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Blog: Temporary Works Forum (TWf) - Suppliers

Temporary Works Equipment Hire: Is it our best example of the 'circular economy'?

The majority of temporary works designs produced in the UK utilise Temporary Works Equipment (TWE) and much of this is hired. Suppliers of TWE are not generally associated with the key carbon cost decisions on construction projects.

However, it can be argued that they are beacons for best practice. The logic goes like this:

1. UK suppliers provide a very wide range of innovative products allowing the project team to select the most efficient equipment available to complete their project.
2. They efficiently manage and maintain/repair the equipment thus maximising working life and utilisation.
3. Manufacturers of the equipment are experts in product design. They combine modularisation, ease of assembly/dis-assembly, monitor damages, maintenance and repair, optimise storage and handling and innovate in safety and materials.
4. Rental companies specialise in logistics ensuring the lowest haulage costs.
5. They can also re-cycle their products and purchase materials such as steel and aluminium which have high recycled contents.
6. They can also provide detailed technical information on their products that highlight the differences between alternative systems to allow informed decisions by the project teams.

If we accept the above it is clear that the suppliers are already fully engaged in the concept of a circular economy. To flourish they must adopt a strict cradle-to-grave approach to the development of their products.

The key questions, therefore, are what should the project team members focus on in the temporary works design process to take best advantage of the low carbon cost options available?

Some of the issues for the main decision makers to consider are:

Temporary Works Equipment Specifiers/Designers:

A.	Quickest	Simplest/easiest solution to install, maintain and dismantle.
B.	Least risky	Robust solution with adequate site investigation and therefore least prone to delay. Ensure availability, suitably qualified and experienced installers and suitable checks/permits established.
C.	Lightest	Reduce transport costs and ease of handling/storage, etc. consider using local suppliers to reduce distance transported.
D.	Least mechanical plant	Minimise requirement for mechanical plant time, e.g. excavators, mobile cranes, MEWPs, etc.
E.	Communication	Ensure that all the essential design information is efficiently produced and shared with the suppliers and design and construction teams. Ideally digitally.

Construction Managers (Temporary Works Co-ordinators and Supervisors):

A.	Effective management systems	Highly efficient procurement and management of the temporary works on site. Excellent communication, collaboration and co-ordination of the process to minimise delays and disruption. Allowing sufficient time for the process, providing full information to the supply chain, early placement of orders, agreed inspections/permits, etc.
B.	Equipment care	Ensuring equipment is safely received, tracked and stored and maintained. Minimising of damages or/ rework and ensuring suitably qualified and experienced teams install and maintain the equipment.
C.	Multiple supplier management	Early communication with suppliers and co-ordination of deliveries/collections, etc. to minimise haulage costs and standing time.
D.	Effective change management	Robust systems to cope with the many changes required on a typical project.
E.	Use of construction rehearsals	Encouragement to engage with the supply chain in rehearsals to manage constructability and reduce changes/delays.

Temporary Works Equipment Suppliers:

A.	Reduce operational costs	Tightly manage and reduce fuel and energy consumption within their operations – transport fuels, operational fuels, manufacturing energy.
B.	Continue managing stock	Maximising product working life and utilisation.
C.	Continue innovation	Focus on materials and processes to ensure speed, reliability, safety and maintainability. Product resilience.
D.	Provide product data	Provide specifiers /designers with detailed energy breakdowns and options to reduce carbon costs.
E.	Engage digitally	With projects to assist management processes. To include tagging of equipment, provision of digital data and engaging in construction rehearsals.

In conclusion, equipment suppliers are our best example of the circular economy model and the rest of the construction industry could learn much from them. However, the only way that carbon costs can be consistently reduced is for the whole industry to collaborate more closely and exchange data effectively to allow management processes and decision making to improve. There is clearly a long way to go.

Prepared by Steve Hesketh, MGF

on behalf of Temporary Works Forum (TWf) Working Group 32, Low carbon temporary works

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NOTE
This blog is focused on non-mechanical plant such as falsework or formwork. Mechanical plant such as excavators use fuel and it is normally the fuel consumption that becomes the main priority for reducing carbon.