

# FERRYHILL TOWN COUNCIL



## **POLICY**

### **GRAVE DIGGING**

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## **POLICY STATEMENT**

It is Council policy to ensure a high standard of grave digging whilst maintaining safety and dignity at all times throughout the process. This extends beyond the day of interment to the weeks and months afterwards when the soil is settling to ensure that all graves are maintained to the highest standard.

### **GRAVE DIGGING - General Requirements**

**Training.** All grave digging staff should receive training in this operation. Any untrained staff involved in grave digging operations should be closely supervised at all times by a fully trained person.

***It is recommended that gravediggers receive training under the Cemetery Operatives Training Scheme administered by the ICCM***

- ❖ Steel Toe Capped boots must be worn at all times.
- ❖ A hard hat must be worn when working in an excavation.
- ❖ Any grave that is left unattended for whatever reason must be completely boarded over in such a manner as to prevent any person falling into the grave. Some manufacturers of mechanical shoring equipment provide a lockable cover to ensure complete security.
- ❖ Entry and egress from a grave must be by ladder. On **NO-account** must a gravedigger climb out of a grave by treading on any part of the shoring.
- ❖ A ladder must remain in place whenever an operative is working in a grave in order to maintain an emergency exit. (**Confined Spaces Regulations 1997**)
- ❖ All finished graves should be prepared using imitation grass matting. The matting will be laid out neatly on staging leaving no folds or gaps which may cause Funeral Director, members of the Clergy, mourners or member of staff to trip. Walkboards / staging must be laid along the length of the grave and supported at each end and must be capable of carrying the weight of the Pall Bearers and Coffin.
- ❖ All graves must be dug centrally within the respective grave space to the exact dimensions indicated (Appendix 1). Graves that are not dug centrally within the grave space will increase the risk of collapse, as the intervening wall of undug soil on one side will be of reduced thickness.
- ❖ Any nearby / adjacent memorials which pose a hazard to the grave digger must be temporarily moved to a safe distance from the grave to be excavated and replaced immediately following the interment. It would be courteous to contact owners of such memorials informing them that your actions are intended to reduce risk to the grave digger and also protect their particular memorial from damage should the grave being prepared collapse and their memorial fall.
- ❖ Protective goggles must be worn when using a pick.
- ❖ Care must be taken when using a pick when shoring is in position so as to prevent striking and dislodging timber struts, screw jacks or acro struts. A damaged hydraulic ram may fail posing a hazard to the operative.
- ❖ Any foul odours encountered should be reported immediately to the Town Council's

Works Manager.

**The ICCM recommends that a second person is in attendance whenever work is being carried out in an excavation of a depth greater than 3' (0.91m) in order to comply with the requirements of the Confined Spaces Regulations 1997 and the Manual Handling Regulations 1992.**

All excavations greater than 3 ft (0.91) must be shored.

All tools and equipment required to complete each grave must be available nearby before digging commences.

When hand digging, shoring must be incorporated as digging proceeds. It is advised that shoring should be incorporated as soon as a depth equal to the depth of shoring equipment panel / timber is reached.

**Hydraulic equipment should be inspected and serviced by a qualified person in order to comply with the Provision and use of Work Equipment Regulations 1998**

**DEFECTIVE UNITS MUST NOT BE USED.**

Shoring timbers and struts should be inspected prior to use for any sign of deterioration.

Defective timbers and struts should not be used and should be cut down to prevent use by any other person.

Acro struts should be regularly lubricated. The proper pin only must be used.

Lowering webbings and putlogs must be inspected prior to each burial to ensure that no deterioration has occurred and that they are capable of taking the weight of the coffin. Frayed webbings should not be used.

## **PRE EXCAVATION PREPARATION**

### **Safe Working Area and Memorial Safety**

#### **General**

It is extremely important that grave diggers follow the advice contained within this Code to ensure a safe working environment for all Cemetery operatives/visitors when excavating a grave, including themselves. It is important that grave diggers are trained to be able to safely assess the working site, including memorials, assess the risk, record the assessment accurately, follow an approved reporting process and understand the range of options available for making the area safe for all who will use it.

#### **Using Risk Assessment Techniques**

Risk assessment is central to ensuring a safe working environment. Grave digging within the burial ground should be covered by a suitable risk assessment and safe system of work as identified in 1.4 of this Code. When assessing the hazards on a potential excavation site a number of decisions need to be made based on sound risk assessment principles:

*What areas of the burial process need to be considered during site preparation: –*

- ❖ Consideration should be given to the range of hazards that may exist around the excavation area.
- ❖ Consideration should be given to activities that will subsequently take place
- ❖ Safe and easy access for operatives and equipment
- ❖ Safe access for persons attending and officiating at the burial service
- ❖ The health and safety of operatives during the excavation process

- ❖ The health and safety of Cemetery visitors

***What range of hazards exist in the area surrounding the grave to be excavated?***

When considering the safety of the site before, after and during excavation work the following must be considered:

- ❖ Ground conditions – proper consideration of the ground conditions surrounding the grave and on the route to the graveside should be taken account of with particular care to be taken when areas contain multiple trip hazards. Safest route, proper footwear and care in unstable or wet/slippery conditions should be emphasised in risk assessments for this work
- ❖ Memorials – memorials present specific hazards and must be dealt with according to the Guidance produced by the Institute of Cemetery and Crematorium Management (ICCM) and Society of Local Council Clerks (SLCC)
- ❖ Correct positioning and marking out of grave – this is essential as reduced midfeathers in otherwise stable conditions can create a false impression of safe excavation conditions. This is dealt with in more detail later in this Code.
- ❖ Protection of excavation – proper techniques to protect the integrity of the excavation are dealt with later in this Code.
- ❖ Vegetation – proper consideration should be given to the effect of any evasive vegetation or work being carried out around trees that have low branches or unsafe branches
- ❖ Undermining of nearby structures - Should a grave to be excavated be located near to a wall or other structure it may be necessary to provide support to such wall or structure to prevent it falling due to its foundations being weakened by the work in progress. It may be necessary to seek the advice of a qualified structural engineer and take the appropriate action in accordance with such advice that is given.

The above risk assessment information is for guidance purposes only, lists are not to be considered all-inclusive but indicative of the types of risks that should be considered. Further guidance should be sought from the Works Manager who is responsible for Health and Safety for the Town Council as the Burial Authority.

**Locating Graves – Measuring and Marking**

All graves to be excavated should be located and identified by using the statutory grave plan. The location will have been marked in advance by the Council's Works Manager. All graves must be dug centrally within their respective grave spaces for the following reasons:

- ❖ If grave is not dug centrally within its respective grave space one of the walls separating the adjacent grave will be of a narrower width and will increase the risk of collapse of that particular side of the grave.
- ❖ When reopening a grave that was previously dug out of centre the risk of collapse is increased.

WO3

- ❖ When a memorial is erected centrally on a grave that was dug out of centre the risk of the memorial subsiding and tilting is increased which in turn increases the risk of the memorial becoming unstable and a danger in its own right.

## Walkboards / Work Platform

### Hazard Checklist and Risk Assessments

Hazard	Type of Harm	(A) Frequency Rating	(B) Severity Rating	Risk Rating A x B
Unprotected grave edges	Impact injuries from fall	3	3	9
Insecure soil box	Crushing/Trapping	3	3	9
Material falling from soil box into grave	Impact injuries	3	3	9
Unstable Walkboards	Impact injuries from fall	3	3	9
Soil box too close to edge of grave	Impact from fall of soil/stones etc. into grave. Trapping/crushing in collapsed grave	3	4	12

### Walkboards

Walkboards must be placed along each side of the grave to be dug that are supported on boards placed across the head and foot ends of the grave. This action will spread the weight of operatives and prevent falls due to crumbling surface edges.

Walkboards should remain in place for the whole of the burial process, i.e. placed before excavation commences and not removed until after backfilling is completed.

### Work Platform

A work platform can be provided by replacing the head and foot boards with boards of 6'6" (1.95m) in length. This action will enable two more boards to be laid along the length of one side of the grave to create a platform 4' (1.22m) wide.

### Soil Box

A Soil box (soil tidy) should ideally be erected to contain the excavated material. This structure must be securely erected so that pressure from the soil inside does not cause it to collapse. The use of a soil box will assist with protection of nearby memorials and turf and is recommended best practice.

The soil box should be situated no closer than 2' (0.61m) from the edge of the excavation so as to reduce pressure near to the edges of the grave and therefore reduce the risk of collapse.

Consideration should be given to increasing the distance of the box from the edge of the grave where unfavourable ground conditions exist.

WO3

The soil in the box should be sloped (battered) away from the grave so as to reduce the weight at the side nearest to the grave. A front board can be placed across the front of the box to stop soil, stones etc. from rolling off the soil stack and onto any operative who may be working in the grave.

It is advisable to estimate and remove excess soil from the grave (i.e. soil that would remain after backfilling is completed) before the soil box is used. This action will keep the amount of soil placed in the box to a minimum and will reduce pressure within the box and subsequently the risk of the box collapsing.

## **EXCAVATION AND GROUND SUPPORT**

### **Preliminaries and Preparation**

All tools and equipment required to complete the excavation process must be available at close proximity to the grave to be excavated before digging commences.

The amount of shoring equipment required should be assessed according to the required depth of excavation, soil type and weather conditions and the depth of shoring timbers / hydraulic units.

### **Machine Excavation Risk Assessment**

<b>Hazard</b>	<b>Type of Harm</b>	<b>(A) Frequency Rating</b>	<b>(B) Severity Rating</b>	<b>Risk Rating A x B</b>
Weight of machine on ground causing collapse of grave	Crushing / Trapping	<b>3</b>	<b>4</b>	<b>12</b>
Vibration of machine causing collapse of grave	Crushing /Trapping	<b>3</b>	<b>4</b>	<b>12</b>
Impact with moving boom	Impact injuries	<b>3</b>	<b>4</b>	<b>12</b>
Impact with moving machine	Impact injuries	<b>3</b>	<b>4</b>	<b>12</b>
Fumes entering grave	Asphyxiation	<b>3</b>	<b>4</b>	<b>12</b>
Noise from machine	Tinnitus/deafness	<b>2</b>	<b>3</b>	<b>6</b>

Only authorised trained persons should be permitted to operate grave digging machines. The machine operator must ensure that no person stands within the area of the radius of the machine boom or bucket.

When moving a digging machine within the Cemetery the driver must exercise caution and treat the roads and grounds with respect.

When a machine is not in use, it must be parked on hard ground in such a manner that it does not cause an obstruction to traffic or pedestrians. When parked, the boom must be lowered with the bucket resting on solid ground. The ignition key must be removed. The blade on tracked machines must be in the down position whenever the vehicle is parked. The machine operator must ensure that the machine is safely manoeuvred into the digging position. Legs/stabilisers must be correctly positioned as far away as is practicable from the grave to be excavated. Placing stabilisers on purpose built bearers can spread the weight of the machine.

WO3

The blade on a tracked machine must be in the down position at all times when digging is in progress.

**Training and certification in the safe use of grave digging machines is provided by the ICCM under the Cemetery Operatives Training Scheme. Unlike other excavator operators courses the COTS course focuses on the hazards, implications and problems specific to the cemetery environment.** The operator must ensure that the machine is level before digging commences so as to ensure that the sides of the grave are vertical. The level of the machine can be adjusted using the legs/stabilisers. An unlevelled machine will cause one side of the grave to be under dug, which will increase the risk of grave collapse.

The machine must be switched off whilst shoring is being installed into a part dug grave. This action will reduce the risk of collapse caused by vibration of a running machine. The bucket must be rested on solid ground to the side and as far away as is possible from the grave being excavated.

It is possible that exhaust fumes from the engine can collect in the bottom of the grave. Wherever possible the machine should be positioned down wind of the excavation to reduce the risk of this occurring. The risk is increased on days when there is no breeze. (Control of Substances Hazardous to Health Regulations)

Care must be taken when excavating a grave whilst shoring is in place so as to avoid striking any part of the shoring equipment with the machine bucket.

Striking or dislodging shoring will not only increase the risk of collapse of the grave but will also increase risk to the gravediggers who are required to rectify the situation.

Digging machines must be operated in accordance with manufacturers instructions.

Machines should be regularly serviced by a qualified person.

Machine operators should be trained to carry out pre-start checks and routine maintenance.

This action will increase familiarity with the machine and assist in identifying faults before they worsen and become hazards.

### **Hand Excavation**

Shoring must be incorporated as digging proceeds. Adequate shoring will be incorporated so as to prevent the collapse of the sides of the grave. Soil type and weather conditions will affect the requirements for each particular grave.

Particular care must be taken during periods of wet weather when it is advisable to close shore graves to full depth.

On completion of each excavation the gravedigger must ensure that the sides and ends of the grave are vertical and that the bottom of the grave is level. Shoring units must be level.

**The ICCM recommends that a second person is in attendance whenever work is being carried out in an excavation of a depth greater than 3' (0.91m) in order to comply with the requirements of the Confined Spaces Regulations 1997. The second person will be in a position to give warning to the gravedigger, raise the alarm in an emergency and commence emergency procedures.**

### **Dealing With Ground Water**

Should water collect in a grave it should be removed prior to the interment. Ideally a motorised pump should be used, as this action will not require a gravedigger to enter the grave. The hose from the pump can be lowered into the grave from surface level.

When conditions indicate that water may collect in a grave a sump pit can be dug in the bottom of the grave towards one end.

The hose from the pump can be placed in the sump pit and as water is pumped out of the pit the remaining water in the grave will be drawn towards the pit thus leaving the greater part of the bottom of the grave dry.



WO3

When hand digging a sump pit can be kept open at one end with the gravedigger working away from it. This action will assist in reducing the amount of mud created on the bottom of the grave.

When machine digging a sump pit can be dug when final hand levelling of the bottom of the grave is carried out.

Should water be removed from a grave using a petrol driven pump no gravedigger should be working in the grave while the pump is running as exhaust fumes may enter the grave and collect at the bottom. (Exhaust fumes are heavier than air)

Ideally the pump should be positioned as far away from the grave as is possible and positioned down wind.

Water removed from a grave should ideally be pumped into the nearest soak away or sewer.

Should foul odours be encountered a supervisor should be informed immediately. Phenolic disinfectant should be used if required.

[Attention is drawn to the Local Authorities Cemeteries Order 1977 which states “no person.....shall remove therefrom any soil which is offensive” (Part 1 of Schedule 2)]

### **Lifting Equipment**

(Lifting Operations and Lifting Equipment Regulations 1998)

When excavating deep graves by hand a point will be reached where the grave digger cannot throw the soil out of the grave without the risk of stones, debris etc. falling back. In order to remove this risk it will be necessary to employ lifting equipment such as a winch and bucket. The bucket is lowered to the bottom of the grave and is filled by the gravedigger. When the bucket has been filled a second person will operate the winch.

When using lifting equipment for this purpose such equipment must be securely set up at one end of the grave so that the gravedigger in the excavation can stand at the opposite end during the lifting operation. Should the bucket fall or debris fall from the bucket during lifting the risk to the gravedigger from being struck by falling objects is reduced. To eliminate this risk entirely the gravedigger can exit the grave before the lift commences and return after the emptied bucket has been lowered.

### **A hard hat must be worn whenever a gravedigger is working in a grave.**

The person operating the lifting equipment should swing the bucket clear of the grave and as far away as is possible and rest it down before detaching the rope / hook. Ideally the bucket should be emptied onto the back of the soil box in order to reduce the risk of stones or debris rolling off of the spoil heap and onto the grave digger in the excavation.

The requirements of the Lifting Operations and Lifting Equipment Regulations 1998 are available on request.

### **Ground Support**

**The example procedures contained within this section demonstrate approaches for dealing with the most favourable and most unfavourable of soil types. These procedures can be modified by the user according to the results of local risk assessments covering local soil type and conditions.**

For the purpose of clarity the diagrams contained in the procedures do not show walkboards in position. It is stressed that walkboards should be placed in position before digging commences and not removed until after backfilling is completed.

**Hazard Checklist and Risk Assessments**

<b>Hazard</b>	<b>Type of Harm</b>	<b>(A) Frequency Rating</b>	<b>(B) Severity Rating</b>	<b>Risk Rating A x B</b>
Unshored grave	Crushing / Trapping	3	4	12
Insecure shoring	Crushing / Trapping	3	4	12
Inadequate shoring	Crushing / Trapping	3	4	12
Defective shoring	Crushing / Trapping	3	4	12
Unstable non cohesive ground	Crushing / Trapping	3	4	12
Falling material and objects including nearby unstable memorials	Impact injuries	3	4	12
Foul water	Infection	2	4	8
Manual handling	Back strain / hernia	3	3	9
Repetitive strain	Arthritis	3	3	9
Unprotected grave edges	Impact injuries from tripping / falling	3	3	9
Unattended open graves	Impact injuries from falling	2	4	8

**NOTE : The above risk assessments were considered in respect of an operative working in or near to a grave of 7' (2.13m) in depth.  
Risk is increased for graves of greater depth.**

**PREPARATION FOR INTERNMENT**

<b>Hazard</b>	<b>Type of Harm</b>	<b>(A) Frequency Rating</b>	<b>(B) Severity Rating</b>	<b>Risk Rating A x B</b>
Limited access	Impact injuries from Trip / Fall	3	3	9
Unstable walkboards	Impact injuries from Trip / Fall	3	3	9
Folded or torn grass matting	Impact injuries from Trip / Fall	3	3	9
Frayed webbing breaking	Back / muscle strain. Injuries from falling.	3	3	9
Insecure nearby memorials	Injuries from Crushing / Trapping	3	4	12

WO3

Prior to preparing / dressing the grave the surrounding area should be examined to ensure as far as is reasonably practicable a safe, unobstructed access for Funeral Directors staff, clergy and mourners. Any trip hazards that may be present must be removed.

Walkboards must be checked for stability with adjustments made as required. Unstable walkboards may cause a pall bearer (s) to fall whilst placing a coffin onto putlogs.

Grass matting can be draped into the grave to cover the internal walls and shoring equipment.

The soil box, walkboards and immediate surrounding area can then be covered.

Care must be taken to avoid trip hazards caused by folds in the matting. Torn or holed matting **must not** be used.

### **PLAN VIEW**

Two putlogs should be placed across the grave onto which the coffin may be placed prior to the committal. Putlogs should be 4'6" x 4" x 4" (1.37m x 102mm x 102mm) and of good quality knot free planed timber.

The distance between the putlogs should be no less than 3'6" (1.07m).

Two lowering webbings are placed as shown in the diagram. Care must be taken to ensure that sufficient webbing is placed on either side of the grave to enable each pallbearer to lower the coffin to the bottom of the grave.

Webbings should be checked for signs of deterioration or fraying before each burial service. Frayed or damaged webbings must not be used and should be cut down to prevent use by any other person.

### **BACKFILLING - General Requirements and Considerations**

Backfilling should commence immediately after all mourners have left the cemetery and be completed fully on the same working day.

Webbings and grass mats, if used, must be removed before backfilling commences.

Walkboards should be left in place during the whole of the backfilling procedure so as to prevent persons walking on any unprotected grave edge.

Backfill must be consolidated at intervals during the backfilling process in order to reduce later subsidence and settlement of the grave. **The grave is to be finished with a tidy mound of soil, covered with saved (and if necessary, imported) turfs to leave an immaculate finish.**

The importance of this action cannot be stressed highly enough as the reduction of instances where the bereaved may be confronted with sunken graves is imperative. It will also subsequently reduce the risk of the memorial tilting and thereby becoming unstable.

Monitoring of the condition of the backfilled grave is to be carried out weekly within the first month and thereafter at regular intervals (at least monthly). Remedial work must be undertaken immediately if there is soil settlement leading to an untidy, uneven or sunken surface and/or if the turves show signs of drought or die-back. The responsibility for monitoring and maintenance rests with the grave digger.

In some instances there may be insufficient space to the side of the grave for the pallbearers to safely carry the coffin and place it on putlogs directly over the grave.

A safer method for this situation is to place a board at either the foot or head end of the grave covered with grass matting on which to place the coffin.

Two putlogs are placed across the board so that the coffin can be rested down with no risk of pallbearers trapping fingers. The lowering webbings are also placed across the board. At the appropriate time during the committal service the pallbearers can lift the coffin using the webbings and walk along the walkboards and safely lower the coffin into the grave.

### **PROTECTION OF THE COFFIN**

When backfilling large flints, pieces of rock or lumps of clay may damage the coffin when they impact from height. To reduce the risk of coffin damage a timber can be placed into the grave as shown in the above diagram. Backfill material will strike the timber, break its speed of fall and deflect to the sides of the grave.

### **MOURNER PARTICIPATION**

Some ethnic and religious groups require carrying out the backfilling of the grave themselves. There is a conflict between health and safety and customer care in this situation and it is for the Town Council to assess the risk involved and decide whether to permit mourners to backfill.

Should it be decided to permit mourners to backfill the Works Manager must take control of proceedings and stop backfilling at the relevant stages in order that gravediggers can remove shoring equipment.

It is vital to the health and safety of mourners that co-operation between Cemetery staff, mourners and the Funeral Director conducting the funeral is established.

### **FUNERAL DIRECTORS**

**Whilst the Town Council and the Funeral Director will combine to serve the same client it is important to also combine in the interest of health and safety.**

Funeral Directors should be requested to provide their risk assessments, safe systems of work and staff training information together with a copy of their public liability insurance certificates.

### **CONTRACTORS AND OTHERS WORKING IN THE CEMETERY**

Tender documents for major contracts must contain a section relating to health and safety requirements. This section will contain full details of how the contractor will comply with all legislative requirements with copies of policies, risk assessments, safe systems of work, staff training records, COSHH assessments, insurance certificates etc.

See Management of Health and Safety at Work Regulations 1999

Small contracts that are not submitted to the full tendering process should also require that bidders submit full details of the health and safety documentation as above.

As Ferryhill Town Council is owner and occupier of the Cemetery it has ultimate duty of care under health and safety legislation and must therefore set the standards required and closely monitor activities of contractors so as to ensure compliance.

Refer to Health and Safety at Work Act 1974 for further guidance.

**BURIAL DIMENSIONS**

The maximum depth of a grave shall not be greater than 2400mm, and no burial shall be made without there being at least 900mm of soil between the ordinary surface of the ground and the upper side of the coffin. In a grave not exceeding:

- (a) 1800mm in depth, not more than two (2); and
- (b) 2400mm in depth, not more than three (3), adult coffins shall be interred.

<b>183 cm Deep</b>			<b>90 cm Deep</b>	
	<b>Coffin</b>			
	<b>15 cm undisturbed soil</b>			
	<b>Coffin</b>			

