1. Overview

The Wudinna District Council will ensure, as far as is reasonably practicable, that the conduct of work relating to excavation and trenching will not be harmful to the health and safety of employees or the general community.

This procedure aims to ensure that:
- Risks to the safety of persons involved in the performance of excavation/trenching work carried out by the Council are identified before work commences;
- Establishes guidelines for establishing and maintaining a safe working environment wherever excavation, including trenching, is carried out; and
- Measures are taken to eliminate, minimise or control these risks before, during and after the performance of the work.

This procedure relates to excavation work if:
- An excavation formed by the work is more than 1.5 metres high when measured from the bottom of the excavation and the excavation is capable of permitting the entry of a person; or
- There is a possibility that a person involved in the performance of the work, or in the vicinity of any excavation or excavation work, could be injured from a fall or dislodgment of soil or rock.

2. Core components

The core components of our Excavation and Trenching Procedure aim to ensure:
- All excavation and trenching activities undertaken are recorded on the Hazard Register
- Completed risk assessment documentation is available for isolated hazardous work
- Appropriate controls in line with the hierarchy of control are identified, put in place and documented (identification of services etc)
- For excavations that require engineer's reports those reports are obtained and available
- Competent staff undertake daily inspections and record the outcome
- If the excavation process requires notification within it, the Functional Manager responsible for the excavation must notify the relevant parties in accordance with the procedure and maintain records of the notification
- Training requirements are identified as part of the Training Needs Analysis (TNA) and a record of any licences is maintained
- A formal documented handover is undertaken with the landowner for all rubble pits
- All records are maintained as per the Document Control (record management) Procedure.

3. Definitions

<table>
<thead>
<tr>
<th>Competent Person:</th>
<th>A person who is suitably qualified (whether by experience, training, or both) to carry out the work or function.</th>
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<tbody>
<tr>
<td>Engineer</td>
<td>A person who holds a tertiary qualification in engineering and who has experience in excavation work in the building, construction or mining industries; [as defined in the Occupational Health, Safety and Welfare Regulations 1985]</td>
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### Engineer's Report
A report prepared by an engineer [as defined in the *Occupational Health, Safety and Welfare Regulations 1995*]

### Excavation Work
Work involving the removal of soil or rock from a site to form an open face, hole or cavity;

### Hazard
Anything that has the potential to cause injury or illness [as defined in the *Occupational Health, Safety and Welfare Regulations 1995*]

### Hierarchy of Control
The system that is indicated in Regulation 1.3.3 of the *Occupational Health, Safety and Welfare Regulations 1995* that is applied in descending order to control hazards

### HSR
Health and Safety Representative

### Monitor
To check, supervise, observe critically or measure the progress of an activity, action or system on a regular basis, in order to identify change from the performance level required or expected

### Minimise
To reduce to the lowest level that is reasonably practicable to achieve [as defined in the *Occupational Health, Safety and Welfare Regulations 1995*]

### PPE
Personal protective equipment is specialized clothing or equipment worn by employees for protection against health and safety hazards. Personal protective equipment is designed to protect many parts of the body, eg: eyes, head, face, hands, feet and ears.

### Risk
The probability and consequences of occurrence of injury or illness [as defined in the *Occupational Health, Safety and Welfare Regulations 1995*]

### Risk Assessment
The process of evaluating the probability and consequences of injury or illness arising from exposure to an identified hazard or hazards [as defined in the *Occupational Health, Safety and Welfare Regulations 1995*]

### Trench
An excavation the length of which exceeds its depth or width; [as defined in the *Occupational Health, Safety and Welfare Regulations 1995*]

### Trenching
Excavation work to form a trench for the purposes of laying, maintaining, repairing or replacing conduits, pipes or cables; [as defined in the *Occupational Health, Safety and Welfare Regulations 1995*]

### Workplace
Means any place (including any aircraft, ship or vehicle) where an employee or self employed person works and includes any place where such a person goes while at work [as defined in the *Occupational Health, Safety and Welfare Act 1986*]

### 4. Procedure

#### 4.1. Register for excavations and trenches greater than 1.5 metres deep.

- **4.1.1.** The Works Manager shall ensure that a register is developed and maintained of all excavations and trenching activities greater than 1.5 metres deep.

- **4.1.2.** The register shall include, at a minimum:
  a. A list of all excavations and trenching activities greater than 1.5 metres deep being undertaken at the workplace
  b. Evidence of a current risk assessment for each excavation and trenching activity greater than 1.5 metres
c. The name and contact details of the engineer providing the engineer’s report (please see 4.4 below in relation to requirements for the engineer’s report)

d. The name and contact details of the person responsible for managing or carrying out the daily site inspections.

e. Evidence of a formal documented handover being undertaken

4.1.3. Functional Managers shall notify the Works Manager when any new excavations and trenching activity greater than 1.5 metres is being undertaken and the register shall be updated to reflect the new activity.

4.2. Identification of excavations and trenches

4.2.1. Functional Managers, in consultation with employees and/or their representatives, shall identify any risks related to excavation and trenching to ensure that risks to safety of persons involved in the performance of excavation/trenching work are identified before work commences.

4.2.2. Measures (in line with the Hierarchy of Control) must be taken to eliminate, minimise or control these risks before, during and after the performance of the work.

4.3. General

4.3.1. The Functional Manager must check that systems are in place, so that, before a person enters an excavation or trench, and while a person is within an excavation or trench, that appropriate signs and protective barriers are erected to prevent unauthorised persons or plant from entering the area.

4.3.2. Any plant or equipment, work practice or personal protective equipment used in excavation and trenching shall comply with any relevant legislative and Australian Standards requirements.

4.3.3. Prior to work commencing check that the controls identified by the pre-excavation risk assessment and the engineer’s report are in place. This may be facilitated through the use of a pre-start checklist.

4.3.4. Transfer the findings from the risk assessment to the Hazard Register.

4.3.5. Completed risk assessments shall be provided to persons entering excavations and trenches greater than 1.5 metres deep and made available to other interested parties (OHS&W Committees, HSRs etc).

4.4. Excavations and trenches greater than 1.5 metres deep

4.4.1. A written engineer’s report (as required by the Occupational Health, Safety and Welfare Regulations 1995: Regulations 5.5.1 and 5.5.2) shall be prepared to assess all site conditions that could affect the excavation and persons safety prior to any work commencing; other than for grave digging, which will have an engineer’s report undertaken on the cemetery (or more than one report per cemetery where soil conditions vary within the cemetery). An engineer’s report will be required if a risk assessment determines that conditions within the cemetery have changed to that noted in the engineers report. The engineer’s report must include:

a. Site conditions

b. Safety precautions that should be taken and observed during and after the performance of the work.
c. Temporary support systems
d. Battering/benching
e. Other forms of retaining structures whether temporary or permanent
f. Pre-excavation Risk Assessment Worksheet
g. Other matters that may be relevant to protect the safety of persons involved in the performance of the work in the vicinity of the excavation
h. Comment or revision of the Excavation Daily Inspection Sheet in respect to content and use.

4.4.2. The engineer’s report (or a copy of the report) must be kept at the worksite at all times during the performance of the excavation work and made available to employees and contractors (if relevant) upon request.

4.4.3. SafeWork SA must be notified using the appropriate form giving, at least 24 hours notice before the commencement of work for excavations and trenches that are or will be greater than 1.5 metres deep if:
   a. An excavation formed by the work is, or will be, more than 1.5 metres high when measured from the bottom of the excavation and
   b. The excavation is capable of permitting the entry of a person; or
   c. There is a possibility that a person involved in the performance of the work, or in the vicinity of any excavation or excavation work, could be injured from a fall or dislodgment of soil or rock.

4.4.4. The Functional Manager must check that, before any work commences for the first time (which involves entry into an excavation or trench greater than 1.5 metres deep), that a Pre-Excavation Risk Assessment Worksheet is undertaken in conjunction with a completed written engineer’s report (Regulations 5.5.1 and 5.5.2) to assess all site conditions that could affect the excavation and person’s safety, prior to any work commencing.
   a. The Functional Manager shall form a team to undertake the risk assessment. The team shall consist of (as a minimum) a management representative, a health and safety representative (where one exists for the work group) and/or employee/s (who will be constructing or working in the trench). (One of these people must have completed risk assessment training to be considered a competent person to lead the risk assessment process.)
      Other people may be included in the team when necessary e.g., the Functional Manager and other relevant stakeholders or experts.
   b. The risk assessment shall be documented on the Pre-Excavation Risk Assessment Worksheet.

4.4.5. The risk assessment shall be reviewed and revised whenever there is evidence that indicates that it is no longer valid (e.g.: there is a change in the risk). Factors that may change the risks in excavation and trenching include, but are not limited to the:
   a. Nature of the ground
   b. Weather conditions
c. Proximity of in-ground services

d. Previously disturbed ground

e. Hazards that could be natural or artificial

f. Trench or excavation depth

g. Surcharging the sides of the trench

h. A change in working arrangements or procedures; or

i. Incidents that affect, or could affect the safety of persons.

4.4.8. Controls shall be selected in descending order from the Hierarchy of Control. The risk assessment must clearly indicate what control measures are to be used. Some risk control measures are mandatory for excavation and trenching, e.g., temporary support systems, battering and other forms of retaining structures, etc.

4.4.9. In all instances, an attempt should be made to eliminate the need for persons to enter an excavation or trench.

4.4.10. A combination of control measures may be required to effectively manage the hazards. These may include, but are not limited to:

a. Battering: Protects employees from cave-ins by excavating the sides of an excavation at an incline, the angle of incline varying with the soil type, the height of the face, the moisture content of the soil and the application of surcharge loads

b. Benching: Similar to a sloping system but with horizontal levels and vertical slopes to give an overall benched slope

c. Support systems: Generally refers to a structure used to support the sides of an excavation or to the underpinning or bracing of an adjacent structure or underground installation. Support systems are either shoring systems or shield systems.

d. Shoring systems: A shoring system is a steel or aluminium hydraulic or mechanical shoring system or a timber system to support the sides of an excavation and prevent cave-ins by the use of sheeting.

e. Shield systems: A shield is a structure, usually manufactured from steel that is able to withstand the forces imposed on it by a cave-in and protect employees who work within the structure. Shields can be permanent structures or designed to be portable and be moved along as work progresses. Shields used in trenches are referred to as trench shields or trench boxes. Steel shields should be designed in accordance with AS 4744.

4.5. Daily inspections for excavations & trenches greater than 1.5 metres deep

4.5.1. Daily inspections must be carried out at least once per day by a competent person (as required by the Occupational Health, Safety and Welfare Regulations 1995: Regulation 5.5.3) to ensure that conditions at the site are safe and that the work is being performed in accordance with any relevant engineer’s report.

4.5.2. After completing the inspection, the competent person shall prepare and sign a written record of the inspection and that record (or a copy of the record) must be kept at the site whilst work is being undertaken, until the completion of the excavation work. Refer to the Excavation Daily Inspection Sheet).
4.5.3. The work must be carried out in accordance with any directions or recommendations given or made by the competent person or engineer's report and the site must be left in a safe condition when work is not in progress.

4.6. Excavation and trenching less than 1.5 metres deep

4.6.1. An assessment of the need for an engineer's report will be made by the Functional Manager in consultation with employees and/or their representatives.

4.6.2. The Pre Excavation Risk Assessment Worksheet must be completed by the design team and supervisor prior to commencement of the project to assess! all site conditions that would affect the excavation and safety of persons involved.

4.6.3. The Pre Excavation Risk Assessment Worksheet and any engineer's report including recommendations for ground support and daily checks shall be kept at the worksite during the performance of the excavation work, as should any daily checklists.

4.6.4. The work must be carried out in accordance with any directions or recommendations given or made by the Competent Person or engineer's report and the site must be left in a safe condition when work is not in progress.

4.7. Incidents or accidents related to excavation and trenching

4.7.1. If an accident or incident occurs, the persons involved shall take whatever steps are necessary to control the hazard and seek any first aid or emergency assistance, in accordance with the procedures documented during the risk assessment process.

4.7.2. The Accident / Incident Investigation and Reporting Procedure shall be complied with.

4.7.3. According to the Occupational Health, Safety and Welfare Regulations 1995, the unintended collapse or failure of an excavation that is more than 1.5 m deep or of any shoring is a notifiable dangerous occurrence. For immediately notifiable work-related injuries or dangerous occurrences, the manager/supervisor (or other nominated person) shall ensure that:

   a. The site where the injury occurred has not been altered.
   b. Plant or equipment connected with the incident has not been reused, repaired or removed; or
   c. Substances connected with the incident have not been reused or removed until/unless authorised to do so by the appropriate authority.

4.7.4. The Functional Manager/supervisor (or other nominated person) must, pending the granting of permission by an inspector, take such steps as are necessary:

   a. To rescue an injured person; or
   b. To retrieve a dead body; or
   c. To protect the health or safety of any person who may be in the vicinity of the site, and may prevent undue damage to property.

4.7.5. The Functional Manager/supervisor (or other nominated person) shall undertake any statutory reporting as outlined in the Accident / Incident Investigation and Reporting Procedure.

4.8. Monitoring and evaluation
4.8.1. Functional Managers shall monitor and review excavation and trenching management by:
   a. Monitoring and evaluating controls for effectiveness (e.g. by reviewing the daily inspection records etc)
   b. Causing the risk assessment process to be recommenced if new hazards are identified
   c. Communicating the outcomes of the risk assessment process to relevant employees, stakeholders and to the OHS&W Committee, as required
   d. Periodically inspecting:
      • All excavation and trenching documentation (e.g.: risk assessments, engineer’s reports, etc) to ensure they have been fully completed
      • Excavation and trenching practices to ensure compliance with documented procedures.
   e. Reviewing competency requirements and checking that workers are competent in accordance with legislative requirements.

4.8.2. The OHS&W Committee shall monitor the Hazard Register and Excavation and Trenching Register during its meetings. A report shall be presented to the Chief Executive Officer listing outstanding items requiring their direction or enforcement.

4.8.3. The OHS&W Committee shall review hazard and incident statistics related to excavation and trenching work, audit results, legislative changes and other information relating to the Excavation and Trenching Procedure and refer any concerns to the relevant Functional Manager for direct action when required. Minutes shall record outcomes of discussion and actions undertaken.

4.8.4. The Excavation and Trenching Procedure shall be subject to audit and the audit findings shall be reported as part of the ongoing management review process.

4.8.5. The OHS&W Committee shall set, monitor and review objectives, targets and performance indicators for excavation and trenching management, as relevant.

4.9. Contractors

4.9.1. Contractors engaged by Council to undertake trenching or excavation work must comply with legislation and have an appropriate procedure in place to ensure the work can be undertaken safely.

5. Training

Wudinna District Council Training Needs Analysis shall identify the training needs for those Council employees required to:

5.1.1. Carry out excavation and trenching work; or
5.1.2. Undertake a risk assessment of excavation and trenching work; or
5.1.3. Manage or supervise persons working in or with excavation and trenching; or
5.1.4. Maintain equipment used for or during work in excavation and trenching; or
5.1.5. Purchase, distribute or maintain personal protective equipment for use in excavation and trenching; or
5.1.6. Potentially be involved in a rescue or first-aid procedure involving work in excavation and trenching.

5.2. The training must, insofar as is relevant to the performance of the particular work and the employee's duties, at least relate to the following:

- The hazards associated with excavation and trenching; and
- Risk assessment procedures; and
- Control measures for excavation and trenching; and
- The systems of work and work practices that enable them to perform their work in a manner that is safe and without risks to health, and;
- The holding of appropriate certificates of competencies where required, particularly in the operation and use of load shifting equipment; and
- The training provided in the instructions should include:
  a. Planning and preparation of work
  b. Setting out excavation and erecting safety equipment
  c. Assist machine excavation operations
  d. Installation of excavation support
  e. Clean up.

5.2.7. The selection, use, fit and maintenance of safety equipment.

5.3. Such training shall be competency based and in accordance with the Regulations, Australian Standards or Approved Codes of Practice. Training must be documented and relevant information forwarded to the OHS&W Coordinator for inclusion to the training records.

5.4. The Functional manager shall check that the findings of the risk assessment and any safe work instruction is explained to those persons involved in the activity and is signed by each person; before any work commences.

6. Records

Records related to excavation and trenching management shall be maintained in accordance with the General Disposal Schedule 20 For Local Government Records in South Australia - 4th Edition (GDS 20). The list includes, but is not limited to:

- Risk assessments – review after 5 years or when legislation or activities change
- Risk management plans
- Training records
- Plant and equipment registers
- Plant and equipment maintenance records
- Registration certification for relevant plant and equipment
- Permit processes
- Statutory notifications

7. Responsibilities

7.1. The Chief Executive Officer is accountable for:
7.1.1. Approving reasonably practicable capital expenditure for items related to excavation and trenching management

7.1.2. Maintaining legislative compliance

7.1.3. Nominating a responsible person to manage excavation and trenching and checking that they are competent to undertake the task

7.2. The Functional Manager responsible for the excavation & trenching is accountable for:

7.2.1. Ensuring the Excavation and Trenching Register is maintained

7.2.2. Restricting work in excavation and trenching to authorised and competent persons

7.2.3. Fulfilling their obligations as outlined in section 4.5 of this procedure

7.2.4. Checking training certifications for validity and currency prior to any person entering and working in excavation and trenching.

7.2.5. Checking that all excavation and trenching activities are identified and managed as per regulatory and Wudinna District Council procedural requirements

7.2.6. Ensuring, so far as is reasonably practicable, that all reasonably foreseeable hazards associated with excavation and trenching are identified, assessed and controlled when elimination is not practicable

7.2.7. Checking that any excavation and trenching signage is maintained

7.2.8. Checking that excavation and trenching work areas are secured against unauthorized entry

7.2.9. Checking that a risk assessment that includes emergency response is developed and documented before any work which involves entry into excavation and trenching work areas is commenced for the first time

7.2.10. Reviewing and revising risk assessments when required

7.2.11. Implementing control measures in line with this procedure to ensure, so far as is reasonably practicable, the safety of workers when undertaking excavation and trenching work

7.2.12. Checking that a record is made in the Hazard Register of all excavation and trenching work

7.2.13. Checking that persons required to undertake excavation and trenching work have been trained and assessed as competent, in accordance with legislative requirements

7.2.14. Checking that any person who works in excavations and trenches is given information about the hazards that are present in the work location, prior to the work being undertaken

7.2.15. Checking that all plant and PPE used in excavation and trenching work is fit for purpose, inspected prior to use and maintained by competent persons, in accordance with legislative requirements

7.2.16. Undertaking inspections, to monitor compliance with requirements

7.2.17. Checking that all persons working in a excavation and trenching have returned from their tasks at the end of the day

7.2.18. Checking that hazards identified or incidents that occur when working in excavation and trenching work, are reported, investigated and control measures are implemented in accordance with Wudinna District Council Hazard Management Procedure.
7.2.19. Implementing any corrective or preventative actions required for excavation and trenching work.

7.2.20. When work is completed on a Rubble Pit, a formal documented handover is to be completed with the landowner.

7.3. The OHS&W Committee

7.3.1. Monitoring the Hazard Register, incident and accident reports; and referring issues to Functional Managers for enforcing close out of items when required and directing action as required

7.3.2. Reviewing the effectiveness of the Excavation and Trenching Procedure

7.3.3. Including excavation and trenching management within the management review process

7.4. Any person required to work in an excavation or trench is accountable for:

7.4.1. Demonstrating and maintaining competency in accordance legislative requirements

7.4.2. Complying with the requirements of the risk assessment and all relevant OHS&W policies and procedures whilst undertaking their tasks

7.4.3. Not endangering health and safety of themselves or others by alcohol or other drug consumption

7.4.4. Using any PPE and safety equipment provided

7.4.5. Assisting in assessing risk, implementing control measures and evaluating them for effectiveness as required

7.4.6. Seeking assistance to manage any identified hazards when required.

8. Review

8.1. The Excavation and Trenching Procedure shall be reviewed by the OHS&W Committee, in consultation with management, employees or their representatives, every twenty four (24) months or more frequently if legislation or Council needs change. The review may include a review of:

8.1.1. Legislative compliance issues

8.1.2. Audit findings relating to excavation and trenching management

8.1.3. Changes in the products, operations or activities of the organization

8.1.4. Incident and hazard reports, claims costs and trends related to excavation and trenching management

8.1.5. Feedback from managers, employees or other stakeholders

8.1.6. Other relevant information.

8.2. Results of reviews may result in preventative and/or corrective actions being implemented and revision of this document.

9. References

Occupational Health Safety and Welfare Act 1986

Occupational Health Safety and Welfare Regulations 1995 Division 5.5: Excavation Work
Excavation & Trenching Procedure

General Disposal Schedule 20 for Local Government
WorkCoverSA Performance Standards for Self-Insurers

RESOURCES
Further guidance is available from:

Workplace Services Safeguard CS 3 - Preventing Trench Collapses

Civil Construction Safety Guide #7 – Trenching and Excavations

10. Related documents
Hazard Management Procedure
Hazard Register
Excavation and Trenching Register
Risk Assessment
Accident /Incident Investigation and Reporting Procedure
Training Needs Analysis
Training Register
Document Control Procedure
Corrective and Preventative Actions Register
Grave Digging Checklist
Excavation Daily Inspection Sheet
Pre-Excavation Risk Assessment Worksheet
Notification of Commencement of Certain Work

SIGNED: ............................................  ............................................
Responsible Officer  Chairperson, OHS&W Committee
Date: _____/_____/_____  Date: _____/_____/_____