Why are we here today?

- Formed in 2012
- Pre-Construction Managers, Construction Managers, D&B Contractors, JV Development, Technical Consultants
- BOPAS, ISO, NHBC Accredited
- £37m Construction T/O
- Sustainable investment in people, technology and information flow
- Constructed Projects in: Pre-Cast RC, SFS / LGS – Stick/Panelised, Timber, SIP, not modular
  - We have recruited from both modular/volumetric manufacturers and contractors who have erected modular/volumetric

Why are we here today?

- Magna Off-Site Solutions launched in March 2019
- Pre-Construction Manager, Construction Manager, D&B contractor or sub-contractor partner of choice for clients/manufacturers constructing in off-site solutions
- Challenge traditional procurement logic
- Charge NO OH&P on ANY PRE-MANUFACTURED VALUE
  - Why should we?
- BUT – we will take traditional contracting risk
- Pre-Construction for manufacture not construction – quality, cost & time

What role can CM/PMs play in delivering competitive off-site solutions?

- All forms of off-site require early integration of the ‘complete team’
- Set clear objectives/outputs on your options appraisals
  - Business Financial Metrics – not just construction costs
  - Time cost and quality
    - Understand the opportunity/compromise of each
- There are very few people in the industry today who can give you the answer in isolation!
- Aim to maintain ‘The Golden Thread’ of design, cost and quality from as early as possible

Understand the key metrics of trad to succeed

- To make an informed decision you must be able to make an intelligent comparison
- Programme and logistics
- Time is money – we all understand that. Do we truly understand how time influences ROCE, GDM, interest costs, prelim costs, etc?
- Compare the key influencers, they can have big impacts
  - Programme duration/staff levels/crane utilisation/risk of non-delivery – off-site storage costs, etc
  - Risk Profile
- Can we really make an informed decision without truly understanding the programme and logistics?

Understand the key metrics of trad to succeed

0	**Facilitating works Sub-total**
1.1	Substructure
1	**Substructure Sub-total**
2.1	Frame
2.2	Upper floors
2.3	Roof
2.4	Stairs and ramps
2.5	External walls
2.6	Windows and external doors
2.7	Internal walls and partitions
2.8	Internal doors
2	**Superstructure Sub-total**
3.1	Wall Finishes
3.2	Floor Finishes
3.3	Ceiling Finishes
3	**Internal finishes Sub-total**
4.1	Fittings, furnishings and equipment
4	**Fittings, furnishings and equipment**
5.1	Sanitary appliances
5.2	Services equipment
5.3	Disposal installations
5.4	Water installations
5.5	Heat source
5.6	Space heating and air conditioning
5.7	Ventilation systems
5.8	Electrical installations
5.9	Fuel installations
5.10	Lift and conveyor installations
5.11	Fire and lightning protection
5.12	Communication, security and control systems
5.13	Specialist installations
5.14	Builder's work in connection with services
5	Services Sub-total
6.1	Prefabricated buildings and building units
6	**Prefabricated buildings and building units Sub-total**

- To make an informed decision you must make an intelligent comparison
- BCIS Elemental Cost Plans – Standard Format
- Collate data on the outturn cost of your trad projects in a standard way – reallocate in to BCIS Elemental?
- Traditional is ‘manufacturing’ just not consistently!
- Understand what is included within the off-site solution to omit from your traditional data sets
  - We have seen several errors of double counting leading to unviability!
- Understand the compromise of cost and quality

An example of understanding the metrics

- 224 unit Co-Living Scheme + amenity space – The Collective
- Very efficient and well designed scheme

- No lead-in for modular/volumetric

- Perfect Grid for SFS/LGS Panellised
  - Only seven unit types
  - Only four bathroom types
- Initial assumptions validated
  - SFS/LGS cost effective structure
  - Lighter foundations
  - Quicker programme
  - Bathroom/kitchen/wardrobe pods
  - Service risers efficient
- Good SFS/LGS supply chain capability
- Improved ROCE

So why are we building it in RC?

An example of understanding the metrics

So why are we building it in RC?

- Depth and weight of the façade and reveals
  - Poor S/C interaction and demonstration of capability/quality for the lightweight façade option
  - Very few options – maturing sector with growing capability
  - Introduction of hot rolled steel

- Bathroom pods were on the critical path – certainty of delivery or storage costs to mitigate expensive delays

- Crane utilisation was poor

- Overall Risk profile

An example of understanding the metrics

So why are we building it in RC?

Off-site solutions now being used:

- Pre-cast RC structures (TBC)
- Pre-cast façade – Achieves quality and market certainty
- Bathroom pods – off critical path with RC
- Pre-fabricated risers
- Pre-fabricated plant rooms
- Improved crane utilisation
- Nominal programme and cost difference but mitigated time, cost and IMPROVED QUALITY risks

AMCM GROUP

MAGNA OFF-SITE SOLUTIONS