

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 LARA OLSEN**

I, **LARA OLSEN**, Managing Director, South East Water Corporation, of 101 Wells Street, Frankston, in the State of Victoria say:

1. I am the Managing Director of South East Water Corporation (**SEW**).
2. I have held that position since 17 February 2020.
3. I hold a Bachelor of Chemical Engineering (Hons), Bachelor of Arts, Masters of Business Administration, and am a Graduate of the Australian Institute of Company Directors.
4. On 16 April 2025 the Board of Inquiry into the McCrae Landslide served upon SEW a Request to Produce Witness Statement, which required an SEW officer or employee to provide a statement in response to the questions set out in the First List of Questions for South East Water Corporation (SEW).
5. 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.
6. This Statement is structured in the order of questions in the First List of Questions for South East Water Corporation (SEW).

Question 1 – For the period from 14 January 2019 to the date of this request, identify the entity or entities (whether SEW or otherwise) that control, operate, manage and/or maintain infrastructure or assets in McCrae Landslide Area for the management of:

1.1 stormwater;

1.2 sewage;

1.3 water mains and plumbed water mains, including leaks from same;

1.4 groundwater; and

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1.5 natural springs, to the extent not already captured by the request above relating to groundwater.

7. Stormwater infrastructure or assets in the McCrae Landslide Area are controlled, operated, managed and/or maintained by the Mornington Peninsula Shire Council (**Council**).
8. Reticulated sewerage infrastructure or assets in the McCrae Landslide Area are controlled, operated, managed and/or maintained by SEW. Diagrams delineating SEW's responsibility for sewerage infrastructure are **Exhibit 1a: "SEW infrastructure responsibility – Sewerage infrastructure diagrams"** to this Statement.
9. Where the sewer main is located inside the property boundary, SEW responsibility terminates at the first Inspection Opening or up to 1 metre inside the property boundary (whichever is less). Inspection Openings are, in broad terms, small capped or covered openings in the sewerage pipe or fitting, often near the property boundary, to facilitate inspection, maintenance and repair of the sewer main. Where the sewer main is located outside of the property boundary, SEW responsibility ends at the first Inspection Opening or up to 1 metre inside the property boundary (whichever is less). The property owner is responsible for maintaining all pipes and infrastructure beyond that point.
10. Water mains within the McCrae Landslide Area are controlled, operated, managed and/or maintained by SEW. Diagrams delineating SEW's responsibility for water infrastructure are **Exhibit 1b: "SEW infrastructure responsibility – Water infrastructure diagrams"** to this Statement.
11. If a water meter is within 2 metres of a property boundary, SEW is responsible for the pipe between the water main and the water meter. If the water meter is located more than 2 metres inside the property boundary, then SEW's maintenance responsibility extends to the first accessible stop valve from the water meter. Beyond that point, the property owner is responsible for the pipe and infrastructure including any leaks and repairs. All plumbing, including pipes from the water meter to the house and all taps and fittings on the property, save for the meter itself, are the responsibility of the property owner. SEW does not manage or control leakages from private water assets, such as irrigation systems and swimming pools, that may be connected to the meter or private water mains / private water lines.
12. I am not aware of any entity or entities that control, operate, manage and/or maintain groundwater infrastructure or assets in the McCrae Landslide Area. If a licence is sought to drill a bore, Southern Rural Water is the relevant licensing authority. SEW does not control, operate, manage and/or maintain groundwater infrastructure or assets in the McCrae Landslide Area.

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13. I am not aware of any entity or entities that control, operate, manage and/or maintain infrastructure or assets related to natural springs in the McCrae Landslide Area. SEW does not control, operate, manage and/or maintain infrastructure or assets related to natural springs in the McCrae Landslide Area.

Question 2 – To the extent SEW is responsible for the management of any of the services and issues listed in 1.1 to 1.5 above (tasks), give a general description of how those tasks are managed by SEW, including the relevant groups or teams and reporting lines.

14. SEW has established a number of groups and teams for the management of SEW's sewerage and water mains infrastructure. SEW's organisational structure that illustrates these relevant groups and teams is set out in **Exhibit 2 ("South East Water Organisational Structure")** to this Statement.
15. SEW delivers drinking water, sewerage services, and recycled water services across a 3640 square kilometre area from Port Melbourne to Portsea and approximately 30 kilometres east of Pakenham. SEW's Network Operational Control Centre monitors the water and sewerage network and acknowledges and / or responds to various alarms that may be triggered from time to time, indicating a change in the performance of SEW's network. When an alarm is triggered, a response may be generated, depending on the event. Alarms may be passed through SEW's Operations Technicians or maintenance contractors to investigate and resolve the problem.
16. Valve and hydrant maintenance is performed on a regular basis by SEW's Water Maintenance team. Valve inspections are conducted on a rolling 10 year program, and hydrant inspections are conducted on a rolling 7 year program.
17. Reservoirs are also inspected at varying frequencies by SEW's Water Maintenance team.
18. SEW operates a scheduled leak detection program across its water network on a 7 year frequency, which is managed by its Water Maintenance team. This is where a technician walks along the street looking for visual evidence of leaks as well as using an electronic listening device at water main fittings such as valves, hydrants and meters. Fittings are typically spaced every 10-30m, making for a time-consuming process across our entire network. By "7 year frequency", I mean the program is designed so leak detection is performed on every asset once every 7 years or, in other words, the whole network is inspected every 7 years. If the leakage detection surveys find a significant leak this is triaged by the SEW Faults and Emergencies Contact Centre team and passed to SEW's maintenance contractor for repair. All other leaks found through detection are prioritised by SEW's Maintenance team.

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19. SEW's reactive leak detection methods include a 24-hour Faults and Emergency Contact Service and 'Snap Send Solve' application / website through which customers, members of the community and agencies can report leaks and other matters of concern. These reports are prioritised based on available data and issued to SEW's maintenance contractor for field investigation.
20. If it is possible a reported leak has emanated from a SEW asset but the source of the reported leak is unknown, electrical conductivity of the water is one of the methods SEW may use to investigate. If the results of that testing are within the parameters for drinking water, SEW deploys specialist employees or contractors to investigate further. If it is established an SEW asset is the source of the leak, it is repaired.
21. SEW reads water meters in the McCrae Landslide Area on a quarterly basis. If a water meter fault is detected during a scheduled read, it is scheduled to be repaired or replaced. SEW otherwise replaces water meters on a 10-15 year cycle. If a customer's water consumption is identified to be significantly higher than the previous billing period, the customer is typically sent a high usage notification with their next bill. This notification includes information about what may cause high usage and how to check for leaks.
22. SEW's Maintenance Team undertakes CCTV monitoring and inspection in the sewerage network to review the condition of pipes and structures. This includes assets with a history of blockage or damage, assets categorised as critical owing to factors such the scale of anticipated customer impact in the event of a blockage, and assets that are in environmentally sensitive areas such as proximity to waterways. In addition, SEW clears blockages and undertakes repairs to its sewer assets as required when it identifies or is otherwise made aware of a blockage or other issue.

Question 3 – Describe any agreement, protocol or memorandum of understanding between SEW and any other entity responsible for performance of any task or tasks?

23. Over the period from 14 January 2019 to 16 April 2025, SEW has identified approximately 123 contracts, protocols or memorandums of understanding between SEW and other responsible entities related to the management of water mains (including leaks) and sewerage within the McCrae Landslide Area. These contracts, protocols or memorandums of understanding are set out in **Exhibit 3 ("Contract Register")** to this Statement.

24. Some of the more relevant agreements are agreements with:

- a. Detection Services Pty Ltd, for leak detection services via visual inspections (meters, stop taps, hydrants) and acoustic sounding and testing, in place from 11 May 2020 to date;

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- b. Downer Utilities Australia Pty Ltd, for the provision of water and sewer repair and maintenance services (sewer cleaning and inspections, reactive and planned sewer civil – sewer dig-outs, spill clean ups, replacing manhole covers, water reactive and planned network repairs, connections and water mains shut-downs), in place from October 2022 to date;
 - c. Service Stream Maintenance Pty Ltd, for the provision of water and sewer repair and maintenance services (sewer cleaning and inspections, reactive and planned sewer civil – sewer dig-outs, spill clean ups, replacing manhole covers, water reactive and planned network repairs, connections, water mains shut-downs), in place from October 2022 to date;
 - d. Programmed Facility Management Pty. Ltd, for the provision of mechanical & electrical maintenance and repairs (mechanical, electrical and instrumental services associated with water/sewer networks and Treatment Plants), in place from October 2022 to date; and
 - e. Australian Laboratory Services Pty Ltd, for the provision of laboratory services, particularly water sampling and testing services to monitor drinking and recycled water, in place from 21 September 2024 to date.
25. Some of these agreements are also with other entities for broader services required for the safe, efficient and effective performance of SEW's water and sewerage functions, such as for grounds and building maintenance, generator provision and maintenance, road reinstatements following repair works, provision of supplies / equipment, and technology / software suppliers. Although these agreements are certainly important for SEW's day-to-day functioning as a statutory water authority, their use is not directly and immediately related to the maintenance of the network water pipes and sewerage in the McCrae Landslide Area.

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

26. SEW's network is broken into zones for, amongst other reasons, monitoring purposes. By way of ongoing proactive leak detection, SEW targets high leakage distribution zones. Zones with higher than anticipated water use and history of repeated leaks and bursts are prioritised for leak detection, maintenance and repair.
27. Several methods have also been implemented by SEW to proactively monitor its system for leaks, including:
- a. SEW's Network Operational Control Centre using the Supervisory Control and Data Acquisition system that, amongst other things, alerts to abnormal network events;

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- b. acoustic leak detection and visual inspection; and
 - c. analysis of the data obtained from the above-mentioned inspections.
- 28. Further information on acoustic leak detection is set out in **Exhibit 4: "Acoustic Leak Detection"** to this Statement.
- 29. As stated above, SEW's reactive leak detection methods include a 24-hour Faults and Emergency Contact Service and 'Snap Send Solve' application / website through which customers, members of the community and agencies can report leaks and other matters of concern. These reports are prioritised based on available data and issued to SEW's maintenance contractors for field investigation.
- 30. Although leaks are often easily detected because they are visible, in some cases the source of a reported leak can be challenging to detect. This is particularly true in areas that:
 - a. Have limited accessibility and visibility – for example, assets running through rural areas or vegetation that makes identification of leaks complex;
 - b. Are significantly noisy – for example, assets near trams or railway lines, complex network configuration or areas of high normal water use that make acoustic leak detection difficult; and
 - c. Contain other unforeseen difficulties that impact acoustic leak detection – for example difficult weather conditions and changes in pipe materials or pipe configuration.
- 31. Further difficulties in identifying the source of a reported leak include:
 - a. Traversing bush and densely vegetated land where native and/or endangered vegetation often grows over SEW assets;
 - b. Safely gaining access to the reported site due to locked gates and unsecured animals;
 - c. Working alongside providers of gas, telecommunications, stormwater, electricity, public transport and road management, whose assets are in close proximity to SEW's assets;
 - d. Arranging traffic management where the reported issue may exist on or under a public road;
 - e. Leaks being located on vacant property, or on domestic irrigation systems, that are out of the public's view; and

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- f. Low flow rates making leaks hard to detect.
32. In some instances where there is doubt about the source of the water leak, further testing of water characteristics is conducted to determine whether the water leaking is from the drinking water or sewer network, or from another source like groundwater. The presence of drinking water does not always indicate a leak in SEW's water supply network. Drinking water may be present in the environment from other sources such as private property leakage, outdoor irrigation, car washing and other private activities.

Question 5 – Describe SEW's systems and procedures for repairing or otherwise addressing water leaks from SEW owned or managed infrastructure.

33. When SEW detects or receives a report of a possible leak in its network, SEW assesses and prioritises it based on considerations of safety, level of service disruption, and the impact on people, property and the environment.
34. The jobs across SEW's service area are recorded in Montage, SEW's computer-based works management system.
35. Once SEW has determined further investigation is warranted a maintenance contractor is engaged, who will often send a single responder (known as a Runner) or a repair crew to the site. The role of the Runner is to do tasks such as investigate the reported leak, confirm its priority, assess the location, identify traffic management requirements and complexities such as overhead powerlines/trees that may be in the way or other factors that will influence the repair. With this information the repair is planned. If an immediate repair can be made it will be, e.g. the Runner may repair a small leak on an above ground fitting.
36. Following the Runner's evaluation, and if repairs are necessary, a field crew is assigned to execute the repair work. In executing repair works, the field crew obtains information of underground assets to enable a safe excavation, arranges for any specialist equipment that may be necessary to execute the works, obtains approval and permits for traffic management when required, arranges for the support and / or management of telecommunication poles and trees in the vicinity, and arranges for the nearby and affected customers to be notified.
37. In the event the reported and identified issue does not relate to a SEW asset, the matter is referred to the relevant party's attention.
38. In the rare occasion that a leak is causing significant disruptions to safety, customers, the community and/or the environment, an incident may be declared in accordance with arrangements under the Australasian Inter-Service Incident Management System

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Framework. This framework is used by all Victorian public sector agencies for emergency preparedness and response.

39. Similar challenges exist when repairing a leak as those identified in paragraph 31 a-d above.

Question 6 – The Board of Inquiry is investigating the potential influence on the 5 January 2025 Landslide and McCrae Landslide of a Burst Water Main that occurred near the corner of Bayview Rd and Outlook Rd in McCrae, around the end of 2024 or the start of 2025. Please describe:

6.1 when and how SEW first became aware of the Burst Water Main;

40. SEW first became aware of the Burst Water Main at approximately 1pm on 30 December 2024.
41. The Burst Water Main in question was asset number 104961, which is located on the edge of densely vegetated bushland between Bayview Road and the Mornington Peninsula Freeway and restricted from public access by a chain mesh fence (**Bushland**).
42. The Burst Water Main was first identified by an SEW employee (**Discovering Employee**) who attended Waller Place to assist a contractor in relation to a report of a possible leak. The Discovering Employee heard and then observed the movement of water in the Council's stormwater system at Waller Place.
43. The Discovering Employee reviewed water tank data (that provides mains water to the McCrae Area) from the supply area and discovered a higher outflow in December 2024 when compared with December 2023. This indicated a potential issue in that part of SEW's network.
44. The Discovering Employee conducted acoustic leak detection on SEW water mains adjacent to the Council's stormwater drain, moving uphill from Waller Place to the high side of the freeway. This led the Discovering Employee to the Bushland on the high side of the freeway, where they were able to hear (with their own ears) the sound of water flowing. The Discovering Employee then observed water moving northwest above the ground and into a large stormwater pit that passes under the Mornington Peninsula Freeway toward Waller Place.
45. The Discovering Employee then located the site in the Bushland from which the water was emanating, and tested the electrical conductivity of the water, which confirmed the water to be drinking water.

6.2 when water first ceased to escape from the Burst Water Main;

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46. Repair to the Burst Water Main commenced on 31 December 2024 and concluded on 1 January 2025.

47. Water first ceased to escape from the Burst Water Main on 31 December 2024, when the surrounding network that fed the Burst Water Main was isolated.

6.3 the extent of SEW's responsibility for the Burst Water Main or the effects arising therefrom;

48. SEW is generally liable for pecuniary losses and expenses incurred by persons for the fault of SEW's assets pursuant to Section 155 of the *Water Act 1989* (Vic).

49. However, SEW is not aware of any pecuniary losses or expenses incurred by persons as a result of the Burst Water Main.

6.4 what steps SEW took to repair or replace the Burst Water Main;

50. When the Burst Water Main was identified, it was recognised repair would take some time due to accessibility difficulties in the form of the chain mesh fence, adjacent trees, the soil quality being that of wet sand, and the Burst Water Main being approximately 1.7m deep.

51. Clearance was obtained from the gas transmission company, APA Group, to excavate approximately 30 metres away from the gas main.

52. In an attempt to effect a timely repair, an ultimately unsuccessful attempt was made in the first instance to insert a valve on the water main approximately 30 metres away beside Outlook Drive.

53. After this attempt failed, SEW began to excavate the site of the Burst Water Main, pumping out water and negotiating the various tree roots during the process. However, the repair works were deemed unsafe due to large trees presenting a collapse risk. One of the two valves was turned back on so residents could have access to water, but only at low pressure to limit water escaping from the Burst Water Main.

54. Approval was then sought and obtained from Council to remove the two trees that surrounded the Burst Water Main and the chain mesh fence for safety, and the hole was excavated using a vacuum truck.

55. Once the Burst Water Main was accessed, that part of SEW's network was shut down to safely isolate the Burst Water Main and make the repair. This involved the replacement of a 1 metre long section of pipe to remedy the small split of 100mm long that was discovered.

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56. The water mains in the area were then flushed to maintain water quality and acoustic testing was conducted to confirm the leak had ceased. The large volumes of water identified as flowing through the stormwater pit were confirmed to have ceased.
57. Whilst the Burst Water Main was repaired and the flows were ceased, water was still found to be continuing to surface at the McCrae resident-reported locations in Charlesworth Street and Waller Place.
58. SEW conducted a portfolio of tests following the McCrae Landslide due to SEW's maintenance and works records evidencing water continuing to surface in the McCrae Landslide Area, primarily between 3 Penny Lane and 10 View Point Road, at the McCrae Landslide site itself, and various other locations including Coburn Avenue, Charlesworth Street and Waller Place. Tests conducted included water sampling for laboratory analysis, acoustic leak detection, night-time data analysis, sewer dye testing and CCTV inspections of sewer networks.
59. These tests indicated that the surfacing water was not coming from the Burst Water Main or any other SEW assets.

6.5 what other steps, if any, SEW took to deal with the effects of the Burst Water Main or to ameliorate future risks;

60. SEW is not aware of any detrimental effects directly caused by the Burst Water Main and, therefore, does not believe special efforts were required to deal with the effects of the same.
61. However, SEW has since increased leak detection activity in the McCrae Landslide Area to strengthen its ability to identify and rectify any future leaks at an early stage, and thereby ameliorate any detrimental effects of same. On-site acoustic leak detection is currently performed fortnightly and analysis of water use data is conducted 3 times per week.
62. A new digital meter program is scheduled to be installed in the McCrae Landslide Area in April to June of 2025, providing 'near real time' alerts of potential leaks. This is part of a \$203 million digital metering program across SEW's wider service region, approved as part of the Essential Services Commission's 2023-2028 Price Determination for SEW.
63. SEW has also escalated all reports of suspected leaks within the McCrae Landslide Area to a 'Priority 1' priority categorisation, which requires a field officer to arrive on site within the hour on average.

6.6 how much water SEW estimates escaped from the Burst Water Main;

64. SEW estimates approximately 37 megalitres of water escaped from the Burst Water Main between November 2024 until its isolation on 31 December 2024.

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6.7 SEW's knowledge or understanding of the paths on or through which water leaked from the Burst Water Main, including whether it travelled along one or more of the following pathways (irrespective of who owned and controlled them):

- i. spoon drains;**
- ii. stormwater infrastructure;**
- iii. sewer infrastructure;**

65. The Discovering Employee initially witnessed water surfacing vertically from the Burst Water Main and travelling downslope into the Bushland. The water was then observed to travel overland into an open stormwater drain, which directed the water into a stormwater pit that was also contained within the Bushland.
66. Further, as water from the Burst Water Main emerged at the surface it brought with it a fine granular sand. This sand travelled along the surface of the ground and tracked the water's motion, evidencing water from the Burst Water Main flowing downhill and into the open stormwater drain, stormwater pit and connecting stormwater infrastructure.
67. SEW considers that a significant portion of the drinking water released from the Burst Water Main travelled above ground to a stormwater pit approximately 30 metres away from the burst site.
68. Based on the information currently available, SEW considers if there was drinking water that entered the ground and moved downslope, that drinking water would likely flow into, and then follow the trenches of existing services such as stormwater or sewer, because they are intentionally constructed on varying downhill grades, and the embedment material of such services offer a readily available preferential pathway for subsurface water flow. The stormwater network near the burst site, follows an alignment running down towards and then adjacent to, Coburn Road to Point Nepean Road, away from the McCrae Landslide site. The sewer mains follow an alignment down Waller Place, Charlesworth Street and then to Coburn Avenue. SEW expects that water would continue to follow either trench until it reaches Point Nepean Road below the elevation of the McCrae Landslide site.

6.8 where water from the Burst Water Main returned to ground level (Surfaced Water);

69. I refer to my answer in Question 6.7 of this Statement.

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6.9 the effects of any Surfaced Water on public infrastructure, land or private property;

70. SEW is not aware of any detrimental effects directly caused by the Burst Water Main.

6.10 works performed by any other entity to repair the cause of the Burst Water Main, damage it caused, or to prevent water from it flowing to landslide prone areas; and

71. SEW is not aware of any detrimental effects directly caused by the Burst Water Main or repair works performed by non-SEW entities.

6.11 any analysis or reports held by SEW concerning the foregoing.

72. SEW's lawyers have commissioned an expert report that has ~~not yet been finalised~~ *been provided to the Board of Inquiry and to the affected residents.*

Question 7 – Does SEW have any information as to the likelihood that the Burst Water Main contributed to the 5 January 2025 Landslide and/or McCrae Landslide?

If so, please describe that material, including by explaining the circumstances by which it came to be created and annex copies of any relevant material.

73. SEW's lawyers have commissioned an expert report that has ~~not yet been finalised~~ *been provided to the Board of Inquiry and to affected residents.*

Question 8 – Did SEW's actions in connection with the Burst Water Main conform with its ordinary practices and procedures?

74. SEW's actions in connection with the Burst Water Main conformed with its ordinary practices and procedures in that:

- a. SEW utilised the ordinary techniques of visual observation, electrical conductivity testing and acoustic leak detection in the vicinity of reported leaks;
- b. SEW deployed additional expertise to locate the leak when it was not readily identifiable; and
- c. SEW deployed maintenance contractors to effect repairs to the Burst Water Main when the leak was identified.
- d. The Burst Water Main was recorded in SEW systems that are used for asset planning and management.

Dated: 30 April 2025

Irrelevant & Sensitive

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Witness: _____