### **TRENCH CONTROL PILING SOLUTIONS**

Ireland's Largest Supplier of Trench Shoring & Excavation Support Equipment



**ROI:** 045 866944 **NI:** 028 9268 9859 www.trenchcontrol.ie



**Excavation Support** 

# **Trench Control**

#### Concrete CFA & Sheet Piling

Anchoring





# **Company Overview**

#### Who we are

- Local Company Operating Nationally
- Largest Irish Sheet Piling Company
- Almost 30 Years in Business
- Countrywide Service

#### What we do

- Ground Support Equipment Hire
- Sheet Piling
- Concrete Piling
- Anchoring
- Flood Protection
- Full Design Service Free of charge



*Excavation Support Equipment* www.trenchcontrol.ie



Safety Training & Consultancy www.safety.ie



Construction Accessories www.mlcs.ie



# **Piling Rigs & Hammers**



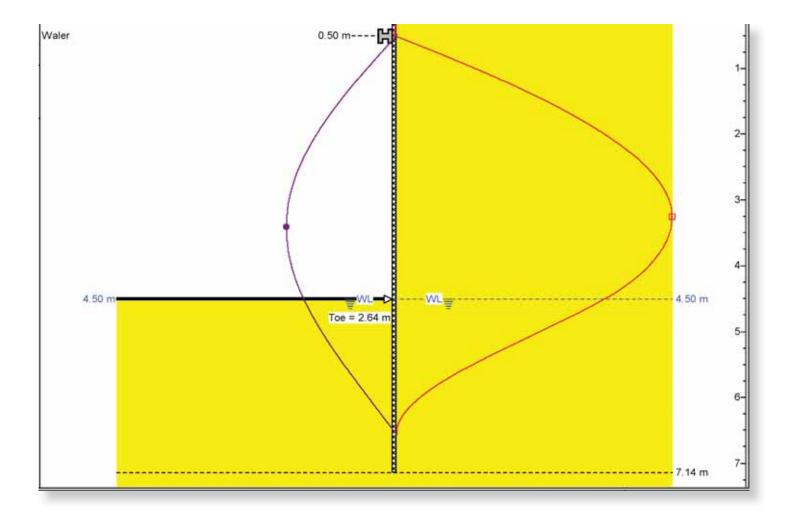


# **Sheet Piling – Larssen Piles**





## **FREE** Piling Design Service - Includes Full PI Coverage





# **Piling Solutions**

#### **Sheet Piling**

- Temporary Sheet Piling
- Permanent Sheets Piling
- Marine Works
- Coffer Dams & Corner Piles
- Additional Sheet Piling Options

### **Concrete Piling**

- Contiguous Piling
- Secant Piling
- Pile Breaking
- King Posts

#### Anchoring

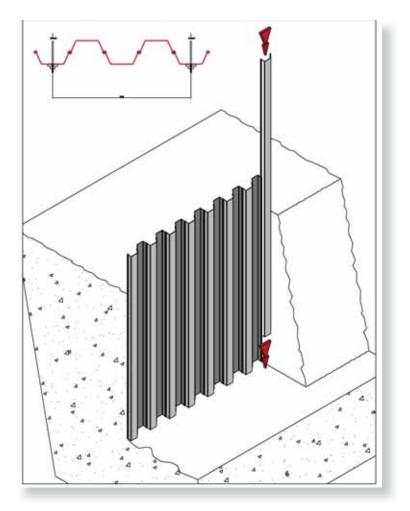
- Tie Back Anchors
- Ground Anchors
- Soil Nailing

#### **Trench Solutions for Hire**

- Trench Boxes
- Drag Boxes
- Trench Sheets
- Frames
- Hammers



# **Sheet Piling**



#### **Technical Details**

- Used in both temporary and permanent conditions
- Suitable in ground conditions with low 'N' values
- Permanent sheets can be designed for load bearing
- Provides a water tight excavation
- Light sheets from 3m lapped or multi-lock
- Heavy sheets can be designed up to 20m in length
- · Can be used with frames, props or cantelevered
- Profile shapes can be U, Z, H/UC/I Beams and Tubes

#### **Benefits**

- Installation is twice as fast as concrete piles
- Ability to re-use steel sheets for multiple projects
- Sheets can be hired reducing projects upfront costs
- Anchors can be attached through sheet piles
- Used in both water and land conditions

# **Temporary Works**



### Sheet Piling – Town Centre Cofferdam



Project	Coffer Dam with Welded Clutches
Customer	O'Hare McGovern
Location	Market Square, Dundalk
Date	January '05



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# **Sheet Piling – Large Excavations**



Project	Impact Driving 2.5 BSP Crane Mounted Hammer
Customer	Kilcullen Homes Ltd
Location	Kilcullen, Kildare
Date	September '05





# **Sheet Piling – Retention Walls**



Project	14m Sheet Piling Wall
Customer	Bowen
Location	Little Island,Cork
Date	March '09





# **Sheet Piling – Watertight Excavation**



Project	Riverside Basement
Customer	Bowen
Location	Little Island,Cork
Date	March '09





# **Sheet Piling – Temporary Sheet Piles**



Project	Temporary Retaining Wall
Customer	Walsh Maguire
Location	Finglas, Dublin
Date	December '05



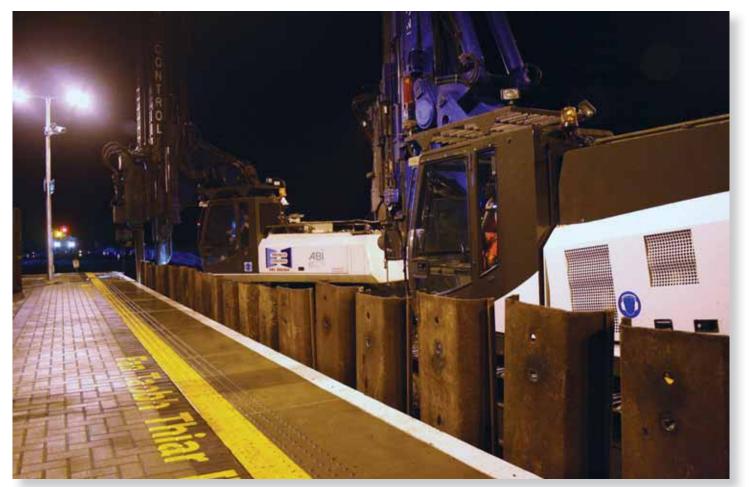


# **Sheet Piling – Temporary Sheet Piles**





# Sheet Piling – Night Work



Project	600 Sheet Piles in 48 Hrs
Customer	Irish Rail
Location	Ballybrophy, Laois
Date	November '08





# Sheet Piling – Railways & Bridges



Project	Under Bridge Piling using a multipiler
Customer	Irish Rail
Location	Ballybrophy, Laois
Date	November '08





## **Sheet Piling – Heavy Duty Frames**



Project	Sheet Piles & Frames
Customer	John Sisk & Son / Wyeth Pharma
Location	Newbridge, Kildare
Date	January '03





## **Sheet Piling – Excavator Mounted Piling**



Project	Using EMV when access is difficult
Customer	McDermott & O'Farrell
Location	Naas Shopping Centre, Kildare
Date	January '07





## **Sheet Piling – Crane Mounted Hammer**



Project	Impact Driving a 2.5 BSP Hammer
Customer	Walsh Maguire
Location	Finglas, Dublin
Date	December '05



# Permanent Works



## **Sheet Piling – Permanent Capped Sheets**



Project	Permanent Retaining Wall
Customer	Bowen
Location	Douglas, Cork
Date	January '08





## **Sheet Piling – Sheet Piling & Anchoring**



Project	WWTP 10m Sheets & Anchors
Customer	Laing O'Rourke
Location	Ballyrickard WWTP, Co. Down
Date	August '07





# **Sheet Piling – Ground Anchors**



Project	Ground Anchors
Customer	Laing O'Rourke
Location	Ballyrickard WWTP, Co. Down
Date	August '07





## Sheet Piling – Underground Car Park Basement



# **Corner Piles**



# **Sheet Piling – Corner Piles**



Project	Corner Section
Customer	Bowen
Location	Eastgate, Cork
Date	February '09



# Marine Works



# **Sheet Piling – Harbour Works**





# **Sheet Piling – Quay Wall Retention**



Project	New Quay Wall at Arklow Harbour
Customer	Allen & Smyth
Location	Arklow, Wexford
Date	July '07





# Sheet Piling – 22m Steel Tubes





# Sheet Piling – Inland Canal Works



Project	Permanent Sheets with protective coating
Customer	Clare Civil Eng.
Location	Shanganagh, Dublin
Date	July '05





# Sheet Piling – Use of a Piling Gate



Project	Piling Gate used for Quay Wall
Customer	Farrans Construction
Location	Warrenpoint Harbour, Co. Down
Date	November '08





# Sheet Piling – Combi Wall





# Sheet Piling – Tubular Piles with Hammer Extension



Project	Tubular Piles along Canal Bank
Customer	Bowen Construction
Location	Haddington Rd, Dublin
Date	April '06





### Aqua Barrier – Water Inflated Cofferdams



Project	Water Filled Coffer Dam
Customer	SIAC
Location	Donore, Co. Meath
Date	July '09



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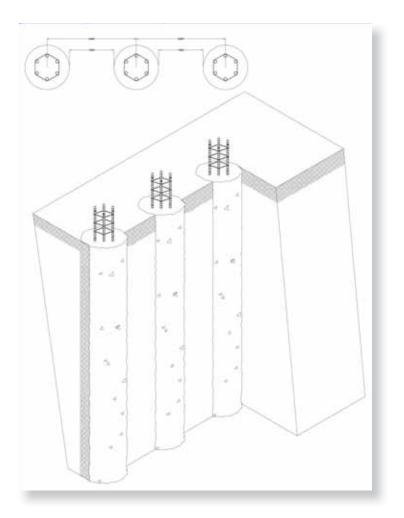
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#### Sheet Piling – Plastic (Vinyl) Piles



# **Concrete Piling Solutions**

## **Contiguous Piling**



#### **Technical Details**

- Used where steel sheet piles cannot be driven
- Bored piles driven adjacent to each without touching
- Gaps between piles depend on soil cohesiveness
- Strength comes from arching of soil between piles
- Not suitable where there is water ingression
- Pile depths of 16 meters
- Pile diameters range from 400mm 600mm

#### **Benefits**

- Drives piles one meter closer to a boundary wall
- Reduce number of piles in a pile wall
- Increased accuracy in verticality
- Ability to drive piles close together thereby reducing need for secant wall
- Less concrete required
- Low noise and vibration



### **Concrete Piling – Contiguous Piles into Boulder Clay**



Project	10m Contiguous Piles
Customer	MDY Construction
Location	Tallaght, Dublin
Date	April '09





### Sheet Piling – 600mm Contiguous Pile



Project	10m Contiguous Piles
Customer	O'Mahony Finnerty
Location	Pembroke Row, Dublin
Date	April '05





#### Sheet Piling – 420mm Contiguous Pile

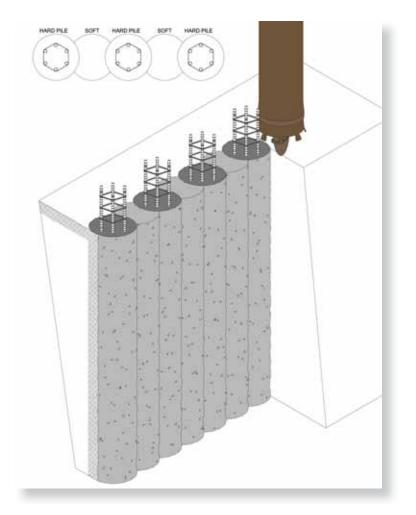


Project	Contiguous Piles – 800mm Centres
Customer	Graham Construction
Location	Santry, Dublin
Date	November '07





## **Secant Piling**



#### **Technical Details**

- Drives piles one meter closer to a boundary wall
- Reduce number of piles in a pile wall
- Increased accuracy in verticality
- Strength of pile casing reduces spreading of piles in digs over 7m
- Less concrete required
- Low noise & vibration

#### **Benefits**

- Provides additional one linear meter around basement perimeter
- No cantelever at ground level reduces structural steel requirement
- No spreading/fingering due to increased vertical accuracy
- Reduces the number of piles in a secant wall
- Less concrete required due to fewer piles
- Low noise & vibration



### Secant Piling – to Within 50mm of a Boundary Wall



Project	260 no. 9m x 450mm Secant Piles
Customer	Pat O'Gorman
Location	Sandymount, Dublin
Date	March '06



Pat O'Gorman & Associates Structural & Civil Consulting Engineers



### Secant Pile Wall – City Centre with Close Boundary



Project	10m Contiguous Piles
Customer	O'Mahony Finnerty
Location	Pembroke Row, Dublin
Date	April '05



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# **Pile Breaking**

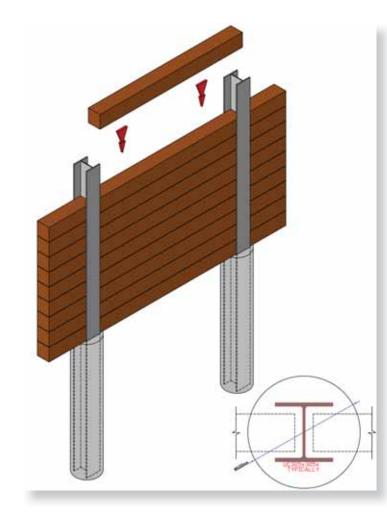


#### **Concrete Pile Breakers**





## **King Posts**



#### **Technical Details**

- Used where steel sheet piles cannot be driven
- Wooden sleepers or precast slabs are inserted between UC posts
- Gaps between piles depend on soil cohesiveness
- Strength comes from arching of soil between piles
- Not suitable where there is water ingression
- Pile depths of 16 meters
- Pile diameters range from 400mm 600mm

#### **Benefits**

- Drives piles one meter closer to a boundary wall
- Reduce number of piles in a pile wall
- Increased accuracy in verticality
- Ability to drive piles close together thereby reducing need for secant wall
- Less concrete required
- Low noise and vibration

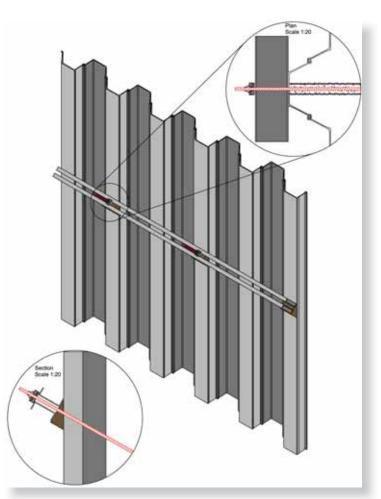


## King Post – Solider Pile





## Anchoring



#### **Technical Details**

- Sheet pile is stabilised by anchor systems
- May be connected to a a 'dead-man pile'
- The anchor and sheet pile act as part of a system to retain the load
- Spacing of anchors is based on the wall height, strength of the water and holding capacity of the anchor
- In permanent works corrosion or deterioation of the tie-backs is factored
- Holding capacity is related to the anchors' structural integrity, its surface area, and the strength of the soil

#### **Benefits**

- Use of a hollow bar is three times faster than conventional systems
- Drilling, anchor installation and grouting is done in a single operation
- No casing is required in collapsing ground conditions
- No seperate anchor installation or removal of casing and drill rods are necessary
- Hollow core serves for flushing during drilling and grouting
- · Flexibility in length due to the utilization of couplers
- Easily extended if ground conditions change
- Pre-tested anchor assures it will hold design load



### Klemm 140 Excavator Mounted Anchor Rig



Project	Tie-Back Anchors for Sheet Piles
Customer	McDermott & O'Farrell
Location	Naas Shopping Centre, Kildare
Date	August '08



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#### **Sheet Pile with Tie Back Anchors**



Project	Tie Back Anchors going into Rock
Customer	Bowen
Location	Douglas, Cork
Date	January '08





#### **Tie Back Anchors in Permanent Steel Basement**



Project	Permanent Steel Basement
Customer	McDermott & O'Farrell
Location	Naas Shopping Centre, Kildare
Date	August '08





#### **Ground Anchors**



Project	Sheet Piling & Anchoring
Customer	Laing O'Rourke
Location	Ballyrickard WWTP, Co. Down
Date	August '07



# **Trench Support Equipment for Hire**



## **Hire Equipment**

- Hammers
- Trench Boxes
- Sheet Piles
- Anchoring
- Frames
- Walers
- Struts/Props
- Linear Shoring
- Stoppers





## Trench Shoring Systems – End Supported Systems

#### **Trench Sheets**

#### **Double Shoring Trench Sheets**





### Heavy Duty Frames / Braces

Heavy Duty Frames used with Light Sheets



Heavy Duty Frames up to 35m in Length





## **Trench Shoring Systems – End Supported Systems**

#### Lightweight Boxes

**Medium Boxes** 





## Trench Shoring Systems – Sliding Rail Systems

#### Single / Double Linear Shoring

Magnum Boxes





## Trench Shoring Systems – End Supported Systems

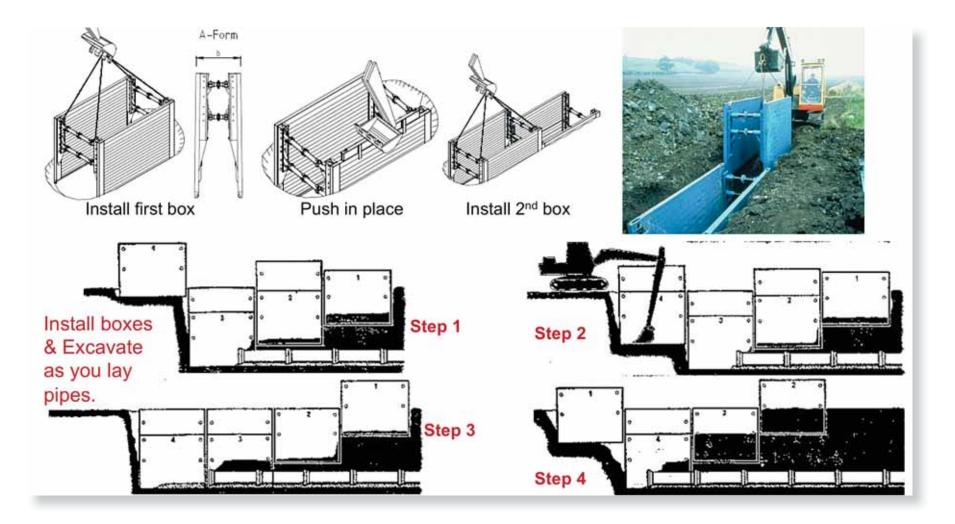
#### Manhole Box

Dragbox





#### Trench Shoring Systems – Installation & Use





### Visit www.trenchcontrol.ie for more info!

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