IN THE MATTER OF THE INQUIRIES ACT 2014

AND IN THE MATTER OF A BOARD OF INQUIRY INTO THE MCCRAE LANDSLIDE

ENTITY: SOUTH EAST WATER CORPORATION

WITNESS STATEMENT OF TIM LLOYD

I, **TIM LLOYD**, General Manager for Service Delivery, South East Water Corporation (**SEW**), of 101 Wells Street, Frankston, in the State of Victoria say:

1. I have previously provided a Witness Statement to the Board of Inquiry on 4 June 2025 (my **First Statement**).

2. I have made this second Witness Statement in response to a Request to Produce a Witness Statement, which was served upon SEW by the Board of Inquiry on 23 May 2025. That Request required an SEW officer or employee to provide a statement in response to the questions set out in the Second List of Questions for South East Water Corporation (SEW).

3. The information in this Statement answers questions 1, 4, 5, 6 and 7 in the Second List of Question for SEW, and is based upon my personal knowledge, or informationI have obtained from the business records of SEW or other employees where necessary. I believe the information to be true.

Question 1 – For the period 1 July 2024 to date, for each of Penny Lane, View Point Road, Prospect Hill Road, Coburn Avenue, Charlesworth Street and Waller Place, please provide a table which includes:

a. **a description of any roadworks or excavation work performed by SEW, including the purpose and outcome of such works;**

b. **the location of the works;**

c. **the date those works were performed; and**

d. **any photographs depicting the works themselves or the location before and after the works were performed.**

4. SEW has prepared two tables, which summarise water and sewer works undertaken by SEW in each of Penny Lane, View Point Road, Prospect Hill Road, Coburn Avenue, Charlesworth Street and Waller Place, including the matters outlined in parts 1 a-c. The tables are annexed and marked **Exhibit 1: "McCrae Water Tasks"** and **Exhibit 2: "McCrae Sewer Tasks"** to this Statement.

5. The tables include Montage record numbers, and these Montage records, including relevant photographs, are **Exhibit 3: "Montage Records"** to this Statement.

Question 4 – Describe SEW's systems and procedures for identifying and detecting water leaks from SEW owned or managed infrastructure. In particular, identify:

a. whether SEW has policies, procedures or requirements in respect of determining the source of water leaks within SEW's network;

6. There are three methods used by SEW for identifying and detecting water leaks across SEW's network. These are:

   a. Reactive leak detection (identified by customer and field staff reports);

   b. Proactive leak detection; and

   c. Remote Network monitoring.

Reactive Leak Detection

7. Due to the size of SEW's water network, potential leaks and other potential asset failures are often reported by customers and the public through the various platforms available. These include SEW's emergency telephone line, SEW online "Snap Send Solve", and/or the SEW's Faults and Emergencies (**F&E**) team (part of the Customer Experience Group) email address.

8. Once reported via these platforms, SEW's F&E team members:

   a. Check to see if the issue has already been reported;

   b. If not, try to identify whether the issue is related to one of SEW's assets;

   c. Assess the consequence (e.g. how much water is escaping, is the water flooding a roadway, is water flowing into a storm water drain);

   d. Based on those factors, determine the urgency of the issue.

9. The above process is documented, and the details of the process is expanded upon in answer to Question 5.

10. Where the issue is potentially associated with our water network, a 'Job' and 'Task' are initiated in Montage, SEW's Works Management System.

11. The priority to respond to a Job is based on the diagnosis of the issue in accordance with Schedule 8 (**Standard of Retail Service Priorities and KPIs**) of SEW's current maintenance services contract with each of Downer and Service Stream and is set out in **Exhibit 4: "Contract - Service Stream - Program Stream 1"** to this Statement. The F&E team are trained to assess issues and initiate Montage Jobs and Tasks in accordance with the Standard of Retail Service – Priorities and KPIs.

12. Once a Job and Task are created in Montage, this will be automatically awarded, in most cases on a 1 to 1 (i.e. equitable and alternating) basis, to one of SEW's maintenance contractors (Downer and Service Stream). The relevant maintenance contractor will be notified by a workflow direct from our systems to theirs, and then they dispatch crews to site to respond to meet the priority set for the Task. All Tasks associated with a Job are given to the same contractor, where the work required is within their remit.

13. Since October 2022, SEW's reactive leak detection has been provided by our maintenance contractors, namely Service Stream and Downer. As described below, if the source of a leak remains unclear after investigation by the maintenance contractor, it may then also involve SEW and specialised leak detection by Detection Services Pty Ltd.

14. SEW receives approximately 1000 reports of water leaks and bursts a month. In most cases, maintenance contractor crews (crews may comprise of one or more individuals) are able to easily diagnose the source of a leak and will either commence repair or, where required, arrange for further maintenance contractor crews with appropriate plant and equipment needed to complete the task.

15. Maintenance contractor crews are required to spend at least 30 minutes on site investigating the issue, unless the issue is immediately obvious. Investigating includes basic leak detection and water testing (described below).

16. To be clear, water testing alone is not a deciding factor as to whether the source is or is not from a SEW asset. There would generally be other clues to suggest whether the water was from SEW assets, for example, sounds on fittings, or perhaps other evidence like poor pressure. It is a combination of things that build up a picture.

17. Where the maintenance contractor crew suspects that the source may be from the drinking water network, but is still unable to identify the source, a supervisor from the same maintenance contractor is required to attend to undertake further investigations for at least another 30 minutes – see Schedule 4 "Water and Sewer Maintenance Services Agreement Schedule 4 – Specifications Part 2: Water Civil", which forms part of **Exhibit 4** attached to this Statement.

18. Where the maintenance contractor supervisor and crew working together are unable to confirm the location of a leak, the maintenance contractor will either arrange for specialised leak detection to be undertaken or ask SEW to assist with the investigation

19. When asked to assist the investigation, SEW may either request support from Detection Services Pty Ltd or send its own employees to the site. In other words, either the maintenance contractor (Service Stream or Downer), or SEW may decide to deploy specialist leak detection from Detection Services Pty Ltd if the maintenance contractor is unable to determine the source of the leak. Where the results from these investigations, namely the initial investigations of the maintenance contractor or the specialist services of Detection Services Pty Ltd, indicate that the source is not from the SEW drinking water network, the Task may be recorded as such and closed. However, it should only be closed when there are several pieces of evidence to support this, and after the contractors have tested multiple fittings in the area. For example, after the contractors have tested multiple fittings in the area and there is no noise on the pipes, water testing results were negative and there is no other indication the water is from the drinking water supply.

20. I set out a description of the different approaches to leak detection below.

Basic leak detection and testing

21. Basic leak detection (also known as non-specialised leak detection) is the first step of any leak investigation, and is undertaken by our maintenance contractors, Service Stream and Downer. The requirements for basic leak detection are set out in Clauses 11.2 and 3.4 of Part 2 of Schedule 4 to our contract with them (Pages 196-197 and 175 respectively of **Exhibit 4**).

22. SEW engages maintenance contractors based on their experience. For that reason, SEW has not specified in its contract each step in the basic leak detection process it expects those contractors to undertake. SEW has been provided with copies of Service Stream's Inspection Procedure and Downer's Water Main, Repair Leaks Work Instructions, which are **Exhibit 5: "Service Stream's Inspection Procedure"** and **Exhibit 6: "Downer's Water Main, Repair Leaks Work Instructions"** to this Statement.

23. As a matter of practice, I am informed by SEW's Water Maintenance team, and as Exhibits 5 and 6 suggests, basic leak detection involves examining the surrounding area, tracking the source of any visible water, checking valves and other fittings and examining domestic meters, lifting pit lids of other utilities and attempting to follow any water sources to their origin. The maintenance contractors also use basic acoustic detection equipment (probes and 'listening sticks') to test fittings for sounds indicating the possible presence of a leak.

24. I am further advised by the Water Maintenance team that maintenance contractor crews will test the water using an electrical conductivity (**EC**) or total dissolved solids (**TDS**) pen (an electronic device with a probe / sensor at the end) and, where available, chlorine reagent test kits. I understand from the Water Maintenance team that only some crews and supervisors have these chlorine reagent test kits. Attached to this Statement and marked **Exhibit 7: "User Manual - EC-TDS Pen"**, **Exhibit 8: "Basic User Manual - EC-TDS Pen"** and **Exhibit 9: "Pocket Pro Low Range Conductivity Tester"** are user guides for, and a photograph of, an EC / TDS pen.

Specialised leak detection

25. Specialised leak detection is undertaken by both SEW's maintenance contractor, Service Stream (who have subcontracted this to Detection Services Pty Ltd) and by SEW's own employees.

26. In broad terms, and as noted above, the maintenance contractor crew initially do basic exploration using basic tools and approaches. The maintenance contractor crew's supervisor assists and supports if called upon, aiding the exploration. As a matter of practice, if the source of a leak cannot be identified after initial investigations, Service Stream and SEW employees may undertake further investigations. Frequently Detection Services Pty Ltd will be engaged for this specialised detection work. The specialised detection involves more advanced equipment.

27. Specialised leak detection technicians walk the alignment of the water main and service pipes and use a range of more sophisticated equipment, by way of example the **Fuji Sound Detector** to test all available fittings along the alignment to locate noise. Technicians might also use the **Touch Pro Correlator** to pin-point the leak or, if required, 'lift and shift' acoustic devices such as the **Enigma** or **Von-Roll sensor,** which can be used in sequence and for longer duration i.e. overnight when there is less background noise. A copy of a brochure for the Fuji sound detector is **Exhibit 10: "Fuji Sound Detector FSB-8D_FSB"** attached to my Statement.

28. SEW technicians use similar methods and equipment as the maintenance contractor Service Stream, but also use an acoustic leak detection tool called the Sewerin AC200. They may use basic leak detection as a way of verification as well as more advanced techniques. However, Detection Services Pty Ltd is often called upon to perform the specialised detection work.

29. The general requirements for the specialised leak detection undertaken by our maintenance contractor, Service Stream, are set out in Clause 11.3 of Part 2 of Schedule 4 to our contract with our maintenance contractor (page 197 of **Exhibit 4** above).

30. SEW employees who undertake specialised leak detection have received on the job training, including in relation to acoustic leak detection and EC testing The training is undocumented. However, we seek to ensure new starters spend six months gaining experience with a more experienced peer.

31. As part of supporting leakage detection SEW employees may collect water samples and deliver them to our contracted laboratory (ALS). The laboratory undertakes a seepage test to confirm the chemistry of the water. Typically, a seepage test undertaken by ALS will test the following parameters:

    a. PH (Units);

    b. Electrical Conductivity – EC (uS/cm);

    c. Fluoride – F (mg/L);

    d. Ammonia – NH_3 (mg N/L);

    e. Chloride – Cl (mg/L);

    f. Sulfate – SO_4 (mg/L).

32. An example of a seepage test report is set out in **Exhibit 11: "Example seepage test report"** to this Statement. Whilst I am familiar with the usefulness of a laboratory test to ascertain the chemistry of water samples taken from the field, I am not currently familiar with the parameters for water in the SEW operational area. Results are currently interpreted by the Water Maintenance team or the Network Operations Team (Service Delivery) in SEW.

33. At present, the process of taking and interpreting water samples forms part of the aforementioned 'on the job' training SEW's employees receive.

34. However, below I refer to a procedure that Mr Declan McCreesh, SEW Group Manager – Network Operations, is preparing for SEW staff and maintenance contractors that will provide guidance for taking and interpreting water samples.

Proactive Leak Detection

35. Proactive leak detection (otherwise known as scheduled leak detection) is undertaken in the drinking water and recycled water network to identify leaks which cannot be identified by network monitoring alone and are generally not visible to the public (and hence typically unreported). The proactive detection of leaks in the network contributes to the reduction of water losses, through identifying leaks that are not visible at surface level.

36. In broad terms, proactive leak detection involves the performance of scheduled checks at regular intervals on SEWs water assets.

37. SEW's employees do not provide proactive leak detection activities. This role is undertaken by contractors.

38. Before 19 May 2025, proactive leak detection was undertaken by Detection Services Pty Ltd. A copy of the Detection Services Pty Ltd contract, including a work specification, is set out in **Exhibit 12: "C0002442-Leak_Detection_Services - Detection Services"** to this Statement (**'C0002442 - Leak Detection Services – Detection Services'**).

39. In May 2025, proactive leak detection work was awarded to Service Stream, one of SEW's main maintenance contractors, on a temporary basis. From the 19 May 2025, Service Stream is required to perform proactive (or 'scheduled') leak detection services in accordance with clause 11.4 of the maintenance services agreement(See page 198 of **Exhibit 4**).

40. Service Stream's work specification is Clause 11.4 "Scheduled Leak Detection" of Schedule 4, Part 2 of **Exhibit 4** to this Statement (**'Service Stream work specification'**).

41. SEW intends to enter into a new contract with a service provider following analysis of its future needs and a procurement process has been completed. As such, the work specification for Service Stream is merely an interim measure. SEW is giving further consideration to how the services will be provided given the rollout of digital meters and the learnings from the McCrae Landslide.

42. I am informed by the Water Maintenance Manager that, prior to the McCrae Landslide, the aim was to undertake proactive leak detection on a 7-year basis. That is to say, each asset in the SEW network would be proactively checked every 7 years. However, I am informed that since May 2025 SEW has commenced issuing work for proactive leak detection in accordance with our new zone prioritisation tool, titled "Leak Detection Zone Prioritisation Tool 2025", which I discuss further in in paragraph 59 below.

43. Proactive leak detection is overseen by the SEWs Water Maintenance Team (part of the Service Delivery Group).

Leak Detection Procedures

44. One of the learnings from the McCrae Landslide has been the need to ensure that leak detection procedures are clearly documented for the benefit of SEW's staff and contractors, including the procedure for undertaking EC tests. To date the reactive leak detection tasks have primarily been undertaken on the basis of 'on the job' training. Mr Declan McCreesh, Group Manager – Network Operations is in the process of drafting a procedure for investigating unknown sources of water and an accompanying work instruction to outline steps for leak detection for the benefit of both SEW employees and SEW's maintenance contractors. This will become a minimum standard / expectation for our future leakage detection and maintenance contracts.

Remote Network Monitoring

45. There are two broad categories of remote network monitoring techniques currently used on SEW's water network. These are:

    a. Telemetry [using Supervisory Control and Data Acquisition (**SCADA**)]; and

    b. Digital meter sensors.

(a) Telemetry

46. Telemetry means the remote collection and transmission of data from sensors and monitoring devices to and from a centralised control centre. SEW's control centre, known as the Network Operating Control Centre (**NOCC**), receives alarms based on pre-set thresholds.

47. SEW uses a system called SCADA to monitor the network across a range of different field equipment such as pumps, tanks and pressure reducing valves. This information is collected and centrally displayed in the NOCC

48. Other monitoring devices (such as acoustic pods and data loggers) are also installed or deployed at various points of the network to monitor pressure and flow.

49. I am informed by Mr Andrew Forster-Knight, SEW Executive General Manager – Digital and Transformation, that many alarms have a trigger point, and some alarms have instructions to ensure the NOCC operator knows what to do to respond to an alarm. The instructions appear on the operator's screen when an alarm is presented.

50. In some instances, an alarm can assist in identifying the presence of a leak. For example, if an alarm alerts that a high flow is leaving a tank it might indicate there is a leak.

51. While it is not within my remit, I understand that Mr Forster-Knight is reviewing SEW's alarm management and that he refers to this in his Witness Statement.

(b) Digital Meters

52. The digital meter program falls within Mr Forster-Knight's remit. I am informed by Mr Forster-Knight that some digital meters deployed in the network, including all installed in McCrae since the McCrae Landslide, have embedded acoustic sensors allowing them to identify a sound in the network.

53. Digital meters that do not have embedded acoustic sensors are used to detect 'continuous flow' characteristics from water use behind the meter on domestic properties. In other words, they assist in identifying a private property leak.

54. Digital meters which have acoustic sensing capabilities, such as the ones installed in McCrae, are monitored by a separate platform. Once the sound from the sensor reaches a certain level, it triggers a notification to the NOCC team, who are responsible for monitoring the system. The highest sounds are prioritised, and then the NOCC operator will initiate an investigation task. This typically involves engaging a specialised leak detection provider to attend the location and investigate further.

55. I am informed by Mr Forster-Knight that SEW's program aims to ensure approximately 60% of all digital meters installed across our service areas are fitted with network leak detection acoustic sensors. SEW will evaluate the results of our deployment in McCrae and use the results to inform our approach to other higher risk areas.

b. the means employed by SEW to identify and monitor high leakage distribution zones, including the frequency such assessments are undertaken and relevant integers or benchmarks;

56. I have been informed by SEW's Water Maintenance team that SEW's water distribution zones are established for a number of operational purposes, for instance water pressure and quality. Mr Forster-Knight has informed me that water distribution zones are based on factors including population, types of properties, topography, pressure and the structure of the network.

57. SEW does not create water distribution zones based on leakage

58. However, water distribution zones can be (and are) used for the scheduling of proactive leak detection work.

59. In February 2024, SEW began developing a new method to prioritise the proactive leak detection work in its water distribution zones. This tool was operationalised and the first work packages issued in May 2025. This new approach includes criteria for each water distribution zone, which are then prioritised based on a weighting The new prioritisation tool is set out in **Exhibit 13: "Leak Detection Zone Prioritisation Tool_2025"** to this Statement (**'Leak Detection Zone Prioritisation Tool 2025'**).

60. The key criteria used (and in respect of which work packages are issued to SEW's contractor) are described below:

    a. When the zone was last inspected (oldest first);

    b. Number of leaks identified in the last proactive leak detection activity in that zone (more leaks higher priority);

    c. Number of reactive leaks and bursts;

    d. Pipe material and age;

e. Digital meter rollout (existing and planned rollout).

61. SEW will update this Leak Detection Zone Prioritisation Tool every six months. Future iterations of the Leak Detection Zone Prioritisation Tool will be informed by the data from the digital meter rollout, from our investigations into some of the latest technologies in this field, and from our learnings from the McCrae Landslide event. This in turn will inform specification for a future leakage detection services contract.

62. SEW contractors also provide SEW with a spreadsheet each month, which includes a list of their findings. SEW then actions any leaks based on priority. Attached to this Statement and marked **Exhibit 14: "Spreadsheet provided by Detection services Pty Ltd"** is a spreadsheet provided by Detection Services Pty Ltd re March 2025.

63. In the course of undertaking their proactive leakage detection, SEW's contractor must immediately report the identification of larger leaks, particularly those coming to the surface.

64. As referenced above, I am informed by Mr Forster-Knight that he is reviewing the calibration of alarms and reviewing the process for escalating issues relating to the performance of SEW's network. This will identify the performance of geographic zones around our operating area. It will set flow thresholds for each zone to drive leakage investigations. This analysis will be undertaken continuously in real time.

65. I further understand from Mr Foster-Knight that he is also assessing the performance of all network flow meters (zone meters) to ensure they continue to be operational and accurate. He expects the review to be completed in quarter 1 of FY25/6.

c. whether the McCrae area (or parts thereof) was or is in a high leakage distribution zone(s);

66. I refer to my answer to part b. of this question and note SEW does not create water distribution zones based on leakage.

67. However, SEW does use the water distribution zones for, amongst other things, the purposes of leak detection prioritisation.

68. Whilst SEW does not presently measure leakage in individual zones, it does assess each zone based on a number of physical characteristics (see paragraph 60) from which all zones are ranked. Currently, the data available from the Leak Detection Prioritisation Tool 2025 indicates that, from 174 zones, with the Zone ranked 1 being the highest priority and Zone 174 being the lowest priority, the three water distribution zones that encompass McCrae (being Parkes St Tank, Cook St Tank and Waller Place P.R. Zones) are ranked as follows:

a. Parkes St Tank – 132;

b. Cook St Tank – 145; and

c. Waller Place P.R. – 99.

69. McCrae proactive leak detection currently operates more intensively than the Leak Detection Prioritisation Tool 2025 would otherwise identify, with night time analysis undertaken three times per week and "on ground" leak detection undertaken every two to three weeks.

70. I am informed by Mr Forster-Knight that, during the assessment for the prioritisation of the installation of digital meters, the network and customer leak history in McCrae was assessed as average compared with the network as a whole.

71. Mr Foster-Knight informs me he is working on a number of initiatives that will allow SEW to estimate its non-revenue water, including leakage, at a zonal level in the future.

d. the methods employed by SEW to determine whether reported or observed water from an unexplained source has emanated from one of SEW's assets or another source;

72. If a source of water is reported to SEW, our F&E team initially assess whether we have assets in the area. This is a structured process as outlined in my answer to question 5 below. If it is determined SEW has assets in the area, a Job would be created on Montage, the maintenance contractor dispatches a crew and that crew investigates by using the approach identified in my answer to question 4a above.

e. the way in which acoustic leak detection is conducted, including by reference to any relevant policies, procedures, requirements or manuals;

73. I refer to Exhibit 4 to the Witness Statement of Lara Olsen, a copy of which is attached as **Exhibit 15: "Annexure 4 - Acoustic Leak Detection"** to this Statement.

74. I also refer to my answer to question 4a.

75. SEW's reactive leak detection is undertaken by SEW maintenance contractors supported by SEW employees. SEW's proactive leak detection is undertaken exclusively by maintenance contractors. The methods and equipment used to undertake reactive and proactive leak detection are similar. It is a contractual requirement that SEW's contractors use sophisticated leak detection equipment (see **Exhibit 4** page 197), and SEW employees have access to similar equipment

76. The variety of equipment used is substantially based on the amplification of noise to identify the presence of a leak on the water network and examples of such equipment include:

    a. Acoustic listening sticks – a device that is placed in contact with a point on the network that either manually or electronically amplifies a noise created by a leak to the human ear. More advanced versions of this technology have a display on which the results are presented.

    b. Ground microphones – a device placed on the ground surface above a pipe that will detect the faint sounds of water escaping from a pipe below.

    c. Leak noise correlators – typically two sensors that are magnetically attached to two separate ancillaries (e.g., a valve, a hydrant, etc.) at 100 – 200m apart. These devices listen to the pipe between their locations and, if a leak is present, they transmit data back to a base station that interpolates the distance between the two sensors estimating the position of a leak.

    d. Acoustic loggers / pods – devices installed on network ancillaries and left in place to monitor the performance of the network. These devices either transmit their data to a central point where it can be analysed or are collected from site so the data can be downloaded for analysis.

77. The above is a generic description of some of the more common types of equipment available, and the manner in which they are used.

f. whether there is acoustic telemetry in SEW's network in the McCrae area beyond digital meters installed on customers' premises;

78. The only acoustic telemetry on customers' premises in McCrae are the digital meters that have been installed on their premises.

79. On or about 4 June 2025 SEW installed approximately 35 Von Roll acoustic listening devices on sections of trunk mains and distribution mains in McCrae. These devices routinely transmit information to a central point where the data can be interpreted to assess whether there is leak present. The Von Roll devices replaced eight Enigma devices that had been previously installed on the trunk main running through McCrae on 16 January 2025 and 21 May 2025 that are not telemetered.

80. I am also aware of telemetry on SEW assets associated with flow meters and water tank levels McCrae. I am not aware of any others.

g. the way in which electrical conductivity tests are conducted in respect of possible leaks in SEW's network, including by reference to any relevant policies, procedures, requirements or manuals.

81. I refer to my answer to Question 4(a).

82. EC or TDS tests are carried out by obtaining a sample of the water thought to be leaking from the network before immersing an EC or TDS pen into the water sample up to the maximum immersion level, stirring the pen slightly, dislodging air bubbles from the pen, waiting until the display stabilises and then noting the reading once stable.

83. As noted above, these tests are performed by our maintenance contractors. To the extent that they are performed by SEW employees, those employees have received 'on the job' training from more experienced employees. However, and again as noted above, Mr McCreesh is in the process of preparing material that will be used for training and educational purposes.

Question 5 – Describe the process by which reports of possible leaks to SEW are prioritised on the basis of safety concerns. Where a current process is different to the process or policy that existed at the time of the 5 January 2025 Landslide and/or the McCrae Landslide, please make that distinction and explain any differences.

84. I am informed by SEW's F&E team that when F&E is notified of a possible leak, for instance by a caller by telephone, via the Snap Send Solve application, or by email to F&E they are trained to:

a. Use guidance information on 'H2Go', the F&E team's knowledge management system, to learn more about the possible leak being notified, either by asking the caller a series of questions to clarify the situation or analysing photographs provided via Snap Send Solve;

b. Based on that knowledge, determine the 'Priority' of the possible leak; and

c. Create a Job in Montage (SEW's works management system), assigning a Priority to the potential leak.

85. Jobs are assigned priority 1 to 10. Water main leaks or bursts are assigned priorities 1, 3, 4 and 6. Any job that is thought to pose a risk to safety is given priority 1. For context:

a. Priority 1 is a water main break, valve failure, broken hydrant or burst large service. The potential consequences include loss of supply, major property damage, large volume of water being wasted, personal injury or risk to public health or major environmental impact. Work needs to start within 1 hour.

b. Priority 3 is water main break, valve failure, broken hydrant or burst service. The potential consequences include loss of supply, property damage, large volume of water being wasted, environmental impact, or burst service. Work needs to start within 3 hours.

c. Priority 4 is leaking water main, valve or hydrant, leaking tapping, partial valve failure or flushing of water main for water quality complaint. The potential consequences include minor property damage, minor environmental impact, or significant customer impact. Work needs to start within 8 hours.

86. These Priorities form part of the Schedule 8 of the Maintenance Services Contract, being **Exhibit 4** to this Statement.

87. If a safety concern is reported or identified as part of the process of assessing a call, the F&E team assigns the Job a Priority 1 status indicating a safety concern (noting that the standard priority assigned to a water main leak is Priority 3 or 4). The Team Leader for F&E has provided to me relevant guidance information from H2GO, which is set out in **Exhibit 16: "Faults Diagnosis Guide", Exhibit 17: "Water Main" and Exhibit 18: "Service Pipe"** to this Statement.

88. Although I do not oversee the F&E team, I am informed by the Team Leader for F&E that staff receive training, including being told to ask questions and listen for 'key words' such as 'large leaks', 'property damage', 'power lines' and 'water erupting into air'. The H2Go dashboard used by the F&E team contains links to assist staff to identify and prioritise potential issues within SEW's network. The Team Leader for F&E has provided to me an extract from the dashboard relating to "injury" ,which is set out in **Exhibit 19: "Screenshot of training link re injury"** to this Statement.

89. I am informed by the Team Leader for F&E that following the McCrae Landslide, she instructed the F&E team to classify all water leaks within the McCrae Landslide Area as Priority 1. The H2Go system was formally updated on 21 May 2025 with guidance material dealing specifically with McCrae. The guidance material states that all notifications of leaks in the Waller Place, Cook Street and Parkes Street zones are to be assigned Priority 1. A copy of the guidance material is set out in **Exhibit 20: "McCrae water leaks"** to this Statement.

90. Since the McCrae landslide, the F&E team has not received any notifications of a possible leak in the McCrae Area that raises a safety concern.

91. The Team Leader for F&E informs me that they maintain a customer interactions spreadsheet for all contact from customers in McCrae. The F&E Team Leaders then look over this data to ensure work is managed effectively.

Question 6 – Describe the leak detection services currently being provided to SEW by Service Stream and Downer, including both reactive and proactive leak detection, and provide an overview of the Water Maintenance Team's role in overseeing the provision of these services by Service Stream and Downer. As part of your answer, exhibit any documents SEW provides to Service Stream or Downer which include requirements for the process it is to undertake in conducting leak detection.

92. I refer to paragraphs 12 to 41 of my answer to Question 4(a).

93. SEW is in the process of evaluating its current and future leakage detection service requirements with a view to procuring new contracted services. The services within this contract will consider the impact of the Digital Meters currently being deployed, changing environmental conditions and adopt learnings from the events at McCrae.

94. The Water Maintenance Team's role in overseeing the provision of leak detection services by Service Stream and Downer includes:

    a. Issuing work based on the proactive leak detection Prioritisation Tool;

    b. providing technical support to the crews undertaking maintenance on the water network, including fielding telephone calls, responding to emails and visiting site;

    c. Providing or arranging for specialised leak detection support;

    d. Overseeing the Montage works management system to review / close a job that has been assigned to a contractor;

    e. approving payment; and

    f. providing feedback on the performance of Service Stream and Downer to the Asset Performance and Resilience Team that manages the maintenance services contract.

95. Although the Water Maintenance Team performs the above functions, it does not conduct auditing of services provided by Service Stream and Downer. This is performed by the Asset Performance and Resilience Team.

Question 7 – Describe any changes to SEW's systems and procedures for identifying and detecting water leaks that are currently being proposed or considered as a result of the McCrae Landslide.

96. I refer to paragraphs 10 - 23 of my First Statement.

Signature: _____ Witness: _____

97. I understand these issues are also addressed in paragraphs 42 - 46 of Mr Forster-Knight's Statement.

98. I have been informed by the Water Maintenance Manager that proactive leakage detection was previously based on a 7-year cyclical approach. As I have described above in paragraph 59, a new tool has been implemented that prioritises the deployment of proactive leakage detection resources across our service area. Meanwhile, in the McCrae Landslide Area we continue to undertake proactive leakage detection every 2to 3 weeks. This will continue for a number of cycles after the full deployment of smart meters to compare and contrast the results and help inform the future needs of our leakage detection contract.

99. SEW has been undertaking a trial of pressure monitoring equipment. We have commenced deployment of this equipment in a number of zones and have decided to include McCrae within this pilot as a result of the McCrae Landslide. Outcomes from this pilot will better inform us on mitigation of the impact of 'pressure transients' (i.e. fast-moving pressure waves, often called 'water hammer'; such a phenomenon can lead to premature asset failures) in areas of our network, including in areas similar to McCrae.

100. I am aware that the Liveable Water Solutions Group at SEW are, in light of the McCrae Landslide, undertaking asset management planning improvement initiatives, which is covered in Mr Christopher Smith's Statement. Service Delivery will take the learnings of its current work and ensure integration into these initiatives.

Dated: 10 June 2025

Personal Information

Signature: _____ Witness: _____

Signature: _____ Witness: _____