

# Quantifying the benefits of off-site construction



## Background to CIRIA/Buildoffsite proposal

To maximise the adoption of build off-site techniques it is important to establish and quantify the benefits where off-site might be used. The client’s own procurement practice should also be receptive to the potential case for off-site solutions. Buildoffsite working with CIRIA will provide a summary report of key data to enable comparison of benefits of off-site construction with more traditional techniques.

At present there is no industry standard methodology for assessing the benefits of off-site techniques against traditional construction practices. Most assessments are made through the client’s tender process on a case by case basis. This may not provide for an easy comparison between approaches on a particular scheme, identify all the possible benefits that are available or act as a record for future projects.

### The project’s key objectives will be to:

- To identify common project drivers in more detail; approach to risk, innovation and procurement
- Identify the benefits of off-site techniques against more traditional approaches by collecting data in a format that will enable comparison
- Enable clients, designers, specifiers, contractors and others to quantify for themselves the benefits of off-site construction techniques when compared to typical construction approaches.

### The project’s data scope will cover:

|   |   |
|---|---|
| Identify the project sector: Housing / Schools / Hospitals  | Actual programme vs contract programme<br>Noting time from starting on site to practical completion and then actual completion to determine time predictability |
| Brief project description including location, start on site date and gross internal floor area                              | Agreed contract sum vs final account sum adjusting for variations to determine cost predictability  |
| Project value   | Net construction cost per m2  |
| No of storeys   | Total project cost per m2 (Net cost plus uplift)  |
| Principal form of construction – Modular components / modular flat pack / modular volumetric / traditional in-situ building | Cost of defects per £,000 of contract value (Net cost and total project cost)   |
| Pre-construction period from initial instruction to starting on site  | BIM Level applied to the project.   |

### The project’s key outputs will be:

- A summary report on quantifying the benefits of off-site construction including case studies
- Industry dissemination.

The project will start in November 2017. Financial support is required to cover the costs of the project – (£50k)

### Opportunities and benefits for industry to get involved

- As a funder you will be a member of the project steering group (PSG) and able to contribute to and gain from early access to the report. The PSG is drawn from industry and academia / professional bodies
- CIRIA will manage the project on behalf of the funders and Buildoffsite
- A research contractor will be appointed to undertake the drafting of the report and will work with the PSG.

### About CIRIA

The Construction Industry Research and Information Association (CIRIA) is the technical centre of gravity for the construction industry. We share knowledge and generate continuous improvement across the sector by delivering good practice guidance, training courses and networking events. Further details can be found via our website [www.ciria.org](http://www.ciria.org) or get in touch with [kieran.tully@ciria.org](mailto:kieran.tully@ciria.org) regarding this project proposal.

Reference: Buildoffsite (2009) *Your guide to specifying off-site manufacture, maximising value and minimising risk*