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29 AUG 2019

CONTAINER No.

PR27695

19 August 2019

The General Manager
Orange City Council
PO Box 35
ORANGE NSW 2800

Attention: Andrew Crump

Dear Andrew

DA 234/2018(1) – DEMOLITION OF CALDWELL HOUSE – 129 TO 133 SALE STREET, ORANGE

Thank you for your correspondence to date in respect of the above development application.

This submission is a response to the matters raised in Council's email dated 25 September 2018.

Council advised that it requires further substantiation for the proposed demolition of Caldwell House, based on economic and environmental grounds, as the only available option to address the asbestos contamination issue in the building. Council has advised that it has relied on advice provided by their consultant hygienist and heritage advisor, as well as information raised in public submissions.

It is understood that Council is not concerned about the proposed demolition of the Nurses Quarters corner building. As such, Caldwell House is the focus of the information provided in this submission.

Investigation

In response to Council's communication and responding to your concerns on Caldwell House we advise that the following has been undertaken:

1. The building has been inspected by two independent registered asbestos removalists (DEMEX and Interactive Projects (IP)).
2. We appointed an Independent Consultant Occupational Physician, Dr Ian Gardner who has reviewed the relevant documents, has undertaken a site inspection and prepared a report.

3. Re Item 1 above, as part of their input, DEMEX engaged asbestos assessors SERS to provide a review.
4. Also re item 1 above, as part of their input, IP engaged asbestos assessors Airsafe to provide a review.
5. DEMEX and IP were also each requested to provide costs for the following options:
 - a) Asbestos Remediation/Complete Demolition of Caldwell House.
 - b) Asbestos Remediation/Retention Front Face & Verandah only (Caldwell House).
 - c) Asbestos Remediation/Front Sale St Building & Verandah only (Caldwell House).
6. The original asbestos assessor for the building and the applicant (Envirowest Consulting) has remained independent and has reviewed the advice provided by DEMEX/SERS and IP/Airsafe as a peer review.
7. The Heritage Impact Statement by Weir Phillips Heritage has been reconsidered in the light of Council's comments and amended to address (where relevant) the matters raised by Council's heritage advisor in his advice dated July 2018.

Findings

The independent findings by the above specialists are attached to this letter and are summarised as follows:

1. The distribution of asbestos pipe lagging (friable asbestos) has occurred throughout all areas of the building.
2. Residual asbestos is located in the following inaccessible areas of the building:
 - a) The ceiling cavity on the structural timber and other areas including the roof tiles between the bearers and framing timber.
 - b) Wall cavities. Air movement through these cavities results in a high risk of exposure through vents, windows and doors.
 - c) Sub floor space on porous surfaces and in the soil.
3. The contractors (DEMEX and IP) Asbestos assessors, independent asbestos assessor (Enviro West Consulting) and Independent Consultant Occupational Physician (Dr Ian Gardner) have advised that clearance certificate for asbestos removal cannot be provided without complete demolition of the building.

4. If the building was to remain, a clearance certificate for occupation cannot be provided because of the residual asbestos that will remain in the inaccessible areas of the building. In this regard:

- a) SERS (for DEMEX) considers that the level of contamination by friable asbestos in this building is similar to properties contaminated by sprayed asbestos insulation. As such, the SERS advice states:

It was the recommendation of the ACT Asbestos Taskforce that the entirety of residential properties identified with this sort of contamination be removed, as the initial removal process conducted in 1988-1993 was not satisfactory to remove the asbestos from the structure. Sampling as part of investigations in 2013 revealed evidence of fibre migration to living areas from remediated or inaccessible areas was evident in a significant number of properties investigated during this program.

- b) Airsafe (for IP) states:

Any clearance certificate issued will contain exclusions to inaccessible cavities, as asbestos would be likely present. The likelihood of asbestos in these cavities re-entering habitable spaces from air movement (external vents, mechanical ventilation & windows and doors) would be high. Unless you can remove asbestos to inaccessible cavities, the exposure to the end user is high. Our previous experience with dwellings contamination of this nature is that they are demolished and removed, eliminating the risk of future exposure.

- c) Envirowest Consulting states:

The asbestos lagging is present at concentrations and locations where permanent and complete encapsulation is also not possible. Even with the most complete removal and encapsulation works, occupants in the building will have a continual risk of exposure to asbestos from air movement around the building from residual asbestos and any future building works (minor or major).

- d) In addition, the Independent Consultant Occupational Physician Dr Ian Gardner states:

There are almost certainly amounts of respirable asbestos fibres in the wall cavity – and that consequently, based on the example in the ACT ‘loose-fill sprayed asbestos insulation’ situation (Mr Fluffy) where forensic deconstruction of a house which had already been remediated three times was undertaken, it will be impossible to effectively clear or encapsulate all of the asbestos fibres from the wall cavity (even at any cost). Thus, it will be unable to be certified as ‘clean’.

5. Theoretically, even if adequate encapsulation could be achieved to make the rooms safe for occupation, the building would be subject to an Asbestos Management Plan (AMP) to manage the residual asbestos. SERS and Envirowest advise that the AMP would involve the following:

- a) Implementation by the owner for the life of the building.
- b) Identify the location of asbestos hazards (some of which will be impossible to determine).
- c) Require regular inspections to ensure the adequacy of the encapsulation.
- d) Control any work impacting on the residual asbestos by a set of strict protocols.
- e) Any works in the asbestos zones will be regarded as friable asbestos works.
- f) Works would need to be undertaken or supervised by an asbestos removalist with a friable licence and monitored by a licensed asbestos assessor.
- g) As a consequence, the building and any redevelopment of it would therefore be either uninsurable or cost prohibitive to insure against these risks.

Environmental and Safety Implications of the Findings

Based on the above findings by the relevant specialists, the implications for the building are summarised as follows:

1. Demolition is the only option to guarantee clearance of the site in terms of asbestos removal to allow the site and precinct area to be redeveloped and re-energised.
2. If the building was to be retained with encapsulation of the residual asbestos, it will only ever achieve a make-safe level of clean up. As such, the building will remain affected by friable asbestos and will be subject to an AMP. This represents a negative outcome due to the following:
 - a) The risk to occupants remains.
 - b) 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 AMP.
 - c) The AMP would significantly restrict the development, renovation and maintenance of the building. Everyday maintenance tasks would require the development of asbestos work plans and require specialist removal and assessors for supervision.
 - d) The AMP will be costly to implement and maintain without guarantee.
 - e) Long term building maintenance will therefore become a liability and potentially uninsurable risk for the building developer and occupants.

6. It is important to note that even if the front façade and verandah could be theoretically retained, the asbestos contaminated material cannot be effectively removed. As such, a clearance certificate would not be able to be obtained for the retained elements and the building would be subject to an AMP along with the negative implications associated with that in perpetuity.

Economic Implications of the Findings

DEMEX and IP have provided quotations for the following options:

SCENARIO	CONTRACTOR		ASSOCIATED BUILDING WORKS
	DEMEX	IP	
Asbestos Remediation/Complete Demolition of Caldwell House	Quotation provided and given to Council as strictly commercial in confidence	Quotation provided and given to Council as strictly commercial in confidence	Quotation provided and given to Council as strictly commercial in confidence
Asbestos Remediation/Retention of Front Façade & Verandah Only (Caldwell House)	Quotation provided and given to Council as strictly commercial in confidence (this should be regarded as a theoretical price only as a clearance certificate cannot be issued for the retained elements)	Refused to price as a clearance certificate cannot be issued	Quotation provided and given to Council as strictly commercial in confidence
Asbestos Remediation/Retention of Sale St Building & Verandah Only (Caldwell House)	Refused to price	Refused to price	Refused to price

These quotations have been provided to Council on a strictly commercial-in-confidence basis, essentially to protect the commercial/competitive interests of the private contractors who supplied the quotations.

However, the process of having specialist contractors provide detailed quotations for the scenarios in the above table demonstrates the following:

1. The level of asbestos contamination is greater and more complicated than what was expressed in the original DA documentation, particularly in terms of the difficulty in treating inaccessible areas and minimising the risk of airborne fibres for future occupants.
2. The cost of remediation is far greater than the estimates that were provided in the original DA documentation (refer table below).

Scenario	Cost Estimate in Original DA Documentation	Cost Estimate based on Investigation by DEMEX/SERS and IP/Airsafe
Asbestos Remediation Complete Demolition of Caldwell House	\$1,004,950	Cost estimate is considerably higher than the original estimate. A quotation has been provided by the contractors and given to Council as strictly commercial in confidence.
Asbestos Remediation Retention of Front Façade & Verandah Only (Caldwell House)	\$1,452,556	Cost estimate is considerably higher than the original estimate. A quotation has been provided by the contractors and given to Council as strictly commercial in confidence. This should be regarded as a theoretical price only as a clearance certificate cannot be issued for the retained elements.
Asbestos Remediation Retention of Sale St Building & Verandah Only (Caldwell House)	\$1,839,599	Refused to price this scenario

The costs have been independently assessed by G.J. Seib Pty Ltd, Quantity Surveyors & Construction Cost Consultants. As a result of their assessment, G.J. Seib Pty Ltd make the following conclusion:

As supported by the comments contained in the previously mentioned consultant reports, and based upon the extensive state of asbestos contamination on this site, together with the recent costs submitted by the specialist subcontractors, this office is of the opinion that any future development of this site is deemed to be commercially unviable and impracticable when each of these estimated costs are considered, other than complete remediation and removal of the existing buildings.

Heritage Implications of the Findings

In regard to the heritage value of Caldwell House, it is noted that:

1. The potential exists for the building to be converted to many uses as facilitated by the heritage conservation incentives of Orange LEP 2011; and
2. The preferred approach would be for the building to be remediated (in terms of asbestos) and adaptively re-used.

However, the ability to pursue the above is significantly constrained by the environmental risks to future occupants and the economic burden and risk outlined earlier.

In response to the matters raised in the *Summary and Recommendations* sections of the heritage advisor's report dated July 2018, we advise as follows:

1. The heritage advisor states that the HIS is not consistent with the NSW Heritage template or guide. The Heritage Impact Statement (HIS) by Weir Phillips Heritage has been revised and a copy is attached.
2. The heritage advisor is concerned that appropriate expert heritage advice has not been used to pursue appropriate options for the site. In response to this:
 - a) Despite the fact that the HIS could not recommend retention of the building; it is our submission that Weir Phillips has provided "appropriate expert heritage advice". The HIS has assessed the proposal in the context of the following heritage publications:
 - *NSW Heritage Office, Statements of Heritage Significance (2002 update)*
 - *NSW Heritage Office, Statements of Heritage Significance (2002)*

In particular, sections 5.3.3 and 5.4 of the revised HIS consider sympathetic solutions and explain why they have been discounted in terms of heritage values.

- b) The conclusion reached in the HIS (essentially that there is no alternative but to demolish the building) is reflective of the well supported argument, that the environmental risks and the economic burden associated with asbestos remediation and demolition/retention of the building outweigh the heritage values.
3. Orange Council's heritage advisor is concerned that the SoEE and HIS draw erroneous conclusions of non-viability related to decontamination costs which are unrelated to heritage options. The process of having specialist contractors (in conjunction with asbestos assessors) provide detailed quotations has demonstrated that:

- a) The level of asbestos contamination is greater and more complicated than what was expressed in the original DA documentation, particularly in terms of the difficulty in treating inaccessible areas and minimising the risk of airborne fibres for future occupants.
 - b) The cost of remediation is far greater than the estimates that were provided in the original DA documentation.
4. The heritage advisor is concerned that the justification for the demolition of the last remaining buildings associated with the Orange Base Hospital are not borne out by the evidence presented. It is suggested that the additional information provided in this document would address any concerns in this regard.
5. The heritage advisor is concerned that the proposal does not include an end use and built form which would replace the existing development of the site. We agree; however, it is considered appropriate for Council to allow demolition without having this information provided due to the following:
- a) The circumstances around the asbestos situation suggest that demolition of the building is required (particularly for environmental reasons) regardless of future development plans for the site.
 - b) It is difficult to practically nominate “an end use and built form” option as part of this development application. In this regard, there is a range of future development options for the site, but none are known at this stage; and there is no obligation to pursue any option that may be put forward at this stage.
 - c) Once a development option is determined, the appropriateness and impact of such development will be guided, assessed and addressed as part of the DA process.
6. The heritage advisor recommends that:

The Applicant is encouraged to engage with skilled and experienced heritage architects who can develop options for the adaptive re-use of the original East wing known as Caldwell House and the sympathetic development of the remainder of the site in accord with market indicators and use of the incentive clauses under the Orange LEP.

The options should then be costed in relation to the related decontamination and structural issues and reviewed with Council and following suitable discussions and market testing an application be prepared and lodged.

We appreciate the intent of the recommendation; however, our response is as follows:

- a) Before considering heritage appropriate options for re-use of the East wing, the first step is to address concerns regarding the asbestos contamination.

- b) In pursuit of point (a), both specialist contractors (with their respective assessors) were asked to consider the following scenarios:
- Undertake the asbestos remediation of Caldwell House and retain front façade and verandah only. In this regard:
 - DEMEX/ERS provided a quotation which has been provided to Council as commercial-in-confidence. In short, the cost is unrealistic; impractical; and prohibitive. This also should be regarded as a theoretical price only as a clearance certificate cannot be issued for the retained elements.
 - IP/Airsafe refused to offer a quotation.
 - Undertake the asbestos remediation of Caldwell House and retain the sale Street building (i.e. the east wing as referred to by the heritage advisor). In this regard both DEMEX/ERS and IP/Airsafe refused to offer a quotation because neither were confident that the remaining building would achieve a satisfactory standard of asbestos clean-up and could not obtain a clearance certificate.
- c) Given that a satisfactory situation is unlikely to be achieved in terms of asbestos remediation, we don't think that engaging a "skilled and experienced heritage architect" to consider adaptive re-use options for the East wing is necessary. It is recognised that the Orange LEP 2011 heritage conservation incentives facilitate a broad range of adaptive re-use options for Caldwell House. However, the highest and best land use will always be constrained by the asbestos situation and it is likely that the building and site will remain undeveloped and boarded up for the foreseeable future.

Independent Review

Health Infrastructure has appointed a highly experienced Consultant Occupational Physician, Dr Ian Gardner to undertake an independent peer review of all the information relating to contamination and clearance, and to conduct a site inspection.

Health Infrastructure consider the independent review as essential in ensuring that the information upon which they rely for this application is thorough and rigorous; and that Council have a complete understanding of the issues involved.

Dr Gardner's review report and CV are attached. The key points that arise from Dr Gardner's report are summarised as follows:

1. Dr Gardner has confined his opinion only to occupational and environmental health issues in relation to the ability of any future building owner to safely, comprehensively and permanently remediate the extensive asbestos contamination on site, so as to ensure that there will be no ongoing exposure to occupants, tradespersons or the surrounding environment from airborne asbestos fibres above background environmental level.

2. Dr Gardner has reviewed all of the information that has been submitted to Council as part of this development application. He has also conducted internal and external inspections of the buildings. He has also viewed photographs taken in the wall cavity spaces.
3. Dr Gardner states that *there are almost certainly amounts of respirable asbestos fibres in the wall cavity – and that consequently, based on the example in the ACT ‘loose-fill sprayed asbestos insulation’ situation (Mr Fluffy) where forensic deconstruction of a house which had already been remediated three times was undertaken, it will be impossible to effectively clear or encapsulate all of the asbestos fibres from the wall cavity (even at any cost). Thus, it will be unable to be certified as ‘clean’.*
4. Dr Gardner also states that *the only certain way to prevent future asbestos-related disease is to reduce airborne asbestos fibre exposures to zero, or if this is not attainable, to a level ‘as low as reasonably practicable’.* In this case – given the wall cavity unknown risk issues etc – *this will not be possible.*
5. In his conclusion, Dr Gardner states that on occupational and environmental health grounds, for any future precinct development in this area of Orange, I recommend the planned, safe demolition of the buildings and comprehensive site remediation.

As to the current state of the site and buildings, Dr Gardner makes the following comments:

I would like to pre-empt my findings below by stating that whilst the buildings are clearly contaminated, the protective measures in place (at the time of my inspection), together with what I understand have been the air monitoring and area protection measures put in place at the site, mean the situation does not represent a health risk to the community or to people like passers-by, neighbours, security guards etc, whilst the current protective measures which I saw in place, are retained.

If further disturbed however I recommend that the site conditions and protective measures should be assessed again immediately.

Closing

There is significant future health and environmental risk and considerable economic burden associated with asbestos remediation and demolition/retention of the building. In this context, it is difficult to argue that heritage conservation of such an item should be pursued at any cost and with such contamination risk to future occupants as well as potentially leaving the building boarded up indefinitely and the precinct undeveloped.

Without ignoring the heritage values, this report proposes that realistic options for the site are limited to what has been proffered in the DA and supporting documentation being Demolition Application Consent.

Based on all of the information that has been submitted, the collective evidence and opinions communicated and included in our report conclude that that the considered experts recommended course of action is for Council to grant approval to allow the remediation of the asbestos as Category 1 remediation under SEPP 55, which includes the demolition of all buildings and structures within the site.

Finally, it is requested that a meeting be convened between Council's expert consultants and the applicant's consultants (Dr Greg Madafiglio and Dr Ian Gardner) so that the relevant matters can be further discussed and resolved.

Yours faithfully

Peter Basha Planning & Development



Per:

PETER BASHA

Enc:

Advice from Quantity Surveyor GJ Seib Pty Ltd accompanied by quotations from specialist subcontractors, Demex & IP
Revised Heritage Impact Statement by Weir Phillips Heritage
Independent Review by Dr Ian Gardner accompanied by CV for Dr Ian Gardner
Asbestos Audit (7 May 2019) by Envirowest Consulting

Dr Ian R GARDNER MBBS MPH FAFOEM FRSM
CONSULTANT OCCUPATIONAL PHYSICIAN

Mr. Lawrence Nethery
Senior Project Director
Health Infrastructure

By email to: Lawrence.Nethery@health.nsw.gov.au

**Re: Independent specialist Occupational and Environmental
Health Review of Asbestos-contaminated buildings in Orange**

Dear Lawrence,

This report responds to a request from Health Infrastructure seeking an independent expert health opinion in relation to the asbestos contamination in the former Nurses Accommodation Buildings in Sale Street, Orange, particularly the building known as Caldwell House.

By way of short background and context, I have previously been instructed in a similar capacity by the ACT, Commonwealth and Local Government in other similar circumstances.

In particular of note :-

- Instructed by the ACT Government to provide expert health advice in relation to the health risks of the 'Mr Fluffy' Loose Fill Asbestos Contamination that led to the buy-back and subsequent demolition of more than 1000 houses in Canberra.
- Instructed by the Commonwealth Department of Defence in relation to some 20,000 asbestos-contaminated buildings on the Defence estate, and numerous cases involving hazardous exposure to airborne asbestos fibres affecting Defence members, Defence civilian employees, Defence Cadets, contractors and the public.
- Instructed by the Orange City Council in relation to possible asbestos exposures to Council employees as a result of unauthorised repairs undertaken on a building at Cook Park.

Please see attached my CV for further information about my experience and background.

I have been provided with and read all the supplied correspondence, including the various independent reports and the submissions made by interested parties to Orange City Council in relation to Health Infrastructure NSW's proposal to demolish these derelict buildings.

I have been asked to confine my specialist opinion **only** to occupational and environmental health issues in relation to the ability of any future building owner to safely, comprehensively and permanently remediate the extensive asbestos contamination on site, so as to ensure that there will be no ongoing exposure from occupants, tradespersons or the surrounding environment from airborne asbestos fibres above background environmental levels.

I will therefore not comment on any of the financial cost issues.

My only comment in the context of the heritage concerns are in relation to whether it would ever be feasible to maintain the façade as part of an effective site remediation plan and adaptive reuse development option.

I have been made aware of concerns in submissions to Council in relation to the claimed heritage values of the 1937 building and its façade.

I would like to preempt my findings below by stating that whilst the buildings are clearly contaminated, the protective measures in place (*at the time of my inspection*), together with what I understand have been the air monitoring and area protection measures put in place at the site, mean the situation doesn't represent a health risk to the community or to people like passersby, neighbours, security guards etc, whilst the current protective measures which I saw in place, are retained.

If further disturbed however, I recommend that the site conditions and protective measures should be assessed again immediately.

The specialist assessments provided to me, in particular the forty-page Asbestos Audit Report dated 7th May 2019 by Dr Greg Madafiglio of Envirowest Consulting and the DRAFT Report to Council by Peter Basha dated 28th March 2019 are comprehensive and authoritative. From an Occupational and Environmental Health perspective, there is nothing in these specialist reports with which I disagree.

I have also carried out a thorough building inspection of the **interior** of the two buildings on Wednesday 10th July 2019, accompanied by Rob Dickson from SpectrumPP (as Project Manager acting on behalf of HI NSW), Dr Greg Madafiglio of Envirowest Consulting Pty Ltd and Duncan Blair of Incline Constructions.

I had also previously visited, externally inspected and photographed both buildings (by myself) on the afternoon of Tuesday 9th July 2019.

Despite what I am advised were previous attempts to partially clean up the interior of the building with the installation of black plastic sheeting and frequent air locks, there was evidence of gross asbestos contamination throughout the building. The asbestos inspected was friable and in a hazardous state. Loose asbestos was noted in all the hallways, cupboard, closets, roof spaces, wall spaces, the boiler room and wherever asbestos-lagged copper pipe had been ripped from the building by vandals.

Of particular note was that the ventilation holes in the cavity brick wall at the Sale Street frontage of the building were patent and that some air was moving through them.

I have also seen photographs taken in the wall cavity spaces showing 'chunks' of loose asbestos at the base of and randomly strewn throughout these cavities.

This condition implies that there are almost certainly amounts of respirable asbestos fibres in the wall cavity – and that consequently, based on the example in the ACT 'loose-fill sprayed asbestos insulation' situation (Mr. Fluffy) where forensic deconstruction of a house which had already been remediated three times was undertaken, it **will be impossible** to effectively clear or encapsulate all the asbestos fibres from the wall cavity (even at any cost). Thus, it will be unable to be certified as 'clean'.

Although the level of asbestos health risk post-remediation will be low, it will not be zero and cannot be guaranteed to be so. This is particularly true of health risks in relation to Mesothelioma and Lung Cancer, where the hazardous airborne asbestos exposure levels can be extremely low and where the latency period from exposure to development of disease can be many decades. And for young people, in particular children, the 'safe' exposure levels are even more uncertain.

The only certain way to prevent future asbestos-related disease is to reduce airborne asbestos fibre exposures to zero, or if this is not attainable, to a level 'as low as reasonably practicable'.

In this case – given the wall cavity unknown risk issues etc – this will not be possible.

Taking all of the above into account, and based on my extensive asbestos contamination and remediation experience, including with Defence, COMCARE's Telstra NBN Asbestos Taskforce, the ACT's Mr. Fluffy Asbestos Taskforce and as the Commonwealth Representative on the Asbestos Safety and Eradication Council, the only viable health-based solution is to demolish all the buildings and remediate the site to the required health-based and environmental standards required for redevelopment.

In summary, on Occupational and Environmental Health grounds, for any future precinct development in this area of Orange, I recommend the planned, safe demolition of the buildings and comprehensive site remediation.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ian Gardner', with a horizontal line underneath it.

Dr Ian R Gardner
Director, Dr Ian R Gardner Pty Ltd

26 July 2019

DR IAN R GARDNER PTY LTD **ABN 52 088 889 507**
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Dr Ian Robert Gardner

Dr Ian Gardner is an Australian medical specialist with more than forty years global experience in Occupational, Environmental and Public Health Medicine and Toxicology. He has a special interest and expertise in Asbestos issues.

He holds degrees in Medicine and Surgery as well as a Masters Degree in Public Health and professional Fellowships from Australia, the UK and the USA. He holds an academic appointment as Adjunct Professor in Occupational & Environmental Medicine at the University of Queensland. He has also been a visiting professor and external examiner in Occupational Medicine at the National University of Singapore and the Chinese University of Hong Kong in Shatin, HK.

From 2015 until mid-2019, Ian was Chief Health Officer, Department of Veterans' Affairs. From 2001 until 2015, Ian was the Senior Physician in Occupational and Environmental Medicine, at the Defence Centre for Occupational Health and Safety, Canberra.

In this Defence role, at the SES Band 2 level, he was responsible for the occupational health side of the Defence Asbestos Exposure Assessment Scheme (DAEAS); large numbers of asbestos presentations to Defence employees, Contractors and Community Groups, as well as specialist advice to CEO, COMCARE on the national Telstra/NBN Asbestos Pits issues; Chief Medical Adviser to the "Mr Fluffy Asbestos Taskforce" in Canberra which resulted in the compulsory acquisition and demolition of more than 1000 loose-fill asbestos-contaminated homes; and many Asbestos exposure issues in multiple Local Authority jurisdictions in the ACT, Victoria, NSW and the Northern Territory. He was also the ministerially appointed Commonwealth representative on the Asbestos Safety and Eradication Agency Council from 2012 until 2015.

Prior to his Defence appointment, Ian worked for IBM Asia Pacific for thirteen years culminating in appointment as Program Director, Health Safety and Environment Management, IBM Asia Pacific, Japan. Previous occupational health jobs were with IBM Australia, ICI Australia and Alcoa of Australia.

Ian has twice been elected as President of the Australasian Faculty of Occupational and Environmental Medicine of the Royal Australasian College of Physicians. He is a joint editor of the textbook, "International Occupational & Environmental Medicine". He was the government-appointed medical member of the New South Wales "Workers Compensation and Occupational Health and Safety Council until 2012, and still chairs the NSW Public Service Commission's Health Review Committee. He has also been a ministerially appointed member of the Specialist Medical Review Council.

Ian is a Fellow of the Australasian Faculty of Occupational and Environmental Medicine, a Fellow of the American College of Occupational and Environmental Medicine, a Fellow of the Royal Society of Medicine, and a Member of the International Commission on Occupational Health. In 2003, he was awarded the College Medal by the Royal Australasian College of Physicians.