

bre

Quality and Performance in Construction

Building
responsibly

“

World-class high performing
supply chains & products
you can build on

”



Trusted expertise for the product manufacturing sector

BPS 7014 and Certification

A multi-tiered Offsite Assessment Method

Building a better world together



Sections

1. Why do we need it?
2. Stakeholders
3. How is this different?
4. Certification
5. Questions



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Why do we need it?



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– “equates to approximately 886,000 homes being needed by 2021”

Advanced Manufacturing of Homes, Buildings and Infrastructure (AMHBI)

The project aims to deliver 10,000 new homes per annum and better quality buildings and infrastructure through an advanced manufacturing facility, developing the latest in offsite and manufacturing technology whilst integrating innovative solutions from across the supply chain and creating new, high skilled jobs.



“It’s very much going back to the days of cheap, bog-standard council housing – it’s a regressive step.”

Flat-pack Wolverhampton council homes being flown in from Dublin





To provide a route to certification for offsite systems for use in the construction of residential buildings. The key objectives:

- encourage **new methods of construction** and **advanced manufacturing techniques** whilst maintaining **acceptable levels of safety and durability**
- create **confidence** in the use of offsite methods in residential construction
- demonstrate **compliance** with relevant building regulations and national building codes, as well as **enhancing characteristics** where appropriate
- identify the **comfort** and **wellbeing** benefits to the householder



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Stakeholders



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Who is involved in the process?



- To facilitate market engagement of Certification - neutral Industry Forum is being formed
- Discussions between *BuildOffsite* as prospective host for forum and, BRE who will 'own' and implement the scheme.
- The forum will be administratively separate from BPS 7014 and linked certification scheme
- Prospectively formed from key stakeholders the offsite construction sector, ideally alongside client bodies



- Articles of Association and work program are subject of live discussions
- Examples of remit include:
 - Forum's role is to provide market feedback and guidance, ensuring BPS 7014 maintains good alignment with market requirements
 - The Forum has no role in relation to the commercial operation of BPS 7014 Certification Scheme
 - The Forum will scrutinise the detail of BPS 7014 and delivery of the linked Certification Scheme



- Client and investment organisations key stake holders taking delivery of high quality, cost effective offsite construction buildings, e.g. LAs
- Architects, designers & consultants responsible for preparing plans for new build or refurbishment projects using offsite construction
- Suppliers & manufacturers of offsite construction products of all types
- Installing & commissioning contractors, responsible for delivering offsite systems and products on-site,
- Relevant Departmental policy teams to ensure alignment or, highlight an emerging policy, regulation or linked standard need to inform development



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**Why is this different to
anything else that's already
out there?**



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The standard contains requirements around the 7 Basic Works Requirements of the Construction Products Regulation:

1. Mechanical resistance and stability
2. Safety in case of fire
3. Hygiene, health and environment
4. Safety in use
5. Protection against noise
6. Energy economy and heat retention
7. Sustainable use of natural resources



- Demonstrating compliance with UK Building Regulations
- 3-dimensional tests [racking, fire, acoustics]
- In-process checks and assessment
- Tag & Track, BIM
- “Comfort” aspects to the user and aspects of BRE’s latest BREEAM related tool: the Home Quality Mark [HQM]
- Stakeholders including manufacturers, warranty providers, mortgage lenders, insurers, building control
- Publication: Q2/2018



Additionally, BPS 7014 Certification seeking to work with BIM logging of projects:

- Registering details of the systems or components used
- Addressing comfort of occupants in the home setting

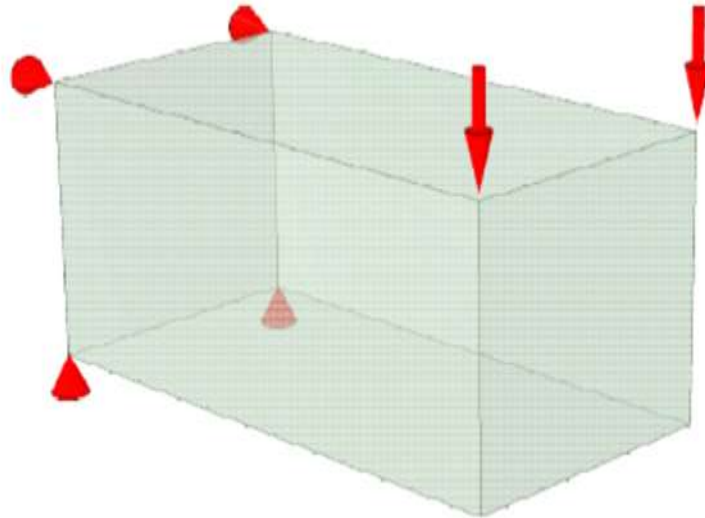
Will provide accessible, long term record to:

- Support effective maintenance
- Inform life cycle refurbishment at the end of a product's life cycle
- Inform actions in the event of an unexpected impact on the building

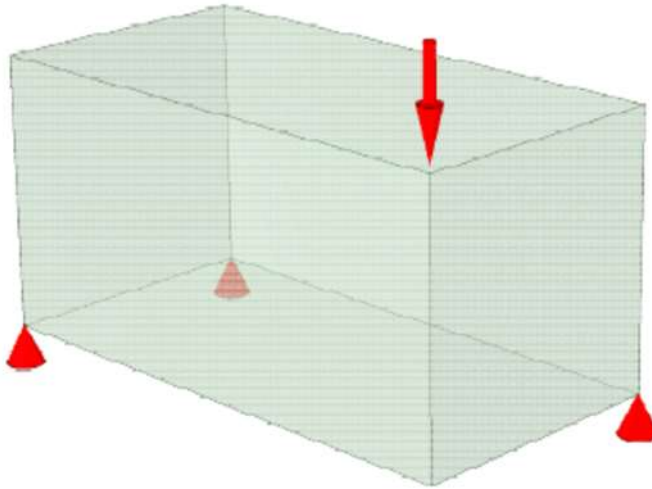


STRUCTURAL TESTS

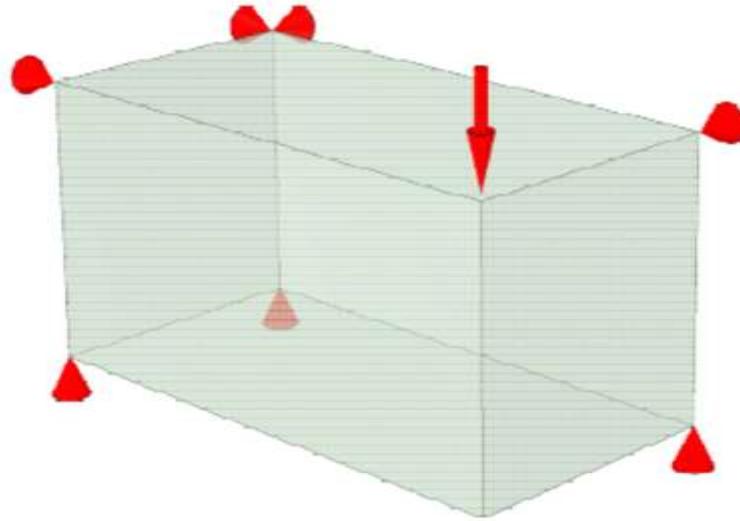
Cantilever loads



STRUCTURAL TESTS

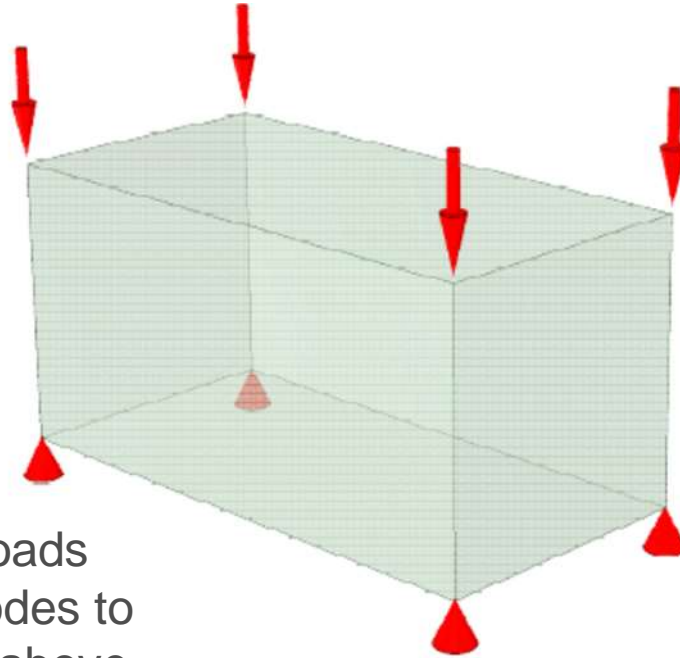


Settlement - unrestrained



Settlement - restrained

STRUCTURAL TESTS



Vertical load – point loads through connection nodes to simulate storeys from above



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Certification

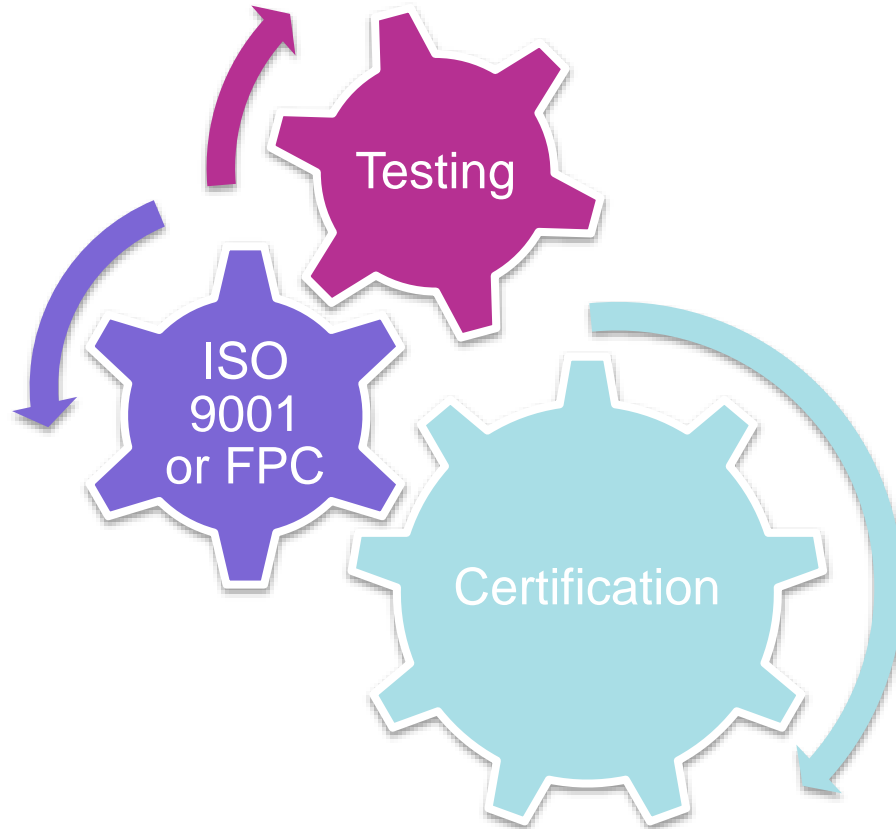


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Buildoffsite Property Assurance Scheme

- A **durability and maintenance assessment**. ISO 15686 [60 years]
- A **process accreditation**; evaluates and facilitates the adoption of best practice by manufacturers and constructors in key performance areas
- A **web enabled database** comprising details of assessed building methodologies, registered sites and registered/warranted properties





Modular construction systems – BPS 7014

- **Initial testing**
- Initial **Factory Production Control** assessment
- On-going **audit testing**
- On-going **surveillance of FPC**
- BRE Global **online listing**



Any questions.....?



Thank you

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