

# INSTALLING/REINSTATING HIGHWAY IRONWORK



## 1. PREPARE

Ensure after excavation:

The clear area of the frame opening is the same or larger than the chamber opening or gully pot.

The frame is aligned with the opening. So that its flange will be fully supported.

The top of the chamber is sufficiently rough to 'key' with the foundation mortar. An area at least 50mm all round the outside of the base of the frame at the chamber top is clean, dry and clear of any loose debris.



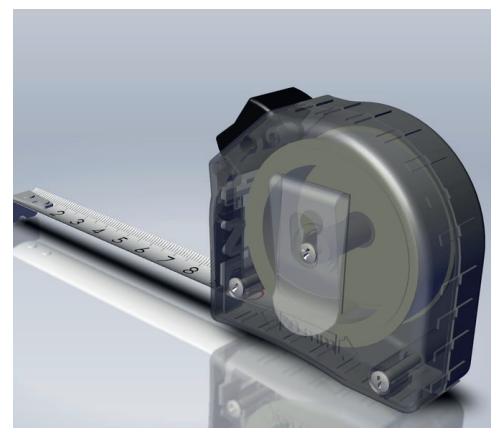
## 2. MEASURE

Depth to chamber from the base of the frame

≥85mm = Lay another course of bricks or proprietary chamber section.

≥30mm = Use UniPak™ adjustment units and mortar

≤30mm = Use UniPak™ mortar





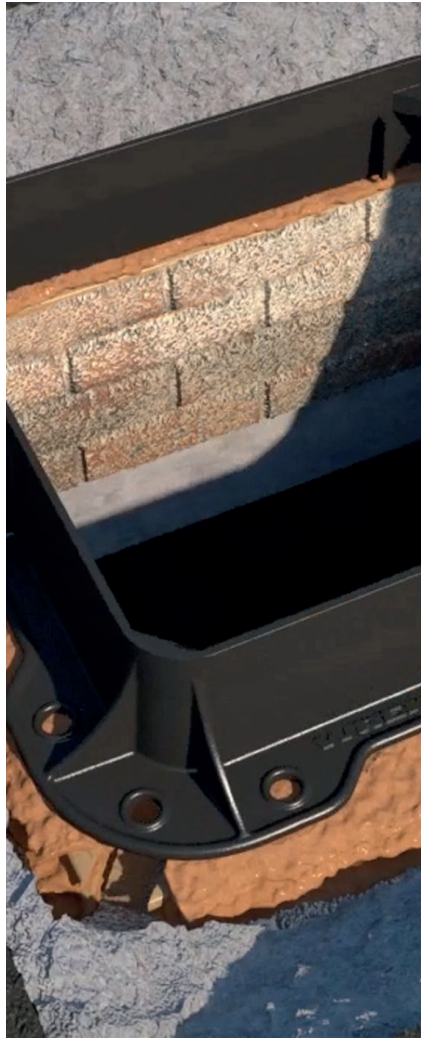
### 3. INSTALLATION

Any necessary adjustment units shall be placed on and interleaved with bedding mortar and tamped to the required level leaving room for the top layer of mortar for a minimum of 10mm.

Lay a top layer of mortar about 50mm wider than the frame in one even pass. If this is not achievable due to insufficient working times, then wedges should be used, and mortar packed under and around the frame by hand.

The final mortar course for setting the frame should be all one mix, except where hand packing is employed.

The finished sandwich of plates and mortar with the frame on top can be tamped, but not the plates themselves (as they will 'spring').



### NOTE:

Mix and lay the UniPak™ mortar following the instructions provided in the tub.

Partially used tins or packs should not be used.

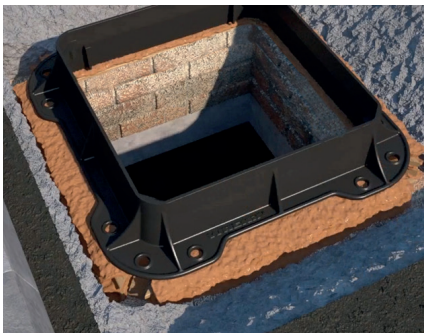
Take care to avoid dropping loose mortar material into the chamber shaft or contaminating the frame seats where the covers contact the frame.

UniPak™ mortar has a relatively short workable-life of around 15 -20 mins in the mixed condition. This can vary due to weather conditions.



### 4. BEDDING

Place the frame and fill any remaining under-frame gaps with bedding mortar.



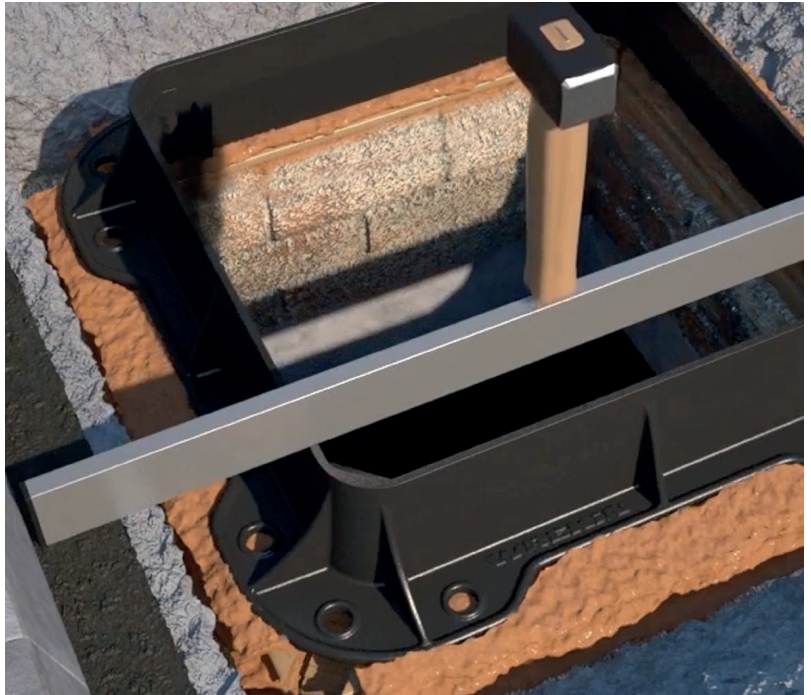
### NOTE:

When dealing with heavy duty ironwork, it is recommended operatives use mechanical lifting devices wherever possible.

To ensure large covers and frames are not damaged or over stressed during lifting, use the lifting provisions.

## 5. TAMP

Gently tamp the frame into the mortar to align the top edge of the frame within 5mm of the expected finished surface level, wearing course or pavement. Ensuring that all the laid mortar is compacted.



## 6. ENCAPSULATE

Add additional bedding mortar on top of the frame flange in order to completely envelope it to a minimum depth of 10mm.

Hand pack this layer of mortar using suitable gloves until it completely merges with the mortar extruded around the frame and through any apertures in the frame flange. Ensure that all the mortar is compacted.

### **NOTE:**

10mm is the minimum depth of UniPak™ mortar layer to be laid under and above the frame.





## 7. KEY

The final layer of UniPak™ bedding mortar should be compacted and NOT be trowelled smooth but should receive a brush-finish so that it has sufficient texture to ensure it will mechanically key to subsequent road-fill materials.



## NOTE:

If frame fixing anchors are to be used in conjunction with a bedding mortar, drilling or hole-forming to receive anchors should only occur when the bedding mortar has fully cured.

Ensure any fixing location is appropriate to receive the fixings and expected loads. Wrekin Products' covers are not supplied with fixing anchors.



## 8. SEAL

Ensure the bedding mortar has fully cured prior to backfilling with proprietary road fill materials. Heavily coat the outside face of the frame and the inside face of the road surface with a suitable bitumen-based cold joint sealer and ensure that the bedding mortar has cured.



## NOTE:

The application of a cold joint sealer to the vertical face of the frame is particularly important if the frame is to be located in a concrete road or pavement.



A typical example of cold joint sealer application is shown in illustration.



## 9. SURFACE

Install the remaining road-fill and wearing course/pavement materials. Take care not to disturb the frame, particularly where mechanical equipment is employed.

### **NOTE:**

Materials suitable for backfilling and road surface repair of the access cover or gully grating frame (already fixed in place with polyester resin mortar) should hold HAPAS/BBA approvals, where available.



## 10. COMPLETE

Apply overbanding to the joint between the new surfacing material and the existing surface.

Its important to cover any saw cuts that extend beyond the reinstated area in accordance with manufacturers instructions.

### **ATTENTION:**

Ensure that trafficking of the finished installation does not occur before the bedding mortar and surrounding surfacing materials have fully cured. Overbanding is applicable to bitumen-based road surfacing only, not concrete pavements or similar.





## 11. PROTECT

When using Highway or Tristar products, consider also employing ClickLift and/or Armadillo protection accessories during construction. Alternatively, in situations where the final wearing course is to be installed at a later date, apply a ramp around the projecting frame to ensure public safety and to protect the frame from impact.



### ATTENTION:

Ensure that trafficking of the finished installation does not occur before the bedding mortar and surrounding materials have fully cured.

