Fire and Civil
(WA)

12 Dickens Place, Armadale
Flow and Residual Pressure Test Report
-Site Number 2971-
Report A

7th December 2025

CONTENTS

1.0-Preamble
Fire and Civil WA

Company: Talis Consultants

7th December 2025

Email: [redacted]
[redacted] Mobile: [redacted]
[redacted] Mobile: [redacted]

Address: 604 Newcastle Street, Leederville WA 6007

Attention: [redacted]

Postal: P O Box 7083
Applecross North
WA 6153

ABN: 65 009 442 648

Site Address: 12 Dickens Place, Armadale

Project:

Dear [redacted]

We thank you for your instructions to undertake a flow and residual pressure test/s at the above site. Fire and Civil (WA) is pleased to provide the following report.

The results particularised herein were obtained by measuring the water flow and residual pressure at the listed test location/s (see section 2). Our comments and findings set out herein meet the requirements of, or are within the acceptable parameters of the following (as and if applicable): DTS (Deemed to Satisfy) provisions of the Building Code of Australia (BCA) (Vol. 1) Part E 1.3.

Please Note: The flow and residual pressure test results, set out in this report are **indicative only** and obtained solely for design/maintenance purposes.

The test results show flow and residual pressure rates for the time and date on which the tests were performed only. No representation is made or warranty given that the same result/s can be achieved in any further, or additional test/s on account of flow and pressure being affected or compromised by factors including, but not limited to:

1) Time of day/week/year of water test
2) Increased demand on infrastructure (internal/external)
3) Age/maintenance of infrastructure (internal/external)
4) Infrastructure modifications (internal/external)
5) Installation of backflow prevention device/s etc.
6) Local demand variations (internal/external) etc.
7) Water Corporation Pressure Management Programme
8) Service Performance Standards for Water Corporation supplied water is set out in Schedule 2, Sections 1.1 and 1.2 (http://www.erawa.com.au/water) for the Perth Metropolitan area being - minimum 15m head static (147 kPa) @ 20L/minute flow.

Further Note: Whilst all care and diligence is taken using best practice methodology in trying to identify all issues or causes affecting flow and residual pressure results, many factors affecting such results are either inaccessible or undisclosable to our state of the art exploratory equipment and practices or may be limited to the specific scope of instructions given by you. Accordingly, although optional scopes of works may be suggested to overcome substandard or non-compliant pressures and flow rates in our report/s, no representation of clear and satisfactory results can be guaranteed or is warranted by us or should be inferred by your acting on such optional scopes of works suggested or is any warranty expressed or implied by us that your infrastructure will not be damaged by your acting on such optional scopes of works suggested or that your scope of instructions meet all applicable standards and regulatory requirements for the infrastructure and its use as a result of the provision of the services provided to you by Fire and Civil (WA) on this or any other occasion.

Should you require any further information, contact Greg Lock on 041 111 5060.

Regards

[redacted]

Plumber's Licence No. 5247
Water Corporation Contractor ID: C5256718
Backflow Prevention No. 2676
PVC Handling Licence No. 13983594
White Card Holder 11th July 2013
National Police Clearance Application Number: 11009221-5700178 04/04/2025
Email: [redacted]

2.0-Overview of Tests Conducted

Test No.	Location (L) No.	Brief Test Description
1A	**L 1** Street feed fire hydrant	**Flow and residual pressure test conducted L 1 - M 3** **“ - M 4 - Total maximum flow = 15L/s**
2A	**L 1** Street feed fire hydrant (test repeated)	**Flow and residual pressure test conducted L 1 - M 3** **“ - M 4 - Total maximum flow = 14.2L/s**

NOTE:

1) The information provided in this report is correct to the best of my knowledge given the information provided by the client or their representative.
2) Tests were conducted to determine hydraulic performance ONLY.
3) Unless identified NO assessment of fire system design parameters (including hose length coverage) are considered when flow and residual pressure tests are conducted.

3.0-Photograph/s of Test Location/s and Description

L 1: Street feed fire hydrant tested

L 1: Internal view of street feed fire hydrant tested

4.0-Site Map of Test Location/s Specified

5.0-Hydraulic Performance Evaluation Data

Test No. 1A - Flow and Residual Pressure Test at L 1

See 3.0 - Photograph/s of Test Location/s and Description and 4.0 Site Map

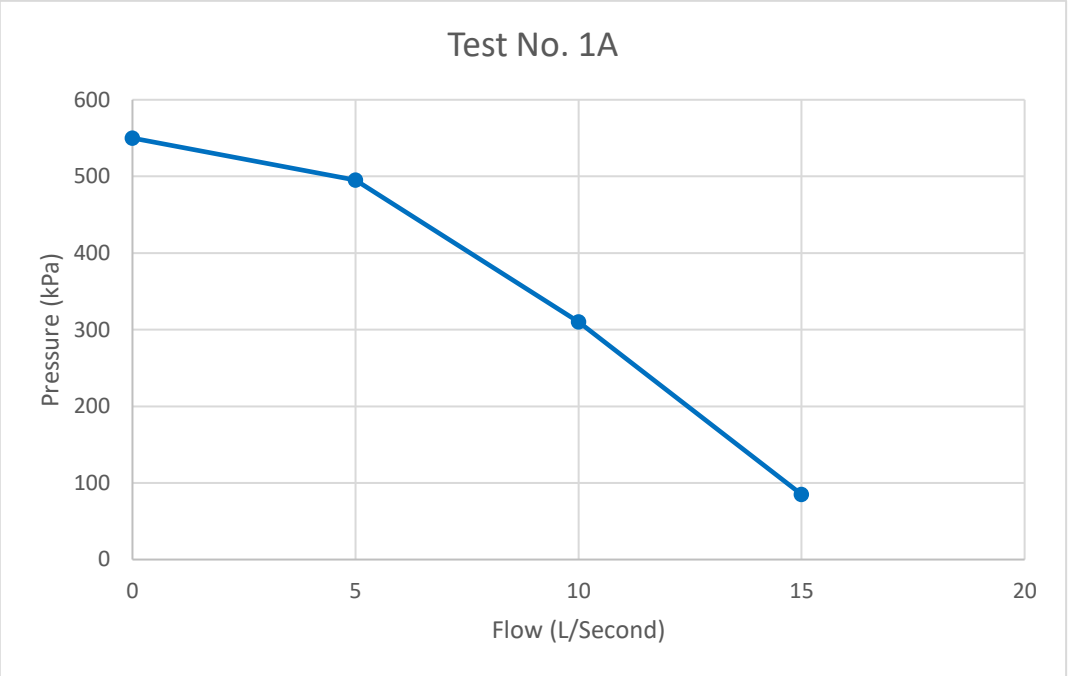
Note:

1. All data below is recorded simultaneously at the **Flow Rate** listed in 5L/s or 10L/s increments or part thereof
2. When multiple testing instruments are flowed at a single location the results are the average of the interpreted combined numerical data generated, the flow is measured in Litres per Second (L/s) and residual pressure measured in Kilopascals (kPa) and rounded up or down to the nearest 5 or 10 kPa increment.
3. No flow is required for a static pressure test.
4. Street feed fire hydrant (SFFH).
5. Refer to 6.0- Calibration Certificates for Flow Machine (M) Instruments only.

The table below reports the flow and coinciding residual pressure testing results interpreted in 5 L/s or 10 L/s increments, or part thereof.

Test:	**Test 1A**				
Time:	**12:17**				
Date:	**07/12/25**				
Location (L):	**L 1**				
Instruments used Machine (M):	**M 3 & 4**				
Brief Current Description:	**SFFH FLOW & LOG**				
Flow Rate (L/s)					
Static 0	**550 kPa**				
5	**495**				
10	**310**				
15	**85**				

See graph/s below when applicable


Test No. 1A
600
500
400
300
200
100
0
Pressure (kPa)
0
5
10
15
20
Flow (L/Second)

Test No. 2A - Flow and Residual Pressure Test at L 1

See 3.0 - Photograph/s of Test Location/s and Description and 4.0 Site Map

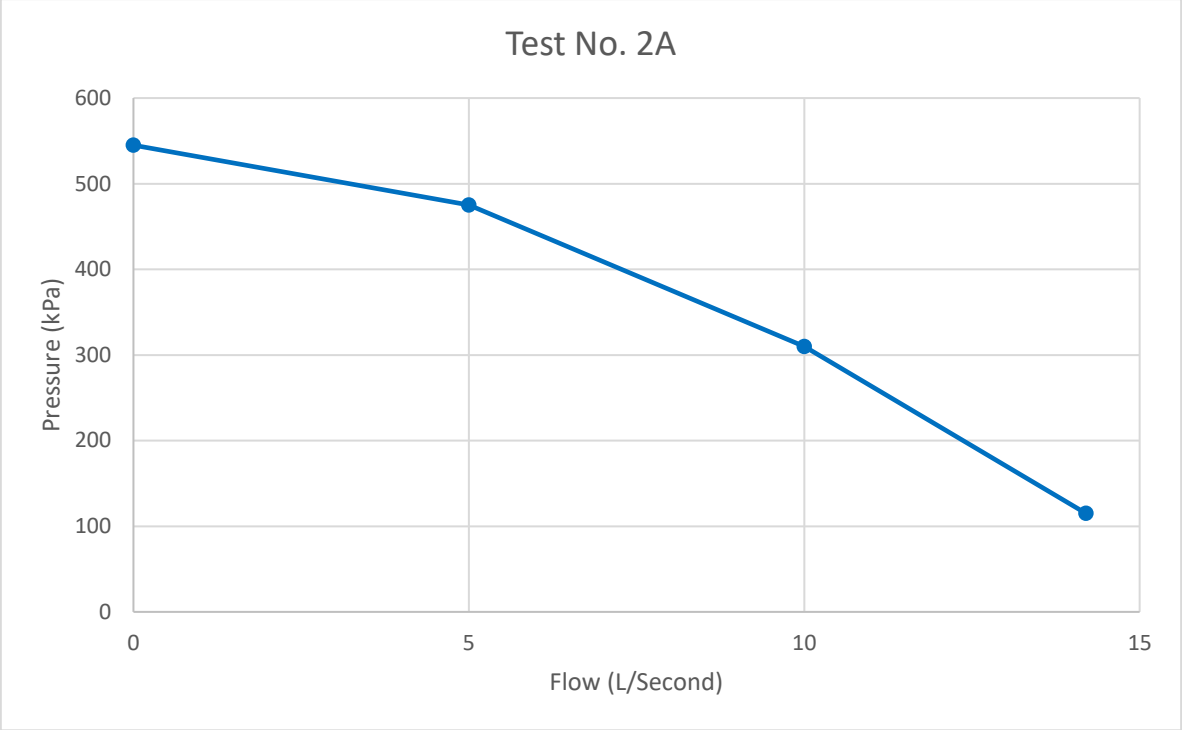
Note:

1. All data below is recorded simultaneously at the **Flow Rate** listed in 5L/s or 10L/s increments or part thereof
2. When multiple testing instruments are flowed at a single location the results are the average of the interpreted combined numerical data generated, the flow is measured in Litres per Second (L/s) and residual pressure measured in Kilopascals (kPa) and rounded up or down to the nearest 5 or 10 kPa increment.
3. No flow is required for a static pressure test.
4. Street feed fire hydrant (SFFH).
5. Refer to 6.0- Calibration Certificates for Flow Machine (M) Instruments only.

The table below reports the flow and coinciding residual pressure testing results interpreted in 5 L/s or 10 L/s increments, or part thereof.

Test:	**Test 2A**				
Time:	**12:23**				
Date:	**07/12/25**				
Location (L):	**L 1**				
Instruments used Machine (M):	**M 3 & 4**				
Brief Current Description:	**SFFH FLOW & LOG**				
Flow Rate (L/s)					
Static 0	**545 kPa**				
5	**475**				
10	**310**				
14.2	**115**				

See graph/s below when applicable


Test No. 2A
600
500
400
300
200
100
0
Pressure (kPa)
0
5
10
15
Flow (L/Second)

6.0-Calibration Certificates

LES COOKE INSTRUMENT CO.PTY.LTD

NATA

NATA accredited laboratory No 1736

Certificate Number
35390/140325/5

Date Of Calibration: 14 Mar 2025
Serial No.: 1845
Customer Ref.:
Submitted By: Fire & Civil
PO Box 7083, Applecross North 6153

Make:
Model: Flowmaster
Range: 0/25 bar

Machine (M) No. 3

NOMINAL APPLIED VALUES		As Found		As Left		
		MEAN INDICATED VALUES	Correction	MEAN INDICATED VALUES	Correction	
bar		bar				
0.00		0.00	nil	0.00	nil	
1.95		1.91	0.04	1.91	0.04	
2.00		1.97	0.03	1.97	0.03	
2.05		2.01	0.04	2.01	0.04	
2.50		2.45	0.05	2.45	0.05	
3.00		2.95	0.05	2.95	0.05	
5.00		4.97	0.03	4.97	0.03	
7.00		7.02	-0.02	7.02	-0.02	
9.00		8.99	0.01	8.99	0.01	
10.00		10.00	nil	10.00	nil	
13.00		12.96	0.04	12.96	0.04	
16.00		15.99	0.01	15.99	0.01	
20.00		20.01	-0.01	20.01	-0.01	
25.00		25.03	-0.03	25.03	-0.03	
20.00		20.02	-0.02	20.02	-0.02	
16.00		16.02	-0.02	16.02	-0.02	
13.00		12.99	0.01	12.99	0.01	
10.00		9.99	0.01	9.99	0.01	
9.00		9.01	-0.01	9.01	-0.01	
7.00		7.02	-0.02	7.02	-0.02	
5.00		4.99	0.01	4.99	0.01	
3.00		2.96	0.04	2.96	0.04	
2.50		2.45	0.05	2.45	0.05	
2.05		2.02	0.03	2.02	0.03	
2.00		1.97	0.03	1.97	0.03	
1.95		1.91	0.04	1.91	0.04	
0.00		0.00	nil	0.00	nil	

REMARKS maximum deviation does not exceed 0.2 % of maximum scale range

The results of the tests, calibrations and/or measurements included in this document are traceable to National measurement Institutes or facilities accredited to ISO/IEC17025 by a signatory to ILAC MRA.

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PLUMBING TESTING Laboratory

PO Box 3225, Malaga WA 6945 Australia
Atley St (corner Victoria Rd)
Malaga WA 6090 Australia
Phone: (61 8) 6465 1888 Fax: (61 8) 9249 7700

Flow Meter Calibration

CUSTOMER: Keyrange Group Pty Ltd
PO Box 7083
Applecross, WA 6153

REPORT No: TT3564B

TEST DATE: 27/10/2025

Machine (M) No. 3

INSTRUMENT DESCRIPTION

MANUFACTURER: Flowmaster	SERIAL NO: 1845
SIZE: 65 mm	CLIENT ID:
TYPE: Magflow EMF 300E	

TEST CONDITIONS

REFERENCE INSTRUMENT: Siemens MAG 6000	
SERIAL NO: 7ME652784902N399	TEST FLUID: Water
AMBIENT TEMPERATURE: 20°C	

TEST RESULTS

NOMINAL FLOW RATE L/MIN	INSTRUMENT UNDER TEST FLOW RATE	MEASURED FLOW RATE	CORRECTION L/MIN	PERCENTAGE OF ERROR
300	300.00	300.06	0.06	0.02
600	600.00	602.13	2.13	0.35
900	895.00	902.72	7.72	0.86
1200	1193.33	1202.78	9.45	0.79
1500	1495.00	1507.22	12.22	0.81
1800	1791.67	1809.02	17.36	0.96

Test Method: The instrument under test was placed in line with a reference flow meter. Six readings were recorded off both meters alternatively over a period of one minute. The readings were averaged and tabulated above.

Comments:

[redacted]
Laboratory Manager

Authorised Signatory:
[redacted]
Laboratory Manager

PTL-F-0908-63

LES COOKE INSTRUMENT CO.PTY.LTD

NATA

NATA accredited laboratory No 1736

Certificate Number
35368/070325/2

Date Of Calibration: 07 Mar 2025
Serial No.: 1846
Customer Ref.:
Submitted By: Fire & Civil
PO Box 7083, Applecross North 6153

Make:
Model: Flowmaster
Range: 0/25 bar

Machine (M) No. 4

NOMINAL APPLIED VALUES		As Found		As Left		
		MEAN INDICATED VALUES	Correction	MEAN INDICATED VALUES	Correction	
bar		bar				
0.00		0.00	nil	0.00	nil	
1.95		1.95	nil	1.95	nil	
2.00		2.01	-0.01	2.01	-0.01	
2.05		2.08	-0.03	2.08	-0.03	
2.50		2.50	nil	2.50	nil	
3.00		3.01	-0.01	3.01	-0.01	
5.00		5.03	-0.03	5.03	-0.03	
7.00		7.05	-0.05	7.05	-0.05	
9.00		9.06	-0.06	9.06	-0.06	
10.00		10.03	-0.03	10.03	-0.03	
13.00		13.05	-0.05	13.05	-0.05	
16.00		16.01	-0.01	16.01	-0.01	
20.00		20.01	-0.01	20.01	-0.01	
25.00		25.05	-0.05	25.05	-0.05	
20.00		20.06	-0.06	20.06	-0.06	
16.00		16.07	-0.07	16.07	-0.07	
13.00		13.05	-0.05	13.05	-0.05	
10.00		10.03	-0.03	10.03	-0.03	
9.00		9.06	-0.06	9.06	-0.06	
7.00		7.04	-0.04	7.04	-0.04	
5.00		5.02	-0.02	5.02	-0.02	
3.00		3.01	-0.01	3.01	-0.01	
2.50		2.53	-0.03	2.53	-0.03	
2.05		2.06	-0.01	2.06	-0.01	
2.00		2.03	-0.03	2.03	-0.03	
1.95		1.95	nil	1.95	nil	
0.00		0.00	nil	0.00	nil	

REMARKS maximum deviation does not exceed 0.28 % of maximum scale range

The results of the tests, calibrations and/or measurements included in this document are traceable to National measurement Institutes or facilities accredited to ISO/IEC17025 by a signatory to ILAC MRA.

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PLUMBING TESTING Laboratory

PO Box 3225, Malaga WA 6945 Australia
Atley St (corner Victoria Rd)
Malaga WA 6090 Australia
Phone: (61 8) 6465 1888 Fax: (61 8) 9249 7700

Flow Meter Calibration

CUSTOMER: Keyrange Group Pty Ltd
PO Box 7083
Applecross, WA 6153

REPORT No: TT3564A

TEST DATE: 27/10/2025

Machine (M) No. 4

INSTRUMENT DESCRIPTION

MANUFACTURER:	Flowmeter	SERIAL NO:	1846
SIZE:	65 mm	CLIENT ID:	
TYPE:	Magflow EMF 300E		

TEST CONDITIONS

REFERENCE INSTRUMENT:	Siemens MAG 6000		
SERIAL NO:	7ME652784902N399	TEST FLUID:	Water
AMBIENT TEMPERATURE:	20°C		

TEST RESULTS

NOMINAL FLOW RATE L/MIN	INSTRUMENT UNDER TEST FLOW RATE	MEASURED FLOW RATE	CORRECTION L/MIN	PERCENTAGE OF ERROR
300	300.00	302.08	2.08	0.69
600	600.00	597.09	-2.91	-0.49
900	893.33	896.68	3.34	0.37
1200	1193.33	1194.72	1.38	0.12
1500	1493.33	1498.14	4.81	0.32
1800	1791.67	1802.97	11.30	0.63

Test Method: The instrument under test was placed in line with a reference flow meter. Six readings were recorded off both meters alternatively over a period of one minute. The readings were averaged and tabulated above.

Comments:

Tested By: [redacted]
Laboratory Manager

Authorised Signatory: [redacted]
Laboratory Manager

PTL-F-0908-63