# Appendix F

## ASBESTOS REMOVAL SUMMARY (VERICO)

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11 August 2021

Dominic Warland
Associate
EJE Architecture
412 King Street
Newcastle NSW 2300

**SUBJECT: Carrington Hydraulic Engine House Internal Asbestos Removal Summary**

Dear Dominic,

As per your request, please find below a summary of the asbestos removal process that has occurred within the Carrington Hydraulic Engine House to date.

A hazardous materials survey was carried out within the Carrington Hydraulic Engine House (CHEH) during June 2018. As part of the survey dust and dirt samples were collected and analysed for asbestos content. A total of 87 dust, dirt and debris samples were collected from areas within the CHEH and 22 of these samples were found to contain asbestos fibre (Ampcontrol Report – *Port of Newcastle, Carrington Hydraulic Engine House, Dust Sampling Report Rev 3*, June 2018).

Port of Newcastle engaged HTS Group (Licenced asbestos removal contractor – Licence Nº. 204431AS1) to carry out the asbestos remediation within the building and Ken Maher (Ampcontrol Occupational Hygienist, Licenced Asbestos Assessor – Licence Nº. LAA000205) to carry out air monitoring, inspections and clearances during the remediation.

Remediation was staged to address areas of the building individually. The remediation areas were sealed, and a decontamination unit was installed to allow decontamination of workers and materials leaving the remediation areas. Where required, elevated work platforms or scaffolding was used to access roof trusses, ceilings, upper walls, windows and ledges. All debris, including large amounts of accumulated bird droppings were removed from floors and ledges. All areas, including walls, roof trusses, beams, ledges and floors were vacuumed and wet wiped to remove dust and debris.

Following the removal, the area was visually inspected by the occupational hygienist. When the removal was found to be satisfactory, dust swab samples were taken from surfaces throughout the remediation area. All swab samples must return results of 'no asbestos detected' for clearance to be given. A PVA sealant was then applied to all surfaces. Clearance air monitoring was then carried out within the remediation area. Clearance air monitoring must return results of less than 0.01 fibres per millilitre of air (less than the detectable limit of the analytical method). An asbestos clearance certificate was then issued for that area.

Removal was staged in the following order.

East room - 2/7/2018 to 17/7/2018, Clearance issued 14/8/2018

North room – 12/7/2018 to 23/8/2018, Clearance issued 31/8/2018.

Front door enclosure - 31/07/2018 to 03/08/2018, Clearance issued 14/8/2018.

West room - 02/07/2018 to 16/07/2018, Clearance issued 29/8/2018.

West accumulator tower – 31/7/2018 to 9/8/2018, Clearance issued 9/8/2018.

East accumulator tower – 25/10/2018, Clearance issued 10/1/2019.

Engine Room – 27/11/2019 to 7/2/2020, Clearance not achieved.

A plan showing the designated removal areas is shown in Figure 1 below.

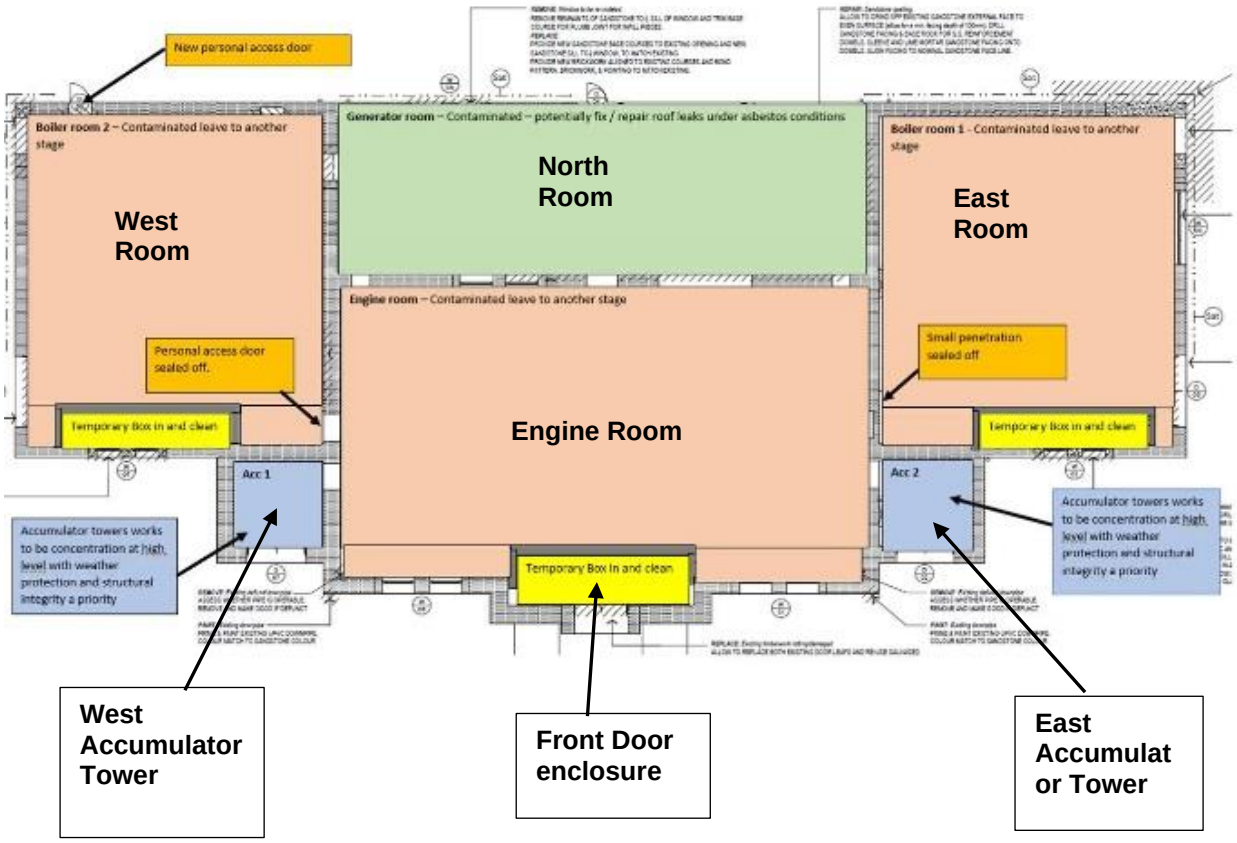


Figure 1 – CHEH Designated Removal Areas

Within the Engine Room, initially all accumulated dirt and debris was removed from the sub-floor area. Then scaffolding was installed to enable access to the roof trusses and the upper walls. Working from the upper levels down, all surfaces were vacuumed and wet wiped to remove all dirt, dust and debris. As each level was cleaned the area was visually inspected by the occupational hygienist. When the removal was found to be satisfactory, dust swab samples were taken from surfaces throughout the level. When all swab samples from the level returned results of 'no asbestos detected' then cleaning of the next level down was commenced. Air monitoring on the upper levels was conducted during cleaning of the lower levels to ensure the areas were not re-contaminated during the cleaning process.

The Engine Room was cleaned down to the ground floor level. Vacuuming of the ground floor and sub-floor areas was carried out. Inspections found that there were asbestos fragments embedded in the sub-floor floor surface and potentially contaminated dirt and debris was present within the cast iron floor grates.

Due to the very difficult nature of removal work required to safely decontaminate the floor grates and remove the embedded asbestos fragments from the floor surface, work was stopped so that alternative options could be considered.

The Engine Room was sealed, and access was only allowed under controlled conditions using appropriate personnel protective equipment.

The asbestos cement fragments embedded in the sub-floor floor surface are bound in a solid bituminous like material and can be considered as bonded asbestos material, and therefore will only become a hazard to health if acted upon by mechanical action that will disturb the asbestos fibres.

Any asbestos fibres within the dirt and debris associated with the cast iron floor grates will not be bonded and can be liberated into the air if disturbed. This material can be considered as friable asbestos containing material.

Yours sincerely,

Ken Maher
Occupational Hygienist
BSc(Eng),GrdDipOccHyg, MEnvOccHygMgt
Licensed Asbestos Assessor (LAA000205)
Verico Asset Integrity Services