



Our ref: FCO-0805/CO3722

Mr Lorenzo Fazzini
L & A Fazzini Manufacturing Pty Ltd
23-25 Wentworth Street
GREENACRE NSW 2190

Dear Mr Fazzini,

FIRE RESISTANCE UPGRADING OF EXISTING CEILINGS USING FOAMED VERMITEX
Assessment No FCO-0805
Your email dated 11 December 2008.

As requested in your email of 11 December 2008, we have re-analysed the available information on the likely performance of your retro-fitted fire protection system for existing ceilings.

The information included:-

- CSIRO Sponsored Investigation test report numbered FSH 0262, FSP 0269, FSP 0270 and FSP 0271; and
- your drawings numbered 01 and 02, dated 2 December 1993.

We have retained these documents

You have proposed the use of your Vermitex material to provide an upgrade of the fire-resistance levels of an existing ceiling of lath and plaster, fibrous plaster, tongue and groove timber, boarding and pressed metal.

ANALYSIS

CSIRO Sponsored Investigation report numbered FSP 0262

On 29 September 1993, this Division conducted a fire-resistance test on a lath and plaster ceiling system fixed to a timber floor. Two floor boards were removed every 1200 mm to 1400 mm and the Foamed Vermitex material pumped into the floor/ceiling space to an average thickness of 70 mm above the lath and plaster ceiling bulbs.

The density of the Foamed Vermitex at the time of the testing was 400 g/m³.

The tested system achieved a fire-resistance level (FRL) of 60/60/30 due to flaming on the top floor at 58 minutes, as a result of a localised collapse of a section of ceiling at approximately 47 minutes.

THIS ASSESSMENT SUPERSEDES FCO-0805 ISSUE DATE 25 FEBRUARY 2000

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Temperatures in the unaffected areas of the floor/ceiling system were well below the failure criterion of AS 1530.4, with the unexposed face approximately 60°C at 60 minutes.

A full description of the test specimen and the test results are detailed in CSIRO Sponsored Investigation report numbered FSP 0262.

Subsequently, three different types of ceilings, upgraded with Foamed Vermitex were tested separately.

CSIRO Sponsored Investigation reports numbered FSP 0269, FSP 0270 and FSP 0271

These ceilings were 24 Gauge stamped sheet metal, 13 mm thick fibrous plaster and 10 mm thick x 100 wide radiata pine tongue and groove boards. These tests are reported in our Sponsored Investigation reports numbered FSP 0269, FSP 0270 and FSP 0271 respectively.

A full description of the test specimen and the test results are detailed in CSIRO Sponsored Investigation report numbered FSP 0269, FSP 0270 and FSP 0271.

Your drawings numbered 01 and 02 detail proposals aimed at reinforcing the upgrading material to prevent its falling off. The proposal is for:-

- 50 mm wide 0.8 mm thick steel straps spanning from joist to joist, to replace the tested channel sections which supported the infill material along the edge; and
- 6 mm mild steel reinforcement rod, on top of the straps, running down the centre of the infra-joist space.

An analysis of the results of the testing carried out on the upgraded systems suggests that while upgrading is in position it is quite adequate to maintain the integrity and insulation of the floor/ceiling systems and that as soon as a fall off occurs the flames get into the floor and the temperature rises rapidly.

Both the new bracket design and reinforcing rod should help considerably to keep the upgrading in place.

Additionally, your drawings details methods of protecting electrical and service penetrations, pipe system within the ceiling void and existing plaster encased beams. None of these systems were incorporated within the prototype and their detailing was founded on previous experience.

CONCLUSION/OPINION

Based on the performance in fire-resistance tests, it is the opinion of this Division that your Foamed Vermitex retro-fitted insulation system detailed in your drawings 01 and 02 listed above would be capable of upgrading fire-resistance levels of a traditional lath and plaster, fibrous plaster, timber and pressed metal floor/ceiling system to a level of 60/60/60 if it was tested in accordance with AS 1530.4-1997.

The plaster and lath ceilings may be sprayed with "Westox Ceiling Reinstatement System" prior to placing of the upgrading.


It must be noted that through penetrations by metallic pipes would not maintain the insulation requirements of the fire-resistance test on the pipe and its immediate vicinity.

Similar penetrations by uPVC (or similar) pipes must incorporate an approved fire stop collar or fire stopping system as part of the penetration system.

TERM OF VALIDITY

This assessment report will lapse on 31 January 2014. Should you wish us to re-examine this assessment with a view to the possible extension of its term of validity, would you please apply to us three to four months before the date of expiry. This Division reserves the right at any time to amend or withdraw this report in the light of new knowledge.

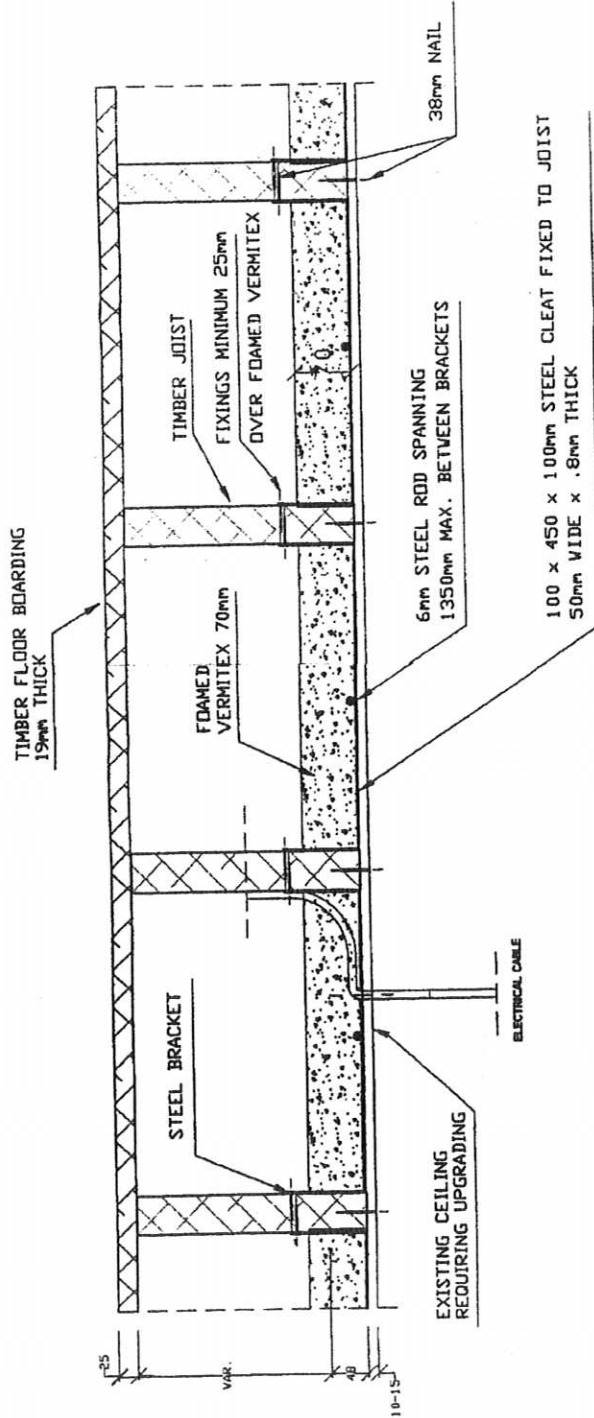
Yours faithfully



Garry Collins
Manager, Fire Testing and Assessment

19 January 2009

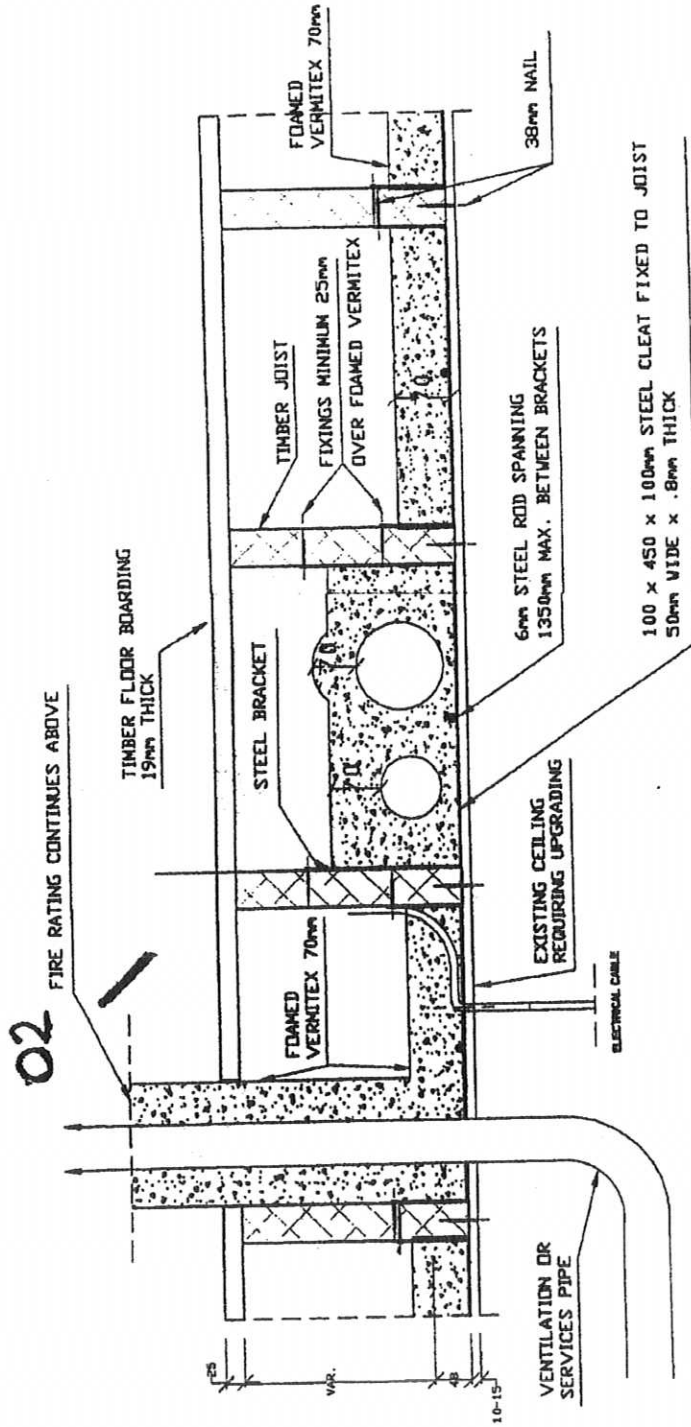
01



FOAMED VERMITEX - PLASTER LATH UPGADING SYSTEM FOR 60/60/60

N.B.: SYSTEM ALSO APPLICABLE TO:
 TIMBER CEILINGS
 FIBROUS PLASTER
 PRESSED METAL CEILINGS

	OPINION PROPOSAL FOR 60/60/60 FRL	
	DEPARTMENT OF PLANNING HERITAGE BRANCH	
NO. 11147	DATE: 02/12/93	DRAWN BY: L. F.
TYPICAL CROSS SECTION, PLASTER LATH CEILING		SCALE: 1/20
		REV. NO. 01



FOAMED VERMITEX - PENETRATIONS TO UPGRADED SYSTEM FOR 60/60/60 FRL

N.B.: SYSTEM APPLICABLE TO:
 PLASTER LATH
 TIMBER CEILINGS
 FIBROUS PLASTER
 PRESSED METAL CEILINGS

LAF	PROJECT	OPINION PROPOSAL FOR 60/60/60 FRL
	DATE	02/12/23
DRAWN BY		L. F.
CHECKED BY		1/20
TYPICAL CROSS SECTION, CEILING PENETRATIONS		