

# Innovative Steelwork Erection Aid

A mobile radiation containment structure was to be constructed with wheels that ran on crane rail tracks. The erection of a single frame was difficult as it would not free stand and only one small crane was allowed to be used on site in the final location due to restrictions. This meant that two frames needed to free stand on wheels before they could be tied together and braced. A means of temporary support was required which could be erected and by hand without the use of any lifting equipment. A simple lightweight “A Frame” was adopted as shown below. The frames were to be used twice, once for a trial build off site and again for the onsite build. The trial build was used to mimic the site conditions and ensure the scheme was practical.



*First Frame being erected*



*First Frame with Supports*



*An “A Frame” support*



*Final Structure – Before Cladding*

## **Key Points**

- The use of multiple cranes was not an option due to safety restrictions on the nuclear site.
- One “A Frame” provided for each column.
- Frames positively fixed using Lindapter clips.
- Frame locked in position at top and on the cross member.
- “A Frame” easily lifted and fitted by 2 men.
- All bolts were accessible from the floor level, reducing working from height.
- Once the legs were fixed, support was completed by adding tie angle and cover plate to the back side of the column.
- Frames were only removed once the adjacent frame had been tied in and made stable.

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