PINNOV

COMMERCIALLY IN CONFIDENCE
MIRVAC TEAM ONLY
DIRECTOR REVIEW, NOT FOR THIRD PARTIES

DIRECTOR RECOMMENDATION, 5 PAGES

Mirvac Modern Methods of Construction Study, Phase 2 recommendation

A summary of the Phase 1 advisory and the recommended Phase 2 pathway, prepared for Director review and approval.

THE CALL

Move into Phase 2 on the Hybrid Stack pathway, four factory-built systems combined on one LIV Mirvac tower (Mirvac's Build-to-Rent platform).

The four systems are Kit of Parts structural frames, Bathroom and Kitchen Pods, Multi-Service Risers (factory-built service shafts), and Facade panels. Domestic suppliers only on the first project. Volumetric Modular (whole rooms craned in) held as the comparison option on the same tower. Phase 2 measures Mirvac's current delivery model directly and benchmarks every option against it.

DOCUMENT
Phase 1 Rev 3.0 summary

ISSUED
11 May 2026

AUTHOR
Adam Strong, Project Innovator

FOR
Mirvac Director review

02

SECTION

The diagnosis why now is structural

Australian construction productivity has gone backwards for thirty years

Every Modern Methods of Construction option (factory-led delivery) sits inside this structural condition. For a Tier 1 developer that sources programme certainty from the contractor market, the trend is the operating environment, not a future risk.

-1.6%

Australian construction productivity since 1990

OXFORD ECONOMICS, ACA 2023

+35.2%

Broader economy productivity, same period

OXFORD ECONOMICS, ACA 2023

-53%

Residential productivity since 1995, half as many homes per hour worked

PRODUCTIVITY COMMISSION, FEB 2025

27%

Construction share of corporate insolvencies, against 8% of GDP

ASIC INSOLVENCY STATISTICS, 2024

THE COST OF DOING NOTHING

48%
of rework caused by poor data and miscommunication, not workmanship

33%
of construction professionals' week spent hunting information and managing rework

0.39%
rework as share of contract value, erasing 28% of project margin

1 to 3%
net margins across mid tier and residential builders

50%
of global projects miss programme

WHAT CHANGES THE TRAJECTORY

The McKinsey trilogy identifies industrialisation (factory-led delivery) as the structural intervention most likely to shift the trend. **20 per cent cost reduction** and **up to 50 per cent programme reduction** are achievable where design repetition is sufficient, factory utilisation is above 70 per cent, and the client accepts standardised outputs.

The Australian Productivity Commission concurs, with the caveat that industrialisation requires demand aggregation at a scale currently absent from the local market.

CAPITAL IS NOW MOVING

Three signals in the same week. **Wesfarmers** backed the Built Living modular factory in Perth on 4 May 2026. **NSW Government** introduced legislation to streamline modular approvals. **Mirvac** trialled a five-bedroom volumetric module at Cobbitty in south-west Sydney on 11 May 2026.

Industrialisation has crossed the institutional credibility threshold in Australia. The question for Mirvac is now scope and timing, not whether.

The Farmer verdict applies to Australia. Mark Farmer's "Modernise or Die" diagnosis was made of the UK construction sector in 2016. Asked whether it applied to Australia, Farmer answered, "All of these things I see in UK and Australia." The Australian Productivity Commission's February 2025 report confirms the pattern. Fragmented supply chains, procurement models that push risk to trades, and an apprenticeship system that builds craft skills rather than systems thinking. This is the environment Mirvac operates inside.

03
SECTION
The five routes and the Hybrid Stack

Five factory-led delivery routes, one combined pathway

All five routes are viable. The Phase 2 recommendation is the Hybrid Stack, four routes (Routes 2 to 5) combined on one LIV Mirvac tower, with Volumetric Modular (Route 1) held as the comparison option on the same project.

01
Volumetric Modular
Whole rooms or modules built in a factory and craned into place on site.

COMPARISON OPTION

Higher factory share. Requires engineered approvals (Performance Solutions) and offshore supply at the scale Mirvac needs.

02
Kit of Parts structural
Pre-cut and pre-assembled structural frame elements, fixed on site.

IN THE STACK

Standard approvals pathway (Deemed-to-Satisfy) where the structural grid permits. Established domestic supply.

03
Bathroom and Kitchen Pods
Complete factory-built wet rooms delivered ready to install.

IN THE STACK

Highest factory-quality contribution per critical-path element. Confirmed domestic supply.

04
Multi-Service Risers
Factory-built vertical service shafts (water, power, data, fire) lifted into place.

IN THE STACK

Removes services trades from the on-site critical path. Verified domestic suppliers.

05
Facade Panels
Factory-built external wall panels installed as complete units.

IN THE STACK

Established Australian market with multiple shortlistable suppliers.

Why the Hybrid Stack is the recommended pathway

MATERIAL FACTORY-SHARE UPLIFT

Four factory-led routes combined on one project produce a meaningful Pre-Manufactured Value uplift (the share of work completed in a factory before site delivery), with schedule compression on every element that currently sits on the critical path.

COMPLIANCE WITHIN BOUNDARIES

Each route in the stack has an established supply chain and an evidence base in Australian residential delivery. The compliance position on the first project is held within boundaries that Mirvac's certifier and structural engineer can absorb.

PLATFORM LEARNING FOR PHASE 3

The route mix delivers the platform learning, the supplier relationships, and the integration data Phase 3 needs, without making the success of the first tower contingent on an approvals pathway not yet demonstrated at scale in New South Wales.

The operator-led reading. The advisory call drawn from the route assessment, supplier matrix, suitability scoring and evaluation rubric is the Hybrid Stack on a single LIV Mirvac tower. Volumetric Modular is held as the comparison option on the same project, with its own scored shortlist, so the productivity figures are produced for both pathways against the same benchmark.

04
SECTION
Phase 2 scope and three work streams

Phase 2 has two shapes. Diagnostic-grade is the recommendation.

Both shapes deliver a scored Modern Methods of Construction option set on the case study project. Diagnostic-grade adds a measured benchmark of Mirvac's own delivery model (the Traditional Construction Baseline) and a structured reading of Mirvac's foundational operating disciplines (the five-pillar Innovation Road Map assessment), so every option figure is benchmarked against Mirvac's own performance rather than industry averages.

RECOMMENDED

Diagnostic-grade Phase 2

Full evaluation of the five factory-led routes against the case study project, plus a structured reading of where Mirvac sits on the four foundational pillars (leadership, data, production discipline, AI), plus a measured benchmark of Mirvac's own delivery model using internal historical project data.

- The benchmark is what makes the Phase 2 option scores defensible inside Mirvac's Investment Committee papers
- The five-pillar reading provides the productivity framework for both the option scoring and the benchmark
- Requires access to Mirvac's recent tower delivery data and to the senior leaders whose operating disciplines are reviewed

CONTINGENCY

Rapid-comparison Phase 2

A direct evaluation of the five factory-led routes against the case study project. Scored shortlist, supplier engagement, approvals pathway confirmation, and option-by-option commercial and sustainability assessment.

- Options are benchmarked against published industry ranges, not Mirvac's measured business-as-usual performance
- Held in the engagement letter as a contingency if Mirvac's timeline makes the diagnostic-grade scope unworkable
- Project Innovator flags the industry-range limitation in preliminary outputs and updates affected figures once internal data becomes available

Three Phase 2 work streams

STREAM 01

Mirvac inputs

- Floor-cycle durations by zone
- Crane hook hours by package
- Labour hours per square metre by task
- Waste and rework cost benchmarks
- Conceptual designs for the structural options
- Sustainability consultant engagement decision
- Sign-off on Phase 1 supplier shortlist
- Approvals pathway for any route needing engineered approval

STREAM 02

Project Innovator deliverables

- Four-pillar Assessment Score on the case study project
- Traditional Construction Baseline report on Mirvac's delivery model
- Scored option set using the Phase 1 evaluation rubric
- Two-date schedule per option, likely and conservative
- Cost panel per option against the benchmark
- Productivity runs per option
- Approvals notes for any engineered-approval route
- Supplier shortlist with capacity confirmation

STREAM 03

External engagements

- Environmentally Sustainable Design consultant runs the sustainability assessment
- Building Solutions Practitioner engaged for any route needing engineered approval
- Shortlisted suppliers confirm production capacity and lead-time ranges
- Supplier readiness for Phase 3 factory visits
- Engineered-approval report and approvals-pathway programme
- Sustainability boundaries and data inputs confirmed at kick-off

05
SECTION
Three options and the decision required

Three options for the Steering Committee, one recommendation

The recommended option, drawn from the operator-led reading of the Phase 1 evidence base, is Option A. Options B and C are the alternative pathways the Steering Committee may consider against Option A.

A
RECOMMENDED

Hybrid Stack on one LIV Mirvac tower

Four factory-built systems combined on one tower (Kit of Parts structural, Bathroom and Kitchen Pods, Multi-Service Risers, and Facade panels). Standard approvals pathway where the structural grid permits. Engineered approvals scoped before tender for any element that needs them. Pods, Risers and Facade panels procured from domestic suppliers confirmed in Phase 1.

WHY THIS OPTION

Material factory-share uplift. Compliance position within boundaries Mirvac's certifier can absorb. Platform learning for Phase 3 without offshore supply chain risk.

B
ALTERNATIVE

Volumetric Modular on one LIV Mirvac tower

Whole rooms or modules built in a factory and craned into place. Higher factory share than the Hybrid Stack, stronger schedule compression on the structural cycle, and a single production pathway that simplifies supplier governance.

TRADE-OFF

Engineered approvals required across structure and fire from day one. Supply chain at the scale required sits offshore with a NSW Design and Building Practitioners Act 2020 designer registration gap.

C
CONTINGENCY

Trial of one system only

Bathroom Pods only, or Multi-Service Risers only, on one project. The balance of construction follows Mirvac's business-as-usual delivery model. A bounded proof-of-concept.

TRADE-OFF

Lowest commercial risk, lowest commercial reward. The trial removes one element from the critical path rather than restructuring the delivery model around factory-led production.

TIME		COST	
	TBC Subject to scope confirmation		TBC Subject to scope confirmation

Next step. Project Innovator to meet with Matt Fisk to walk through the Phase 1 findings, confirm Phase 2 scope, and define the Phase 2 time and cost framework against the chosen option. Numbers return to the Director for sign-off after that session.

DECISION

For Director approval

- [ ] Approve Option A, the Hybrid Stack on a single LIV Mirvac tower, with Volumetric Modular held as the comparison option on the same project
- [ ] Approve the diagnostic-grade Phase 2 scope (measured against Mirvac's own delivery data), with the lighter rapid-comparison scope held as a contingency in the engagement letter
- [ ] Authorise the scope-definition session with Matt Fisk, after which the Phase 2 time, cost and case-study tower nomination return for sign-off