

09 November 2021

s9(2)(a)

OI 21 419

Thank you for your email of 27 September 2021 requesting the following information under the Official Information Act 1982 (the Act).

...I was just wondering if I could any information (documents, reports etc) on these things?

- *The future use of OSM (off-site manufacturing) such as figures or numbers of projected use of these forms of construction in the future?*
- *What are the reasons why Kianga Ora has decided to use OSM methods of construction over traditional methods.*
- *What are the projects Kianga Ora has already completed using OSM methods of construction, and are currently or planning to build?*

A number of papers relating to Kāinga Ora's use of OSM can be found listed below and enclosed.

1. 2.3 June OSM Supply Programme Update – Board Paper
2. 4.1 July OSM Supply Programme Monthly Land Update – Board Paper
3. 8.3 OSM Supply Programme – Inventory Purchase Business Case – Board Paper
4. BN 21 013 Kāinga Ora OSM Supply Programme – Briefing Note

Some redactions have been made to these documents under the sections 9(2)(a), 9(2)(j) and 9(2)(f)(iv) of the Act. 9(2)(a) allows for the withholding of information to protect the privacy of natural persons. 9(2)(j) allows for the withholding of information if it would prejudice ongoing negotiations. 9(2)(f)(iv) allows for the withholding of information to protect the free and frank expression of advice tendered by officials.

Additionally the following document is also within scope of your request however, this is not being supplied to you at this time.

1. Cabinet Paper 'Kāinga Ora Proposed Offsite Manufacturing (OSM) supply programme'

This paper is currently being prepared for proactive release and will be published on Kāinga Ora's website in due course. As such I am refusing this section of your request under section 18(d) of the Act as it will soon be publicly available.

Using more OSM

The demand for public housing has never been higher. There is a very real and urgent need to get families and children out of motels and other forms of emergency housing and into more secure homes where they can feel settled and able to move forward with their lives.

Innovative approaches are needed to deliver more quality homes, at a faster rate, and with the best possible outcomes for people, communities, and the construction industry.

Off-site manufactured (OSM) homes are an excellent option. These are homes that can be built and installed on sites faster, enabling Kāinga Ora to have the completed homes on site around 40% faster than a traditional on site build. They meet quality and sustainability thresholds expected of a traditional build, including Healthy Homes standards and the New Zealand Green Building Council's 6 Homestar ratings.

OSM homes are not new to New Zealand, and Kāinga Ora, with around 15 percent of public homes currently under construction or in design utilising offsite manufacturing techniques. Our build partners are among those leading the charge in this build method, and it was used under Housing New Zealand for many years, particularly during the Canterbury rebuild.

To supply the extra public and supported housing for families in need, Kāinga Ora has plans to increase its use of OSM homes by around 20%. Kāinga Ora and the Government are committed to supporting the growth of OSM in New Zealand. We are developing a future focused OSM Plan aimed at increasing OSM innovation across our build programme, and we have engaged with the local OSM sector to understand capability and capacity to supply these homes at scale.

While Kāinga Ora does not maintain an exhaustive list of all of our projects that include some form of OSM, more information about our increasing use and a pilot programme can be found at the following link <https://kaingaora.govt.nz/news/ramping-up-offsite-manufactured-builds>

You have the right to seek an investigation and review by the Ombudsman of this response. Information about how to make a complaint is available at www.ombudsman.parliament.nz or Freephone 0800 802 602.

Please note that Kāinga Ora proactively releases our responses to official information requests where possible. Our response to your request may be published at <https://kaingaora.govt.nz/publications/official-information-requests/> with your personal information removed.

Yours sincerely



Rachel Kelly
Manager – Government Relations

Kāinga Ora - Investment and Delivery Committee

Paper no:	2.3
Meeting date:	21 June 2021
DCE:	Nick.Maling@kaingaora.govt.nz General Manager National Services s 9(2)(a)
Paper author:	Karla.Fisher@kaingaora.govt.nz Director Supported Housing s 9(2)(a)
Business Group:	National Services
Title:	OSM SUPPLY PROGRAMME LAND UPDATE

Released under the Official Information Act 1982

Purpose

1. This paper provides an update on land availability for the Off-Site Manufacturing (OSM) Supply Programme.

Recommendations

2. It is recommended that the Investment and Delivery Committee:
 - a) **note** the updated progress of identifying land for this Programme.

Background / Context

3. On 25 May 2021 the Board approved the Business Case for the OSM Supply Programme to enable delivery of [REDACTED] OSM modular units to be used for Public and Transitional Housing.
4. The Programme will use all available residual capacity for volumetric modular units manufactured in New Zealand, s 9(2)(j) [REDACTED], and the remaining units will be manufactured overseas.
5. Pre-purchasing the units at scale allows the Programme to work in parallel to identify land at the same time that it is in discussion with a number of suppliers about the design and quantity of units it will purchase.
6. This paper provides an update on progress to date with identifying land for use in this programme.

Discussion

7. The Programme is looking across all available avenues for securing land, including Kāinga Ora owned land, acquisition and leasing opportunities. It is open to opportunities to use land for even quite a short term, due to the ability to move the units to another location. This includes opportunities for leasing properties, as well as the short term use of land that is earmarked for future Large-scale Projects.
8. Land remains the Programme's largest risk. Significant effort is going into scaling up Kāinga Ora capability and capacity to secure additional land. We are seeing the benefit of this, but not yet at a level where we can be confident of delivering at the scale required.

9. The Programme has a number of sites that it is progressing to design phase for Bulk and Location and Resource Consent preparation. If all these sites are completed we will achieve at least s 9(2)(j), which represents our current state progress regarding land availability. Of these, s 9(2)(j) representing a yield of s 9(2)(j) are ready for Resource Consent pre-application.

10. The table below provides a summary of all active sites and a full list of these sites is attached as Appendix A.

Table One: Summary of active land opportunities under development

Location	Sites	Potential Yield
Kaikohe	s 9(2)(j)	
Auckland		
Tauranga		
Rotorua		
Gisborne		
Hastings		
Palmerston North		
Porirua		
Christchurch		
Dunedin		
Invercargill		
TOTAL		

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11. This list is weighted towards land Kāinga Ora already owns land, as this was the focus of early efforts to identify suitable land, with new acquisition and lease opportunities added once they have been secured. There is a mixture of small sites with low yield, as well as a few bigger sites where higher yield can be achieved.
12. Each site is tested with the local Place-Based Region to confirm if there are any reasons why volumetric modular units may not be suitable on the site (for example local knowledge about history of flooding or access issues that were not immediately obvious in the screening process), and also whether the site would be suitable for Transitional Housing (if not, it will be used for public housing).
13. There are a number of sites in our acquisition pipeline, these are represented in the table below.

Table two: Summary of land acquisition pipeline

Summary of Land Acquisition Pipeline				
	Opportunity	Negotiations	Conditional	Unconditional
Probability of settlement	10-20%	20-40%	30-50%	90%
Kaitaia	<div style="background-color: black; color: red; padding: 10px; transform: rotate(-45deg); font-size: 2em; font-weight: bold;">Released under the Official Information Act 1982</div>			
Northland				
Whangarei				
Auckland				
Hamilton				
Waikato				
Tauranga				
Rotorua				

Summary of Land Acquisition Pipeline

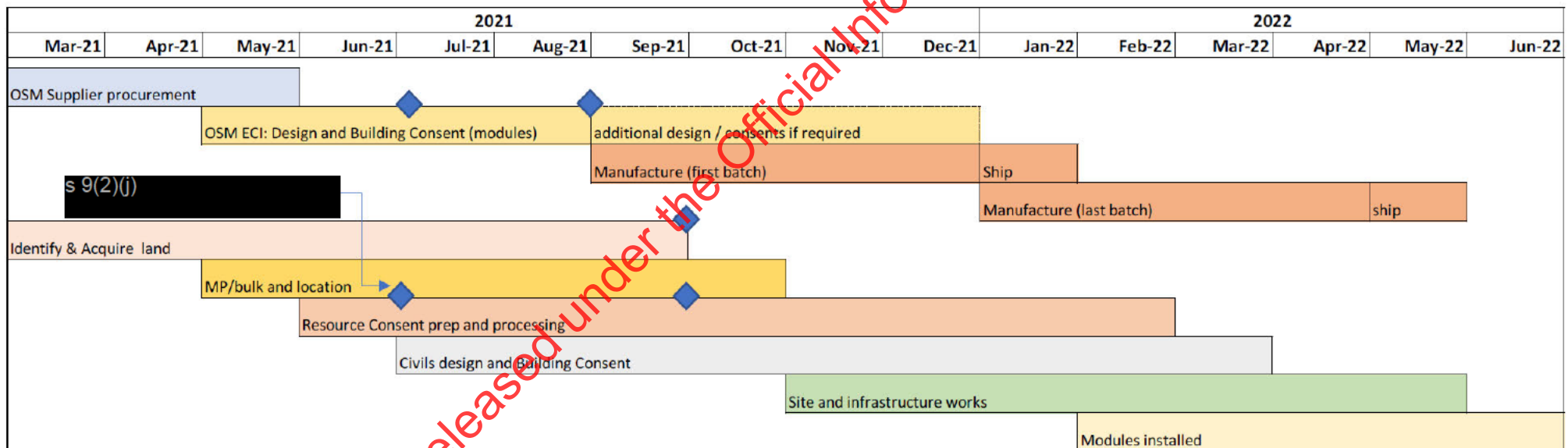
	Opportunity	Negotiations	Conditional	Unconditional
Gisborne	s 9(2)(j)			
Flaxmere				
Hastings				
Horowhenua				
Napier				
Hawkes Bay				
Paraparaumu				
Wellington				
Nelson				
Blenheim				
Greymouth				
Ashburton				
Christchurch				
Dunedin				
Invercargill				
Total				

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14. The Programme’s priority is on Transitional Housing, with a goal of achieving a spread across the country that aligns as much as possible with our purchasing intentions for Transitional Housing. This means a focus on the regions, as delivery in Auckland is already well progressed.
15. Currently the mix of opportunities is heavily weighted in Auckland with significant gaps in some priority locations across the country. Priority locations are those where there is significant demand (as defined by HUD) and there is not yet delivery to meet this from Kāinga Ora or other providers.
16. The Programme is focused on getting more land in priority regional locations. By taking a regional approach we are getting the right capability and capacity on the ground to identify all opportunities through the market and create opportunities through partnering.

Programme approach

17. The Programme is continuing to progress land opportunities as we work with suppliers to finalise designs and order units. The diagram below provides an overview of the Programme approach, and next steps.



18. Key milestone dates are:

- 30 June: Pre-application meetings with Councils underway
- 7 July: Prototype order to test product (s) (for overseas manufactured product)
- 31 July: First batch of OSM in fabrication
- 30 September: Last tranche of acquired/leased land secured
- 30 September: Last Council pre-applications underway

19. To provide certainty of delivery by June 2022, land needs to be secured by the end of September 2021. While we may be able to include a small number of additional projects after this, we will not have time to progress significant sites.

Operating Principles

20. As covered in the Business Case, this Programme is consistent with a number of our operating principles. Particularly with respect to land, as we are considering the locations to support our customers to be well connected to their communities, to lead lives with dignity and with the greatest degree of independence possible, and to sustain tenancies. This will be a significant contribution towards meeting our delivery targets and providing new homes for our customers.

21. This project could also create additional options for partnering differently with Māori. Key areas we are actively engaging with Māori on include:

- a) to identify land Māori may wish to lease or sell to Kāinga Ora for use of OSM homes. We are actively exploring this with Māori in a number of locations, § 9(2)(j). The relative portability of these homes could be useful on Māori land, as it potentially enables shorter term leases that may be more attractive to Māori.
- b) To explore opportunities to include Māori in our New Zealand design team that would work with Kāinga Ora on the design of sites.
- c) Māori organisations who may be interested in procuring OSM units alongside Kāinga Ora to leverage the economies of scale from this project to achieve OSM costs lower than they could achieve operating alone.

d) Future updates to the Board will include an update on Māori engagement and opportunities identified.

Risks and Mitigation

22. Land remains the biggest risk for the project s 9(2)(j) by June 2022. The Programme will continue to provide regular updates to the Board on this as well as overall programme progress, over the coming months.

Consultation

23. This update has been prepared by the project team, which includes business groups and teams from across Kāinga Ora including Supported Housing, Construction and Innovation Delivery, Procurement, Market Delivery, and Communications.

Implications

Legal Implications

24. There are no legal implications relating to this update.

Financial Implications

25. There are no financial implications related to this update.

People and Resource Implication

26. A project team has been stood up quickly to work at pace to diversify our pipeline through OSM delivery. The programme is looking at capacity and capability in priority locations across the country to ensure we have the right people involved to maximise our opportunities to secure land. This approach may be slightly different in different locations, depending on the local environment.

Health and Safety

27. There are no health and safety implications relating to this update.

Communication and Engagement

28. Communication and Engagement remains a significant focus. We are ready to start engaging with councils regarding resource consents in areas where we have sites ready to progress. These conversations are being carefully managed with consistent messages.

Treaty of Waitangi and Māori Outcomes Obligations

29. This project will undertake appropriate mana whenua consultation processes, noting the potential opportunities identified for Māori organisations.

Next Steps

30. Regular updates on land availability and other work streams will be provided to the Investment and Delivery Committee.

Attachment

31. There is one attachment: *List of active land opportunities*

Signature



Nick Maling

GM National Services

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Appendix A: List of active land opportunities

Land Type	Location	Site	Area (m ²)	Density	Yield
Existing	Auckland	s 9(2)(j)			Preparation for Resource Consent pre-application underway
Existing	Auckland				Preparation for Resource Consent pre-application underway
Existing	Auckland				Preparation for Resource Consent pre-application underway
Existing	Auckland				
Existing	Auckland				
Existing	Auckland				
Existing	Auckland				
Existing	Auckland				
Existing	Auckland				
Existing	Auckland				
Existing	Auckland				
Lease	Rotorua				

Land Type	Location	Site	Area (m ²)	Density	Yield
Lease	Rotorua	s 9(2)(j)			
Lease	Rotorua				
Lease	Rotorua				
New	Rotorua				Preparation for Resource Consent pre-application underway
Lease	Rotorua				
Existing	Hastings				
Existing	Porirua				Preparation for Resource Consent pre-application underway
Existing	Gisborne				
Existing	Gisborne				
Existing	Gisborne				
Existing	Gisborne				
Existing	Gisborne				
Existing	Palmerston North				
Existing	Palmerston North				

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Land Type	Location	Site	Area (m ²)	Density	Yield
Existing	Palmerston North	s 9(2)(j)			
Existing	Invercargill				Preparation for Resource Consent pre-application underway
Existing	Dunedin				Preparation for Resource Consent pre-application underway
Existing	Christchurch				Preparation for Resource Consent pre-application underway
Existing	Christchurch				Preparation for Resource Consent pre-application underway
Existing	Christchurch				Preparation for Resource Consent pre-application underway
Existing	Christchurch				Preparation for Resource Consent pre-application underway
Lease	Kaitaia				
New	Tauranga				Preparation for Resource Consent pre-application underway

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Kāinga Ora - Investment and Delivery Committee

Paper no:	4.1
Meeting date:	19 July 2021
GM:	Nick.Maling@kaingaora.govt.nz General Manager National Services s 9(2)(a)
Paper author:	Karla.Fisher@kaingaora.govt.nz Director Supported Housing s 9(2)(a)
Business Group:	National Services
Title:	OSM SUPPLY PROGRAMME MONTHLY LAND UPDATE

Released under the Official Information Act 1982

Purpose

1. This paper provides an update on land availability for the Off-Site Manufacturing (OSM) Supply Programme.

Recommendations

2. It is recommended that the Investment and Delivery Committee:
 - a) **note** the updated progress of identifying land for this Programme.

Background / Context

3. On 25 May 2021 the Board approved the Business Case for the OSM Supply Programme to enable delivery of s 9(2)(j) modular units to be used for Public and Transitional Housing.
4. The Programme will use all available residual capacity for volumetric modular units manufactured in New Zealand, s 9(2)(j), and the remaining units will be manufactured overseas.
5. Pre-purchasing the units at scale allows the Programme to work in parallel to identify land at the same time that it is in discussion with a number of suppliers about the design and quantity of units it will purchase.
6. This monthly update provides an update on progress to date with identifying land for use in this programme.

Discussion

7. The Programme is looking across all available avenues for securing land, including Kāinga Ora owned land, acquisition and leasing opportunities. It is open to opportunities to use land for even quite a short term, due to the ability to move the units to another location. This includes opportunities for leasing properties, as well as the short term use of land that is earmarked for future Large-scale Projects.
8. Land remains the Programme's largest risk. Significant effort is going into scaling up Kāinga Ora capability and capacity to secure additional land. We are seeing the benefit of this, but not yet at a level where we can be confident of delivering at the scale required.

9. The Programme has a number of sites that it is progressing to design phase for Bulk and Location and Resource Consent preparation. If all these sites are completed we will achieve s 9(2)(j) [REDACTED], which represents our current state progress regarding land availability. Of these, s 9(2)(j) [REDACTED] are ready for Resource Consent pre-application.
10. The table below provides a summary of all active sites and a full list of these sites is attached as Appendix A.

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Table One: Summary of active land opportunities under development

Location	16 June (previous update)		@7 July		Comment
	Sites	Potential Yield	Sites	Potential Yield	
Kaikohe	Released under the Official Information Act 1982				
Auckland					
Tauranga					
Rotorua					
Gisborne					
Hastings					
Palmerston North					
Porirua					
Christchurch					
Dunedin					
Invercargill					
Blenheim					
TOTAL					

11. This list is weighted towards land Kāinga Ora already owns, as this was the focus of early efforts to identify suitable land, with new acquisition and lease opportunities added once they have been secured. There is a mixture of small sites with low yield, as well as a few bigger sites where higher yield can be achieved. Additional work is underway to secure sections of land for OSM from master planned sites already underway.
12. There are a number of sites in our acquisition pipeline, these are represented in the table below.

Table two: Summary of land acquisition pipeline as at 7 July

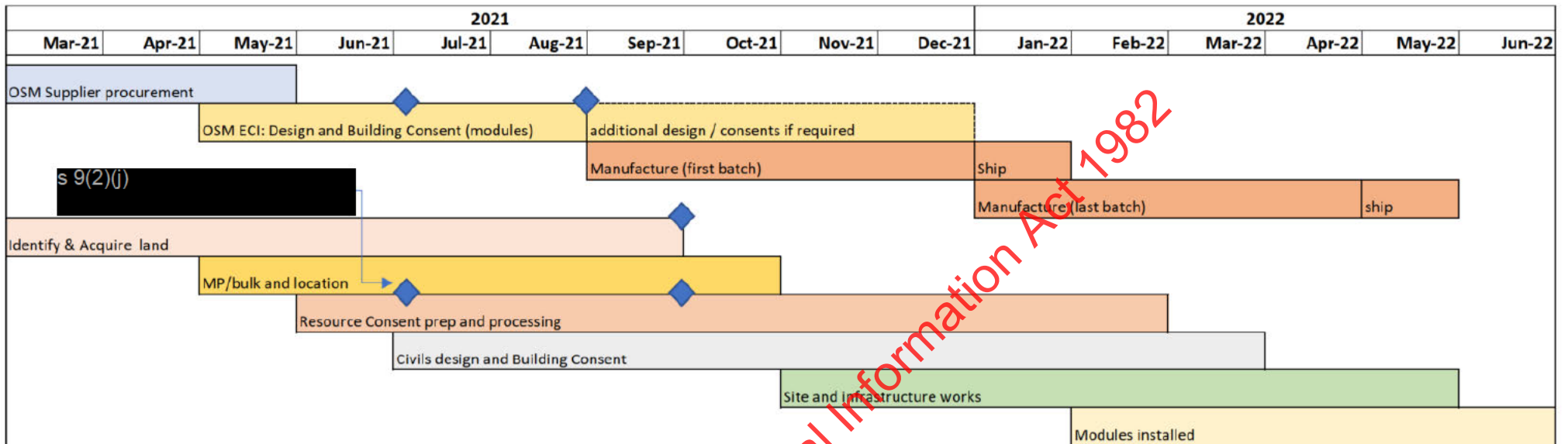
Summary of Land Acquisition Pipeline as at 7 July				
Probability of settlement	Opportunity	Negotiations	Conditional	Unconditional
	10-20%	20-40%	30-50%	90%
Kaitiaia	<div style="background-color: black; color: white; padding: 10px; font-size: 2em; transform: rotate(-45deg); opacity: 0.5;"> Released under the Official Information Act 1982 </div>			
Northland				
Whangarei				
Auckland				
Hamilton				
Waikato				
Tauranga				
Rotorua				
Gisborne				
Flaxmere				
Hastings				

	s 9(2)(j)
Horowhenua	
Napier	
Hawkes Bay	
Paraparaumu	
Wellington	
Nelson	
Blenheim	
Greymouth	
Ashburton	
Christchurch	
Dunedin	
Invercargill	
Whangauni	
Total*	

13. The Programme's priority is on Transitional Housing, with a goal of achieving a spread across the country that aligns as much as possible with our purchasing intentions for Transitional Housing. This means a focus on the regions, as delivery in Auckland, Wellington and Christchurch is already meeting targets.
14. Currently the mix of opportunities is too heavily weighted in Auckland with significant gaps in some priority locations across the country. The Programme is focused on getting more land in priority regional locations. By taking a regional approach we are getting the right capability and capacity on the ground to identify all opportunities through the market and create opportunities through partnering.

Programme approach

15. The Programme is continuing to progress land opportunities as we work with suppliers to finalise designs and order units. The diagram below provides an overview of the Programme approach, and next steps.



16. Key milestones achieved:

- June: Kāinga Ora is s 9(2)(j)
- 30 June: Pre-application meetings with Councils underway
- Week of 7 July: communications out to the wider OSM sector through PreFab NZ article (attached as Appendix B) and direct communication to NZ Suppliers we already have a relationship with
- 7 July: Prototype order to test product (s) for overseas manufactured product)

17. Key milestone dates are:

- August: First batch of NZ manufactured OSM in fabrication
- End August: First batch of overseas manufactured OSM in fabrication

- c) 30 September: Last tranche of acquired/leased land secured
 - d) 30 September: Last Council pre-applications underway
18. To provide certainty of delivery by June 2022, land needs to be secured by the end of September 2021. While we may be able to include a small number of additional projects after this, we will not have time to progress significant sites.

Other significant updates

19. On 12 July 2021 the Minister of Housing took a noting paper to Cabinet about the OSM Supply Programme. An update on the outcome of this will be discussed at the meeting.
20. The Minister of Housing has requested regular reporting about the Programme including land and logistics. Kāinga Ora is working through the approach for this, and will line up reporting to both the Board and Minister.

Operating Principles

21. As covered in the Business Case, this Programme is consistent with a number of our operating principles. Particularly with respect to land, as we are considering the locations to support our customers to be well connected to their communities, to lead lives with dignity and with the greatest degree of independence possible, and to sustain tenancies. This will be a significant contribution towards meeting our delivery targets and providing new homes for our customers.
22. This project could also create additional options for partnering differently with Māori. Key areas we are actively engaging with Māori on include:
- a) to identify land Māori may wish to lease or sell to Kāinga Ora for use of OSM homes. We are actively exploring this with Māori in a number of locations, s 9(2)(j). The relative portability of these homes could be useful on Māori land, as it potentially enables shorter term leases that may be more attractive to Māori.
 - b) To explore opportunities to include Māori in our New Zealand design team that would work with Kāinga Ora on the design of sites.
 - c) Māori organisations who may be interested in procuring OSM units alongside Kāinga Ora to leverage the economies of scale from this project to achieve OSM costs lower than they could achieve operating alone.

d) Future updates to the Board will include an update on Māori engagement and opportunities identified.

Risks and Mitigation

23. Land remains the biggest risk for the project s 9(2)(j) by June 2022. The Programme will continue to provide regular updates to the Board on this as well as overall programme progress, over the coming months.

Consultation

24. This update has been prepared by the project team, which includes business groups and teams from across Kāinga Ora including Supported Housing, Construction and Innovation Delivery, Procurement, Market Delivery, and Communications.

Implications

Legal Implications

25. There are no legal implications relating to this update.

Financial Implications

26. There are no financial implications related to this update.

People and Resource Implication

27. A project team has been stood up quickly to work at pace to diversify our pipeline through OSM delivery. The programme is looking at capacity and capability in priority locations across the country to ensure we have the right people involved to maximise our opportunities to secure land. This approach may be slightly different in different locations, depending on the local environment.

Health and Safety

28. There are no health and safety implications relating to this update.

Communication and Engagement

29. Communication and Engagement remains a significant focus. We are ready to start engaging with councils regarding resource consents in areas where we have sites ready to progress. These conversations are being carefully managed with consistent messages.

Treaty of Waitangi and Māori Outcomes Obligations

30. This project will undertake appropriate mana whenua consultation processes, noting the potential opportunities identified for Māori organisations.

Next Steps

31. Regular updates on land availability and other work streams will be provided to the Investment and Delivery Committee.

Attachment

32. There are two attachments:

Appendix A: *List of active land opportunities*

Appendix B: *Article submitted for Prefab NZ magazine*

Signature



Andrew Booker

Acting GM National Services

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Appendix A: List of active land opportunities

Sites new since the last update are added in bold.

Sites shaded in grey: Packages in preparation for RC pre-apps

Existing Leased New	Location	Site	Area (m ²)	Density	Probability	TH/PH	Yield
E	Auckland	s 9(2)(j)					
E	Auckland						
E	Auckland						
E	Auckland						
E	Auckland						
E	Auckland						
E	Auckland						
E	Auckland						
E	Auckland						
E	Auckland						
L	Rotorua						
L	Rotorua						
L	Rotorua						

L	Rotorua	s 9(2)(j)
N	Rotorua	
L	Rotorua	
E	Hastings	
E	Porirua	
E	Porirua	
E	Porirua	
E	Gisborne	
E	Gisborne	
E	Gisborne	
E	Gisborne	
E	Invercargill	
E	Dunedin	
E	Christchurch	
E	Christchurch	
E	Christchurch	

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E	Christchurch	s 9(2)(j)
L	Kaitaia	
N	Tauranga	
N	Blenheim	
		GRAND TOTAL

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Appendix B: Article submitted for Prefab NZ magazine

OSM article for PrefabNZ July 2021 e-Newsletter

Image – Busby Street, Blockhouse Bay, Auckland



Video Link – Busby Street OSM

[Busby Street - XLam on Vimeo](#)

Title

Kāinga Ora is ramping up offsite manufactured builds

Opening Blurb (71 words) - (80-word max limit)

As the need for more state and market housing continues to climb, Kāinga Ora-Homes and Communities is bringing innovation to the forefront of its build programme and ramping up off-site manufacturing (OSM) to complement traditional builds. To support this growth, they are developing an OSM Plan. Part of that process will be seeking to understand the capacity of OSM suppliers around New Zealand to supply this type of home at scale.

Body (393 words) - (400-word max limit)

Throughout New Zealand the demand for both market and state housing is increasing. A key consideration for Kāinga Ora is housing people and families on the housing register awaiting a state home. The growing need for homes means innovative approaches are needed to deliver more quality state homes, at a faster rate, and with the best possible outcomes for people, communities, and the construction industry.

Off-site manufacturing (OSM) is one build method that Kāinga Ora says they are committed to ramping up. It's a key strategy in their [2019-2023 Statement of Intent](#) and [Building Momentum—Construction Plan for Future Homes](#).

The organisation is developing an OSM Plan to drive innovation and output, and an OSM pilot programme means they can trial and evaluate more offsite products and design solutions.

One standout pilot is the 18-home [Busby Street development](#) in Blockhouse Bay, Auckland, built by Miles Construction. The three-storey walk-up apartment buildings combine a mix of OSM technology, including Cross Laminated Timber (CLT) panels from Xlam. Engineered light timber frame panels and factory-built bathroom pods from Concision are also used.

Scaling up OSM is in early stages for Kāinga Ora but already about 15 percent of homes currently under construction or in design within their developments utilise OSM techniques.

Nick Maling, General Manager National Services at Kāinga Ora, says they expect to increase use of OSM significantly over the coming years.

“Kāinga Ora is New Zealand’s largest housing provider and is delivering the highest number of newly built state homes in over 20 years. But there is an ever-increasing number of people and families requiring a warm, dry and safe place to live and we have to think differently about how we match demand with supply.”

“Over the next 12 months we are intending to intensify use of volumetric modular OSM in particular, as a means of further accelerating immediate housing supply.”

The key to success will be collaboration and cooperation, they say. The organisation is investigating the capacity of OSM suppliers around New Zealand to supply this type of home at scale. Kāinga Ora is also supporting the PrefabNZ conference in October this year and say they look forward to engaging with OSM suppliers then.

If you’re a supplier of OSM in New Zealand and would like to know more about the type of OSM homes Kāinga Ora needs, email buildingmomentum@kaingaora.govt.nz

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Kāinga Ora - Homes and Communities Board

Paper no:	8.3
Meeting date:	25 May 2021
DCE:	Nick Maling Nick.maling@kaingaora.govt.nz General Manager National Services s 9(2)(a)
Paper author:	Reuben.Davis@kaingaora.govt.nz Business Partner s 9(2)(a)
Business Group:	National Services
Title:	OFF SITE MANUFACTURING HOUSING SUPPLY PROGRAMME – INVENTORY PURCHASE BUSINESS CASE

This report is subject to amendment and is currently under review.

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Purpose

1. This paper seeks approval of ^{§ 9(2)(j)} [REDACTED] off-site manufactured (OSM) homes as an enabler to meeting Kāinga Ora's delivery target of ^{§ 9(2)(j)} [REDACTED]

Recommendations

2. It is recommended that the Board:
 1. **note** the IDC considered this paper on 17 May 2021 and agreed in principle, raising a number of questions which we have addressed in this paper
 2. **approve** this Business Case to proceed
 3. **approve** consultation with the Minister of Housing on this Business Case
 4. **note** that the following delivery options were considered to close the current gap in the pipeline of Public and Supported Housing delivery:
 - a) Continue to accelerate our delivery through current business-as-usual methods, including delivering through OSM on a site-by-site basis
 - b) Option a AND delivery of additional ^{§ 9(2)(j)} [REDACTED], including pre-purchasing of these units where necessary
 - c) Options a, b AND delivery of additional ^{§ 9(2)(j)} [REDACTED]s, which are pre-purchased
 - d) Options a, b AND delivery of additional ^{§ 9(2)(j)} [REDACTED]
[REDACTED] **[Recommended approach]**
5. **approve** option d in recommendation 4
6. **approve** expenditure of ^{§ 9(2)(j)} [REDACTED]. This includes the OSM homes themselves, shipping, transport (including to site), insurance and fees. This does not include land, foundations, site works, connection to services, consenting, development contributions, etc. These additional costs will be set out through site specific business cases as per our usual decision-making processes
7. **note** this project provides an opportunity to implement OSM methodologies at scale, and identify new supply chain routes and more efficient construction methodologies that expand New Zealand's housing supply delivery capacity
8. **note** Kāinga Ora has funding and financing in place in the current budget to acquire the new Public and Supported Homes forecast to be delivered across FY21-FY22 as part of this project. Spend under this business case will align to the current budget.

9. **note** that the homes will be prioritised for Transitional Housing, but can be used for either Public or Transitional Housing
10. **note** the key risks identified are identified in paragraphs 61-68 and are land availability, logistics, quality, s 9(2)(f)(iv) and consenting. The potential impact of these risks is largely to our ability to deliver all units by June 2022, with cost being a relatively lower risk.
11. **note** that management will report to the Board monthly on progress
12. **note** we intend that this Business Case creates a funding envelope from existing budget to allow Kāinga Ora to move at scale and pace. Draw down against the funding sought in this Business Case would be approved by the Programme Control Group, and overseen by the New Public and Supported Housing Programme Governance Board
13. **approve** all projects that utilise OSM units procured under this approval that are valued at s 9(2)(i) being managed as *Simple Profile* investments under the Mana Tuku Kaupapa Here (Delegations Policy) SF-POL-001 and the Investment Approvals Policy CA-POL-004
14. **note** that the *Simple Profile* approval requirements may be tailored as appropriate to enable expedited decision-making within risk tolerances, but that these approvals will set out the costs for these sites (land, enabling works, OSM units), future income, and financial performance as per our normal decision-making processes
15. **note** that we will purchase land, enter leases, etc following our business as usual processes
16. **note** that s 9(2)(a)

Background / Context

3. New Zealand has a significant need for additional housing to address homelessness, overcrowding, and housing affordability issues. Kāinga Ora's Planning Intentions target is to deliver s 9(2)(j) across FY21-22. Considering homes delivered to date and those in our pipeline, s 9(2)(j).
4. Kāinga Ora is s 9(2)(j) using our traditional methods of redevelopments, new builds, and buy-ins, due largely to high housing demand and the construction sector already operating close to, or at, full capacity. Constraints on the supply of materials and labour have further limited capacity to accelerate opportunities to close the gap.
5. To address this challenge, this project seeks to pre-purchase OSM units to accelerate delivery of additional places into the pipeline. Pre-purchasing OSM units, particularly from offshore, allows us to create additional construction capacity to meet New Zealand's housing needs faster, by creating new supply lines, and running aspects of the build process in parallel, such as procuring land, consenting, and house construction.

6. This programme will complement our overall delivery programme, which is working at an accelerated pace to bring on as much new supply as possible, and continues to use OSM on a site-by-site basis where it can.

Kāinga Ora is already increasing the amount of OSM it uses with a long term goal to stimulate a system wide shift

7. Kāinga Ora has a clear mandate to utilise OSM, given this was requested by the Minister of Housing in the March 2021 Letter of Expectations; was outlined as a key goal in our 2019-2023 Statement of Intent; and was noted as a key strategy in “Building Momentum”.
8. Kāinga Ora’s OSM Strategy is to build OSM into the way that we do things, building relationships with local OSM suppliers and streamlining our processes. Kāinga Ora’s long term goal is to stimulate a system wide shift towards OSM for the New Zealand Building and Construction Sector. We know by looking at Sweden, UK, and Australia that this requires a sector wide strategy over a 5-10 year period. Kāinga Ora is leading collaborative efforts between other parts of government as well as industry to build momentum towards an eventual sector strategy for OSM. In the meantime, we will ‘walk the talk’ and use the levers available to pave the way for this shift.
9. Kāinga Ora’s State Housing portfolio currently delivers approximately 15-20 percent of projects with some form of OSM (excluding tilt slab). This is delivered by s 9(2)(j) [REDACTED]. We have approximately s 9(2)(j) [REDACTED] in feasibility coming into the construction pipeline with this split approximately s 9(2)(j) [REDACTED]. Across the UDD and market portfolios, approximately 10 percent of projects are using some form of OSM, s 9(2)(j) [REDACTED]. All suppliers to these two portfolios are offshore panelised and volumetric solutions.
10. This project aligns with our OSM Strategy by building OSM into the way that we do things and streamlining our processes. It sits alongside that strategy by delivering some units at pace, testing and exploring different methods to do so, and purposefully pushing the boundaries.

Proposal

11. s 9(2)(j) [REDACTED]
 [REDACTED] There is significant pressure on Transitional Housing in particular, and we are targeting the OSM product for Transitional Housing in the first instance, though if we can deliver in a location and it is not deemed a match for Transitional Housing we will use it as

State Housing. Across our portfolio and pipeline we can move properties between Transitional Housing and State Housing to ensure we have the right mix.

12. This project is purposefully exploring the role OSM can play to deliver additional homes. In addition to that it is contributing to a number of Kāinga Ora's wider objectives including:
- a) Unlocking additional capability and resource in the system to enable new housing delivery including new supply lines for other system participants, such as Community Housing Providers
 - b) Driving the adoption of innovation in the housing sector
 - c) Enabling faster, safer and more predictable delivery of homes, and saving time and cost
 - d) Developing capacity within the New Zealand OSM market
 - e) Increasing Kāinga Ora's agility to respond to natural disasters, such as earthquakes and floods
 - f) Providing additional opportunities for Māori to develop and deliver on their whenua and participate in urban development.
13. This project delivers more than just additional homes, through the delivery of OSM homes at volume it will be part of a strong system shift towards enabling OSM technology to be adopted more widely, increasing the production capacity and driving down the cost of the technology. The benefits of the programme will go beyond the delivery of the homes through the project if we can create enough volume to lift the capacity and productivity of the OSM sector.

OSM product selection

14. To understand the right mix of OSM products that will provide the best opportunity to have the most houses available by June 2022, we have considered a range of New Zealand and overseas OSM suppliers. Following our market analysis, we identified ^{s 9(2)(i)} [REDACTED].
15. Our assessment was informed by small scale projects completed across New Zealand, HLC, and KiwiBuild, and by utilising industry knowledge including speaking with other participants in the market, visiting project sites, and visiting OSM production sites.

16. Our assessment of options has been based on critical factors to deliver quality solutions at pace while also recognising that we need flexibility in the solutions to enable deployment into the regions. Our assessment factors focused on known constraints for delivering OSM, which are:
- a) Capability
 - b) Capacity – both production and install capacity
 - c) Delivery:
 - i. Consenting experience in New Zealand
 - ii. Buildability – relationships with local installers
 - iii. Logistics – national and international transport
17. Following this assessment, we have estimated that ^{s 9(2)(j)} [REDACTED]
18. Bulk purchasing from overseas suppliers carries a risk that the units will need to be stored somewhere both overseas and in New Zealand before they can be sent to the building site. Based on this, it was quickly identified that weathertight modular homes would hold a significant advantage. Therefore, Kāinga Ora issued a Request for Proposal targeting the suppliers that met its criteria and delivered the types of homes that it had selected. ^{s 9(2)(j)} [REDACTED]). Kāinga Ora has established relationships with both companies.
19. In order to deliver a weathertight unit, the homes will be 1 and 2 bedroom. While this does reduce the flexibility, there is good alignment with our Purchasing Intentions, where 1-2 bedroom units make up c.70% of the total requirements for delivery to June 2022. The delivery of more 1-2 bedroom units through this delivery methodology can be balanced with a bias towards delivery of larger homes through other delivery methodologies on shore.
20. The portability of these modular OSM homes (relative to traditional housing) provides additional benefits. It increases our options for short term use of land (through lease or short-term use of sites planned for future development) and it provides Kāinga Ora with a tool for responding to natural disasters, using the modular homes to respond more quickly where there has been significant damage to homes in a particular area.

21. The Request for Proposal process is still underway. ^{s 9(2)(j)}

The letter is an ‘option to purchase’, and does not commit Kāinga Ora to purchase. It signals our intention to work with the parties to ensure we have a good design, it specifically speaks to a number of areas that we need to ensure are resolved before we would contract with the parties including Building Consents, compliance with quality standards including HomeStar 6 and Healthy Homes, and ethical sourcing.

Delivery options available

22. With the goals to both deliver more homes by June 2022 and contribute to the system-wide capacity of OSM technology, we have considered the following approaches:

- a) Continue to accelerate our delivery through current business-as-usual methods
- b) Option a AND delivery of ^{s 9(2)(j)}, including pre-purchasing of these units where necessary
- c) Options a, b AND delivery of approximately ^{s 9(2)(j)} ^{l)}
- d) Options a, b AND delivery of additional ^{s 9(2)(j)} **[Recommended approach]**

Option a) Continue to accelerate our delivery through current business-as-usual methods

23. Kāinga Ora is already and will continue to accelerate its delivery through current business-as-usual methods. This includes building and purchasing new homes, and using OSM as one of the methods of construction for these homes on a site-by-site basis. ^{s 9(2)(j)}

24. This option does not create additional movement towards increasing the capacity and productivity of the OSM sector.

25. Irrespective of the Board’s preferred option, accelerated delivery is already underway effectively making it the baseline option.

Option b) Delivery of additional § 9(2)(j) *, including pre-purchasing where necessary (AND option a)*

26. As well as our accelerated build programme, we have identified that the § 9(2)(j) units without taking capacity that would be utilised by other developers. § 9(2)(f)(iv)
27. Utilising local OSM suppliers allows us to target delivery of the OSM product onto sites which minimise the transportation needed.
28. For example, we have identified that the New Zealand company § 9(2)(j). We plan to pre-purchase these units to give § 9(2)(j) lock in production, and allow us to deliver up to § 9(2)(j).
29. This option provides some additional capacity into our pipeline, and has the advantage of supporting New Zealand providers to grow their capacity and productivity. § 9(2)(j). It will be easier than overseas products to move to the building site, and quality control will be able to be more directly monitored. It greatly reduces § 9(2)(f)(iv).
30. This option requires expenditure of \$ § 9(2)(j) to purchase up to § 9(2)(j).

Option c) Delivery of additional § 9(2)(j) *, which are pre-purchased (AND options a and b)*

31. In addition to accelerated delivery and the purchase of § 9(2)(j) These homes are fully weathertight, allowing for storage both overseas and in New Zealand until they are required on site. They are able to be manufactured in 2021 and be ready to start being put on site at the end of 2021 and start of 2022, provided we act with alacrity.
32. Under option c we would take a pilot approach by pre-purchasing § 9(2)(j), testing the approach with enough volume to achieve cost efficiencies while being small enough to reduce some of the risks associated with a larger scale. Combined with option 2 this will mean a total extra delivery of up to § 9(2)(j) § 9(2)(f)(iv).

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33. Pre-purchasing of homes ahead of securing the land that they will be built on comes with a risk that they might need to be stored for some time before use. The weathertight nature of the homes means that the risk of damage is significantly lowered, however there is a perception risk if homes are seen to be stored rather than available for people to live in. The units can be stored overseas and in New Zealand meaning the flow of the units into New Zealand can be carefully managed to reduce the storage as much as possible. Ultimately the best mitigation is to ensure we secure the land required, and we are working on this in parallel, full details below.
34. There are risks with bringing modular homes from off-shore. Overseas manufacture increases the risk of quality standards not being reached, though this is being mitigated carefully by working with the New Zealand supplier of the product, carefully agreed designs, and quality checks. ^{s 9(2)(f)}
(iv)
- These risks are being managed through careful stakeholder engagement and clear messages that explain how we are creating additional capacity in a constrained sector to deliver more homes for New Zealanders, creating jobs for New Zealanders in the process.
35. Bringing the units from overseas also requires consideration for the logistics of storing the units overseas, shipping the units, unloading the units at port, storing and moving them from port to an intermediary location, and then moving them to site. As the units are oversized, they will need to be moved by truck during the night. We are still working with both OSM providers to determine the roles we will each play and where the risk will sit. We have sought advice from logistics experts in workshop sessions, and have commissioned direct advice from Mainfreight to ensure that we fully understand the logistics requirements and options. Until this work is completed, it is difficult to be certain of the scale of risk associated with logistics, and how well it will be mitigated.
36. This option requires expenditure of \$^{s 9(2)(j)} to deliver up to ^{s 9(2)(j)} (amount is not additive with option b).

Option d) Delivery of additional ^{s 9(2)(j)}, which are pre-purchased (AND options a and b) – [Recommended option]

37. As per option c, in addition to accelerated delivery and the purchase of locally manufactured modular homes, Kāinga Ora could purchase additional modular 1-2 bedroom units manufactured overseas. Under option D we would aim for a total of ^{s 9(2)(j)}

38. The delivery of s 9(2)(j) would make a substantial difference in our planned pipeline of activity, and the level community need. s 9(2)(j), and provide substantially more homes for New Zealanders, and other housing providers. It would also test offshore OSM supply lines at scale, and likely begin to catalyse system transformation, one of Kāinga Ora’s key strategic outcomes.
39. That said, the greater number of units increases the size and complexity of the risks identified in options and requires us to be more certain about our mitigation strategies. There is a trade-off between more delivery and increased risk, and the Board’s risk appetite and relative priorities therefore need to be considered.
40. While we will pre-purchase units, the delivery of these can be carefully managed. There are opportunities to store the units overseas and in New Zealand, and we would carefully manage the flow of the units to New Zealand through regular shipping in smaller batches. We recognise the importance of getting the logistics approach right, and are engaging specialist advice from Mainfreight to work alongside us as we work with the Providers to develop the right plan for moving the units from the factory to the building site.
41. Option d is recommended as the preferred option given New Zealand’s current situation with housing need. It provides the greatest opportunity to deliver a large number of homes, and deliver on Kāinga Ora’s broader outcomes. While it has the highest risk profile, there are practical mitigations that can be put in place to lower the risk profile of the project.
42. This option requires expenditure of \$ s 9(2)(j).

Options analysis

The table below summarises the options presented.

	Option A	Option B	Option C	Option D
	Accelerated BAU	OSM from NZ providers (+ accelerated BAU)	OSM pilot of s 9(2)(j) (+ accelerated BAU and NZ providers)	OSM delivery of s 9(2)(j) (+ accelerated BAU and NZ providers)

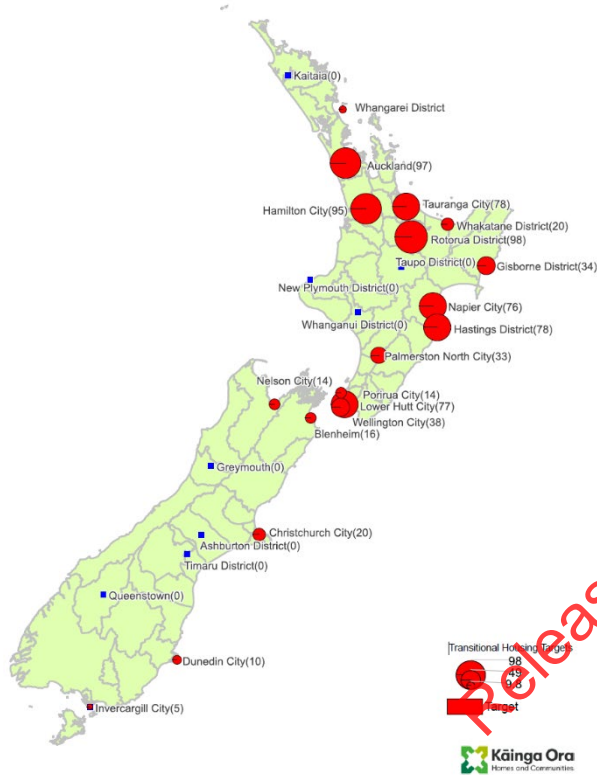
Number of additional homes	s 9(2)(j)			
Budget (based on top end of delivery range)	s 9(2)(j)			
Contributes to increasing capacity and productivity of OSM sector	Low	Medium	Medium	High
Key risks				
s 9(2)(j)				
Kāinga Ora does not secure enough land to put the OSM units on by June 2022	No additional risk	Medium	High – strong mitigation strategy underway	High – strong mitigation strategy underway
The quality of the units does not meet Kāinga Ora standards	No additional risk	Low	Medium	Medium
s 9(2)(f)(iv)				
Community does not accept the product	No additional risk	Medium – mitigated through our engagement approach	Medium – mitigated through our engagement approach	Medium – mitigated through our engagement approach
The logistics of moving the product from manufacture to site	No additional risk	Medium	High (currently unmitigated, urgent action underway to mitigate)	High (currently unmitigated, urgent action underway to mitigate)
Building consenting process		Medium	Medium	Medium

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Acquiring land in parallel to purchasing the OSM units is critical to the success of this project

- 43. Land has been identified as the largest project risk, and is receiving significant attention. To secure enough land for s 9(2)(j) we recognise that we must approach securing land differently, including taking a region by region approach.
- 44. While both Public and Supported Housing will benefit from OSM, our priority for this project has been identified as Transitional Housing. The heat map below notes the s 9(2)(j)

Transitional Housing targets (TH1k), as at May 2021



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- 45. We are analysing our own land, new acquisition and lease opportunities to find the land we need for this project across New Zealand.
- 46. At present we have identified sites with a combined probability weighted s 9(2)(j). We are rapidly scaling the resource dedicated to securing land and are investigating all options, including challenging ourselves to think differently in our approach. The increased portability of fully modular homes means we can explore shorter term use of land than traditional means of delivery.
- 47. The Business Case outlines our Land Strategy and how we are approaching the need to secure land by working differently, on the ground in regions identified as priority locations.

Cost competitiveness of OSM

- 48. We have compared the cost of OSM to a traditional build methodology using a like-for-like cost basis. This analysis indicates that OSM is cost competitive with traditional builds.
- 49. As each supplier has a different risk profile, we have applied different contingency amounts which reflect our risk assessment. For example, we have applied our standard s 9(2)(j)

Traditional build vs OSM methodology cost comparison (excl. GST)

Comparison Including Contingency	
Typology	s 9(2)(j)
1 Bed	<ul style="list-style-type: none"> Standalone single storey Duplex single storey
2 Bed	<ul style="list-style-type: none"> Standalone single storey Duplex single storey
<i>Contingency included</i>	

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Comparison Including Contingency	
Typology	s 9(2)(j)
3 Bed	Standalone single storey
4 Bed	Standalone single storey
<i>Contingency included</i>	

Traditional vs OSM Build Costs (excl GST) - Including Contingency

s 9(2)(j)

	1 Bedroom	2 Bedroom	3 Bedroom	4 Bedroom

Funding and Financing for the project

- 50. Kāinga Ora has funding and financing in place in the current budget to acquire the new Public and Supported Homes forecast to be delivered across FY21-FY22. This project would use the money in the existing budget. However, because we are seeking to pre-purchase the OSM units and treat them like inventory, we are seeking Board approval for the costs to do so.
- 51. The OSM homes purchased as part of this project will sit as inventory that will then be progressively 'sold' to each sub-project as land for each site is secured and becomes ready for the OSM home to arrive.

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Request to alter delegations to support the pace of this project

52. In order to allow for the project to continue to move at pace, we propose a change to delegations for the scope of this project only.
53. We propose that all projects that utilise OSM units procured under this approval that are valued at \$9(2) being managed as *Simple Profile* investments under the Mana Tuku Kaupapa Here (Delegations Policy) SF-POL-001 and the Investment Approval Policy CA-POL-004.
54. Through tailoring the *Simple Profile* approval requirements as appropriate we will enable expedited decision-making within risk tolerances. These approvals will set out the costs for these sites (land, enabling works, OSM units), future income, and financial performance as per our normal decision-making processes.
55. Business as usual processes will be used to purchase land and enter into lease arrangements.

We will report to the Board monthly

56. We will report to the Board monthly on progress.
57. A report will also be provided to the Board when a logistics plan is available due to the high logistics risk and because this risk is currently unmitigated. We believe this risk level will be significantly lowered after we receive the expert advice and develop a plan.

Operating Principles

58. The homes we plan to deliver will be good quality, designed to have a 50+ year life, and meet current Homestar 6 and Healthy Homes specifications, thereby providing good quality, warm, dry and healthy rental housing. The homes will target Kāinga Ora's M-255 standards, any variations will be recorded. Building quality, cost effective homes that are fit for purpose and that comply with all regulatory requirements contributes to managing our housing stock prudently.

59. Providing, warm, dry, safe housing to those in need, in locations of need supports our customers to be well connected to their communities, to lead lives with dignity and with the greatest degree of independence possible, and to sustain tenancies. This will be a significant contribution towards meeting our delivery targets and providing new homes for our customers.
60. This project could create additional options for partnering differently with Māori. Key areas we are currently actively engaging and will engage with Māori on this project include:
- a) to identify land Māori may wish to lease or sell to Kāinga Ora for use of OSM homes. We are actively exploring this with Māori in a number of locations, s 9(2)(j) [REDACTED]. The relative portability of these homes could be useful on Māori land, as it potentially enables shorter term leases that may be more attractive to Māori
 - b) To explore opportunities to include Māori in our New Zealand design team that would work with Kāinga Ora on the design of sites
 - c) Māori organisations who may be interested in procuring OSM units alongside Kāinga Ora to leverage the economies of scale from this project to achieve OSM costs lower than they could achieve operating alone

Risks and Mitigation

61. To achieve this programme’s ambitious targets, Kāinga Ora and its partners will need to work differently and at pace, and at times this will require an increased risk appetite. A discussion of the risks and mitigation strategies is outlined in the Business Case, with a summary of key risks for each option identified in the options analysis above.
62. The largest risks for this programme relate to the ability to deliver on time, reflecting the tight timelines involved. Comparatively, we have a much stronger ability to control cost than timeline risk.
63. Land: Securing land is currently the largest project risk. Not having land secured and prepared in time, in the required locations, could result in project delivery targets being missed and additional costs from transporting modules. Trying to secure a large volume of land in a short timeframe is likely to increase land costs which could impact project feasibility. To mitigate this risk, we are exploring all opportunities to secure land and considering options including owning land; short and long term leases; repurposing land; and temporary use of land. A Land Strategy is attached as Appendix F of the Business Case, providing detail on the approach.

64. Quality: There is a risk that the units will not meet our quality standards. This risk is highest for the first order of units manufactured overseas, and we expect this risk to reduce with subsequent orders. We are mitigating this risk through the design process with suppliers, and have signalled that we need to be certain that the product can meet our standards (calling out in particularly Healthy Homes and HomeStar 6) before we will contract with providers. Through our own experience and through speaking with other New Zealand agencies who have purchased OSM units manufactured overseas, we understand that this is a risk that can be mitigated well through clear expectations and agreements between parties.
65. s 9(2)(f)(iv)
66. Logistics: The logistics of getting the manufactured product to the sites when required represents another significant risk. This area is complex, and not an area that Kāinga Ora has significant knowledge about. The risk of getting the logistics planning wrong is to not have the product at the site when required, or that it costs significantly more to get it to site than expected. Specialist advice is being obtained about the considerations and planning required that will inform Kāinga Ora's decisions on OSM product, locations, and purchasing approach.
67. Consenting: Project delivery targets could be missed or the project's feasibility impacted if resource consents are not obtained in required timeframe or incur significant additional costs. Early engagement will be undertaken with regional authorities and affected community stakeholders, and opportunities to streamline the process will be explored. There is also a risk that project delivery targets could be missed or the project's feasibility impacted if building consents are not obtained in the required timeframes, incur significant additional costs, or consenting standards change between ordering products and final consent being submitted. s 9(2)(j)
- We are working closely with Consentium to proactively manage these risks.
68. Module costs: Cost increases, impacting the project's feasibility, and potential delays may result if modules require much higher levels of additions or customisation than currently anticipated. Detailed design will be completed and a much stronger understanding of land and mix of typologies required developed ahead of placing the pre-order for modules, allowing our cost estimates to be updated on this basis.

Perceived conflict of interest

69. s 9(2)(a)

70.

71.

72.

Consultation

73. Business groups and teams from across Kāinga Ora have been consulted with and involved in the development of this proposal, including Supported Housing; Construction and Innovation Delivery; Procurement; Market Delivery; Chief Commercial Office; Investment Management Office; Investment Planning; Consentium Consent Processing; Urban Design; Legal; Sustainability; and Te Kuratao.

74. The Ministry of Housing and Urban Development has been closely engaged in the development of this project and there has also been high level engagement with the Ministry of Social Development and Customs.

Implications

Legal Implications

75. The Kāinga Ora legal team are aware of this and are working alongside the project team.

Financial Implications

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76. This proposal seeks approval for expenditure of \$9(2)(j). Kāinga Ora has funding and financing in place in the current budget to acquire the new Public and Supported Homes forecast to be delivered across FY21-FY22 as part of this project. The funding utilised in this Inventory Purchase Business Case will be funded from the Construction and Innovation budget.

People and Resource Implication

77. A project team has been stood up quickly to work at pace to diversify our pipeline through OSM delivery. We are currently reviewing the resourcing, management, and governance structures for this project. However, indicative resourcing requirements for key activities such as identifying and evaluating land acquisition and use opportunities, procurement, logistics, and the programme business case have been identified.

Health and Safety

78. There are not considered to be any direct health, safety and security implications from this business case.

79. The homes delivered will provide customers with good quality, warm, dry and healthy homes and, as a baseline, meet current Homestar 6 and Healthy Homes specifications.

Communication and Engagement

80. The Kāinga Ora business units identified in the Document Control section of the Business Case were consulted in its development.

81. This project has evolved quickly and therefore wider stakeholder engagement remains in the early and planning stages.

82. Individual stakeholder management plans will be developed for each site where the homes delivered through this project will be located.

83. A communications and engagement strategy to support the rationale for the proposed approach and the benefits it delivers will be developed.

Treaty of Waitangi and Māori Outcomes Obligations

84. This project will undertake appropriate mana whenua consultation processes, noting the potential opportunities identified for Māori organisations identified in paragraph 60 above.

Delegations

85. The Board holds the delegations to approve this business case and associated expenditure and it is expected that there will be Ministerial engagement.

Next Steps

86. Indicative timeframes provided in this business case highlight that multiple work streams will run concurrently in a way that would not be possible using traditional build methodologies.

87. Following Board approval, there will need to be engagement with the Minister of Housing.

Attachment

88. There is one attachment to this paper: Attachment 1 - *Off-Site Manufacturing Housing Supply Programme Inventory Purchase Business Case*.

Signature

89. Nick Maling, General Manager National Services

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Kāinga Ora-Homes and Communities Report: *Kāinga Ora OSM Supply Programme*

Reference number	BN 21 013
Date	11 June 2021
Priority	Normal
Security level	In confidence

Action sought

Recipient	Action sought	Deadline
Minister of Housing Minister of Finance	<p>Note that Kāinga Ora is working towards its Planning Intentions Target of § 9(2)(i) between July 2020 and June 2022.</p> <p>Note that § 9(2)(i) to meet our planning Intentions targets by June 2022 and OSM provides the opportunity to shift this approach</p> <p>Endorse the proposal for the Kāinga Ora OSM supply programme, with consideration as to whether this should also be provided to Cabinet.</p> <p>Note regular updates can be provided to your Offices if requested</p>	

Contact for discussion (if required)

Name	Position	DDI Mobile	Email	First contact
Nick Maling	GM – National Services	§ 9(2)(a)	Nick.Maling@kaingaora.govt.nz	Yes

For Minister's Office			
<input type="checkbox"/> Noted	<input type="checkbox"/> Approved	<input type="checkbox"/> Not approved	<input type="checkbox"/> Other
Comments			

11 June 2021

Minister of Housing and Minister of Finance

cc: Vui Mark Gosche, Board Chair

Kāinga Ora – Homes and Communities Report: *Kāinga Ora OSM Supply Programme*

Executive summary

- 1 Kāinga Ora – Homes and Communities (Kāinga Ora) is working at pace to deliver on its s 9(2)(j) between July 2020 and June 2022. With demand for housing now at an all-time high and significant pressures on emergency and transitional housing, we are acutely aware of the importance of ensuring those most in need have access to warm, dry, quality homes.
- 2 While we have made strong progress and our construction pipelines are continuing to grow, increasing demand pressures, coupled with a constrained construction sector and increasing demand for land has created a significant shift in our operating environment. We are utilising our local manufacturers to the maximum capacity for OSM product and they continue to deliver our pipeline of larger sized homes but this shift requires Kāinga Ora to work in a more innovative way to fulfil its mandate and deliver on its targets.
- 3 As at May 2021, s 9(2)(j) to meet our planning intentions targets by June 2022. Kāinga Ora has identified an opportunity to expand existing construction capacity by pre-purchasing s 9(2)(j) off-site manufactured units (OSM) from New Zealand-based companies, with domestic and off shore manufacturing facilities.
- 4 Units would be prioritised for transitional housing to help satisfy the government's priority for new build, sustainable transitional housing. Traditionally, transitional housing has been delivered through market purchases. Creating additional transitional housing through utilising OSM provides an opportunity to shift this approach.
- 5 Kāinga Ora is focussed on delivering as many new builds as possible. Increasing supply through OSM modular units is an effective way of supporting our ability to reach delivery targets, while providing a range of benefits and opening up new opportunities and ways of working for Kāinga Ora. These opportunities include:
 - **Speed of delivery** – pre-purchasing OSM modular units accelerates delivery compared to traditional build methodologies, as units must be contracted ahead of time. This enables aspects of the build process to be run in parallel, such as securing land and consenting.
 - **Opening up new land opportunities** – while modular units are designed to provide high quality, permanent housing solutions that have a 50-year lifespan, they are also more easily transported than traditional builds. It is not Kāinga Ora's intention to relocate units as a matter of practice, however this flexibility supports Kāinga Ora to unlock new land opportunities that were previously unfeasible, such as shorter term leases. It also provides an opportunity for Kāinga Ora to partner with Māori in new and different ways.

- **Cost benefits** – our analysis indicates procuring housing in this way is cost competitive with traditional building methodologies. This analysis is based on a like-for-like comparison between the two methodologies.¹
- **Enabling sector innovation in New Zealand** – this approach supports the continued build of long-term relationships with local suppliers and streamlining processes to better enable OSM integration across the sector, facilitating a much greater proportion of OSM delivery in the future.
- **Increasing flexibility and new supply lines** –this approach expands overall market capacity at a critical time, and tests at scale new off shore supply lines to respond to need, as well as making those supply lines available for community housing providers and other market participants.

6 Kāinga Ora will purchase all suitable² and available production capacity from the New Zealand market. While Kāinga Ora will work to optimise all residual suitable local capacity, the level of current demand requires the majority of pre-purchased units to be manufactured offshore.³ Units manufactured offshore would be delivered as weather tight modular homes, enabling additional capacity and new supply chains to meet demand, principally for transitional housing. Units manufactured offshore would comprise one and two bedroom homes, which reflect s 9(2)(j) delivery requirements for June 2022.

7 All OSM units would be designed to current New Zealand quality standards, including Homestar 6 and Healthy Homes specifications. Kāinga Ora has identified two potential suitable suppliers with offshore manufacturing capacity, with which we have established working relationships. A refresh of ethical auditing has also been commissioned to provide ongoing assurance that both potential suppliers have ethical practices in place throughout their supply chain.

8 Funding to acquire OSM units at this scale is available within existing Kāinga Ora budgets. A series of contracts with providers would be established within this total envelope of funding, as agreed by the Kāinga Ora Board. This would see Kāinga Ora use its spending power differently to fulfil its mandate and support system change across the sector.

This proposal carries logistical risk that Kāinga Ora must proactively mitigate, in addition to s 9(2)(f)(iv)

9 Securing sufficient land represents a significant logistical challenge that Kāinga Ora is actively working to mitigate. All options are being explored to secure land in areas where transitional housing is in high demand. Until recently, Kāinga Ora has not purchased land in the regions at the scale it is looking to now. Regionally based teams have been set up to work in these areas, building key relationships and networks to support this process.

10 Previous experience delivering transitional housing has also demonstrated that some communities are reluctant to have ‘temporary’ housing in their community. We intend to mitigate this through our communications approach, which will provide assurance that modular units are permanent homes designed to New Zealand quality standards with a 50-year lifespan. While Kāinga Ora does not intend to move units to different locations as a matter of practice, the relative

¹ See ‘Economic Case’ in the appended Business Case for further information.

² As defined by Kāinga Ora’s suitability assessment, which accounts for a range of factors including proven supplier capability to meet New Zealand quality standards, capacity to meet demand, evidence of ethical practices and suitability of product type

³ Following an assessment of suitable products available the domestic market, Kāinga Ora would source s 9(2)(j) from New Zealand companies with offshore manufacturing capacity

ease of transporting modular units compared to traditional housing provides an added benefit should we need to relocate a unit for any reason.

- 11 This proposal has been endorsed by the Kāinga Ora – Homes and Communities Board for Ministerial consultation. Your endorsement is now sought for Kāinga Ora to pre-purchase modular units as part of its supply programme to meet June 2022 targets.

Recommendations

I recommend that you:

- | | |
|--|-----------------|
| a) Note that Kāinga Ora is working towards its Planning Intentions Target of s 9(2)(i) between July 2020 and June 2022 | <i>Noted</i> |
| b) Note that s 9(2)(j) to meet our planning intentions targets by June 2022 and OSM provides an opportunity to shift this approach | <i>Noted</i> |
| c) Endorse the proposal for the Kāinga Ora OSM supply programme, with consideration as to whether this should also be provided to Cabinet | <i>Endorsed</i> |
| d) Note regular updates can be provided to your offices if requested. | <i>Noted</i> |



Nick Maling

General Manager, National Services

11 June 2021

Hon Dr Megan Woods

Minister of Housing

Date

Hon Grant Robertson

Minister of Finance

Date

Purpose

1. This paper seeks your endorsement to the Kāinga Ora – Homes and Communities (Kāinga Ora) OSM supply programme to meet demand for transitional and public housing.

Background

2. Kāinga Ora is working at pace to deliver on its Planning Intentions Target of s 9(2)(j) [REDACTED] between July 2021 and June 2022. Demand for housing is now at an all-time high, with increasing levels of need contributing to homelessness and reliance on emergency and transitional housing. With the construction sector also operating at near to full capacity, we must find new ways of working to meet demand.
3. As at May 2021, s 9(2)(j) [REDACTED] to meet our planning intentions targets by June 2022. Kāinga Ora has identified pre-purchasing s [REDACTED] off-site manufactured units from New Zealand-based companies with domestic and offshore manufacturing capacity as an opportunity to complement existing construction capacity.
4. Kāinga Ora's preferred approach would be to purchase all suitable⁴ and available production capacity from the New Zealand market, but the current level of need is greater than domestic capacity allows. Utilising a combination of domestic and offshore supply is essential to meet demand. Kāinga Ora intends to optimise working with local manufacturers to identify and use any suitable, residual capacity and it is estimated that this could deliver between s 9(2)(j) [REDACTED].
5. Units manufactured offshore would be delivered to New Zealand as fully assembled weather tight modular homes, enabling additional capacity and new supply chains to meet demand, principally for transitional housing. Units manufactured overseas would comprise one and two bedroom homes. This aligns with current demand, with one and two bedroom units reflecting approximately s 9(2)(j) [REDACTED]. Units manufactured onshore would include a broader range of options, with delivery focussed on larger homes.
6. Kāinga Ora is working closely with Te Tūāpapa Kura Kāinga | Ministry of Housing and Urban Development (HUD) and the Ministry of Social Development to maintain visibility of transitional housing demand and understanding of provider capacity to support implementation. Through giving early visibility of the delivery pipeline, Kāinga Ora can help to support HUD to have a provider on board as soon as possible.
7. Pre-purchasing these units from companies who manufacture both in New Zealand and offshore provides an opportunity to increase the pace of delivery and support system transformation across the New Zealand OSM sector. This will also support Kāinga Ora's

⁴ As defined by Kāinga Ora's suitability assessment, which accounts for a range of factors including proven supplier capability to meet New Zealand quality standards, capacity to meet demand, evidence of ethical practices and suitability of product type

efforts to deliver on the Public Housing Plan, providing new public and transitional housing places in areas of high demand.

8. Kāinga Ora has a clear mandate to utilise OSM⁵ and it is currently incorporated into 15-20% of projects across the Kāinga Ora State Housing portfolio. Kāinga Ora is building long-term relationships with local suppliers and streamlining processes to better enable its integration across the sector, facilitating a much greater proportion of OSM delivery in the future.

Discussion

9. Kāinga Ora must adapt its way of working to meet increasing demand. We are seeking your endorsement of our OSM supply programme, which would see Kāinga Ora pre-purchase s 9(2)(j) OSM units from companies with New Zealand and offshore manufacturing capacity (estimated capacity in the sector for s 9(2)(j)).⁶ Units would be prioritised for transitional housing, given significant demand pressures on this part of the housing sector.
10. Pre-purchasing units requires Kāinga Ora to contract with OSM suppliers ahead of time. This will allow Kāinga Ora to have units constructed while other processes run in parallel, including securing land. This increases speed of delivery in a way that is not possible with the traditional build process.
11. This proposed approach would complement the current delivery programme, with funding available from Kāinga Ora's existing budget. This approach does not increase Kāinga Ora's costs to deliver homes and would instead see Kāinga Ora utilise its spending power differently to fulfil its mandate and support system change across the sector. However, utilising OSM at this scale is a new way of working for Kāinga Ora and carries logistical s 9(2)(f)(iv).
12. Kāinga Ora has established working relationships with suppliers in the OSM sector. Ahead of contracting with any supplier, Kāinga Ora will require assurance that prospective suppliers have:
 - proven experience meeting New Zealand quality standards and consenting requirements
 - ethical practices in place throughout their supply chain, verified through independent auditing and supplier chain mapping.
13. Ensuring potential OSM suppliers have ethical practices in place is a key priority for Kāinga Ora. Suitable prospective suppliers identified by Kāinga Ora had detailed independent ethical audits completed by Sedex in 2019.⁷ These audits cover key areas of Labour Standards, Health & Safety, Environment and Business Ethics.
14. Kāinga Ora has commissioned a refresh of these independent ethical audits and manufacturer supply chain mapping to ensure this information is as up to date as possible.

⁵ Letter of Expectations 2021; Statement of Intent 2019-2023

⁶ Following an assessment of suitable products available the domestic market, Kāinga Ora would source between s 9(2)(j)

⁷ Sedex is a major ethical auditor specialising in supply chain and ethical auditing.

We have an opportunity to increase the use of OSM at scale to support housing delivery

15. Procuring modular units at scale is one way Kāinga Ora can help meet housing demand in a time of significant pressure. It is anticipated that this will signal to the sector our intention to utilise OSM at scale moving forward. This aligns with a number of Kāinga Ora's wider objectives including:
- **Unlocking additional capability in the system and developing capacity in the OSM market** – pre-purchasing OSM at scale provides opportunity for Kāinga Ora to work with a range of providers, identify efficiencies and to deliver at pace. This is expected to increase opportunities to scale up domestic OSM capacity and contribute toward building confidence in OSM, facilitating wider uptake in the future.
 - **Providing additional opportunities for Māori to develop and deliver on their whenua and participate in urban development** – for example, working with Māori to identify land that may be made available to Kāinga Ora for OSM units, or facilitating access to OSM units where Māori wish to leverage economics of scale and procure units alongside Kāinga Ora.
 - **Enabling faster, safer and more predictable delivery of homes** – OSM units are built to an agreed design, creating a consistent and additional flow of supply through the delivery pipeline that is able to be delivered at pace.
 - **Increasing responsiveness to natural disasters** – OSM units are more portable by design than traditional builds and provide another tool for responding to natural disasters, supporting customers to remain housed when properties become damaged.

Partnering with Māori

16. Utilising OSM at scale provides opportunity for Kāinga Ora to partner with Māori in new and different ways. For example, Kāinga Ora is currently working with four iwi/hapu in s 9(2)(j) who wish to lease land to Kāinga Ora for transitional housing. The speed at which OSM can be delivered is helping drive this work and provide assurance that whānau and tamariki currently in emergency housing will be able to be suitably housed in a shorter timeframe.
17. Kāinga Ora also intends to ensure that there are opportunities to partner with Māori throughout this process. Temporary placement of OSM on Māori land is a possible outcome, given that units are able to be transported more easily than traditional housing.

New Zealand OSM sector

18. In fulfilling our mandate to support innovation, capability and scale within the wider urban development and construction sectors, Kāinga Ora is committed to supporting the growth of the domestic OSM sector.⁸ While our proposed approach relies on a combination of supply from local and overseas manufacturers to meet delivery targets for June 2022, this is part of a step-change we consider is necessary to deliver more housing at scale and pace.
19. Kāinga Ora will work with local suppliers and manufacturers wherever capacity allows, decreasing reliance on offshore manufacturing as domestic capacity increases.

⁸ Section 14, Kāinga Ora – Homes and Communities Act 2019

Delivering OSM units at scale is expected to support a system shift towards enabling OSM technology to be adopted more widely, increasing domestic production capacity in the medium to long term.

20. An assessment of the domestic market has identified that suitably qualified local manufacturers hold excess capacity of up to § 9(2)(j) by June 2022. Given that New Zealand currently lacks manufacturing capacity to meet all demand Kāinga Ora intends to:

- continue accelerating delivery through business-as-usual methods, including using OSM on a site-by-site basis
- deliver an additional § 9(2)(j), including pre-purchasing where necessary⁹
- deliver an additional § 9(2)(j) These units would be shipped to New Zealand fully assembled and made up of 1-2 bedroom units to ensure weather-tightness.¹⁰

Identifying prospective suppliers

21. Kāinga Ora undertook a suitability assessment to identify appropriate prospective suppliers. This assessment considered a range of factors, including:

- suitability of product type (watertight modular), installation time and supplier level of international experience
- supplier capability to deliver to New Zealand quality standards and consenting requirements
- capacity to meet demand
- factors that impact on logistics and installation including ease of transporting products nationally and internationally
- assurance that prospective providers have ethical practices in place throughout their supply chain

22. We have also engaged with the Department of Corrections on their previous experience importing units from offshore. This engagement identified that weather tight products provide a significant advantage, particularly if units need to be stored either offshore or in New Zealand ahead of being transported to site. This was also factored in to the suitability assessment when considering product type.

23. Following this assessment, Kāinga Ora issued a Request for Proposal, targeting suppliers that met the above criteria. § 9(2)(j)

§ 9(2)(j)

§ 9(2)(j)

§ 9(2)(j) Kāinga Ora has established working relationships with both companies.

⁹ Kāinga Ora would seek to purchase suitable available stock from New Zealand manufacturers ahead of units manufactured overseas. § 9(2)(j) a New Zealand based company has been identified as a potential supplier.

¹⁰ 1-2 bedroom units make up § 9(2)(j) for delivery to June 2022.

Perceived conflict of interest

25. s 9(2)(a)

Financial implications

26. This proposal would require Kāinga Ora to make up to s 9(2)(j) available toward the purchase, shipping, transporting and insuring of OSM units.¹¹ This includes s 9(2)(j) contingency to cover cost variances that can be reasonably expected, given current levels of uncertainty.
27. This total cost is comparable with traditional delivery methods, with funding to be drawn from existing budgets. Kāinga Ora has funding and financing in place to acquire new Public and Supported Homes forecast to be delivered across FY21-22. This would be used to establish an envelope of funding to enable a series of contracts with suppliers.

Risks and mitigations

28. Procuring OSM units at scale presents many opportunities for Kāinga Ora to meet housing demand, however it also carries risk given current reliance on offshore supply. Key risks and mitigations are outlined in further detail below.

Securing land and logistics management

29. Securing land represents a significant logistical challenge. An inability to acquire sufficient land in time may result in Kāinga Ora storing pre-purchased units in New Zealand or overseas.
30. While this does not present any concerns regarding degradation (as all units are weather tight) this does carry reputational risk if units are held in storage and unavailable to those who need them most. Storage would also carry additional cost, which can be met within contingencies.
31. Kāinga Ora is actively working to mitigate this risk, exploring all options to secure land in areas where transitional housing is in high demand. OSM units are more easily transported than traditional builds and will allow Kāinga Ora to unlock new land opportunities that were previously unfeasible, such as shorter term leases. We will also explore all options, such as purchasing land, long term leases, repurposing land, and temporary use of land.
32. We currently have people on the ground in high demand areas, tasked with building key relationships and networks to support this process. While this work is in its early phases, we are seeing positive progress.
33. This strategy will likely see Kāinga Ora acquire a large volume of land in a short period of time. However, this would also be expected if traditional methods of delivery continue to be relied on to meet June 2022 targets.

¹¹ This figure excludes costs associated with land acquisition, consenting, foundation and site works, which will continue to be managed through existing budgets and decision-making processes. It includes GST.

34. Logistical risks associated with shipping and transporting units once onshore are currently being worked through in parallel with unit design. Kāinga Ora has commissioned specialist advice to support our ability to navigate logistical risks, and this is being worked through prospective suppliers. This approach will be reflected in final contracts with selected suppliers.
35. Kāinga Ora understands the importance of working with communities regarding new developments and previous experience has shown that some communities are more reluctant to have Transitional Housing in their community. Strong engagement is a business-as-usual requirement for Kāinga Ora, and the pace of the OSM builds will mean we need to start this engagement early.

Quality

36. Kāinga Ora will work closely with suppliers throughout the design process to ensure units meet current New Zealand quality standards, including Homestar 6 and Healthy Homes specifications. We intend to work closely with Consentium throughout the duration of the process to proactively prevent and manage consenting risks.

Risk

37. Kāinga Ora recognises that purchasing units from offshore manufacturers presents some risk. This is being mitigated through the development of stakeholder engagement plan, communicating that our intent is to create additional capacity in a constrained sector, while we work to create further uplift in the domestic OSM market.

38. s 9(2)(f)(iv)
[REDACTED]

39. More information regarding risks and mitigations is contained in Appendix 1.

Timeframes

40. Unit design and supplier contracts must be finalised by 12 July 2021 if Kāinga Ora is to deliver the number of units required by June 2022. Following your endorsement, Kāinga Ora will progress work with prospective suppliers.

Consultation

41. Consultation on this proposal has been undertaken HUD who have also engaged with Treasury on this proposal.

Next steps

42. Subject to your endorsement, Kāinga Ora will continue to work with suitable suppliers to finalise designs and put contracts in place. Regular progress updates will be provided to your Offices.
43. As noted above, sourcing sufficient and appropriate land is critical to our success. Any support your Office can provide through identifying long and short term land opportunities would make a significant contribution to this project. Additionally, sharing the message with local OSM manufacturers that Kāinga Ora is interested in acquiring suitable residual stock would support our efforts to acquire as many units locally as possible, ahead of contracting suppliers offshore.