Turner & Townsend

Delivering Project Success Through Collaboration

MMC Ireland Conference 2025

13 March, 2025

We transform together.

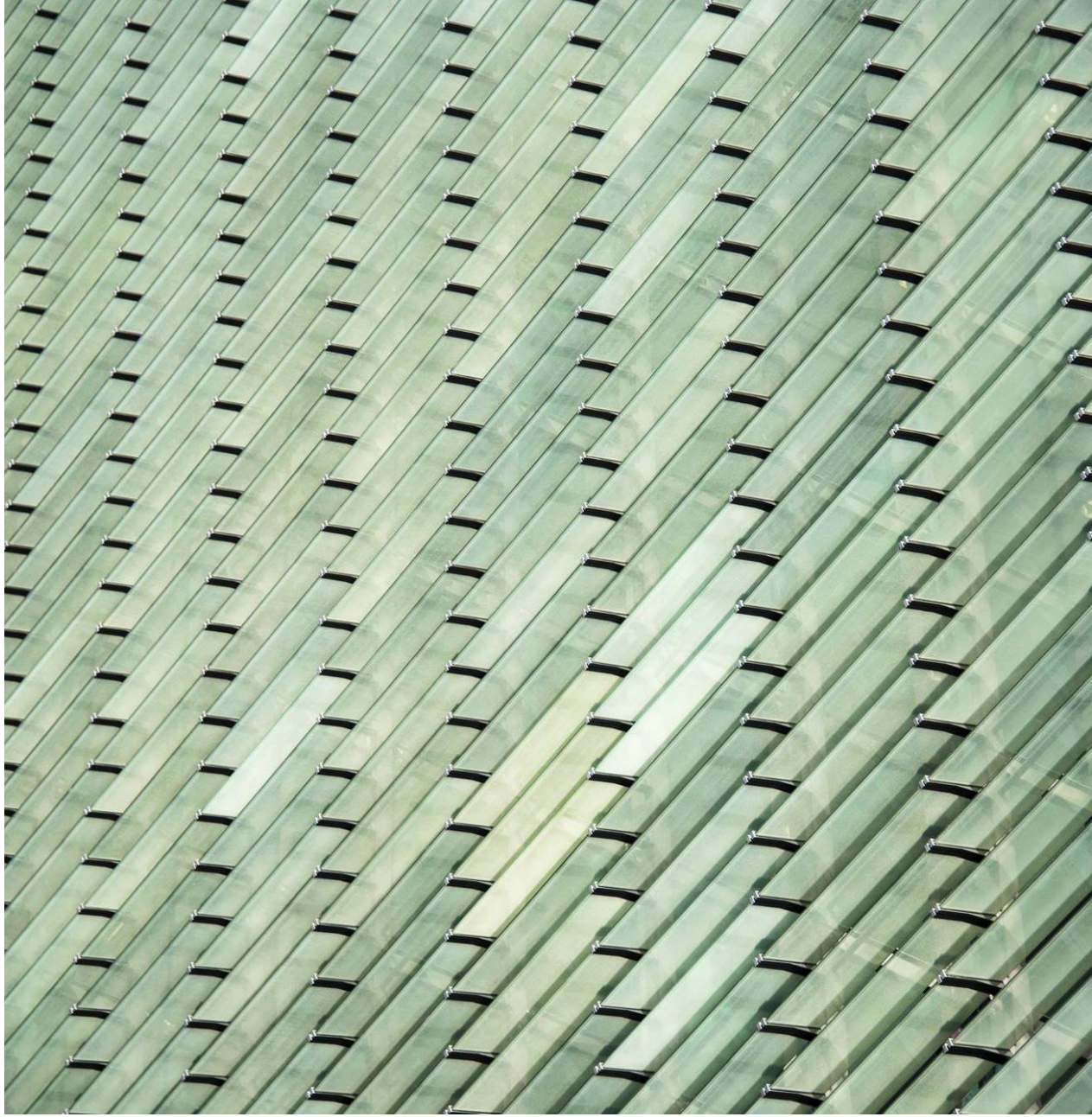
Today’s Agenda

Collaboration

Case Studies

YIF MMC

Chelmsford Garden Community



Construction Parties

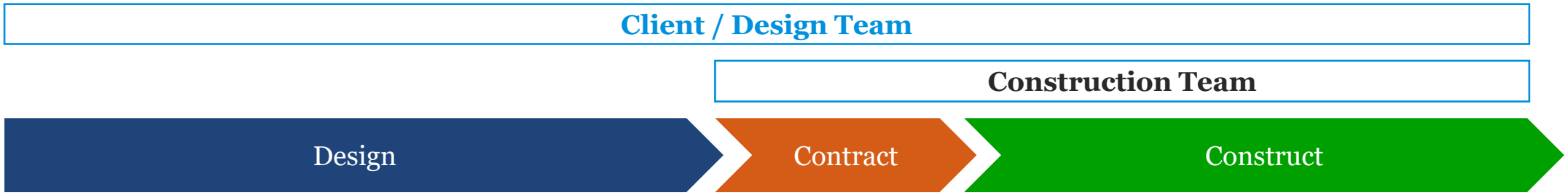
- Funder
- Client
- Design Team
- Project Manager
- Quantity Surveyor
- Legals

- Funder
- Client
- Design Team
- MMC Contractor
- Project Manager
- Quantity Surveyor
- Legals

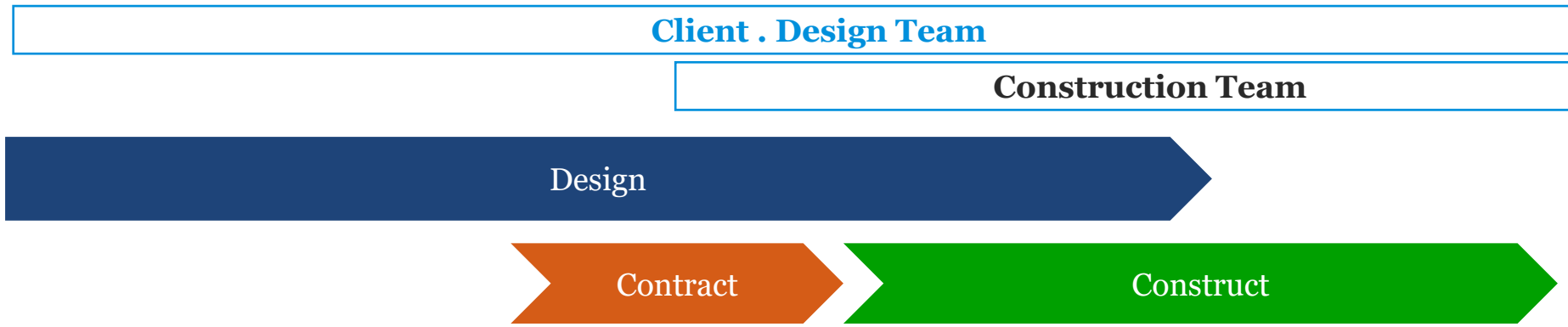
- Contractor

Collaboration for Delivery

Traditional

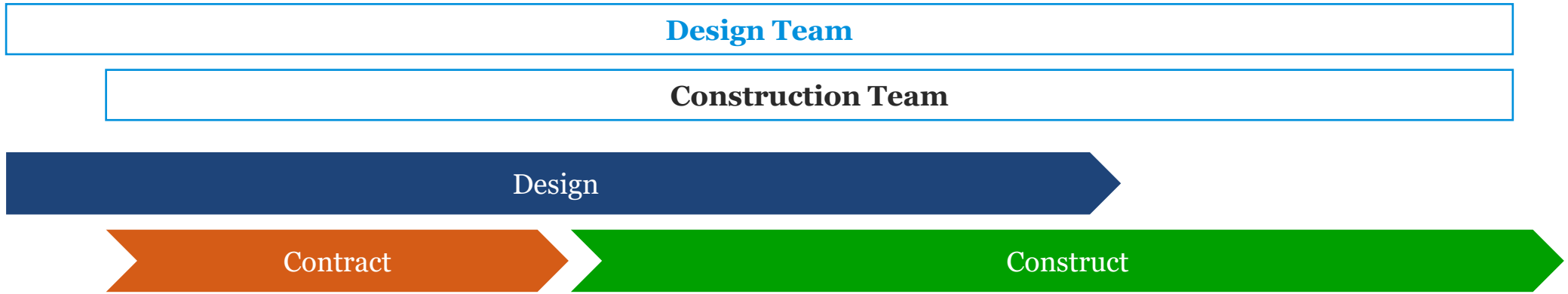


Design & Build



Collaboration for Delivery

Collaborate



Case Study

Youth Investment Fund – Modular Youth Centres

Modular Youth Centres

Youth Investment Fund (UK)

Task force of architects and MMC Advisors to design a kit of parts to deliver four modular youth facilities.

Each scheme received detailed planning approval.

The schemes were tendered to the supply chain and were deemed unaffordable at over £7k/m²

Modular Youth Centres

Procurement & Collaboration

DCMS appointed the Social Investment Business (SIB) Foundation as the Youth Investment Fund (YIF) grant provider.

T&T and C&W were appointed to collaborate across the national portfolio to create a platform design for all projects to improve productivity and to provide nationwide support to the portfolio through all preconstruction activities to contract ready status.

C&W role: Perform all design-related and planning activities

T&T role: Perform all project planning, monitoring and management activities

Modular Youth Centres

Supply chain engagement

Early engagement with the supply chain of six MMC Cat 1 volumetric and two Cat 2 panelised suppliers was critical.

Arrived at a standard template design that met the suppliers' dimensional and specification sweet spots

Resulted in the average above ground cost across the supply chain of £2.7k/m² rendering the portfolio affordable.

The projects were geographically batched in collaboration with the suppliers to maximise manufacturing and transportation efficiencies.

Modular Youth Centres

Key Successes

Reduced costs from £7k/m² to £2.5k/m²

Supported the supply chain to deliver a platform DfMA system through collaboration

Collaborated with competitors to deliver programme productivity improvements for the client

Case Study

Chelmsford Garden Community

Chelmsford Garden Community

Project overview

- 1250 single family rental dwellings, 614 of which allocated as MMC delivery.
- Split of 2 & 3 storey houses and small apartment blocks. Approx 75% housing and 25% apartments.
- On site MMC delivery start date July 2025.
- Delivery rate 14 plots per month.
- Full turnkey solution required.

Chelmsford Garden Community

Our scope

- MMC market analysis of recent success and failures & 5-year forecast
- Supply chain analysis and recommendations
- CAT 1 & 2 options analysis and recommendations
- Design pattern book review

Chelmsford Garden Community

MMC category 1 example 14 plot programme

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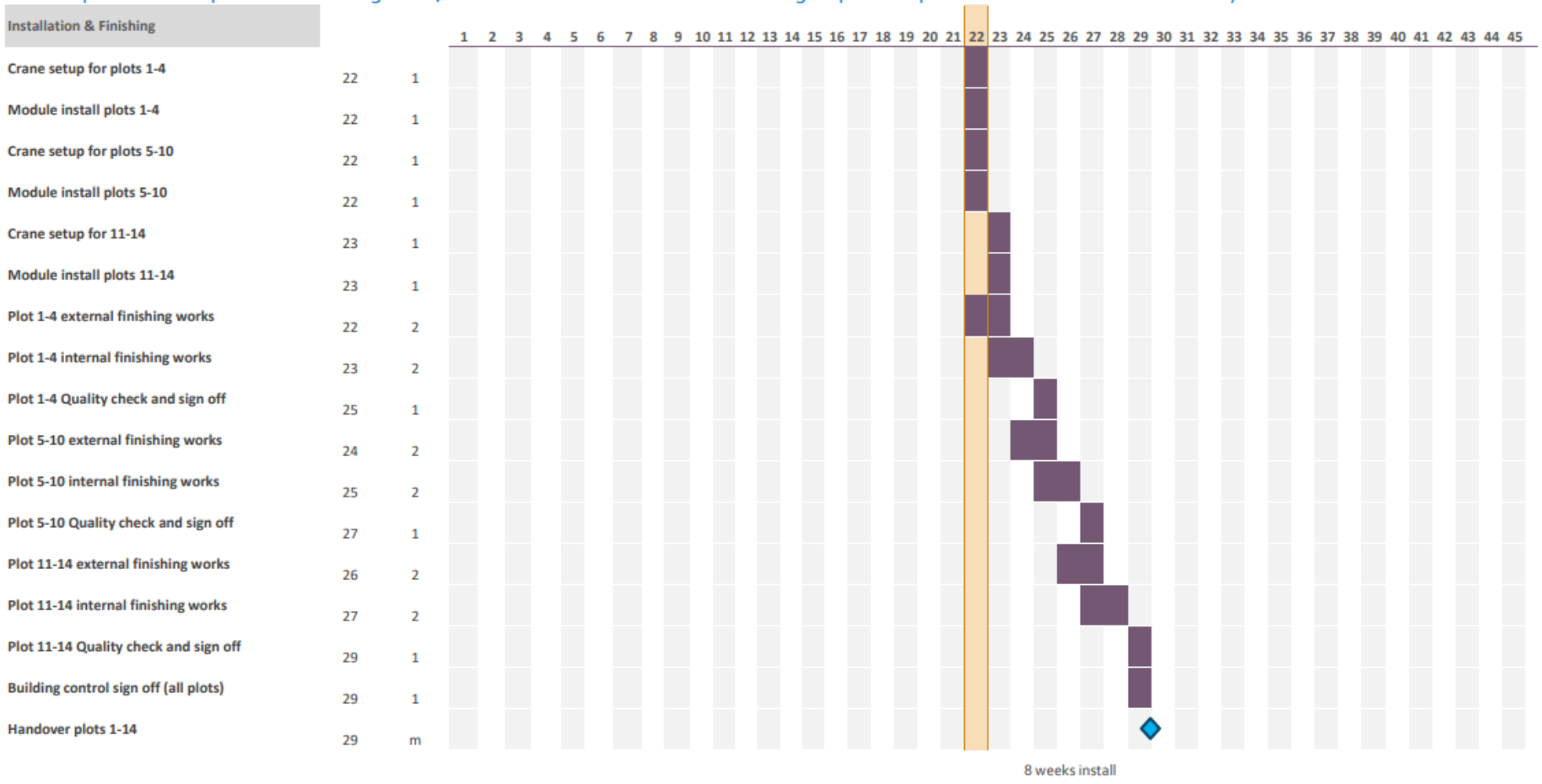
Based upon an assumption of 1 finishing team, 1 crane and batched into three install groups. Multiple teams could work concurrently.



Chelmsford Garden Community

MMC category 2 example 14 plot programme

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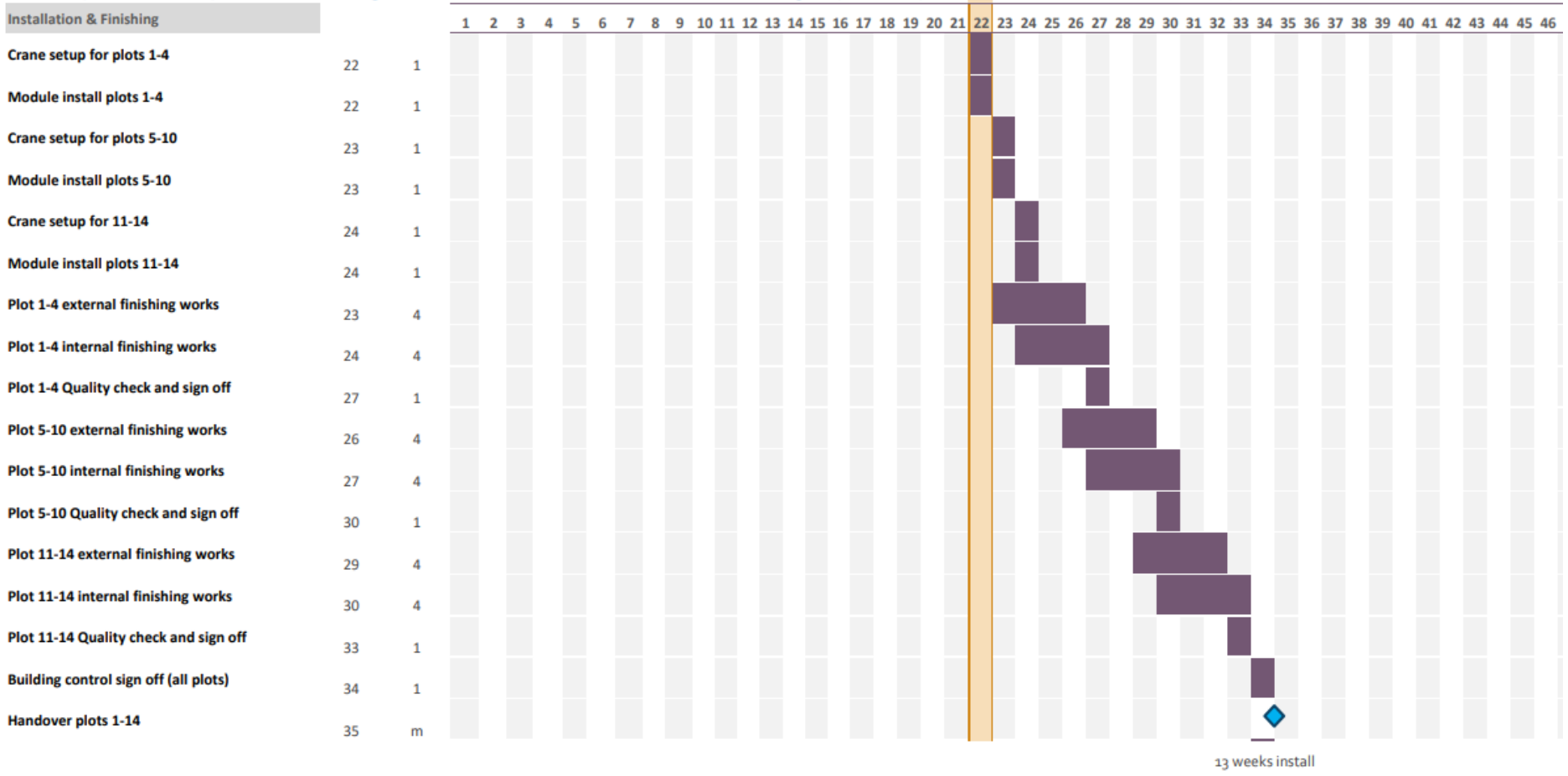
Based upon an assumption of 1 finishing team, 1 crane and batched into three install groups. Multiple teams could work concurrently.



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Category 1 - Positives

- Fully finished internal and external treatments (Programme benefit).
- Possibility to install up to 6 plots in a single day.
- Improved quality standards as all trade works are completed in a factory setting.
- Tested M&E systems prior to site install.
- Full turnkey supply and install with manufacturer.
- Opportunity for programme betterment.
- No reliance on traditional trades to compete the dwellings on site.
- High fabric performance and air tightness (Passivhaus standard).
- Low running costs.
- Most efficient resource building strategy.
- Least site disruption (logistics and site works) and site setup.
- Greatest potential for carbon reduction.

Category 1 - Negatives

- Depending on system & location, potential higher unit rate cost.
- Increased risk exposure with single source supplier & strength of covenant.
- Storage risk if site delays incurred.
- Subject to wind delays.
- Location factor with transportation to site.
- Less design flexibility.
- Funding structure (cash flow and upfront costs).

Chelmsford Garden Community

Category 2 - Positives

- Lower unit cost compared to category 1.
- High speed erection in a single day for a dwelling (watertight envelope).
- High thermal performance. Passive house standards achievable if required.
- Lower risk portfolio, many suppliers with similar products for supply chain continuity.
- Available in open of closed panel options including windows, doors and cladding.
- Potential for lower running costs.
- Higher design and façade flexibility & variability achievable.
- Can utilise architects designs over a supplier led design.
- Circa 5% net construction cost cheaper than traditional, excluding prelims.
- More efficient logistics delivery to site compared to traditional construction.

Category 2 – Negatives

- Slower finishing speed compared to category 1.
- Relies heavily on traditional trades for internal fit out and external cladding works.
- Weather dependant for finishing works.
- Subject to wind delays.
- Manufacturers don't often offer turnkey solutions without partnering with a principle contractor.

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Delivery Options

Option 1 -Tier 1 Contractor D&B with the MMC supplier as a sub-contractor –

Option 2 -MMC supplier turnkey solution – MMC supplier takes on the role of Principal Contractor.

Option 3 -Off-site Project integrator approach ('Construction Management light' with minimal number of packages and interfaces resolved).

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Pop Up Assembly Hubs

- Cat 2 panels transported to an assembly hub
- Either a ‘pop up factory’ or an existing local large open plan industrial unit.
- 2D components can then be assembled locally into larger sub-assemblies or 3D volumes.
- Lifted into position gaining all the benefits of volumetric (speed of construction, weathertightness, resource efficiency, etc.) without having the transportation issues that some sites have with 3D volumetric deliveries.
- Use of skilled labour isignificantly reduced compared to traditional construction, as components are being assembled rather than constructed, utilising a less skilled local labour force.
- Supports ESG criteria.
- On completion of the project the assembly hub can be deconstructed and reassembled at a new location

Conclusions

Plenty of opportunity for change

Industry Engagement and information essential

Scale of demand in key sectors could provide platform for growth

In return MMC could contribute significantly to the delivery of vital infrastructure

Planning and upfront engagement with supply chain critical to future success

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