# Purpose

The purpose of this standard is to provide a Wannon Water framework and guidance for the management of excavation and trenching work (including backfilling) to minimise the risks to our employees, contractors, the environment and the public, as far as reasonably practicable, and ensure compliance with legislative obligations.

We conduct a variety of trenching and excavation tasks as part of our activities where risks are heightened based on many external factors (e.g. dependant on the location, environment, weather conditions, ground conditions (soil type and moisture content), soil contaminants (e.g. asbestos), loadings adjacent to the proposed excavation, mobile plant, traffic management, members of the public in the vicinity, confined spaces, risk of falls, presence of gases/fumes, underground services (gas, electricity, water, sewage) and engulfment. Working in these environments where we’re presented with different levels of risks needs to be managed effectively to prevent adverse impact to our Strategic Direction and support our **Zero Harm** ambition.

# Scope

This framework applies to:

* Any employee or contractor engaged in our activities involving trenching or excavation works on our behalf.

**Out of scope:**

* When a principal contractor has been granted formal possession of a site whilst carrying out contracted work, it is the responsibility of the principal contractor to comply with the relevant regulations and consult with our Engaging Officer to determine if their activities pose a risk to us.

# Standard requirements

| **Standards** | **Responsibility[[1]](#footnote-2)** | **Accountability[[2]](#footnote-3)** |
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| Assets, plant, and equipment, including safety equipment, used for excavation and trenching must:   * Comply with Australian Standards[[3]](#footnote-4) * Be installed and used as per the manufacturer’s instructions. * Be inspected and maintained. * Be fit for purpose, and; * Be appropriate for the full duration of the task. | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| Equipment use in excavation and trenching must be used and maintained (e.g., inspected, serviced, and repaired) in line with the manufacturers recommendations as a minimum. | BM Asset Systems  BM Maintenance | GM Assets & Service Delivery |
| Excavation and trenching work must be completed in accordance with our procedures (e.g**., Excavation and Trenching Procedure**, Task Risk Assessment (JSA)) or equivalent system[[4]](#footnote-5)). | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| A **Pre-Start Checklist** must be completed prior to using excavation and trenching plant (e.g., Excavator, HydroVac) every day that the equipment is used. | **Executive People & Resilience**  BM Maintenance | GM People & Business Services |
| A system must be in place to get permission from the pipeline owner before any excavation or trenching work is done within 6m of a pipeline defined within the Pipelines Act (e.g., high pressure gas line).  **Note:** This applies to all work. | **Executive People & Resilience**  BM Maintenance  BM Asset Creation | GM People & Business Services |
| Notification of any planned trenching or excavation works of ≥ 1.5m deep, must be provided to WorkSafe Victoria at least 3 days prior to commencing the work. Emergency works are exempt from notification. | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| For all excavation works, the “[Before You Dig Australia](https://www.byda.com.au)” (BYDA) form/request must be completed as per the **Excavation and Trenching Procedure** – records must be kept.  In addition to BYDA, alternative methods to assist with location of underground services (e.g., use of fibreglass hand probe or electronic locator) must be used as per the **Excavation and Trenching Procedure**. | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| All activities involving the breaking of ground are considered as excavation and the hierarchy of control must be used to control the risks associated with trenching and excavation works, as follows:   * Eliminate (e.g., send a camera down instead of excavating) * Substitute (e.g., use an excavator with a rock breaking attachment rather than using manual labour) * Isolate (e.g., move pedestrians away from the excavation area) * Engineering control measures (e.g., use benches or shoring to reduce the risk of ground collapse) * Administrative control measures (e.g., use of warning signs)   Reduce exposure using Personal Protective Equipment (e.g., wearing a hard hat) | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| Any shaft, trench, or tunnel ≥ 1.5m deep must be secured to minimise the risk of engulfment (e.g., by battering, benching, shielding, shoring, or a combination there of).  If a trench is ≤ 1.5m and there is a risk of engulfment, then risk controls should still be used (e.g., stepping/battering back). | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| A zone of influence must be ascertained to create an appropriate exclusion zone with clear access around the excavation zone. | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| A safe and/or fixed access point to the excavation or trench must be provided where anyone is entering it (e.g., where the surfaces are ≥ 1m above or below ground, use of ladders/stairways and/or ramps). | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| Licences required by legislation must be maintained where relevant to the excavation and trenching work being done (e.g., scaffolding, use of certain cranes & dogging rigging activities) | **Executive People & Resilience**  BM Asset Creation  BM Maintenance | GM People & Business Services |
| Persons working in excavations ≥ 1.5m must have a competent person supervise/observe/spot the work at all times to ensure the safety of the trench entrant(s). | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| Hard hats and high visibility clothing must always be worn whilst conducting excavation and trenching works. | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| Risks associated with falling into an excavation or trench, or falling objects must be identified and assessed – and the hierarchy of control must be used to manage them to our accepted levels, as per the **Working at Heights (Fall Prevention) Standard** (e.g., installation of barriers, fences, guard rails etc). | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| Where the trench may become a confined space (e.g., harmful contaminants entering the space - vehicle emissions, sewerage odours) the **Confined Space Management Procedure** must be followed. | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| Excavation and trenching work occurring on a road reserve must follow the **Traffic Management Procedure**. | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| A system must be in place to control the movement of mobile plant where persons are at risk of being:   * Run over by plant (e.g., an excavator reversing or tracking) * Struck by slewing plant (e.g., by the bucket of an excavator) * Electrocuted by working near powerlines (e.g., operating in a “No Go Zone”) | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| To protect the public and other workers from present risks around excavation sites, signage and barricades must be appropriately placed to create a safe zone. | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| A system must be in place to ensure that buildings cannot be undermined and/or affected due to trenching or excavation work undertaken. | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| A plan to identify and protect cultural sites must be in place prior to any excavation works and is to be considered during emergency works where practicable. | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| A system must be in place to control environmental impacts where practicable E.g.:   * Control of run-off/contamination to any waterways, drains or reservoirs * Dust control measures where there is a risk of the materials leaving the site, and; * A plan to identify and protect native flora/fauna | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| Surface water inflows must be prevented from entering the excavation or trench; or collecting in the working area. Any inflow must be collected in a sump and pumped clear of the excavation area. | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| Where an excavation or trench is to be left unattended it must be secured (e.g., by backfilling with sand (if practicable) or sufficient barricades, signage, and lighting) to prevent access/injuries. | BM Asset Creation  BM Maintenance  BM Operations | GM Assets & Service Delivery |
| Asbestos containing pipe must be removed by complying with the **Asbestos Cement (AC) Pipe Removal and Disposal Procedure**. | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| Excavated soil/material is classified as industrial waste and must be managed and disposed of as per the **Waste Management Standard**. | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| A plan must be in place for the management of an emergency where there is a risk of engulfment, confined spaces, a fall, etc. (e.g., rescue and first aid). | **Executive People & Resilience**  BM Asset Creation  BM Maintenance  BM Operations | GM People & Business Services |
| A **Hazard Report** must be raised for any suspected/obvious risk, and/or faulty/damaged plant and equipment that is a risk to human health or the environment. | Executive People & Resilience | GM People & Business Services |
| An **Incident Report** must be raised for any event involving trenching or excavation works that has resulted in a near miss or injury to any person. | Executive People & Resilience | GM People & Business Services |

# Training, Competence, and Awareness

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| **Standards** | **Responsibility** | **Accountability** |
| All managers with Responsibilities & Accountabilities within this document must be made aware of this standard. | Executive People & Resilience | GM People & Business Services |

# Monitoring

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| **Standards** | **Responsibility** | **Accountability** |
| Compliance with and effectiveness of this standard  must be verified at least every four years by including periodic audits in the **Audit Program**. | Executive People & Resilience | GM People & Business Services |
| All records required by this standard must be maintained in our records management systems. | Information Services Manager | Chief Information Officer |

# Definitions

| **Term** | **Means** |
| --- | --- |
| Battering | A battered wall is “any kind of wall that has been built with an intentional slope.” The word “batter” refers to a predetermined type of angle which ensures stability providing a safe slope to the excavated face. The excavated slope is safe when the ground is stable. |
| Benching | Benching is a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels. |
| Construction Induction Training (White Card) | General construction induction training with an approved Registered Training Organisation (RTO). The Construction Induction Card (White Card) is a mandatory requirement for all workers on building and civil construction sites |
| Excavation | A hole or opening in the earth, or face of the earth, formed after rock, sand, soil or other material is removed |
| No Go Zone | The No Go Zone defines a minimum distance that people and their equipment must maintain when they are working near overhead and underground electricity assets. |
| PPE | Personal Protective Equipment is equipment and clothing used as personal protection against potential hazards, risks, or injuries in the workplace or environment. |
| Shaft | A vertical or inclined way or opening from the surface downwards or from any underground working and the dimensions of which (excluding the perimeter) are less than its depth |
| Shielding | Shielding systems include trench boxes, steel plates, and/or combination of protective systems. Shielding does not protect against soil failures. Shielding systems do not support the face of excavations, rather they protect the workers inside of them. |
| Shoring | Provides temporary support to trenching and excavation by using materials to reinforce the walls during activities. |
| Slewing Plant | Equipment that can rotate/turn/move its’ attachments horizontally. |
| SWMS | Safe Work Method Statement |
| Task Risk Assessment (JSA) | Job Safety Analysis Procedure and eForm |
| Trench | An excavation that’s length is greater than its depth and width and is for the purpose of laying, removal or repairing a pipe or cable |
| Tunnel | An underground passage or opening in an approximate horizontal plane and which begins at the surface or from an excavation of any sort |
| Zone of Influence | The zone of influence is the area around a trench in which the  risk of ground collapse may increase if plant or material is placed within that zone. |

# Governance

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| **Parent policy/standard** | Zero Harm Policy |
| Associated procedures/standards | * Safe Trenching Procedure * Hazard Reporting Procedure * Incident Reporting and Response Procedure * Confined Spaces Standard and Procedure * Working at Height (Falls Prevention) Standard and Procedure * Asbestos Standard * Asbestos Cement (AC) Pipe Removal and Disposal Procedure * Waste Management Standard * Task Risk Assessment (JSA) Procedure and eForm |
| **Legislation mandating compliance** | * Victorian Occupational Health & Safety Act 2004 * Pipelines Act 2005 * Environment Protection Act (2017), General Environmental Duty * WorkSafe Victoria, Compliance Code: Excavation, Edition 2, December 2019 |
| **Approval** | Executive Committee |
| **Owner** | GM People & Business Services |
| **Content enquiries** | * Safety Field Officer * Environmental Risk Compliance Officer |

# Document version history

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| --- | --- |
| Version | Changes made to document |
| 1 | New document created as part of the new IMS Standard Framework |
| 2 | Updates to ensure alignment between standard & procedure. This includes:   * Change – “3m of pipeline” to “6m of pipeline” & removed/updated “planned and unplanned works” to “all works” (High pressure gas transmission main requirement). * Remove & update – “all planned works” to “all excavation works” & “all unplanned works” to “in addition to BYDA” (Before You Dig Australia requirement). * Minor administrative changes |
| 3 | * Re-worded Section 2 Out of scope: from “has taken legal ownership of a site” to “has been granted formal possession of a site”. * Minor administrative changes. |

1. The nominated sponsor who is responsible for ensuring there is the system in place to meet a requirement or delivering a task to an acceptable level of performance. [↑](#footnote-ref-2)
2. The Executive are collectively accountable for the standard. The individual GM is the nominated person who will approve any capital/operating expense requests (within the Instrument of Delegation) and any material changes to current work practices to meet requirements of the standard. [↑](#footnote-ref-3)
3. Where equipment is manufactured internationally – the manufacturer or supplier must be consulted for assurance that the item complies with relevant Australian Standards [↑](#footnote-ref-4)
4. For contractors, an equivalent system (e.g., **Safe Work Procedure**, **JSA**, **SWMS**) must be of equivalent or higher standard. [↑](#footnote-ref-5)