



CONSTRUCTION INNOVATION

RORY BERGIN

PARTNER

SUSTAINABLE FUTURES

HTA DESIGN LLP

WHO ARE HTA?



- 46 YEAR HISTORY
- AJ120 PRACTICE
- OFFICES IN LONDON, MANCHESTER & EDINBURGH
- 160 STAFF
- AWARD-WINNING CONSULTANCY
- MULTI-DISCIPLINARY APPROACH:
 - ARCHITECTURE
 - LANDSCAPE DESIGN
 - SUSTAINABLE FUTURES
 - COMMUNICATIONS
 - PLANNING
 - URBAN DESIGN
 - COMMUNITY ENGAGEMENT



Content

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- **Introduction to Prefabrication**
- **Research**
- **Case Studies**
 - Olympic Way
 - Karma House
 - Dexion House



Prefabrication



- Elemental Prefabrication

- Trusses
- Staircases
- Timber Frame

- Component Prefabrication

- Bathroom Pods
- SiPs Panels

- Volumetric Prefabrication

- Olympic Way
- Karma House
- Dexion House



Prefabrication

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- Component Prefabrication

- Bathroom Pods

- SiPs Panels



EXPERIENCE WITH OFFSITE?



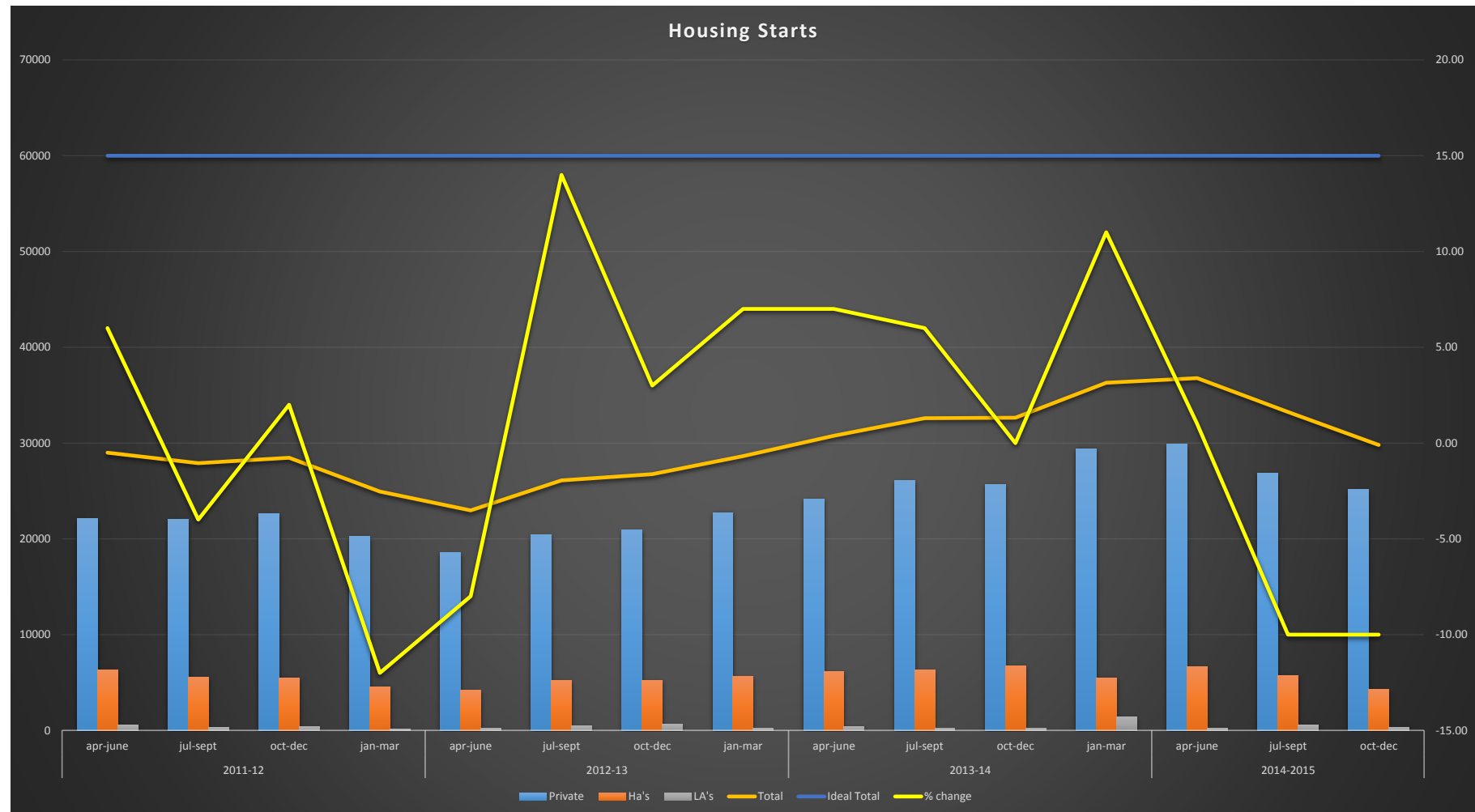
- **DESIGN:** VOLUMETRIC, PANELS
- **GUIDANCE:** LAING O'ROURKE
- **RESEARCH:** MODCONS



WHY IS OFFSITE RELEVANT NOW?



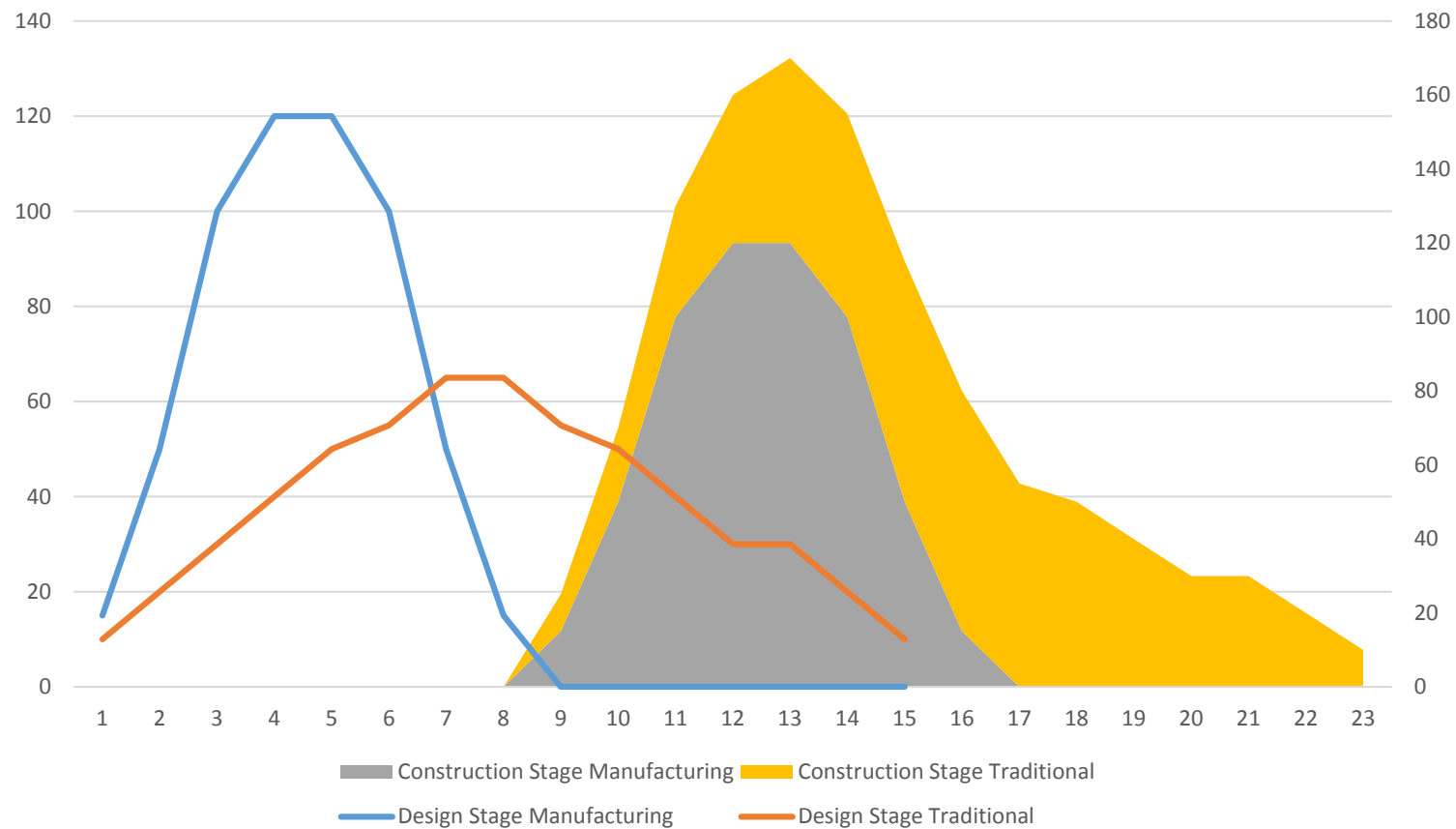
- **COSTS:** Rising Labour and Materials Costs (50-75%)
- **SKILLS:** Falling Skills and Employee Numbers
- **CAPACITY:** Traditional Supply Chain Overloaded



SUPPLIER RELATIONSHIP



- **SUPPLIER COMPETES WITH TRADITIONAL DEVELOPER**
- **CONTRACTOR OWNS SUPPLIER** - LAING O'ROURKE, PERSIMMON, STEWART MILNE



DESIGN & CONSTRUCTION TIMELINES

PROCESS



EARLY DECISION

- **KNOWING WHO TO CALL** - FRAMEWORK
- **KNOWING HOW TO DESIGN** - EXPERIENCED ARCHITECT
- **KNOWING HOW TO BUILD** - EXPERIENCED MANUFACTURER/CONTRACTOR

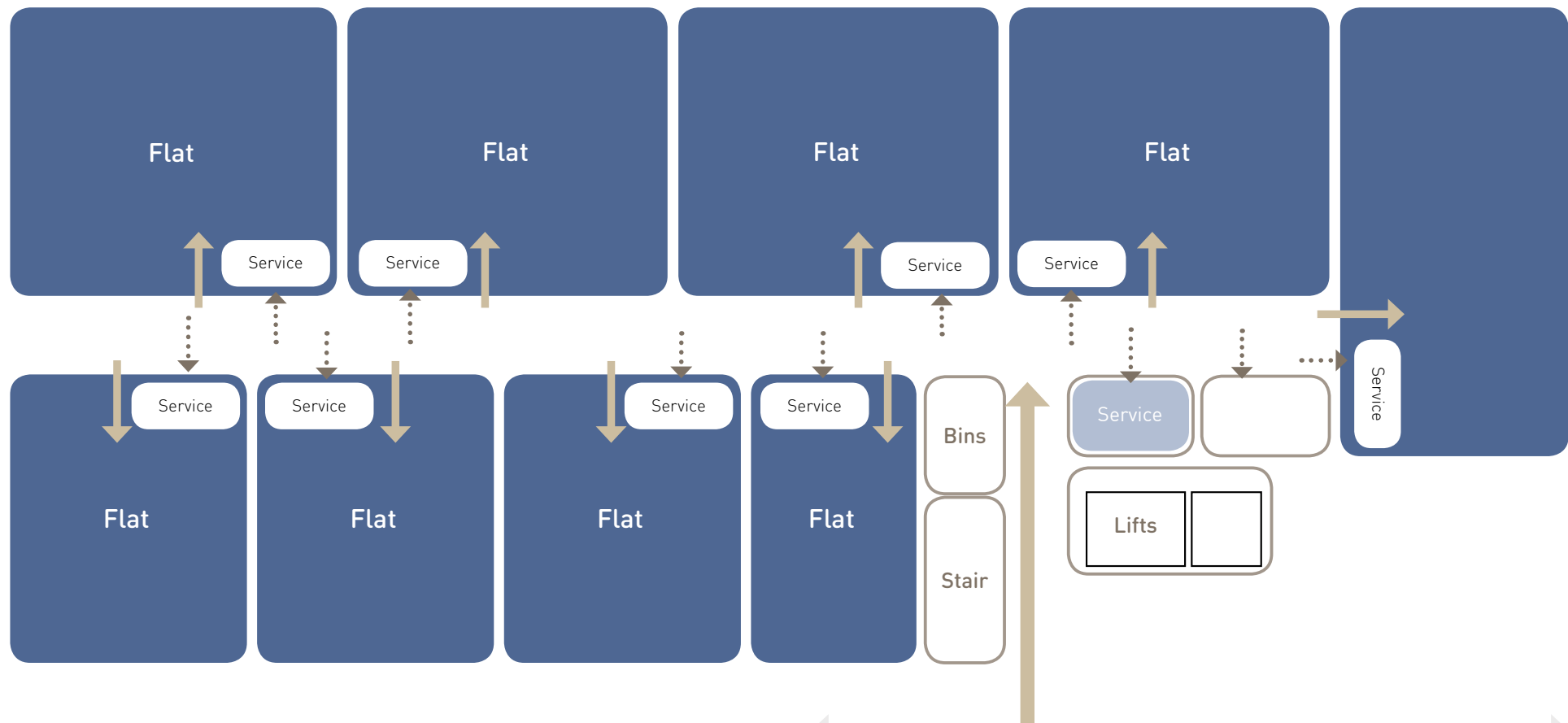


A FACTORY NEEDS A STABLE OUTPUT TO BE EFFICIENT

DESIGN FOR ACCESSIBLE SERVICES



- REPETITION
- INTEREST

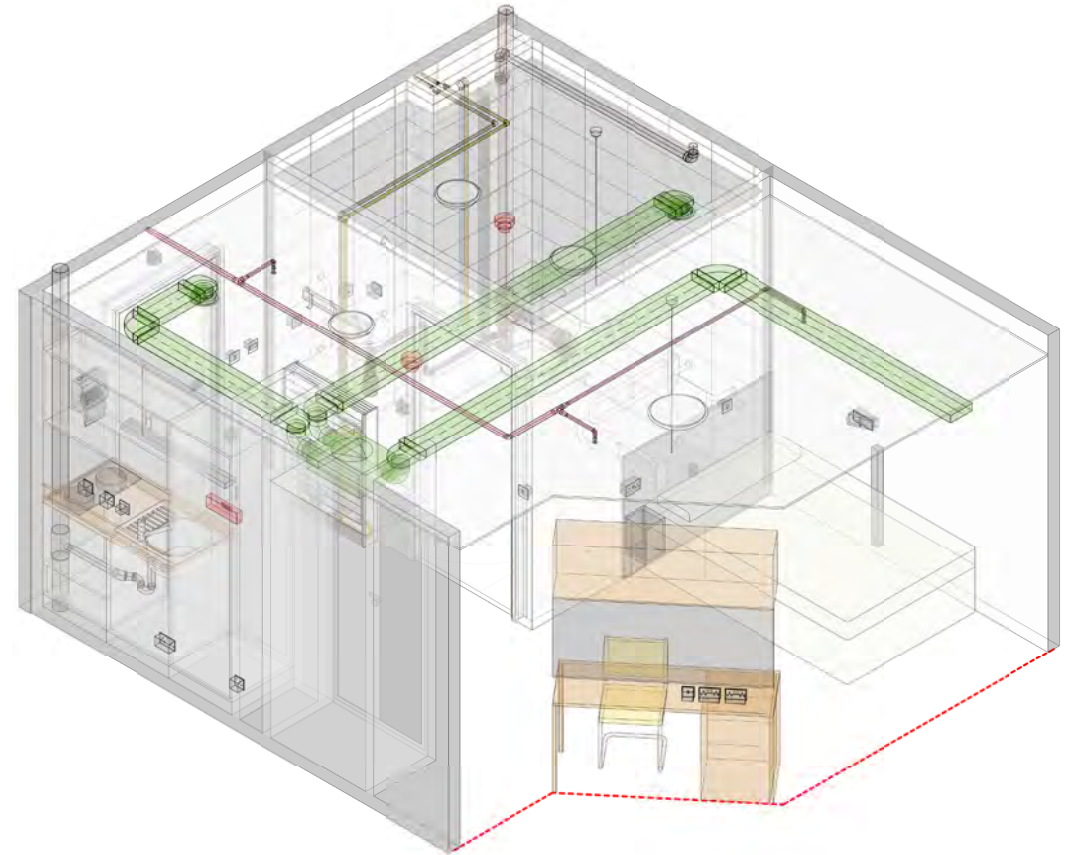


BIM INTEGRATION



ARCHITECTURE

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M&E

LOW RISE BUILDING PREFABRICATION



CURRENT PROJECTS



TYPICAL BUILDINGS



STUDENT

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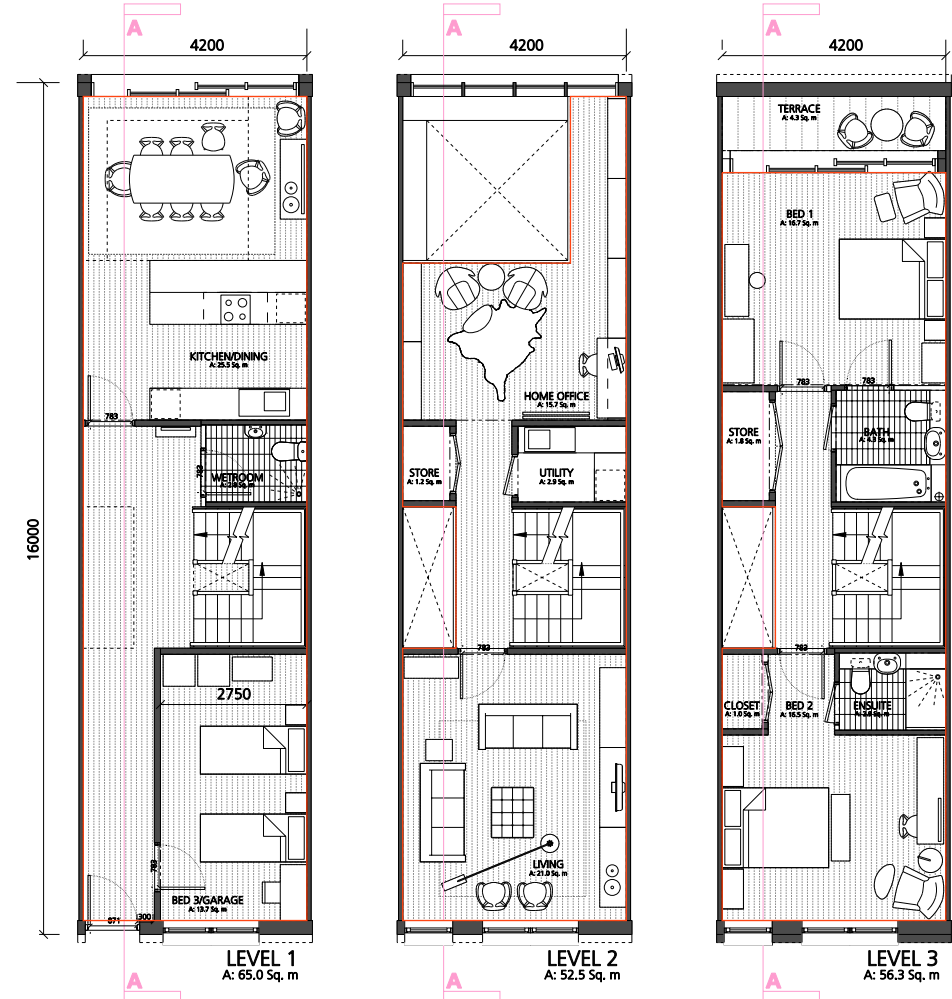
RESIDENTIAL TERRACE

TYPICAL FLOORPLANS



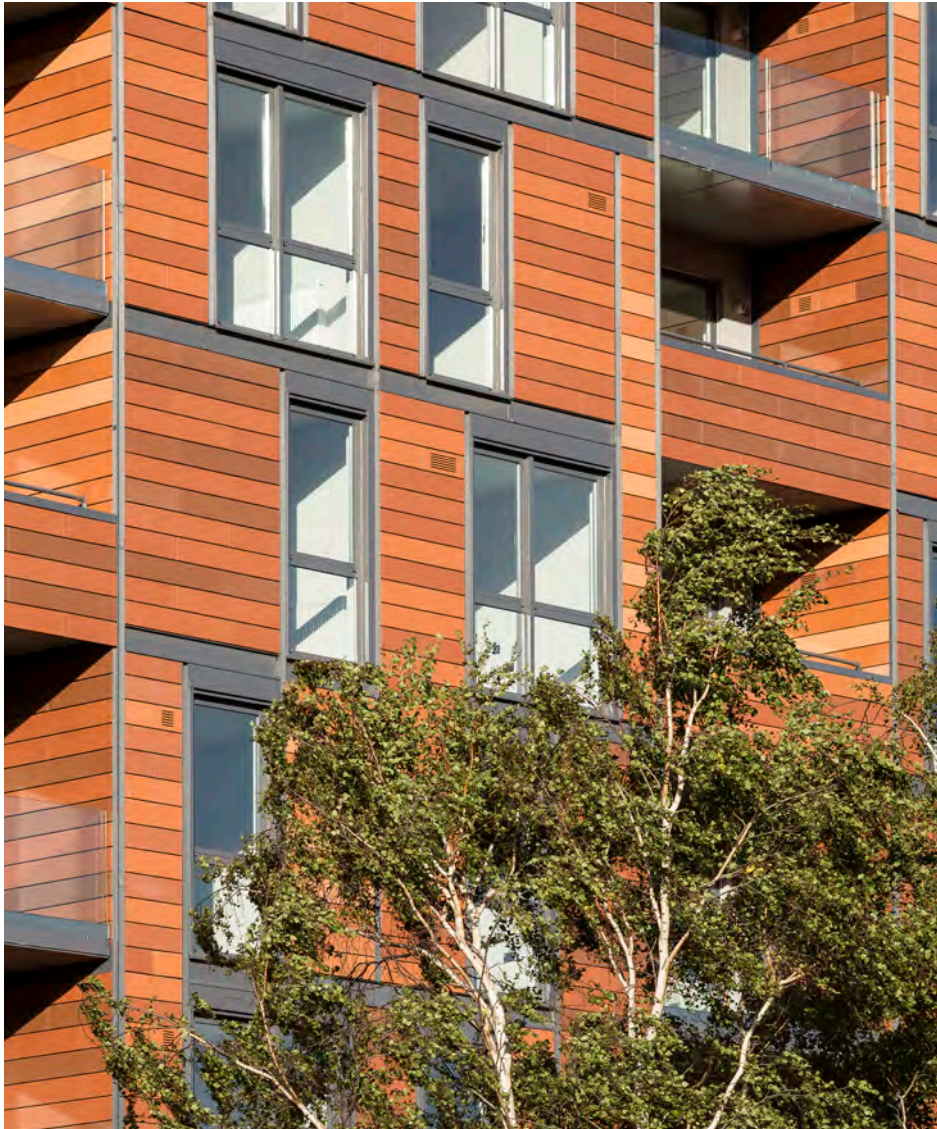
STUDENT

BOPAS Breakfast Briefing Nov. 2015



RESIDENTIAL

FAÇADES



OLYMPIC WAY



KARMA HOUSE

BENEFITS OF OFFSITE



- **NOISE:** DISRUPTION REDUCED
- **QUALITY CONTROL:** RESPONSIBILITY SIMPLIFIED
- **WASTE:** REDUCED
- **PRODUCTIVITY:** INCREASED
- **STABLE COSTS:** MORE LIKELY
- **SHORTER SITE TIME:** MORE LIKELY
- **TEAM:** MORE COHESIVE



CURRENT PROJECTS

