



Zenith SR1

Demarcation / Welded mesh

Installation Manual

**Read this manual in full before attempting installation.
Act in accordance with the manual and retain for later use.**



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DISCLAIMER

Although every effort has been made to ensure that the information contained in this manual is correct at the time of issue, no responsibility is accepted for any loss or damage arising from incorrect information.

All described work must be performed by certified personnel. Should work deviate from the described actions, any guaranteed entitlement and liability of the manufacturer shall no longer apply.

COPYRIGHT

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1 PREFACE

1.1 MANUFACTURER / SUPPLIER

Manufacturer: Heras
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Technical Construction File: Heras, T&I Department

2 SAFETY

2.1 GENERAL SAFETY INSTRUCTIONS



- Always read and understand all instructions in this manual before installing. Contact Heras if any instructions are unclear.
- Carry out installation in accordance with applicable local guidelines.

2.2 SAFETY DURING INSTALLATION



- Always wear safety boots during installation. Make use of other personal protective equipment where applicable.
- Observe safe lifting techniques and use lifting aids where applicable.

3 SITE ASSESSMENT

3.1 CIVIL DETAILS



To guarantee the longest effective use of the Zenith SR1, always first assess the following on site:

- Soil mix
- Ground bearing pressure
- Humidity

Drawings showing recommended positions of the equipment and foundation requirements can be supplied alongside the relevant data sheets.

4 INSTALLATION

4.1 EXPLANATION OF SYMBOLS



Protective gloves

Use when working with concrete.



Wait

Allow concrete to cure.



Level

Use a spirit level.



Electric screwdriver

Use for fixings.



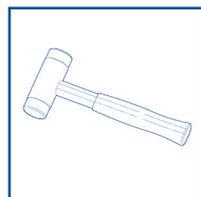
Shovel

Digging required.



Attack side

Shows direction of attack.



Hammer

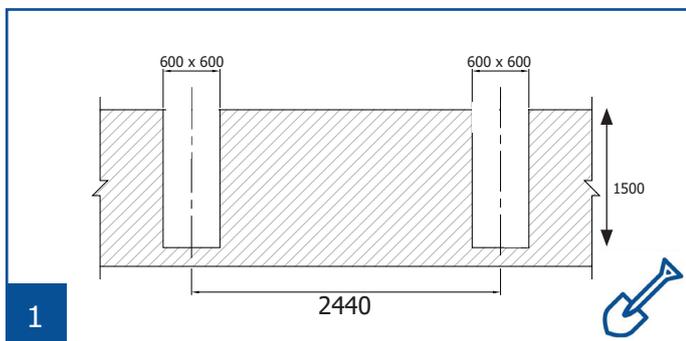
Use a hammer.



Hooks

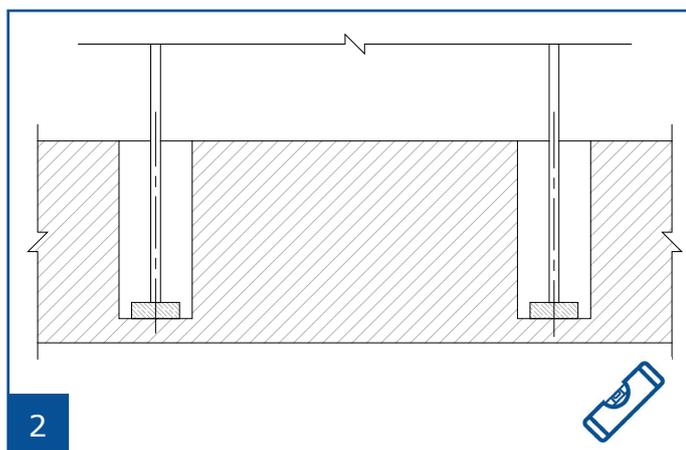
Use special handling hooks to lift the mesh and hold it in place.

4.2 PREPARE SITE

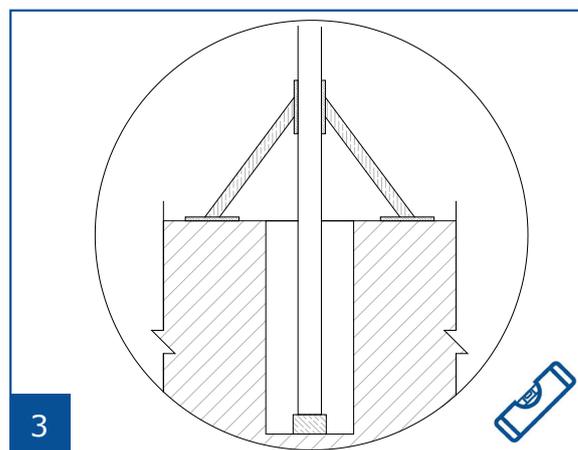


Clear and level the site appropriately before beginning installation. Dig holes accordingly.

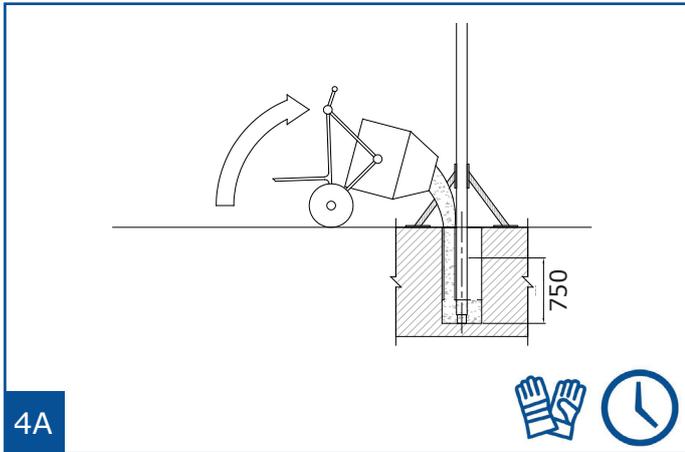
4.3 INSTALL POSTS



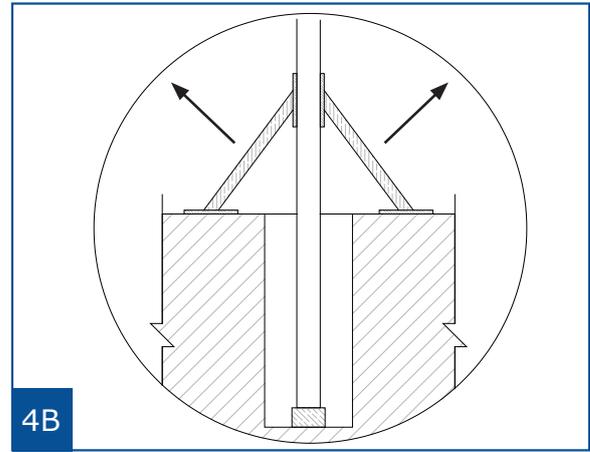
Insert posts, using a spirit level to keep them perpendicular. If necessary, place wooden blocks at base of posts to keep them flat and level with one another.



Attach wooden struts to hold the posts in place.

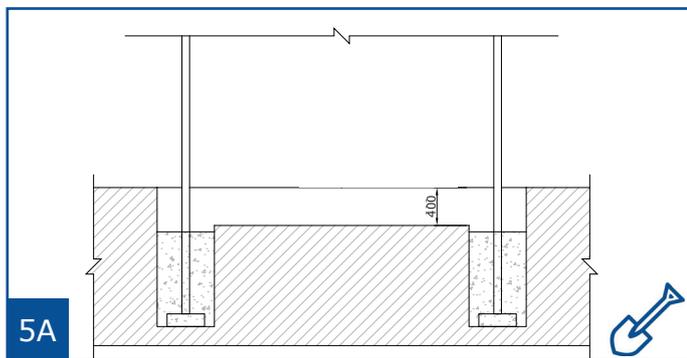


4A Fill foundations with concrete up to 750 mm depth.

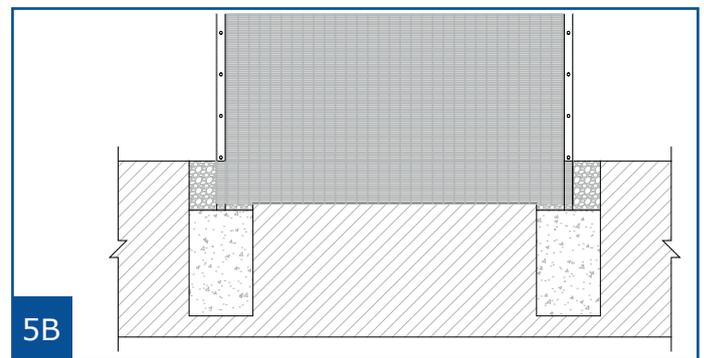


4B After allowing concrete to cure, remove wooden struts.

4.4 PANEL INSTALLATION

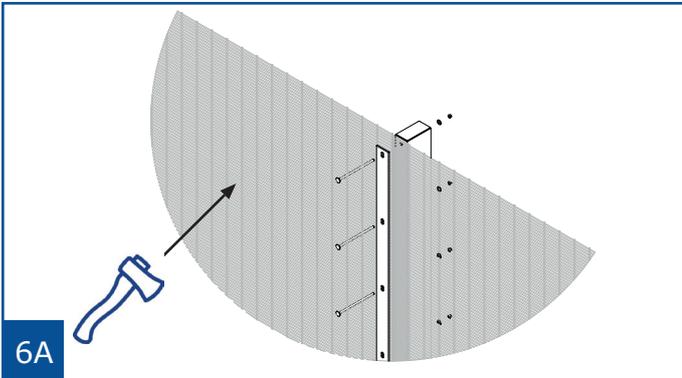


5A Dig 400 mm deep channel between each post, wide enough to insert panel.

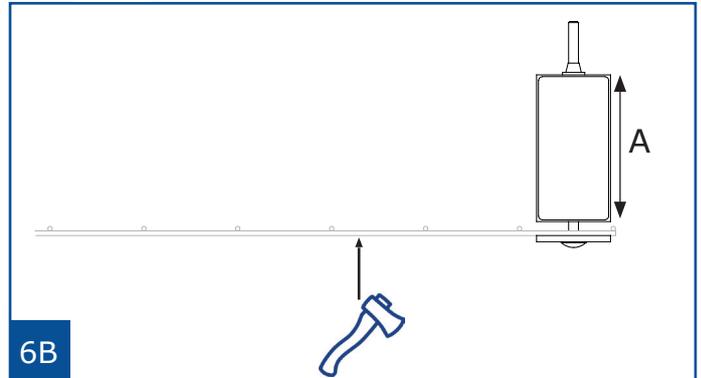


5B Insert panel into channel and affix to posts as shown in section 4.5. The mesh should rest atop foundations. Fill channel with aggregate or similar when panel affixed.

4.5 AFFIX PANELS

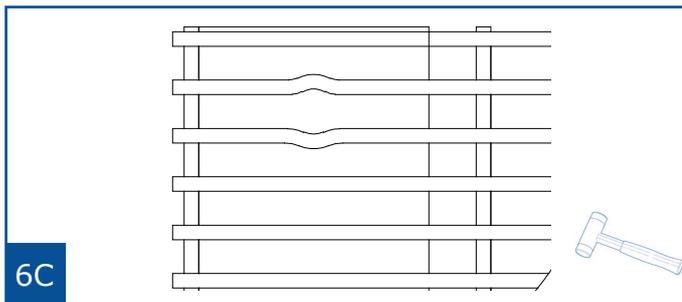


6A
Overlap mesh on intermediate post. Clamp into place using flat bar and insert bolts from attack side.



6B
Assemble bolts as shown. Bolts should be 30mm longer than dimension A. Refer to Appendix to determine this size.

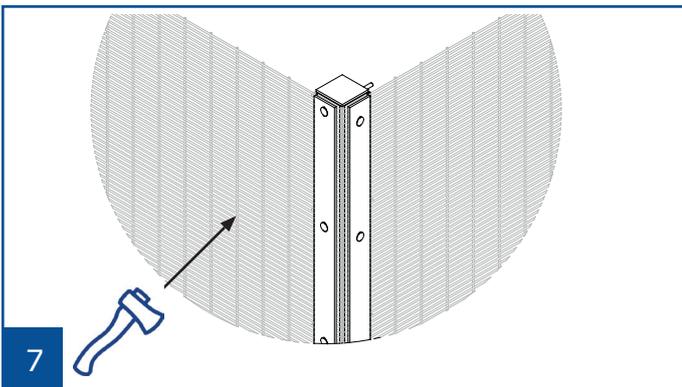
Use a hex nut and form G washer to secure topmost bolt. Use shear nuts and form G washer for all other bolts.



6C
If the bolts are difficult to insert, use a hammer and tapered peg to widen mesh aperture as shown.

4.6 CORNERS

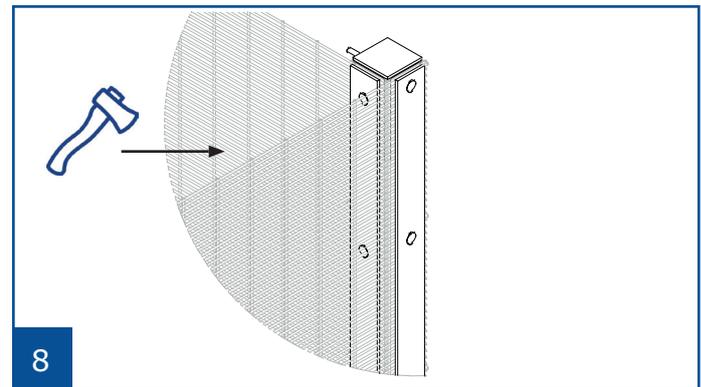
4.6.1. Internal



7
Fix the mesh as normal to the exterior of the posts.

Instead of overlapping, set the mesh to form a corner assembly as shown with offset bolts to eliminate clashing.

4.6.2. External



8
Fix the mesh to the exterior of the posts.

Instead of overlapping, set the mesh and fixings in the arrangement shown with offset bolts to eliminate clashing.

4.7 ATTACHING DOUBLE CONCERTINA RAZOR COILS

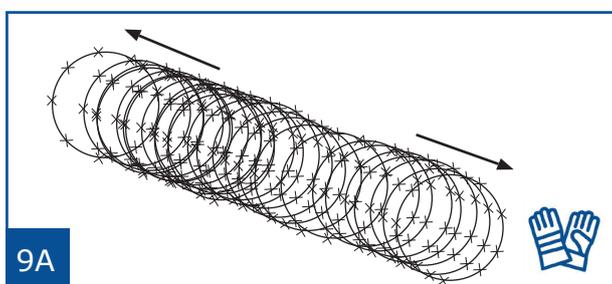


This stage of installation requires at least 2, ideally 3 operatives to be completed safely. In addition to standard PPE of gloves and safety boots, safety helmets with visors are recommended.

The installation area should be cleared of any obstacles e.g. vegetation down to the grass level. As the installation will require operatives to walk backwards while carrying the heavy and sharp coils, attention should be paid to any areas with uneven ground levels or ground affected by weather.

The coils are supplied in compacted bundles. Care should be taken when cutting the ties as the coils will expand when doing so.

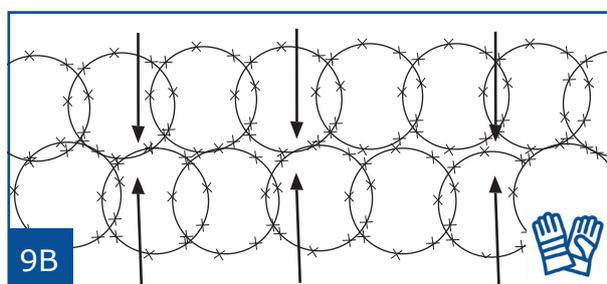
When working at height to aid installation, a recognised safe working platform should be used.



9A

Significant potential energy is stored in the coils when they are packed similar to that of a spring. Additionally, the barbs may be entangled with one another.

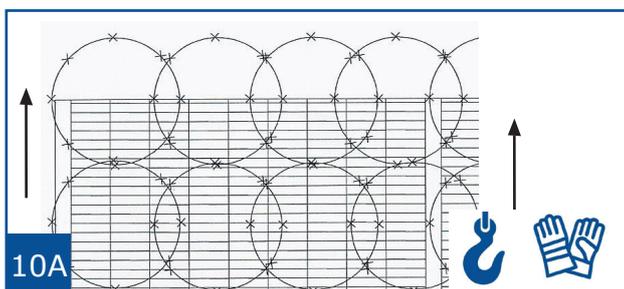
Operatives should cooperate and communicate effectively so that the coils do not rapidly and dangerously expand when the ties are cut.



9B

When the coils have been safely expanded and untangled, individual coils should be extended at ground level and laid adjacent to form the double coil formation, before clipping the spirals of each of the two individual coils together using dove tail clips.

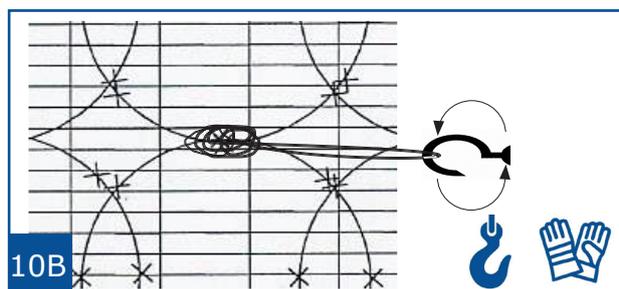
4.8 LIFT AND FIX



10A

Lift both coils into the fixing position. The next pair of double coils should be joined to the last spirals of the first pair at ground level, using dovetail clips.

The double coils can be lifted into position using a collection hook. Coils should be lifted and held in position from one side of the fence, with fixings fastened from the opposite side.

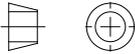


10B

Coils should be attached directly to the weld mesh fencing with double loop wire ties which are tightened by twisting using a wire tie ratchet.

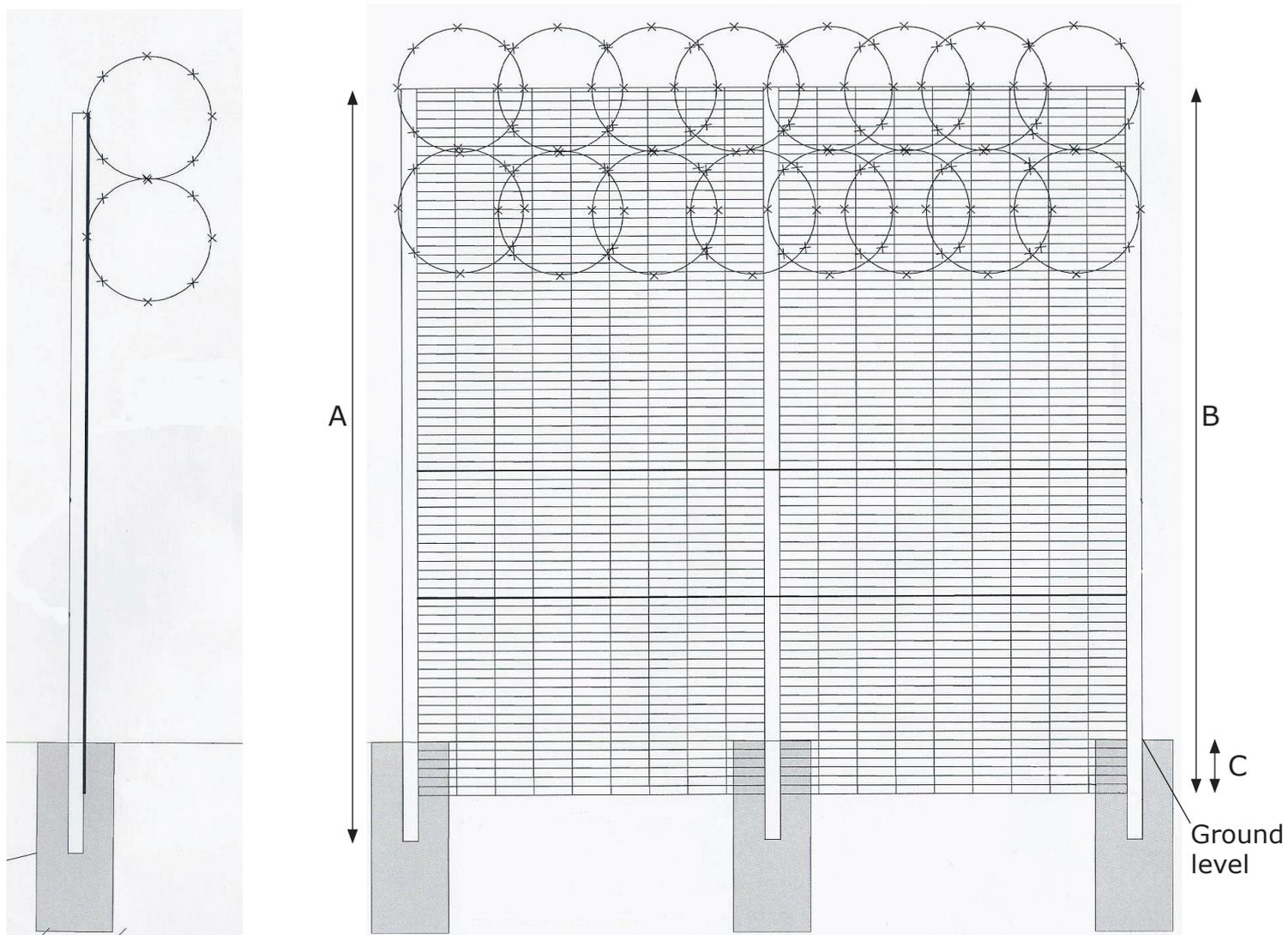
Fixings should be at 500 mm intervals, with both top and bottom coils attached with the same fixing.

5 BILL OF MATERIALS

Image	Name	Stages
	M8 cup square bolt	6A, 6B, 7, 8
	Hex nut	6A, 6B
	Shear nut	6A
	Form 'G' washer	6A
	Flat bar	6A, 6B, 7, 8
	Mesh panel	5B, 6A, 6B, 6C, 7, 8, 9, 10A, 10B
	Post	2, 3, 4A, 4B, 5A, 5B, 6A, 6B, 6C, 7, 8,
	Double concertina razor wire	9A, 9B, 10A, 10B
	Double loop wire ties	10B
	Dove tail clips	9B

6 APPENDIX

Post and foundation dimensions.



Post Specifications			
Post length (A)	Panel Height (B)	Panel buried depth (C)	Post dimensions
6000	5400 mm	400	120 x 80 x 6.3 mm RHS

Local supplier stamp:

**Heras
Herons Way
Balby
Doncaster
South Yorkshire
DN4 8WA
United Kingdom**

