REGULATORY INFORMATION REPORT

An assessment of the fire resistance performance of a 150mm thick concrete floor penetrated by plastic pipes protected by Hilti CP 680 75/2.5" N firestop collars if tested in accordance with AS1530.4-2005 and assessed in accordance with AS 4072.1-2005

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Testing. Advising. Assuring.

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CONTENTS

1 INTRODUCTION

This report contains the minimum information sufficient for regulatory compliance and refers to the Assessment report EWFA 35233700.

The referenced report presents an assessment of the fire resistance performance of a 150mm thick concrete floor penetrated by plastic pipes protected by Hilti CP 680 75/2.5" N firestop collars if tested in accordance with AS1530.4-2005 and assessed in accordance with AS 4072.1-2005.

The tested systems are described in Section 2 and are subject to the proposed variations described in Section 3 if tested in accordance with the referenced test method described in Section 4. The conclusions of the report are summarised in Section 5. The validity of this assessment is conditional on compliance with Sections 7, 8 and 9 of the referenced report.

2 TESTED PROTOTYPE

The referenced assessment is based on fire resistance tests WF 130659 and FSH 1208.

Test WF 130659 describes a test of various stack pipe and floor waste penetrations protected with Hilti CP 680N firestop collars tested in accordance with AS1530.4-1997. The test was undertaken by Warringtonfire and was sponsored by Hilti Entwicklung Befestigungstechnik GmbH, who has granted permission for this test data to be referenced in the referenced report.

Test FSH 1028 describes a test of various stack pipe and floor waster penetrations protected with various Hilti products tested in accordance with AS1530.4-1997 was undertaken by CSRIO and was sponsored by Hilti (Aust.) Pty Ltd.

3 VARIATION TO TESTED PROTOTYPES

The proposed construction shall be uPVC, PP, PP-R, Silere (PP), PE, HDPE, uPVC sandwich core pipe penetrations protected with either Hilti CP 680 75/2.5" N firestop collars in floors as tested in tests WF 130659 and FSH 1208 and with consideration of the following variations:

- The floor thickness shall be minimum 150mm thick or greater.
- As an option, the tested floor construction may be replaced by the Ultrafloor flooring system, which incorporates a layer of 12mm compressed fibre cement permanent formwork on the underside of the concrete slab. The proposal requires a hole to be cut in the formwork to completely expose the metal plate of the Hilti CP 680 75/2.5" N firestop collars.
- Refer to table 1 and figures 1 and 2 for a summary of the proposed construction.

Table 1 – Pipes protected with Hilti CP 680 75/2.5" N firestop collars in 150mm thick floors

Pipe Material	Local Fire Stopping System	Nominal Pipe Diameter (mm)	Nominal Pipe Wall Thickness (mm)
uPVC pipe	Hilti CP 680 75/2.5" N	32	1.9
		40	2.0
		50	2.2
		65	2.7
uPVC pipe with Flange of elbow fitted into collar, DWV Bend × 88°		32	1.9
		40	2.0
		50	2.2
		65	2.7
PP pipe		32	2.9
		40	3.7
		50	4.6
		63	5.8
		75	6.8
PP-R pipe		32	4.4
		40	5.5
		50	6.9
		63	8.6
		75	10.3
Silere pipe		58	4.2
PE pipe		32	2.9-3.3
		40	3.7-4.2
		50	4.6-5.2
		63	5.8-6.5
		75	6.8-7.6
HDPE		50	3.0
		56	3.0
		63	3.0
		75	3.0

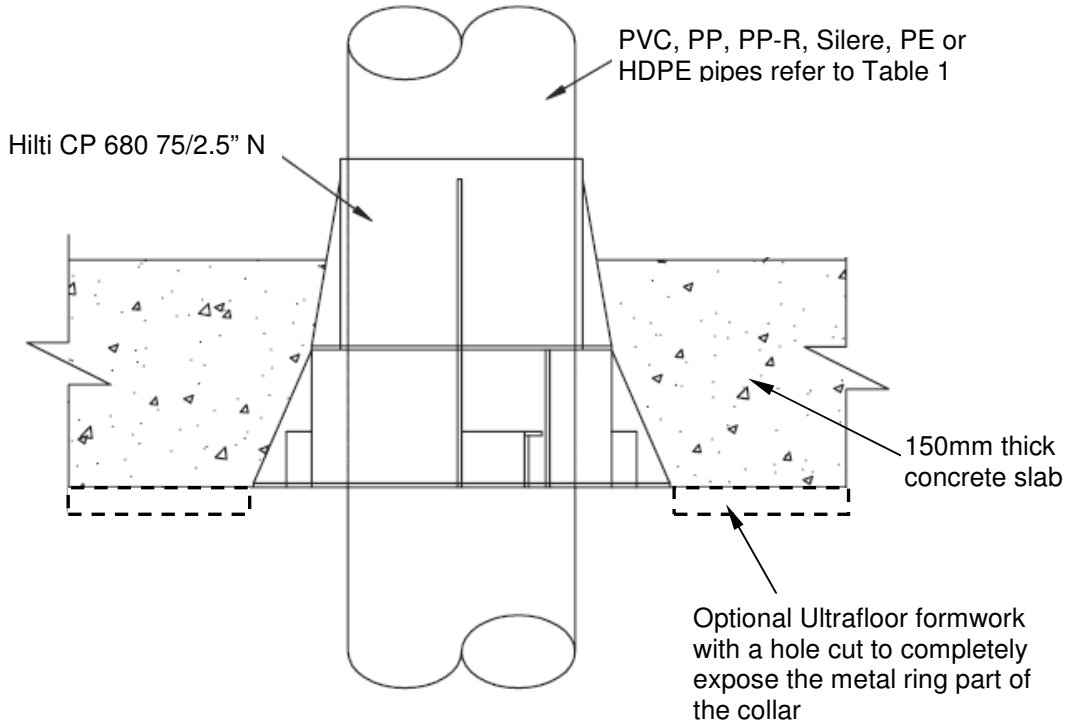

Figure 1 – Stack pipes protected with Hilti CP 75/2.5" N with or without Ultrafloor

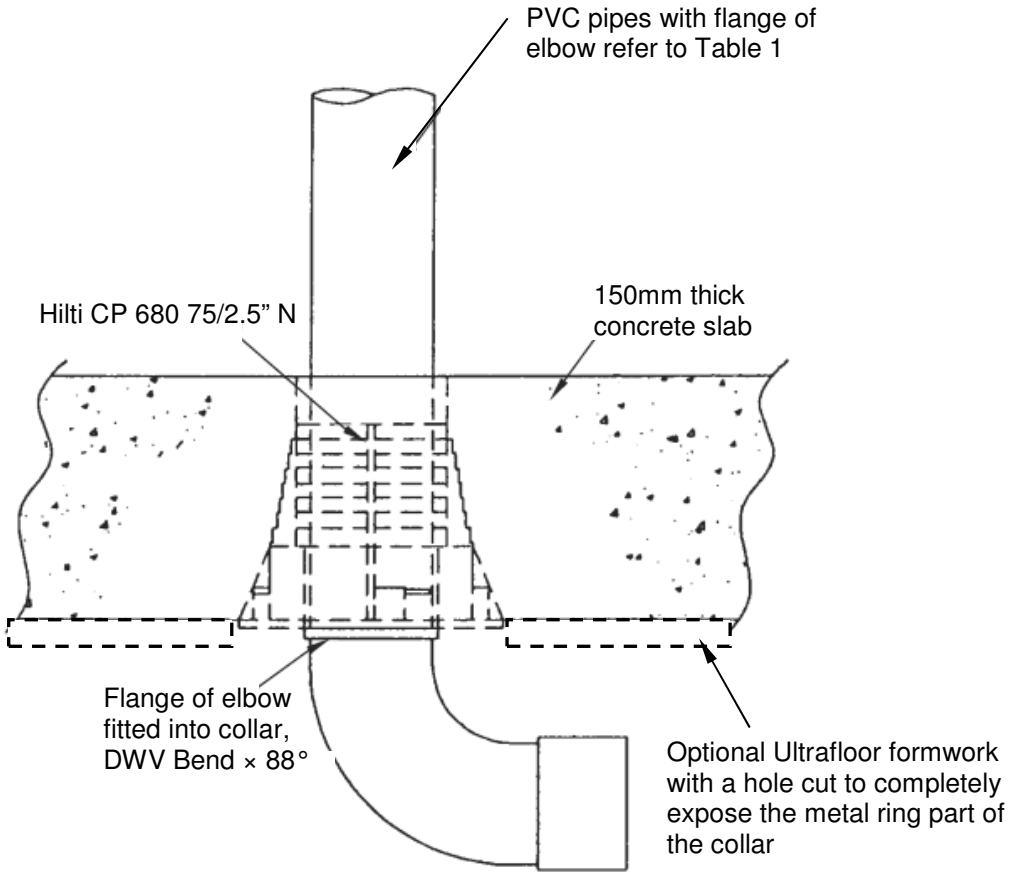

Figure 2 – uPVC pipes flange of elbow fitted into firestop collar protected with Hilti CP 680 75/2.5" N with or without Ultrafloor

4 REFERENCED TEST PROCEDURES

The referenced report is prepared with reference to the requirements AS1530.4-2005 and AS4072.1-2005 for the determination of an FRL and specimen configuration.

5 FORMAL ASSESSMENT SUMMARY

On the basis of the discussion presented in the referenced report, it is the opinion of this testing authority that if the tested prototype described in Section 2 had been varied as in Section 3, it will achieve the fire resistance as stated below if tested in accordance with the test method referenced in Section 4 when subject to the requirements of Section 7.

Table 2 - Performance of stack pipes in floors

Pipe Type & Material	Nominal Pipe Diameter (mm)	Nominal Pipe Wall Thickness (mm)	Local Fire Stopping System	Refer Figure	FRL
uPVC pipe	32	1.9	Hilti CP 680 75/2.5” N	Fig. 1	-/240/240
	40	2.0			-/240/240
	50	2.2			-/240/240
	65	2.7			-/240/240
uPVC pipe with Flange of elbow fitted into collar, DWV Bend × 88°	32	1.9		Fig. 2	-/240/240
	40	2.0			-/240/240
	50	2.2			-/240/240
	65	2.7			-/240/240
PP pipe	32	2.9		Fig. 1	-/240/240
	40	3.7			-/240/240
	50	4.6			-/240/240
	63	5.8			-/240/240
	75	6.8			-/240/240
PP-R pipe	32	4.4			-/240/240
	40	5.5			-/240/240
	50	6.9			-/240/240
	63	8.6			-/240/240
	75	10.3			-/240/240
Silere pipe	58	4.2			-/240/240
PE pipe	32	2.9-3.3			-/240/240
	40	3.7-4.2			-/240/240
	50	4.6-5.2			-/240/240
	63	5.8-6.5			-/240/240
	75	6.8-7.6			-/240/240
HDPE	50	3.0			-/240/240
	56	3.0			-/240/240
	63	3.0			-/240/240
	75	3.0			-/240/240

6 DIRECT FIELD OF APPLICATION

The application of the results of the referenced assessment is to floor elements exposed to fire from the underside as tested with the service supported as tested.

7 REQUIREMENTS

The referenced report details the methods of construction, test conditions and assessed results that would have been expected had the specific elements of construction described herein been tested in accordance with AS1530.4.

The supporting floor construction shall be capable of providing effective support of the proposed pipe and firestop collar for the required fire period.

All services shall be supported in the manner in which they are assessed as described in Section 3. Any further variations with respect to size, constructional details, loads, stresses, edge or end conditions, other than those identified in this report, may invalidate the conclusions drawn in the referenced report.

8 VALIDITY

The referenced assessment report does not provide an endorsement by Exova Warringtonfire Aus Pty Ltd of the actual products supplied.

The conclusions of the referenced assessment may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.

Because of the nature of fire testing, and the consequent difficulty in quantifying the uncertainty of measurement, it is not possible to provide a stated degree of accuracy. The inherent variability in test procedures, materials and methods of construction, and installation may lead to variations in performance between elements of similar construction.

The assessment can therefore only relate only to the actual prototype test specimens, testing conditions, and methodology described in the supporting data, and does not imply any performance abilities of constructions of subsequent manufacture.

The referenced assessment is based on information and experience available at the time of preparation. The published procedures for the conduct of tests and the assessment of test results are the subject of constant review and improvement and it is recommended that this report be reviewed on or, before, the stated expiry date.

The information contained in this report shall not be used for the assessment of variations other than those stated in the conclusions above. The assessment is valid provided no modifications are made to the systems detailed in this report. All details of construction should be consistent with the requirements stated in the relevant test reports and all referenced documents.

9 AUTHORITY

9.1 APPLICANT UNDERTAKINGS AND CONDITIONS OF USE

By using this report as evidence of compliance or performance the applicant(s) confirms that:

to their knowledge the component or element of structure, which is the subject of this assessment, has not been subjected to a fire test to the Standard against which this assessment is being made, and

they agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test by a test authority in accordance with the Standard against which this assessment is being made and the results are not in agreement with this assessment, and

they are not aware of any information that could adversely affect the conclusions of this assessment and if they subsequently become aware of any such information, agree to ask the assessing authority to withdraw the assessment.

9.2 GENERAL CONDITIONS OF USE

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9.3 AUTHORISATION ON BEHALF OF EXOVA WARRINGTONFIRE AUS PTY LTD

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9.4 DATE OF ISSUE

14/04/2015

9.5 EXPIRY DATE

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