.1 comments on costings would be recommended.
- Bradfield Barker agrees with GHD's conclusions that the placement of plastic to cover friable asbestos within areas such as hallways and stairs of Caldwell House is not an acceptable medium- and long-term management solution.
- Bradfield Barker notes that the extend of this study has been limited to returning the building to state where the building would qualify as being fit for occupancy. This study has not sought (nor costed) the process involved for providing an occupancy certificate in accordance with the National Construction Code by a Principal Certifying Authority.

It is recommended that this cost could vary depending on the required future re-use of the building and building classification. Given this unknown, a building certifier would be best placed to undertake this assessment in the form of a BCA assessment.

- Appointment of a suitably qualified and experienced EPCM project manager to oversee the contractor's management of remediation, ensure probity best practice, due diligence and facilitate advantageous financial outcomes.

Barker Bradfield notes that should council recommend retaining Caldwell House there will still need to be an ongoing management plan in process to manage the risks associated with this remediation.

This is a statutory requirement and standard and practicable process that should not provide significant deterrent for future occupants, providing that the ACM remediation process is appropriately and acceptably managed.

9. Limitations

Bradfield Barker has prepared this report for Orange City Council in accordance with the usual care and thoroughness of the consulting profession. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Bradfield Barker has made no independent verification of this information beyond the agreed scope of services and Bradfield Barker assumes no responsibility for any inaccuracies or omissions.

The scope of the services provided was limited to assessment of the structures via site inspection and desktop review of plans and documents, as agreed in the scope of services. Unless Bradfield Barker has knowledge to the contrary, information obtained from this source has been assumed to be correct and complete. Bradfield Barker does not assume any liability for misrepresentation of information or items available at the time of the review.

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context, or for any other purpose, or by any third parties. This report does not purport to give legal advice. Legal advice should be sought from a qualified legal practitioner.

Opinions and recommendations contained in this report are based upon data provided by site representatives, Bradfield Barkers experience in providing consulting services on the demolition of sites such as this, general demolition industry standards and industry best practice. The costings within are indicative in nature and should not be relied upon by others. Persons should make their own independent enquiries and assessment of the scope, programme and resources.

The report has been prepared for the exclusive use of Orange City Council and shall not be given to any third party without the expressed written permission of Bradfield Barker.

Appendix A

Cost Estimate Option C – Retain Caldwell House

Caldwell House - Option C Cost Assessment - Retain Caldwell Building

Item	Description	Number of	Duration (wks.)	Rate (\$)	Total	Comment
1	Labour (exc Asbestos Labour)					
1.1	Demolition Labours	5	24	\$4,550.00	\$ 546,000.00	
	Management					
1.2	Project Manager	1	24	\$ 4,375.00	\$ 105,000.00	
1.3	Demolition Supervisor	1	24	\$4,800.00	\$ 115,200.00	
1.4	Safety Manager (allowance 40% time)	1	24	\$ 2,340.00	\$ 56,160.00	
1.5	Site Admin	1	24	\$ 2,000.00	\$ 48,000.00	
				Sub Total =	\$ 870,360.00	
2	Travel					
2.1	Accommodation (Houses - local)	3	24	\$ 500.00	\$ 36,000.00	
2.2	Flights (Labourers)	4	6	\$ 500.00	\$ 12,000.00	
2.3	Flights (Management)	4	6	\$ 500.00	\$ 12,000.00	
				Sub Total =	\$ 60,000.00	
3	Site Establishment					
3.1	Fencing (utilise existing)			item	-	
3.2	Service & Utility Connections	1	1	\$ 10,000.00	\$ 10,000.00	
3.3	Site Shed (12m x 3m)	1	24	\$ 255.00	\$ 6,120.00	
3.4	Office (12m x 3m)	1	24	\$ 255.00	\$ 6,120.00	
3.5	Ablution block	1	24	\$ 585.00	\$ 14,040.00	
3.6	Pump Out	1	6	\$ 500.00	\$ 3,000.00	
3.7	Generator	1	6	\$ 1,000.00	\$ 6,000.00	
3.8	Miscellaneous	1	24	\$ 300.00	\$ 7,200.00	
				Sub Total =	\$ 52,480.00	
4	Consumables					
4.1	Fuel / Oils				\$ 30,000.00	
4.2	Oxy / Gas				\$ 30,000.00	
4.3	PPE / Medicals / Inductions / Consumables				\$ 20,000.00	
4.4	Tool Hire				\$ 20,000.00	
				Sub Total =	\$ 100,000.00	
5	Plant Mobilisation					
5.1	36t Excavator	Sydney	2	\$ 12,000.00	\$ 24,000.00	
5.2	Scissor Lifts / Containers / Misc. Gear	Sydney	1	\$ 20,000.00	\$ 20,000.00	
				Sub Total =	\$ 44,000.00	
6	Administration					
6.1	Consultants (inc Flights / Accomd)				\$ 20,000.00	
6.2	Bank Guarantees through Insurance(\$5M)	2.5% of BG Value	2	\$ 10,000.00	\$ 20,000.00	
6.3	Stationary / advertising / Petty Cash		24	\$ 1,000.00	\$ 24,000.00	
6.4	Insurance				inc	
6.5	Office equipment / internet connect. / Mobiles		24	\$ 1,000.00	\$ 24,000.00	
				Sub Total =	\$ 88,000.00	
7	Asbestos					
7.1	Asbestos Site Establishment	1	1	-	\$ 30,000.00	
7.2	Asbestos Labour	5	24	\$4,500.00	\$ 540,000.00	
7.3	Asbestos Supervisor	1	24	\$4,800.00	\$ 115,200.00	
7.4	Asbestos Travel - Flights	6	4	\$ 500.00	\$ 12,000.00	
7.5	Asbestos Accommodation	3	24	\$ 500.00	\$ 36,000.00	
7.6	Misc. - Vehicles etc	1	24	\$ 800.00	\$ 19,200.00	
	Consumables					
7.7	PPE / Medicals / Inductions	6	-	\$ 1,000.00	\$ 6,000.00	
7.8	Consumables / PPE etc	Plastic / gloves / suits / tape / masks / Glove Bags / Timber etc.			\$ 60,000.00	
7.9	Neg Air Units (1500)		2	\$ 4,500.00	\$ 9,000.00	
7.91	3 Stage Decon Showers		1	\$ 15,000.00	\$ 15,000.00	
7.92	Hep Vac		2	\$ 1,500.00	\$ 3,000.00	

Caldwell House - Option C Cost Assessment - Retain Caldwell Building

Item	Description	Number of	Duration (wks.)	Rate (\$)	Total	Comment
7.93	Hygienist / Air Monitoring (\$1200/day)	1	\$ 7,000.00	25	\$ 175,000.00	
7.94	Hazardous Materials Survey (Inc. clearance cert + Ongoing Plan)				\$ 150,000.00	
7.95	Issue Clearance Certificates				\$ 15,000.00	
7.96	Plant (Included in Section 8)					
				Sub Total =	\$ 1,185,400.00	
8	Plant					
		Number Of	Duration	Rate		
8.1	36t Excavator with grab	2	22	\$ 2,070.00	\$ 91,080.00	
8.2	Fuel	2	22	\$ 1,235.52	\$ 54,362.88	
8.3	660 Shear	2	22	\$ 1,230.00	\$ 54,120.00	
8.4	3600 Hammer	2	22	\$ 960.00	\$ 42,240.00	
8.5	Water Truck (12,000L)	1	22	-	\$ 20,000.00	
8.6	Boom and scissor Lift					
8.7	86ft Boom Lift	1	20	\$ 2,100.00	\$ 42,000.00	
8.8	19ft Scissor Lift	2	20	\$ 1,100.00	\$ 44,000.00	
8.9	Mob / Demob	4	2	\$ 600.00	\$ 4,800.00	
8.91	Truck & Dog	2	16	\$ 5,200.00	\$ 166,400.00	
8.92	Site Vehicles (Cars)	3	24	\$ 450.00	\$ 32,400.00	
				Sub Total =	\$ 551,402.88	
9	Tipping					
			Tonnage	Rate		
9.1	Tipping - Construction & Demolition Waste		2000	\$ 150.00	\$ 300,000.00	
9.2	Tipping - Asbestos		1800	\$ 500.00	\$ 900,000.00	
				Sub Total =	\$ 1,200,000.00	
10	Demobilisation					
10.1	Demobilisation (allow 50% of Site Est. & Mob.)	1	-	\$ 48,240.00	\$ 48,240.00	
10.2	Remediation of Site (Grassing), Clean, Retaining Wall	1	-	\$ 20,000.00	\$ 20,000.00	
				Sub Total =	\$ 68,240.00	
	Summary					
1	Labour		\$ 870,360.00			
2	Travel		\$ 60,000.00			
3	Site Establishment		\$ 52,480.00			
4	Consumables		\$ 100,000.00			
5	Mobilisation		\$ 44,000.00			
6	Administration		\$ 88,000.00			
7	Asbestos		\$ 1,185,400.00			
8	Plant		\$ 551,402.88			
9	Tipping		\$ 1,200,000.00			
10	Demobilisation		\$ 68,240.00			
	Sub-Total Contract Cost		\$ 4,219,882.88			
	Profit (10%)		\$ 421,988.29			
	Overheads (5%)		\$ 210,994.14			
	Contract Cost		\$ 4,852,865.31			
	Project management (3%)		\$ 145,585.96			
	Project Contingency (20%)		\$ 970,573.06			
	Total Costs		\$ 5,969,024.33			

Caldwell House - Option C Cost Assessment - Retain Caldwell Building

Item	Description	Number of	Duration (wks.)	Rate (\$)	Total	Comment
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Note:
*Prices are GST Exclusive
*Rates provided are indicative only and considered conservative in nature. Actual costing will depend on variables including time of going to tender, contractor proposed methodology, hygienist agreed scope
*Cost is based on 24 weeks proposed total program, including 20 weeks of ACM removal.
*Disposal Rates have been allowed for. Further accuracy can be obtained, or at time of taking tender to market.
*Scope of works is clarified in report. Works include retaining as much of the existing structure of Caldwell House. Refer to report for comments.
*Extent of demolition is to slab on ground (hardstand) (no below ground works to nurses questers besides ACM remediation
*Contingency of 20% is a recommended allowance based on current stage of proposed works and confirmed scope
*This cost is reflective only of demolition and asbestos costs. This cost excludes costs would be incurred to provide full occupancy to the extent satisfied by a building certifier.
*No consideration has been made to the commercial value of land or potential value of the remediated site
*No consideration has been made to the ongoing management of the site (Remediation Management Plan & Register) following the first year.
*Costs provided are as of January 2020
*Bradfield Barker are not quantity surveyors. These opinions are based on experience and review of the documentation provided.

Appendix B

Documents

Documents Provided:

1. Colliers, & Raine & Horne, Marketing feedback and recommendations, dated 27th & 28th June 2018
2. Cook and Roe, Proposed Demolition Methodology, 35086, dated April 2018
3. Cook and Roe, Structural review of Caldwell House, 35086, dated 2 June 2018
4. Credwell Consulting, Fire Safety Audit Report 10598-Audit-r1, dated 16/5/2018
5. Envirowest Consulting, Asbestos Audit, R7040aa10.1, dated 7 May 2019
6. Envirowest Consulting, Asbestos Removal Control Plan, R7040arcp2, dated 17 May 2018
7. Envirowest Consulting, Asbestos Removal Options, R7040asb5, dated 26 June 2018
8. Envirowest Consulting, Hazardous Material Survey, R7040hm2, dated 3 August 2017
9. Envirowest Consulting, Preliminary Contamination Investigation, R7040c, dated 27 May 2016
10. G.J. Seib Pty Ltd - Quantity Surveyors, Appendix 1 Estimate, dated June 2018
11. G.J. Seib Pty Ltd, Cost Summary for Asbestos Removal, Demolition and associated building works and associated BOQ, dated 19th March 2019
12. GHD, Development Application Contamination Technical Advice, 2219715-50553 dated 18 October 2018
13. Peter Basha, DA 234/2018(1) Letter to Andrew Crump, dated 19 August 2019
14. Peter Basha, Development Application DAPJB17067 Volume A, SEE Main Report, dated 4 July 2018
15. Weir Phillips Heritage, Heritage Impact Statement, J3130 dated July 2018
16. Weir Phillips Heritage, Heritage Impact Statement, J3130 dated November 2018
17. Wilkson Murray, Orange Nurses Quarters Demolition Noise & Vibration Assessment, 18085 Rev B, dated 4 July 2018

Plans

18. Orange Base Hospital New Nurses Quarters Plans, PH139/24, 25, 26, 27, 28, 29, 41, 58, 59, 60, 61, 62, 63
19. Peter Basha, 17067DA Figure 1 Location, Sheet 1 to 4, Dated 28.06.2018

Appendix C

Photo Gallery



Figure 1 Caldwell House, Street View



Figure 2 Caldwell House, Street View



Figure 3 Caldwell House from adjacent Nurses Quarters Building



Figure 4 Caldwell House from adjacent Nurses Quarters Building



Figure 5 Caldwell House, Rear

Figure 6 and 7 Inside Main Building. 200um sheets covering asbestos lagging that was stripped off copper by trespass.



Figure 8 Caldwell House Roof with presumed asbestos throughout.

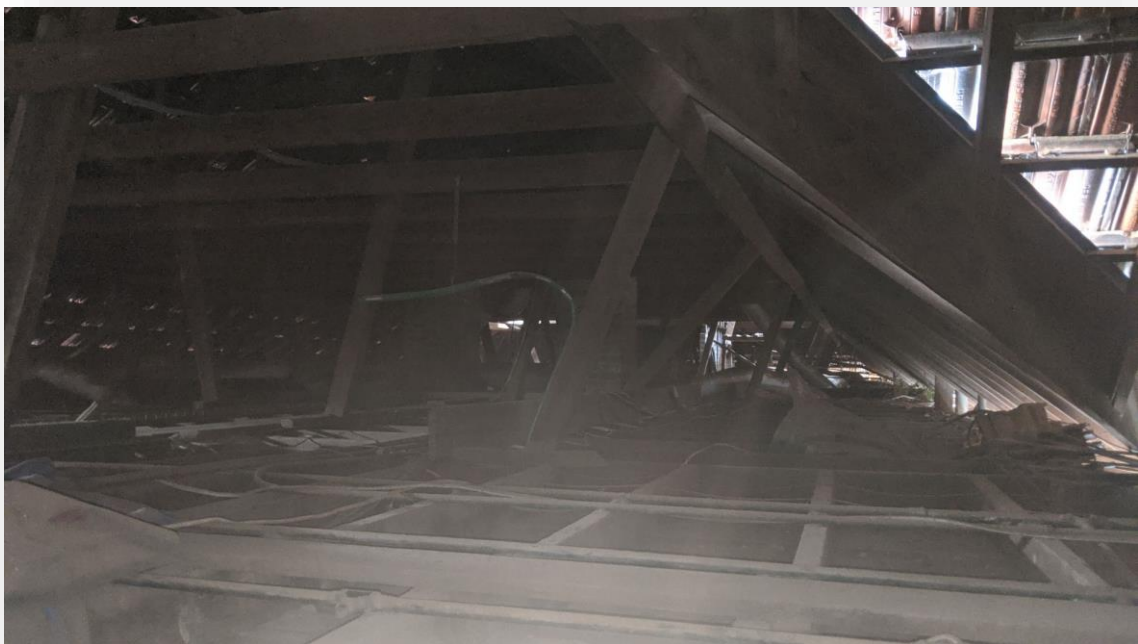


Figure 9 Caldwell House Roof with presumed asbestos throughout with presumed asbestos throughout.



Figure 10 Presumed Chrysotile in roof



Figure 11 Under Floor of main building, presumed asbestos lagging on pipework which sits on ground.



18 October 2018

David Waddell
Orange City Council
PO Box 35
Orange NSW 2800

Our ref: 2219715-50553
Your ref:

Dear David,

**Former Orange hospital (Caldwell House and Nurses Quarters) Development
Application
Contamination Technical Advice**

1 Introduction

GHD Pty Ltd (GHD) has been engaged by Orange City Council (OCC) to provide a review of information submitted under development application 234/2018 (DA 234/2018) to OCC. The DA is for the proposed Category 1 remediation (asbestos), demolition of all buildings and structures and removal of vegetation at 129 to 133 Sale Street, Orange NSW (the site). The site is also known as the former Nurses Quarters and Caldwell House associated with former Orange Hospital.

2 Objective

The objective of the review is to provide OCC with technical contamination advice in relation to the assessment of DA 234/2018. In particular, OCC requires information on whether asbestos removal from the impacted buildings, and other areas, can occur in such a way to allow for the heritage building (Caldwell House) to be retained, and made safe for future adaptive re-use (understood to be likely as commercial use).

3 Scope of work

The following scope of works was completed:

1. Review of the following reports in relation to contamination and the proposed development application.
 - Envirowest Consulting (26 June 2018), *Asbestos Removal Options, Caldwell House, 129 Sale Street, Orange, NSW* (R7040asb5)
 - Envirowest Consulting (17 May 2018) *Asbestos Removal Control Plan, Caldwell House and Nurses Accommodation, 129 to 133 Sale Street, Orange, NSW* (R7040arcp2)
 - Envirowest Consulting (3 August 2017) *Hazardous Materials Survey 131 to 133 Sale Street, Orange NSW* (R7040hm2)
 - Envirowest Consulting (27 May 2016) *Preliminary Contamination Investigation Lots 10B-10G DP4099 and Lot 10A DP187494, 125 to 133 Sale Street, Orange NSW*

- Cook and Roe (2 July 2018) *Proposed Demolition Methodology for Caldwell House and the Nurse's Quarters, 129-133 Sale Street Orange, NSW* (35086)
 - G.J Seig Pty Ltd (29 June 2018) *Quantity Surveyor Report and Preliminary Budget Estimates for Asbestos Removal, Demolition and Associated Site Redevelopment Options at 129 - 133 Sale Street, Orange*
 - Peter Basha (4 July 2018) *Statement of Environmental Effects: Proposed Category 1 Remediation (Asbestos); Demolition of all Buildings and Structures; and Removal of Vegetation at 129 – 133 Sale Street, Orange (Former Nurses Quarters)*
2. Provide advice as to whether or not the asbestos removal and remediation can occur in such a way that the most significant buildings can be retained and reused for future adaptive re-use.
 3. Provide comment on the accuracy of the costings presented (Quantity Surveyor report)
 4. Site inspection to ground truth information in the documentation reviewed.
 5. Preparation of this letter report documenting the findings

4 Background

Council is in receipt of DA234/2018, which is to demolish all buildings, structures and vegetation within land described as Lot 2 DP 1230592, known as 129 -133 Sale Street (the site). The land is identified as a local heritage item pursuant to Orange LEP 2011 as it contains Caldwell house. The land has been vacant since the Orange Base hospital relocated in 2011. There are two buildings on the site; Caldwell House and the Nurses Quarters.

The buildings are known have been illegally accessed, with the illegal removal of copper wire and piping from both buildings. Consequently, asbestos material (including friable lagging materials around copper pipes) within the buildings have been disturbed and distributed throughout the buildings. The owner, NSW Health, is seeking consent through DA234/2018 to demolish the buildings in conjunction with addressing the asbestos contamination issue. DA234/2018 outlines that: *complete remediation and clear validation of the buildings in terms of asbestos clean-up should be the goal. However, the achievement of this goal is complex, impractical and cost prohibitive.*

5 Site inspection

On 21 August 2018, Jessica Hannaford (GHD) inspected the site with the applicant's occupational hygienist, Greg Madafiglio from Envirowest Consulting. During the site inspection the following was noted;

- The site is fenced, however illegal entry points were noted under the wire fence.
- Outside of buildings
 - Evidence of recent illegal entry, understood to have occurred within the last month, was observed.

- Rubbish associated with illegal entry was evident. This included discarded Tyvek suits, dust masks and head torches. It is assumed these were used for the handling of asbestos material when removing building products.
- Broken fragments of bonded asbestos cement sheeting were noted on the ground surface between the two buildings within the courtyard area. Concrete slab entry points had been lifted and removed to expose pipework connecting the two buildings under the covered walkway.
- Inside buildings (Caldwell House and Nurses Quarters).
 - Multiple illegal entry points into the building including smashed/open windows and windows which have been covered in plastic and duct taped which has been removed.
 - Black plastic has been lined on the ground floor corridor, understood to be covering friable asbestos which had been removed and dragged throughout Caldwell House.
 - Some asbestos remedial works within the Nurses Quarters was evident in the form of painting where illegal access had been gained to remove piping.

6 Development Application DA 234/2018 review

DA 234/2018 lodged by NSW Health Infrastructure (HI) to OCC outlines the proposed demolition the onsite buildings in conjunction with addressing the contamination issue. DA 234/2018 states *complete remediation and clear validation of the buildings in terms of asbestos clean-up should be the goal. A number of supporting reports and documentation have been lodged as part of the Statement of Environmental Effects. The documents of relevance for this review are listed in Section 2 of this letter.*

Based on the review, GHD makes the following comments;

- The DA seeks approval for Category 1 remediation works to address the asbestos contamination. Under SEPP 55 Remediation of Land, Category 1 remediation works requires a Remedial Action Plan to be submitted with the DA. Section 4.4.5 of SEPP 55 states an *RAP is a mandatory requirement for category 1 remediation work.*
- The Statement of Environmental Effects (Section 3) states NSW Health Infrastructure continue to monitor and maintain the property in a safe condition. Based on the site inspection observations, and the information provided to GHD (both verbally and documented), the site has not been secure for periods of time.
- The Statement of Environmental Effects Section 3.2.5 (Options Analysis) states *Category 1 remediation under SEPP 55 with the intent to either retrieve the cost in the sale price of the land; or pass the responsibility and cost onto a future purchaser. This is not a viable option due to the following: The building will only ever achieve a make-safe level of clean up. As such, the building will be burdened with the negative implications associated with the stigma and legacy of having and managing a building that remains affected by friable asbestos and is subject to an asbestos SMP. In this state, it is unlikely to be attractive to a purchaser. While GHD agrees the site may require a Site Management Plan, the “make-safe level of clean up” is the level of validation required under SEPP 55 to ensure the site is considered suitable. Further, the preferred demolition option lists *Clean-up of the asbestos as Category 1 remediation under SEPP 55 as part of the demolition option. This is essentially the same as “make-safe level of clean up”. In short, the level of asbestos removal and**

'clean-up' for demolition, and level required for retaining the buildings, seem to be the same, as asbestos materials need to be removed from buildings prior to demolition works. If asbestos materials have not been completely removed prior to demolition, demolition waste materials will need to be assessed for the presence of asbestos prior to off-site disposal.

- The Envirowest Consulting (June 2018) *Asbestos Removal options* outlines the general process of asbestos removal for each of the options, i.e. demolition v retain buildings. While the methodology seems appropriate, the removal process for both options should essentially be the same, if demolition material is to be disposed of as building and construction waste. In Section 8.2 of the Asbestos Removal Control Plan, the demolition costs associated with *Material will be cleaned then classified as non-asbestos waste* do not seem to have been adequately captured in the Quantity Surveyor Report (G.J Seig Pty Ltd, June 2018).
 - Based on the extensive asbestos contamination now evident throughout Caldwell House, the asbestos removal plan (and costings) would need to be updated to adequately reflect this. For example, the costs associated to either disposing building materials as asbestos waste and/or ensuring they are asbestos free prior to demolition and disposal have not been accounted for.
 - For example, for retaining Caldwell House, the *cost for removal/clean and relay existing roof tiles* is \$103,345 due to asbestos contamination. However, in the Complete Demolition costings the costs for *removal/clean and relay existing roof tiles* is given as \$0. From this, it would be assumed the roof tiles will be disposed of as asbestos waste, but this has not been clearly stated. It is therefore not clear if these (significant) additional waste disposal costs have been accounted for. This scenario is relevant for most of the building materials. In any event, it should be noted that full removal of asbestos and subsequent clearance is required prior to demolition in accordance with SafeWork guidelines.
- The Envirowest Consulting (May 2018) Asbestos Removal Control Plan outlines the asbestos removal works required prior to demolition. Envirowest states *A clearance certificate will be issued following the completion of the asbestos removal and decontamination work by the asbestos assessor*. As per SafeWork NSW, an Asbestos Clearance Certificate is issued when asbestos has been removed, and is to ensure all visible asbestos has been removed and the site/area is considered safe to be re-occupied. In this case, information has not been provided on how an Asbestos Clearance Certificate issued for demolition would differ from an Asbestos Clearance Certificate issued for building retention.
- The Cook and Roe (July 2018) Proposed Demolition Methodology does not provide any asbestos removal methodology, and simply states *removal of asbestos or materials containing asbestos fibre shall be in accordance with the NOHSH (WorkSafe Australia), Code of practice for the safe removal of asbestos*.

7 Provide advice as to whether or not the clean-up can occur and the most significant buildings retained and cleared as safe for future adaptive re-use.

GHD considers that asbestos removal to allow for adaptive re-use of the buildings is possible. Asbestos removal is required regardless of whether the buildings are demolished or not. However, as stated in the DA documents, asbestos removal/remediation to allow for re-use is likely to be the more expensive

option due to the additional validation requirements associated with safe re-use compared to demolition. The likelihood of the site requiring a Site Management Plan to manage any potential risks associated where asbestos remains encapsulated in areas such as roof spaces and/or crawl spaces is considered high. However, the use of a Site Management Plan to manage risk in this regard is a common occurrence for ensuring site suitability.

8 Provide comment on the accuracy of the costings presented (Quantity Surveyor report)

The costings provided in Quantity Surveyor report do not appear to have any obvious errors and omissions for the time of reporting. However, due to the asbestos disturbance which has occurred after the costings were prepared, they now do not accurately reflect current conditions. Further, it is not clear if all asbestos disposal costs have been allowed for in the Complete Site Demolition. See example provided in Section 6 of this letter. Given the sensitivity and risk perceptions associated with asbestos, it is recommended that OCC seeks further advice/quotation for asbestos removal and demolition contractors who have demonstrated track record and experience on similar projects, in order to ensure that costings are representative as possible.

Please note GHD are not quantity surveyors and these opinions are based on experience and review of the documentation.

9 Conclusions

The DA seeks approval for Category 1 remediation works to address the asbestos contamination. Under SEPP 55 Remediation of Land, Category 1 remediation works requires a Remedial Action Plan submitted with the DA.

It is considered additional costs associated with asbestos removal and remediation will be incurred due to the site being illegally accessed and the distribution of further asbestos (including friable) within the buildings since the DA was lodged. During the site inspection, recent illegal access and removal activities were noted. GHD notes efforts have been made to remove and remediate the asbestos issue within the Nurses Quarters; however, limited remediation/removal activities have been undertaken in Caldwell House to date. The placement of plastic to cover friable asbestos within areas such as hallways and stairs of Caldwell House is not an acceptable management solution.

As a result of the amount of asbestos disturbance undertaken since the issue of the DA (i.e. 4 July 2018), the reports such as the Envirowest Asbestos Removal Options, the Envirowest Asbestos Removal Control Plan and the Quantity Surveyor Report and Preliminary Budget Estimates need to be updated to reflect current site conditions – including the additional costs of remediation and removal. From the site inspection, the potential for ongoing illegal entry is considered high as in multiple areas of copper piping had been exposed, but not removed. Effective security measures will reduce the risk of further damage and potential spread of asbestos.

The cost differentiation between asbestos removal for demolition, as opposed to asbestos removal for building reuse have not been appropriately evaluated within the DA documents, as it does not appear to have been recognised that asbestos removal is required to be carried out under either scenario.

Regardless of the end use, (i.e. demolition versus buildings retained) asbestos materials still need to be managed, handled and disposed of in the same manner. However, as pointed out in the Envirowest Asbestos Removal Option report, some areas where asbestos remains encapsulated (but prevents no risk) in areas such as roof spaces and/or crawl spaces, a Site Management Plan would be required. The implications of a Site Management Plan for the site would need to be evaluated.

10 Limitations

This letter has been prepared by GHD for Orange City Council and may only be used and relied on by Orange City Council for the purpose agreed between GHD and the Orange City Council as set out in Section 2 of this report. GHD otherwise disclaims responsibility to any person other than Orange City Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the letter and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared. The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Orange City Council and others which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

Sincerely
GHD



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