Users of this equipment should be both familiar with and competent in its use. MGF can provide toolbox talks and training material/advice on request.

MGF excavation systems can be supplied with a full range of safety products and accessories. These products are designed to comply with current best practice and meet the requirements of the Lifting Operations & Lifting Equipment Regulations, Work at Height Regulations and other relevant legislation.

For MGF contact details or further information visit www.mgf.ltd.uk

#### ASSEMBLY

1. **Excavate to max 1.0m below ground level** (if site conditions permit). Once assembled pump the struts out to the required width using MGF 4-leg pump provided (generally trench sheet to sheet dimension -75mm).

2. **Lower Walers frames into excavation and release 4-leg chains**.

3. **Commence by installing four corner sheets, as shown. Sheets are pitched using an MGF quick release shackle and pushed gently into the trench using the excavator bucket.** Sufficient toe (min. 300mm) must be provided to ensure sheets cannot slip or slide. Using a 4-leg lifting chain, position the top frame to the correct level, attach restraining chains and pump out top frame struts to pre-load/restrain the sheets fully. Manual assistance will be required to pitch and release sheets and ensure they are installed plumb/square (no person at any time should stand directly under bucket/sheet or over the edge of the excavation).

4. **It is now possible to excavate beneath the level of the lower frame to the required level of the next frame. The sheets must be driven ahead of the dig level as work proceeds (and the lower frame dropped as the excavation works progress)**.

5. **The lower frame can now be pumped out to pre-load the sheets and restraining chains attached. Always ensure a safe, secure means of access.** Removal is a reverse of installation; NB. MGF Endsafe panels/struts can be used in lieu of a batter.

6. **Batter back open ends. Install edge protection and a safe means of access**.

#### SAFETY TIPS

1. **Always inspect lifting points prior to every lifting operation and ensure all personnel are clear of the lifting zone**.

2. **Beyond 1.0m depth, only access the excavation via a secured ladder placed within the frame. Never enter an unsupported excavation at greater depths**.

3. **Always ensure pins and retaining clips are correctly fitted prior to use**.

4. **Do not allow personnel to enter the excavation whilst excavator is digging**.

5. **Maintain a position of safety. Avoid working above an unsupported edge, on unsupported edges or under a suspended load**.

6. **Heavy equipment to be installed by competent groundwork contractors only**.

7. **Tag cabs to avoid excessive flying shawls or using shawls for lifting the walls**.

8. **Ensure the frame is plumb and use hardwood wedges to ensure all sheet pans are supported squarely by walers**.

9. **Ensure isolation valve is always closed once struts are installed**.

10. **Excavation should not be a reverse of installation and beyond 1500mm per pass using MGF bucket/pump**.

11. **Always retain hydraulic heads before removing water frames**.

12. **Trench sheets should be handled, pitched or extracted by experienced labour in ensuring that the design conditions from the QRS’s current rig are satisfied. Trench sheets are fully secured prior to lifting. Oral care must be taken to ensure sheets are handled correctly and is the responsibility of the individual handling the sheets. In all conditions additional care is required when in the recommended lift position as sheets can slip and cause injury to personnel**.

13. **Ensure that climbing caps are placed on tops of sheets from a quarter of a yard and cannot be displaced by the personnel**.

14. **Always use an extactor for removal of sheets. Do not use GME for extraction**.

15. **Do not extend struts beyond their stated working range**.

16. **Stick must ensure that the excavated has sufficient room to permit the sheets to safely, securely and effectively lift the sheets and ensure that the extra forming and in-situ sheeting is removed and stockpiled at least 10 yards from the site edge of the excavation. There is a risk of the excavation sheeting buckling and the sheets to be relocated if required**.

17. **Where excavating using tip bucket/dump equipment or removal of Water barrier at least 1m, means will be taken to ensure that all assembled frame. If any of the struts are damaged or the frame is operated at least 10 yards from the site edge of the excavation, the support can be provided by restraining chains, lifting chains or alternatively by pushing the frames off the excavation level**.

#### INSTALLATION

1. **Commence pitching and driving the sheets as far as is practicable without buckling the sheets. Use an MGF driving cap to protect the sheets ends from damage**.

2. **The assembled waler frame is now ready for lifting using MGF 4-leg chains supplied**.