Modular Construction and Installation of Service Risers

The risers were fabricated in two 11m long sections at the steelwork contractor's works (see picture below-left). A designated work area was set aside at these works where the service risers were laid horizontally at ground floor level. In this position, the main services for the heating, air conditioning and drainage were were able to be installed.

Subsequently the risers were transported to site on flat back lorries and were craned into position in just two lifts (see picture below-right showing second lift).

- All work, with the exception of the crane lifts, were carried out at ground level (only 2 lifts per riser required during construction).
- By constructing at ground level, mechanical means such as fork lift truck were able to be utilised.
- Hot work activity on site including welding, use of chop saws, etc was eliminated.
- By working in a designated workshop type environment, there is a reduction in the risk of almost all hazards e.g. no walking up stairs, housekeeping easier to control as no other trades around.
- There is an ability to demonstrate compliance with the hierarchy of hazard management.
- The risers were able to be installed as part of the structural steelwork very early in the construction programme.
- The number of operatives working on the construction site was able to be reduced.
- The risers were able to be constructed far quicker than using traditional on-site techniques with no adverse effects on quality.
- A cost comparison with traditional techniques indicate that the project saved **£47,000** by using this method