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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, of 101 Wells Street, Frankston, in the State of Victoria say:

1. I am the General Manager for Service Delivery of South East Water Corporation (**SEW**).
2. I have held this position at SEW since 11 November 2024.
3. I hold a Bachelor of Engineering degree from Leicester Polytechnic's (now called DeMontfort University) program of Engineering Technology focused on mechanical, production and operations and a Higher National Diploma in Engineering (Mechanical and Production) from the same institution. I also hold a BTEC Diploma in Water Supply and Distribution and a BTEC Diploma in Design and Operation of Sewerage Systems.
4. I have worked for approximately 30 years in strategic and operational roles across a range of asset maintenance, utility and infrastructure service providers. After graduating I was employed by Severn Trent Water Plc, one of the largest privatised water utility companies in England and Wales. I held a variety of roles at Severn Trent Water, including Network Control Manager, Regional Manager – Service Delivery, and Optimisation and Efficiency Manager. After moving to Australia in approximately December 2010, I was employed in various roles by Thiess. In my initial role as Group Manager – Maintenance, I was responsible for a team that, in partnership with SEW, serviced SEWs maintenance function.
5. From July 2013 until November 2024 I was employed by AusNet Services in a variety of management roles. My last role at AusNet, which was from 2019 to October 2024, was General Manager, Network Control & Operations at AusNet Services, and involved leading network operations and planning.
6. In November 2024 I commenced employment at SEW. In my role as General Manager Service Delivery at SEW, I am part of the executive leadership team, and oversee the

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network maintenance and operations, asset performance and resilience, and treatment and recovery services, including water recycling plants.

7. On 23 May 2025 the Board of Inquiry into the McCrae Landslide served upon SEW's lawyers a Request to Produce Witness Statement, which required me to provide a Statement in response to the questions set out in that document.
8. The information in this Statement is based upon my personal knowledge, or information I have obtained from the business records of SEW or other employees where necessary. I believe the information to be true.
9. This Statement is structured in the order of questions set out in the List of Questions For Mr Tim Lloyd, South East Water Corporation (SEW).

Question 1 – Outline the work currently being undertaken by SEW in revisiting its standard practices for leak detection, including but not limited to alarms, acoustic testing, electrical conductivity testing and protocols for site visits.

10. Due the occurrence of the McCrae Landslide, SEW has identified McCrae as a high priority zone, which requires heightened attention. A number of processes have been employed to increase the monitoring and attention to leaks in the area, as outlined below.
11. SEW has commenced a manual review of the base usage flows into the McCrae area. This involves SEW selecting a period at night (often 1:00am to 3:00am) and monitoring minimum flow within the network. Staff within SEW review the night flow data in McCrae three times a week to look for any anomalies. Historical usage in the area is taken into account to establish water flow trends. If there is an unexplained spike or anomaly in excess of historical trends, it can be indicative of a leak or other issue so it is investigated further. The resulting investigation may detect a leak, an issue with the pumping regime or a problem with a meter. Whilst the rolling data is seasonally adjusted, it cannot take into account changes in usage, for instance, building developments and the like. Although this is not within my remit, I understand we are in the process of establishing thresholds, for instance one or two standard deviations above normal, that will trigger an alarm in SEW's Network Operation Control Centre. More sensitive thresholds may be used in areas more prone to landslides. This is still under development.
12. Since the McCrae Landslide, SEW has also installed a number of portable acoustic listening devices (or pods) on SEW's trunk pipe assets as a temporary measure to monitor the network by listening for leaks. The portable devices actively listen to the characteristics of the trunk main to assist in detecting leaks. To date, no leaks have been identified in our trunk mains in McCrae. Typically metallic pipes carry the best noise compared with PVC. However, the device can still assist in identifying leaks on plastic pipe. SEW is in the process of continuing to test these devices and explore other options. Given the potential

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benefits of this technology, SEW is currently engaging in conversations with technology providers in Australia and overseas, with the view to implementing these devices on a permanent basis in SEW's network, beginning with 'high risk' areas like McCrae.

13. This is in addition to SEW conducting more frequent physical in-field acoustic leak detection, with staff or contractors 'on the ground' in the McCrae area every 2 or 3 weeks. This is a proactive measure that does not depend upon SEW having received a call or contact via "Snap Send Solve".
14. SEW continues to receive customer reports of water surfacing. SEW's standard procedure is to respond within 1 hour where the issue being reported is assessed as potentially posing a safety concern or damage to infrastructure, and otherwise within 3 hours to 8 hours. From April 2025, all customer reports within the McCrae Area are to be responded to within 1 hour. I would have liked for this change to have occurred earlier, but due to a misunderstanding by those undertaking the change, it was not fully implemented until April 2025. The purpose of smart meter technology is to identify many leaks before they emerge to the surface, ensuring their much earlier identification and repair.
15. SEW has commenced the roll-out of smart meters in the McCrae area. Smart meters can operate like acoustic listening devices on SEW's network in the immediate vicinity of the smart meter. Smart meters also allow the water use of private properties to be continually monitored and tracked. Therefore, leaks on private properties will be able to be identified in a timelier manner, and we are able to notify our customers of private leaks on their properties faster. After each smart meter is installed, if a suspected private property leak is identified, SEW contacts the customer by telephone. In one case, the live data allowed SEW to notify a customer of unusual water usage, which was identified as the customer having left a hose running. In other words, this technology allows us to identify issues and follow up more quickly than in the past. SEW is also looking at technology to automate reminders to customers in circumstances in which a private leak has been identified on their property but a repair has not been effected.
16. Given the Burst Water Main occurred in a non-residential and discrete area, I do not believe the Burst Water Main would have been identified by smart meters installed on private properties because those meters can only monitor sound for a certain distance into SEW's network. That is why, as previously mentioned, SEW is looking to invest in the installation of leak detection technologies on distribution and trunk pipe assets to complement the new fleet of smart meters and mitigate the risk.
17. In addition to some of the immediate processes SEW has taken in the McCrae area, we are also developing some longer-term strategic approaches to present and future challenges, which I address below.

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18. Last year SEW commenced the development of a new prioritisation tool - '**Leak Detection Prioritisation Tool 2025**'. The purpose of this was to create a dynamic document for use by the Water Maintenance Team that lists all SEW's water zones and uses a range of parameters to prioritise which zones should be targeted for proactive leak detection ahead of others. The latest iteration of this tool became operational in May. It is expected there will be further iterations of this tool over time. A copy of this prioritisation tool is **Exhibit 1: "Leak Detection Zone Prioritisation Tool_2025"** to this Statement.
19. SEW previously did not have a formal document that outlined the range of field and laboratory testing for the chemical composition of water and how those results could be interpreted. Rather, SEW relied on the experience of our staff and on-the-job training provided to our staff, and the procedures of our contractors to select the tools that they employ. Following the McCrae Landslide we have created a procedure for **Investigating Unknown Water Sources**'. The purpose of this is to identify the various chemical tests that can be undertaken in the field and lab to better identify the source of water. This first draft is completed and being reviewed internally. A copy of this draft is **Exhibit 2: "AMXXXX Investigating unknown sources of water"** to this Statement.
20. To complement the 'Investigating Unknown Water Sources' procedure, we are in the very early stages of developing a **Work Instruction for Investigating Leaks**'. The purpose of this is to provide our people and maintenance contractors a clear instruction on the expectations of undertaking an investigation into a suspected leak. This will include the sequence of steps to be taken, the use of the field tests (e.g. the EC testing pen) and laboratory tests, the uses of equipment such as that used for asset sounding and other site exploratory work (e.g. examining ducts and manholes) etc. It will also include a decision process for escalation. Once complete we will explore options for training material to accompany the working instruction e.g. a video accessible in the field, which will be particularly useful for those members of staff who have difficulty with documentation.
21. We have created a summary of the monitoring and maintenance work done during this event titled '**Monitoring and Maintenance in McCrae**'. This is a living document that will change over time. The purpose of this document is to ensure we have a living record of the various approaches we have taken to monitor the performance of the network. This document will be maintained as various approaches are utilised. This document will be the foundation for supporting the development of a long-term approach for all zones where a significant natural hazard exists or where the presence of critical infrastructure may drive a different, non-standard approach. Once this evaluation is concluded this document will be retired and these concepts will form part of any future Asset Management Plan. A copy of this summary is **Exhibit 3: "Monitoring and Maintenance McCrae"** to this Statement.
22. In addition to the above tactical documents I am intending to continue a process of examining a number of additional operational, tactical and strategic topics that will

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complement the work done to date but will also advance SEWs capability in these and related fields. The scope of some of these activities were considerations for SEW before the McCrae Landslide but I have expanded on this scope to include the learnings from the McCrae Landslide and other environmental factors such as any future drought impacts, the requirements of the *Security of Critical Infrastructure Act 2018* and critical infrastructure, the resourcing challenges and the changing regulatory regarding community expectations. This strategy will influence some short term decisions as well as longer term planning and inclusions in the next price review. Examples of some of these topics are set out below:

- a. An exercise to evaluate the future capability needs for our organisation in relation to leakage management, response, and investigation to assess:
 - i. The capabilities available within the Australian market;
 - ii. The level of insourced and outsourced capability SEW requires;
 - iii. The training standards that we would expect;
 - iv. The equipment, technology and approaches we would consider for a range of asset types (e.g. distribution and trunk mains);
 - v. The balance between proactive monitoring, proactive leakage detection and reactive leak detection in sensitive locations and locations with critical infrastructure present;
 - vi. The tendering of a new Leakage Detection and Support contract.
- b. An evaluation of SEWs approach to emergency and crisis management, the continued development of the rostered roles under the Australasian Inter-Service Incident Management System and associated training standards for core roles in the emergency and crisis management team.
- c. Considerations to the seasonal workloads that SEW experiences and the base resources and contracts we need to respond to these fluctuations. Because workload, especially leakage, has seasonal variations, we need to be able to forecast these changes over time so our work programs and resourcing models need to be sufficiently flexible to complement these changes and we must adjust our practices as a result.
- d. A reconsideration of our policies towards leaks on private property and the balance between supporting customers, preventing wasted water through education and enforcement and the use of evolving technologies and other approaches adopted in other businesses to help inform our policy.

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- e. The commercial impacts of these approaches, the approach to the next price submission and considerations to the customer and community.
- 23. It is anticipated that these strategies will be reviewed, prioritised and developed progressively through FY25/26.

Question 2 – In relation to the Burst Water Main:

- a. **When did Mr Lloyd first become aware of the Burst Water Main? Was it prior to the meeting at Dromana Town Hall on 22 January 2025?**
 - 24. I first became aware of the Burst Water Main at 10:14am on 14 January 2025 through an email from my colleague Mr Charles Swain, Water Maintenance Manager.
 - 25. A copy of Mr Swain's email is **Exhibit 4: "Landslide at Viewpoint Rd, McCrae"** to this Statement.
- b. **Why did Mr Lloyd not inform Ms Lara Olsen of the Burst Water Main prior to 30 January 2025?**
 - 26. I did not inform Ms Olsen of the Burst Water Main prior to 30 January 2025 as I did not know the significance of the burst at the time. The fact water was still surfacing weeks after the Burst Water Main was fixed caused me to believe the two issues were unrelated and the focus for me and my team was on the ongoing water surfacing at various locations near the McCrae Landslide site.
 - 27. Although I was made aware of the Burst Water Main on 14 January 2025, I and SEW generally did not understand the magnitude and potential impact of the burst given the distance of the burst from the McCrae Landslide site (around 450 metres) and the fact that it had been fixed relatively soon after it had been detected and weeks earlier. An email of Mr Swain to myself further informed me water from the Burst main was "overflowing into the stormwater drain and not going into the ground". I refer to and repeat **Exhibit 4:** to this Statement.
 - 28. On 19 January 2025, I had heard water continuing to run heavily in two stormwater drains in the vicinity of Waller Place and Coburn Avenue. I also spoke to three sets of customers who spoke to the long-term issues of natural springs in the McCrae area. One of those customers had lived in the McCrae area for 60 years and understood there to be 3 springs that fed through the area. He had direct experience of this having undertaken building work in the local area.
 - 29. I was copied into an email on 21 January 2025 from Ms Avilyn Tate, Team Leader Faults and Emergencies that referred to a customer reporting a leak at 12 Coburn Avenue on 19 January 2025 and stating they had noticed water constantly running in stormwater drains

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over the past year like a tap running on full. To my mind, this reinforced the commonly-held theory there are an abundance of natural springs in the McCrae area that often flow, irrespective of any leak to SEW's network. A copy of Ms Tate's email is **Exhibit 5: "McCrae Incident Water Sample"** to this Statement.

30. I was only informed of the size of the burst on 30 January 2025, at which time the initial estimate was that approximately 60 megalitres of water had been lost from the Burst Water Main between early November 2024 and the Burst Water Main's repair on 1 January 2025. I can no longer recall who informed me of the estimated size of the burst.
31. It is at this time I escalated the matter and informed Ms Olsen of the Burst Water Main.

c. What was the basis for Mr Lloyd making a statement at the meeting held at Dromana Town Hall on 22 January 2025 to the effect of: "*SEW has reviewed its network and it is performing well and above average*"?

32. Following the McCrae Landslide, SEW was aware water was found running down the escarpment, and water was continuing to surface in nearby areas such as Charlesworth Street and stormwater drains. As such, the focus of initial investigations was on whether SEW had any infrastructural problems in the immediate area of the McCrae Landslide.
33. Prior to the meeting held at the Dromana Town Hall on 22 January 2025 (**Dromana Meeting**), members of my team briefed me on the results of investigations conducted by SEW in the immediate area of the McCrae Landslide.
34. On 16 January 2025 I received an email from Mr Swain that evidenced laboratory analysis of groundwater samples taken from various locations in the area surrounding of the McCrae Landslide were not reflective of the typical measured chemical properties of potable water throughout SEW's potable water network. In other words, the sampled water did not contain the typical chemical properties of drinking water that had escaped from SEW's water network. A copy of Mr Swain's email is **Exhibit 6: "Summary of WQ results in McCrae"** to this Statement.
35. On 16 January 2025 I received a further email from my colleague Ms Prerna Ramamurthy, Group Manager - Maintenance that revealed night time flows in the Waller Place Distribution Zone were consistently low at less than 1 litre per second. These findings were consistent with a well-performing network and did not suggest to me the existence of a leak. A copy of Ms Ramamurthy's email is **Exhibit 7: "Night flow analysis for Waller Place PR Zone"** to this Statement.
36. On 17 January I received an map from Ms Ramamurthy that showed the extent of leakage detection in the immediate vicinity and uphill from the McCrae Landslide site. A copy of

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this map is **Exhibit 8: "Mains where leak detection performed in McCrae"** to this Statement.

37. On 21 January 2025 I was forwarded an email from Mr John Hook, Water Planning Engineer that evidenced nightline consumption levels for the periods immediately prior to, and predating the McCrae Landslide. Save for a pre-Christmas spike in water usage, which was unsurprising and typical for a tourist area like McCrae in summer, I interpreted these nightline graphs as being consistently low and, again, indicative of a well-performing network. Although I am familiar with these types of graphs, I do not hold myself out to be an expert in relation to the them so I discussed them extensively with members of my team who confirmed the water usage displayed was indicative of a well performing zone. Consequently, I sent an email to Mr Swain, Mr Hook and Ms Ramamurthy to make further inquiries in relation to the night flow spikes, whether they tie in with any reported leaks, and what they might mean. Mr Swain responded on 22 January 2025 confirming he was very confident the night flow spikes were related to holiday makers heading down to the Peninsula over summer. A copy of this email chain is **Exhibit 9: "Night flow analysis (1)"** and **Exhibit 10: "Night flow analysis (2)"** to this Statement .
38. The assessment of usage in the area, the chemical test results and leak detection activity, as well as the extensive work already undertaken investigating sources of water surfacing, led me to conclude our preliminary investigations showed SEW's assets were performing well. It was for this reason I said words to the effect our preliminary investigations showed that our assets were performing well at the meeting. I distinctly remember using the word "preliminary" because SEW had not finished and we wanted to continue looking into the issue.

Dated: 4 June 2025



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