TE MANATŪ WAKA
MINISTRY OF TRANSPORT

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Commercial Case - Transport

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DRAFTING NOTE -

This document represents an Interim Draft Commercial Case of approximately 50% completion.

50% completion is defined as having:

- a largely complete 'front-end', including introduction, purpose, approach and methodology, relevant frameworks etc, noting that future market sounding, sponsor guidance and / or any changes made to other workstreams may impact the front-end chapters
- indicative packaging options based on precedent models, and high level analysis of potential contracting models reflective of available ALR procurement objectives, technical information, project scope/definition and current assumptions.
- a high level procurement timeframe.
- articulation of principles and key considerations for the recommended delivery model, which will be developed further to reflect more detailed project scope, staging technical specifications, and market feedback on project specific areas.

This document refers to 'emerging' outcomes (e.g. emerging preferred packaging options). This language has been used specifically for the 50% version of the document, and will be removed for future iterations, as this document develops further.

The Commercial Case focuses primarily on the delivery of the transport intervention, with limited discussion on the interface between the transport solution and the urban solution. This will be developed further in future updates once the urban solution (particularly in the context of over and / or integrated station development) is further progressed.

1. Introduction

[Drafting Note: this section will be refined to align with Introduction Chapters of other Cases]

1.1 Purpose

The purpose of the Transport Commercial Case is to provide evidence on the commercial viability of the Auckland Light Rail City Centre to Māngere project (ALR CC2M / the Project). The Transport Commercial Case identifies the preferred procurement and delivery models for ALR CC2M.

1.2 Scope of Transport Commercial Case

The Transport Commercial Case:

- documents the process and approach to develop the Transport Commercial Case
- defines and describes the Project, its objectives and key risks
- details the information relied upon in developing the Transport Commercial Case, including:
    - New Zealand Government guidelines and requirements (e.g. Better Business Case Guidelines, Construction Sector Accord, and Procurement Rules and Guidelines
    - previous Indicative Business Case (IBC) assessments
    - market precedent, market intelligence (undertaken in September 2023) and market sounding (to be undertaken in early 2024) feedback.
- Outlines the proposed procurement and delivery models for ALR CC2M, including packaging and contracting options
- [outlines the commercial principles for the relevant procurement and delivery models]
- [outlines the procurement process, including potential timeframes and evaluation process]
- [any other relevant considerations].

[Drafting Note: Yellow highlighted bullets in Section 1.2 will be developed in a subsequent update to the Commercial Case]

1.3 Background

1.3.1 Project background

ALR CC2M is a 24 kilometre passenger fully autonomous (Level 4 Grade of Automation (GOA4)) light metro railway running between Wynyard Station and Auckland Airport including surface, elevated and tunnel running track. It is intended to be the first part of Auckland's future rapid transit network and establish the spine of the network. It will

eventually link into the Northwest Rapid Transit and the Waitematā Harbour Connections projects.

The Project will enable the City Centre to Māngere Corridor (CC2M Corridor) to accommodate significantly higher growth in a way that enhances the quality of life, equity, social cohesion and the environment. It also will provide critical connectivity to jobs, education, health and social services, and amenities.

Currently, the wealth, transport access, liveable places, and quality housing are inequitably shared among residents along the ALR CC2M Corridor, with disparities often apparent between demographic groups. Given the critical role of the ALR CC2M Corridor in the life and economic performance of Tāmaki Makaurau Auckland as a whole, addressing these challenges is of fundamental importance.

1.3.2 Unique requirements of the Project

The Project is a significant investment for Auckland and is of a scale that will challenge the market and New Zealand's financial and delivery capacity. ALR CC2M's complex scope will require the integration of multiple different elements that are likely to be delivered by different suppliers.

These factors suggest a bespoke delivery model will be required, tailored to:

- the Project risks
- staging and phasing
- market capacity and conditions
- stakeholder requirements
- availability of funding
- the client side experience delivering projects of this scale and complexity.

While there is significant global experience delivering light metro projects with a similar scope, it will be a completely new mode in New Zealand. Accordingly, lessons learned from international precedent projects must be adapted to respond to the local market.

1.3.3 Indicative Business Case

An Indicative Business Case (IBC) was submitted in October 2021, which assessed a wide range of transport options, including various modes of public transport and route options. Further analysis has been undertaken since the development of the IBC to optimise the Project scope. The IBC analysis has been reassessed in this context.

The packaging and contracting assessments undertaken as part of the IBC informed the assessment of delivery models that are unlikely to be suitable for ALR CC2M. However, greater reliance was placed on market precedent and the Market Intelligence process when determining the emerging packaging and delivery models.

1.4 Project and sponsor objectives

1.4.1 Project requirements

Informed by the development of the Investment Logic Map (ILM), a number Project requirements have been developed, which have informed the Transport Commercial Case.

Figure 1: Minimum Project Requirements

1.4.2 Public service delivery model

Sponsor guidance requires that ALR CC2M is delivered under a 'Public Service Delivery Model' for the transport components. This has been interpreted as excluding the detailed consideration of Public Private Partnership (PPP) and or other private financing options.

Accordingly, the Transport Commercial Case does not include detailed analysis of the PPP / private financed procurement options for the transport scope. However, for completeness, packages that may be capable of being delivered under these models have been identified.

1.5 Procuring organisation

[Drafting Note: this will be further populated following input from the Management Case; which may also be subject to the preferred contracting model, funding model and level of government guarantee needed for particular contracting models.]

1.5.1 Establishment of ALR Ltd

Auckland Light Rail Ltd (ALR Ltd) was established as a limited liability Crown Entity Company under Schedule 2 of the Crown Entities Act. It is responsible for the planning and development of the Project. The Transport Commercial Case assumes that ALR Ltd will be the procuring organisation.

1.5.2 Capability and capacity assumptions

The Procurement Strategy was developed without being constrained by the required capability and capacity of the procuring organisation. This includes an ability of that organisation to deliver under a range of potential delivery models and complexities.

Consistent with the New Zealand Construction Procurement Guidelines, a Client Capability Assessment (in conjunction with the Management Case) would consider the following, and as required supplement existing expertise in the ALR Ltd with any required support and experience.

[Drafting Note: To be updated to align with the Management Case as relevant]

Table 1: Client capability assessment

Assessment areas	Key questions	ALR CC2M Considerations
Resource	Are there adequate resources within ALR Ltd to manage complex delivery models?	• Managing a project of this scale and complexity will require a large and experienced team. • Additional resources are likely to be required to deliver the Project, which could be sourced through recruitment or through procuring a Delivery Partner.
Oversight	What level of oversight is ALR Ltd able to provide?	• The level of oversight required depends on the procurement model. Given the degree of disaggregation and complexity of certain package scopes (eg the line-wide Trains, Systems and Signalling, Operations and Maintenance package), a high degree of oversight is likely to be required. • ALR Ltd will be fully resourced to oversee the Project delivery, with clearly established responsibility and accountability throughout the governance structure. However, it is likely to require additional oversight, which could be sourced through a Delivery Partner.
Management and contract administration	What is ALR Ltd's ability to manage complex delivery models? What is ALR Ltd's ability to develop or administer a new form of contract that has not been used previously?	• ALR Ltd is assumed to undertake a significant recruitment programme to support project delivery and have the ability to draw on local experience from City Rail Link (CRL), Pūhoi to Warkworth PPP and Transmission Gully PPP. • However, given the complexity of the Project and it being a new public transport mode, global expertise with managing large and complex greenfield rail projects is likely to be required.
Experience	Does ALR Ltd have experience in delivering complex infrastructure projects?	• ALR Ltd was established to deliver the ALR CC2M Project, and therefore, does not have experience delivering any projects as an organisation. • It does have individuals with experience delivering large projects, and can draw on the experience of Sponsors and Partners. Further, a Delivery Partner can supplement ALR CC2M's experience and capability.
Private sector and other Government agency support	What level of private sector and other Government Agency support can supplement ALR Ltd capability and capacity?	• Specialist advisors across the technical, project delivery, commercial, financial and legal disciplines will supplement internal capacity and capability. • Input can also be sought from Government agencies including Waka Kotahi, NZ Transport Agency (Waka Kotahi), New Zealand Treasury and CRL Ltd.

ALR Ltd is assumed to supplement internal resources with international and local capability required to deliver the Project.

2. Procurement rules, requirements and policy

2.1 Policies and guidance

The Procurement Strategy documented in this Transport Commercial Case was developed with regard to New Zealand procurement policies and guidance, including the Government Procurement Rules 4th Edition (GPR) and Treasury Better Business Case Framework, and global best practice. A summary of the key policies / guidance is provided in the table below.

Table 2: Key Procurement Policies and Guidance

Policies / guidance	Description	ALR CC2M considerations
Government Procurement Rules	• The GPRs support sustainable and inclusive procurement through the promotion of good practice for procurement planning, approaching the supplier community and contracting.	• ALR Ltd is a 'mandated' agency and required to follow the GPRs. • The Procurement Strategy must align with The Principles of Government Procurement and meet as many Charter expectations as possible. • Relevant rules include those relating to open advertising, improving New Zealand business involvement, contributing to social outcomes, and providing sufficient time for tendering.
Construction Procurement Guidelines	• Construction procurement guidelines set out standards of good practice for Government agencies to apply to projects. • The guidelines supplement MBIE's 'Guide to procurement' and must be read together with them and the 'Government Procurement Rules'.	• Includes guidance on components of a good procurement strategy. • Additional relevant guidelines on matching capability to complexity, construction project governance, project brief, whole-of-life, market engagement, risk management, construction skills and training, health and safety, sustainable construction.
Better Business Cases	• The purpose of Better Business Cases is to provide objective analysis and consistent information to decision-makers, enabling them to make investment decisions for public value.	• The Better Business Case Framework outlines the requirements for a Commercial Case at the Detailed Business Case phase. • This Transport Commercial Case is consistent with the requirements, and supporting guidance material.
Construction Sector Accord	• The purpose of the Accord is to strengthen the partnership between Government and industry and be a catalyst to transform the construction sector for the benefit of all New Zealanders.	• Priority for better risk management and fairer risk allocation so it sits with the party best able to manage it. • Priority for better procurement practices and improved pipeline management. • Initiated changes to GPRs and construction procurement guides • Significant focus on growing the New Zealand workforce and capability in any model.

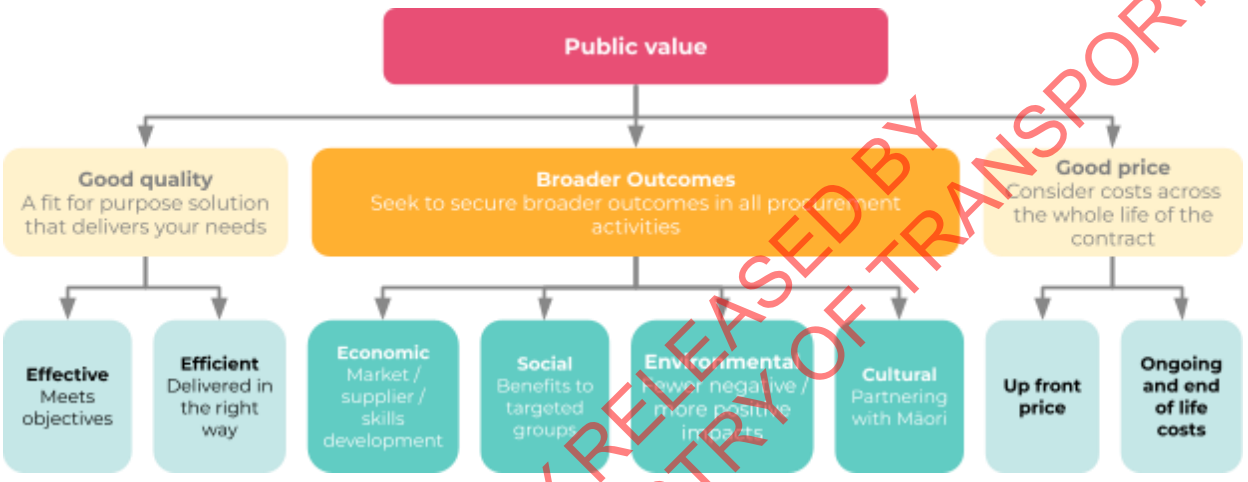
2.2 Broader Outcomes and Progressive Procurement

2.2.1 Overview and requirements

As noted in Table 2 above, the Procurement Strategy has been structured to deliver Broader Outcomes which are the secondary benefits that are generated from procurement activity. These include environmental, social, economic, and cultural benefits, and will deliver long-term public value for New Zealand[1].

An overview of the Broader Outcomes is provided in the figure below.

Figure 2: Public Value and the Broader Outcomes



Source: New Zealand Government Procurement Rules.

The Government has identified four priority broader outcome areas agencies should focus on[2]. These are:

1. increasing access for New Zealand businesses to Government procurement
2. increasing the size and skill level of the domestic construction sector workforce
3. improving conditions for workers and future proof the ability of New Zealand businesses to trade
4. supporting the transition to a net zero emissions economy and assist the Government to meet its goal of significant reduction in waste by 2020 and beyond.

As part of delivering against the Broader Outcomes, ALR Ltd is required to follow the Government's Progressive Procurement Policy.

2.2.2 Progressive Procurement Policy

The Procurement Strategy has been developed consistently with the Progressive Procurement Policy (developed by Te Puni Kōkiri and the Ministry of Business, Innovation

[1] Public value includes good quality, good price, and good outcomes. It is defined in the Government Procurement Rules as getting the best possible result from your procurement, using resources effectively, economically, and without waste, and taking into account the total costs and benefits, and its contribution to the results you are trying to achieve.

[2] *Broader Outcomes - New Zealand Government Procurement*. (2019, May 27). New Zealand Government Procurement. https://www.procurement.govt.nz/procurement/principles-charter-and-rules/government-procurement-rules/planning-your-procurement/broader-outcomes/

and Employment), as well as Te Rautaki Māori (Māori Outcomes Strategy), which outlines the high level approach for delivering on mana whenua and Māori expectations.

From a policy objective perspective, this means:

- **Setting progressive procurement targets -** annual targets for volume and value of contracts to be awarded to mana whenua and Māori enterprises, including baseline, equality and equity targets
- **Building capability and capacity -** support the development and connection of Māori businesses to increase participation in procurement processes, education and training and access to finance and capital
- **Providing progressive employment opportunities -** progressive procurement policies and strategies include opportunities for Māori employment and workforce development.

[Drafting Note: The contractual mechanisms of the Progressive Procurement Policy will be developed in further iterations of this Case]

2.2.3 Sustainable procurement

The Procurement Strategy is also designed to drive environmental / sustainable outcomes, which is one of the four Broader Outcomes. A key input into the Procurement Strategy is the Environmental Sustainability Strategy, which aims to:

- **protect and restore the ecosystem** within the corridor, improving the quality of nature and human life
- create **climate positive and low carbon** outcomes for future development along the ALR CC2M corridor
- encourage a **regenerative and circular approach** to development.

The Environmental Sustainability Strategy will be considered at a number of points during the procurement process and Request for Proposal (RFP) stage to ensure long-term sustainability objectives are met over the Project lifecycle, including:

[Drafting Note: Detailed information of Environmental Sustainability Strategy application and other sustainability policies will be included in further iterations of the business case]

2.2.4 Implementation of the Broader Outcomes

ALR Ltd and its Partners must be committed to delivering the Broader Outcomes throughout the whole procurement lifecycle. This is likely to be best provided through the development and adoption of a Sustainable Procurement Framework, which provides a consistent approach across the whole Project / programme.

The Procurement Strategy delivers on the Broader Outcomes and Progressive Procurement through: [Drafting Note: Subject to further refinement in commercial principles.]

Table 3: Implementation of Progressive Procurement and Broader Outcomes initiatives

Procurement phase	ALR CC2M considerations

Initiate Project	• ALR Ltd will continue to work with its partners to leverage existing programmes, shared understanding and expertise, and lessons learned. • Establish partnerships with external enterprises to support delivery of Broader Outcomes (eg Amotai). ALR Ltd partnerships facilitate the interface between international contractors, the domestic market, and target groups to deliver learning, employment, and supply chain opportunities. • Establish partnerships with mana whenua / Mātāwaka groups to identify and understand potential opportunities for Māori businesses, and how local Māori communities want to be involved in training, apprentices and programmes. • Ongoing engagement with the local supply chain to ensure it is well briefed on the potential opportunities and when they may come to market. • Obtain a centralised registry of Māori businesses distributed to major local and international contractors, including making it available through Government Electronic Tenders Service (GETS).
Identify needs and analyse the market	[Further work to be undertaken on the Māori economy and the skillsets available to deliver ALR CC2M]
Plan approach to market and evaluation	• Commercial clauses, including in the performance / payment mechanisms to be included in major contracts to provide financial and other incentives for contractors to deliver Broader Outcomes / Progressive Procurement. • Broader Outcomes will be included in the benefits realisation plan, risk management plan, risk register, etc. • Further work will be undertaken to understand opportunities to directly appoint certain scope elements where Māori businesses have the necessary skillset.

Approach the market and select suppliers	• Be clear during all market engagement that delivery of Broader Outcomes and Progressive Procurement is a critical success factor for the Project and that it will be an evaluation criteria.
	• In setting requirements in tender documentation and the evaluation framework, reference to the following:
	  ○ past performance and any current internal diversity initiatives
	  ○ plans for engaging with the New Zealand supply chain
	  ○ local content and supplier diversity requirements (subject to capacity).
	• Tender responses to questions on Progressive Procurement and Broader Outcomes will be evaluated with appropriate weight given.
	• The tender documentation will clearly articulate ALR Ltd's expectations in relation to the Broader Outcomes and Progressive Procurement.

Negotiate and award contracts	• Mana whenua/Māori targets will be agreed with suppliers during negotiations and incorporated into the contract. • Joint development of Sustainability Management Plans. • A mana whenua representative will be included in the Evaluation Team.
Manage contracts, reporting and relationships	• A robust measurement, monitoring, and reporting framework, including a Progressive Procurement Policy Reporting System. • Contractors will be required to regularly report on Broader Outcomes and Progressive Procurement data / metrics, with the information consolidated in the Project wide monitoring.
Reviews	• Ongoing regular reviews of the performance, impact and assessment of performance, including holding sessions with partners, and contractors throughout and / or after the project.

3. Pre-implementation

3.1 Statutory approvals

[Drafting Note: this will be populated following input from the Consenting / Legal Teams.]

3.2 Consenting pathway

[Drafting Note: this will be populated following input from the Consenting / Legal Teams.]

3.3 Property acquisition

[Drafting Note: this will be populated following input from the Property / Consenting / Legal Teams. Noting some property acquisition may not be considered pre-implementation, and respond to the staging options for the project.]

4. Service requirements and project scope

4.1 Introduction

This Section sets out the service requirements for the Project, including technical requirements for the construction, operations and maintenance for the transport solution, as well as the staging profile, urban development scope covered in the Transport Commercial Case, and the staging profile.

4.2 Project scope elements

[Drafting Note - Project Scope to continue to be developed refined through next iterations]

4.2.1 Overview

A high level identification of the scope elements that comprise the ALR CC2M programme is provided in this Section, which forms the basis of the packaging and contracting analysis in the following sections:

- Ancillary works
- Civil works:
  - Tunnel
  - At grade and elevated
  - Stations (underground, at grade, elevated) and station developments
- Line-wide works
  - Track work
  - Signalling, rail and telecommunication
  - Power and other systems
  - Depot, maintenance and stabling facilities
  - Rolling stock
- Operations and maintenance (O&M)
- Urban Development (including adjacent station development).

Figure 3: ALR CC2M proposed route

This high level scope definition is sufficient for the purposes of the Transport Commercial Case and developing a packaging and procurement model. More detailed scope and requirements definition is provided in the Appendix A.

4.2.2 Civil works

The Project consists of 24 kilometres of civil works, including major tunnel works between Wesley and the Auckland CBD, with elevated, at grade and trenched works for the remainder of the alignment.

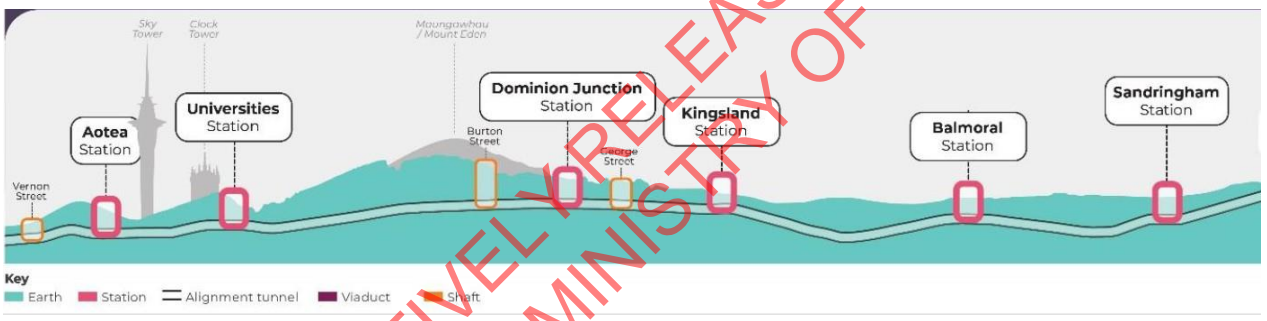
Tunnel excavation and station excavation

The proposed tunneling works runs from Wesley station to Waihorotiu (Aotea) station.

The tunnel will comprise a single bore twin track tunnel (monotube tunnel) with the up and down tracks stacked on top of each other, separated by internal precast concrete structures. It is anticipated that there will be one Tunnel Boring Machine (TBM) for the Project with the southern dive site located at the corner of Mount Albert and Sandringham Road (Wesley Station). The southern portal will include a cut and cover structure and dive structure.

Following breakthrough at Dominion Junction, the TBM will be removed. The second stage will be a northern TBM drive from Dominion Junction to Vernon Street Shaft, where the TBM will be extracted. The tunnel civil works will also include station excavation for all underground stations.

Figure 4: Tunnelled alignment



At grade, trenched and elevated

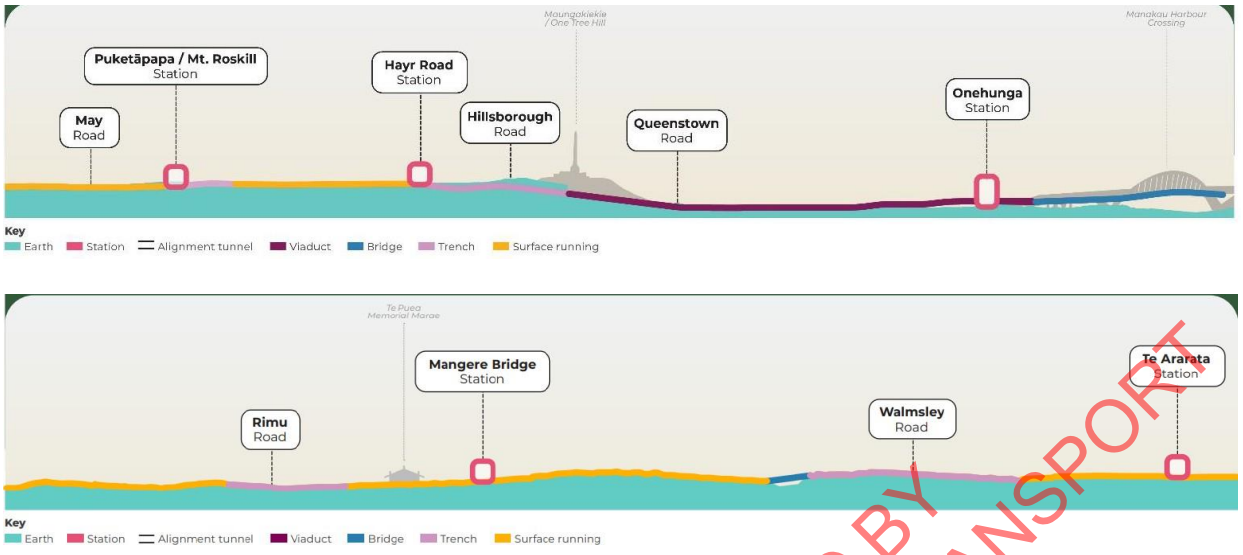
The proposed surface, trenched, viaduct and bridge works runs from Wesley Station to International Airport Station.

Approximately half of the ALR CC2M alignment is surface running (ie not in a tunnel, viaduct or bridge). Viaducts are required in Onehunga and Wesley to overcome topographic challenges, adverse basalt ground conditions, groundwater, flooding and other spatial constraints. Finally, there will be a new bridge structure that crosses Manukau harbour to the east of the existing SH20 southbound bridge.

There will be one rail depot situated in Onehunga. Whilst it is anticipated that the fitout of the depot will be managed by a line-wide package (alongside operations, maintenance, systems and signalling), the depot civils structure could be managed by an at grade and elevated civils structure.

The construction methodology programme recognises that contractors for Stage 1a will be similar to those required for Stage 3a (and possibly Stage 3b). The programme as developed has been structured so that the majority of contractors for Stage 1a can transition across to Stage 3a.

Figure 5: At grade, trenched and elevated alignment



Station civil works

Station civil works include a mixture of elevated stations, at grade stations and underground stations. Te Waihorotiu station, University sations, Dominion Junction, Kingsland, Balmoral/ St Lukes and Sandringham stations will be underground stations. Dominion Junction is a cut and cover station, allowing for opportunities for Integrated Station Development (ISD) / Over-station Development (OSD) / Adjacent Station Development (ASD).

Wesley and Onehunga stations will be elevated stations with a viaduct running through the middle. The remaining stations will be at grade stations, with minimal complicated civil structures.

Utilities

Utilities are generally located within the road reserve to service adjacent properties. Gravity assets (sewers and stormwater infrastructure) may, however, run through private property outside the road corridor. Utility assets are owned by several companies that operate and engage with third parties (such as ALR Ltd) differently.

There are a number of existing services which are in direct conflict or close to ALR CC2M infrastructure which need to be diverted or relocated.

In order to undertake this investigations are required, and services protected or relocated (or new services provided). New connections also need to be made for ALR CC2M infrastructure (such as TBM power, high voltage power (HV power), traction power (refer further below), telecommunications infrastructure, water supply, wastewater connections, etc).

Utilities risk is lowered on this Project given the monobore tunnel typology (as compared to at grade / trenched).

4.2.3 Line-wide works

Line-wide systems and works are critical to ensuring that the finished metro product is able to run smoothly, with integration of these works a key driver of overall Project success.

Track

There is expected to be 24 kilometres of track along the ALR CC2M corridor. It is expected that the trackform will be entirely Slab Track for the mainlines.

Signalling and systems

The signalling system will facilitate the operation of 30 trains per hour per direction at peak times.

Rail signalling will utilise the principals of a moving block system underpinned by a Communication Based Train Control (CBTC) system. The CBTC provides continuous communications between the wayside and train, thereby enabling continuous Automatic Train Control (ATC). ATC will be deployed to provide operational efficiency, whilst including Automatic Train Protection (ATP) to automatically regulate train movements and maintain safe distances between trains. Automatic Train Operation (ATO) functionality will provide as a minimum, speed regulation, programmed stopping, and door control.

Telecommunications

Control and Information Systems (CIS) and Information and Communications Technology (ICT) systems are pertinent to railway operations and encompass a range of assets, including the fibre network, data communications network, internal telephone system, wayside to train communication system and Operational Radio System (ORS). All underground areas (tunnel and stations) require specialist ICT tunnel infrastructure.

Power

The Traction Power system is to be powered by two HV bulk feed intake stations. These stations intake from the electrical network to feed the Traction Substation and the Overhead Contact System. They are to provide the necessary redundancy (N-1) and reliability of the overall ALR CC2M system. HV power shall be reticulated to the stations by the relevant electricity distribution company Vector Limited. The station HV power supply will be independent of the traction HV power supply system.

Rolling stock

There are likely to be between 68 - 80 units of rolling stock in operation for ALR CC2M, each a conventionally bogied 5-car unit with a nominal length of 85 metres. However, this will be implemented over time as demand increases.

Station fit-out works

The remaining scope elements of the stations (excluding elements identified below) are anticipated to be delivered under a station fit-out package. The fit-out of each underground, at grade and elevated station will include the following scope elements:

- vertical transportation (considered as standalone package)
- electrical power supply (Mechanical, Electrical and Plumbing (MEP)
- small power and lighting
- hydraulic services
- platform screen doors (considered as part of the line-wide package).

4.2.4 Depot

There will be one rail depot situated in Onehunga. It will accommodate all maintenance functions for the rolling stock (passenger and infrastructure maintenance vehicles) across the entire lifecycle of the railway. The depot is also envisaged as being the operation and administrative headquarters of the O&M entity. The depot will house a power intake substation which will provide power for traction both in the depot and along the mainline as well as the load centres in the depot itself.

4.2.5 Key risk categories

The Procurement Strategy has been developed with consideration of key Project risks that were identified in previous projects and from industry feedback.

Table 4: Key Project risks

Key Risks		
• Design risk • Utilities relocations • Third party agreements • Property Acquisition Risk • Traffic Interfaces • Construction • Interface risk (scope and package)	• Systems Integration • Changes / Modification • Commissioning • Future stages • Heritage • Consenting risk • Service availability / Reliability	• Disruption • Traffic resolution • Journey time and punctuality • Asset condition • Patronage levels • Customer Satisfaction • Future Changes

4.3 Urban development

[Drafting Note - Approach to procuring developments alongside stations / transport assets to continue to be further developed for subsequent versions of the Commercial Case, post testing with market.]

Urban development

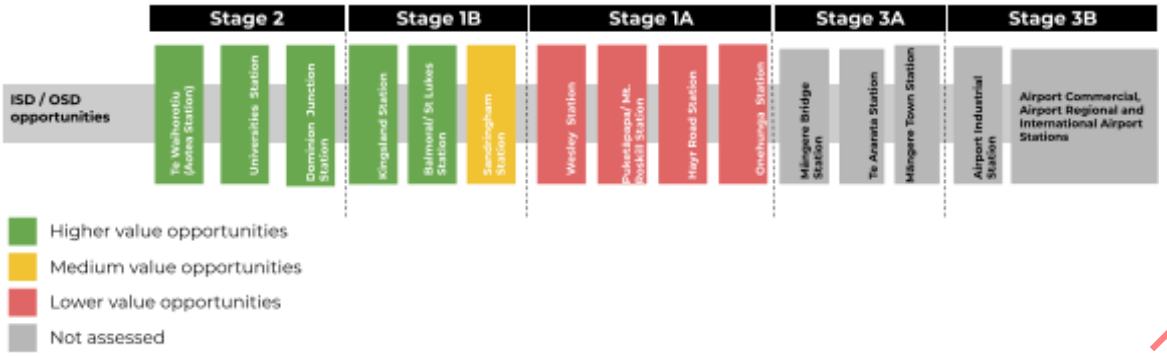
ISD and OSD opportunities support the delivery of the desired outcomes and Project requirements, such as enhancing the environment and public realm and delivering a superior customer experience. For some high value sites, there is the potential for these development opportunities to provide additional funding sources for the Project.

Transport Commercial Case focus on transport solution

The Commercial Case focuses on the procurement models relevant to the transport scope elements, rather than outlining the approaches for the urban development opportunities, which are covered in the Urban Commercial Case.

Given the significant interface between development opportunities and the transport solution at stations, ISD / OSD / ASD opportunities have been considered as part of the Transport Commercial Case. Specifically, where there may be potential to procure these developments alongside transport infrastructure (eg packaging the delivery of a station with an OSD), or where there is a direct interface that will need to be considered as part of the procurement (eg input from the developer into the station design).

Figure 6: Overview of ISD / OSD opportunities



The highest value opportunities are located in Stages 2 and 1b.

[Drafting Note: Further analysis will be undertaken as part of the next iteration of the Transport Commercial Case to identify the critical interfaces between the proposed ISDs / OSDs and how these will be managed.]

4.4 Staged delivery and operations

A staged approach has been developed to manage the financial and market capacity constraints associated with delivering a project of the size and scale of ALR CC2M. Under the staging approach, the ALR CC2M Project will be delivered in (overlapping) stages. The tunnelling between Wesley and Dominion Junction forms the first partial stage (Stage 1b) alongside the at-grade and elevated section between Wesley and the Depot site near Onehunga (Stage 1a).

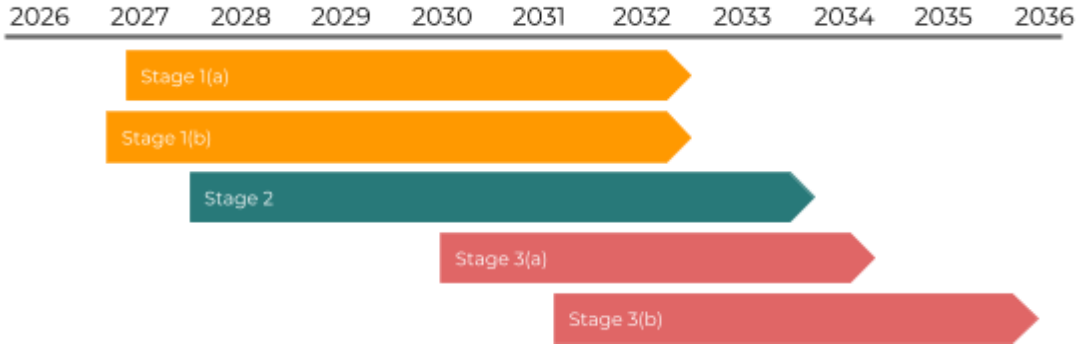
This does not preclude procurement packages including works over multiple stages - with the figure below representing *opening* stages, not necessarily *packages*.

Figure 7: Staging approach

Programme

The five stages / substages start and finish at different points in time (with the exception of Stage 1a and Stage 1b). The first stage is scheduled to open in Q2 2032, with the final stage completed in Q1 2036.

Figure 8: Project staging programme



The programme is considered in the Transport Commercial Case in the context of:

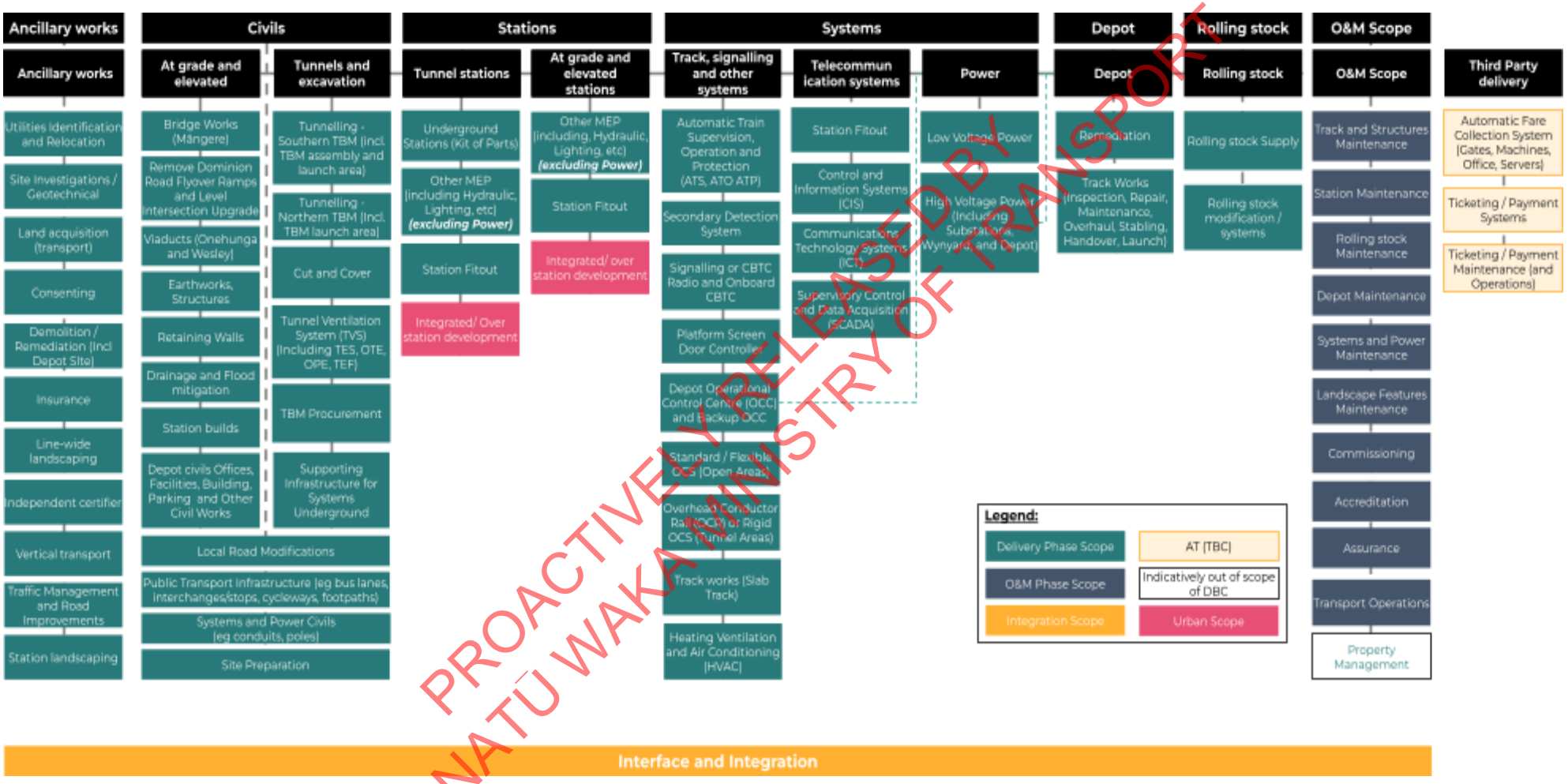
- **Funding and packaging:** The programme assumes the Project is fully funded, and 'stages' represent staged opening of operations. This is distinct from a Project which is not fully funded and only stages that are fully funded can be procured.
- **Packages are not limited to stages:** As a fully funded project, works which are across multiple stages (as represented in the diagram below) can be procured in a single package.
- **Stages 1 and 2:** Stage 1a, Stage 1b and Stage 2 overlap significantly with commencement and completion of the stages relatively (compared to the length of the construction) close together.
- **Stage 3:** Stage 3 works are spread further out in the programme, in particular, Stage 3b, which is due to commence approximately 4.5 years after Stage 1 is due to commence. Whilst Stage 3a commences significantly after Stage 1 and Stage 2, it is more closely aligned to these stages from an opening perspective, opening [four] months after Stage 2, but almost [two] years before Stage 3b opens.
- **Airport works:** Stage 3b, which includes material works within the [Auckland Airport] designation, is procured last, as noted above. This provides further time to deal with the complexity of delivery in the brownfield airport environment.
- **Market capacity:** The programme has significant scale, and may strain market capacity, with potential cost and programme risks.
- **Interface risks:** The packaging and contracting methodologies will respond to the programme to reduce interface risks, which could include procuring packages across stages, seeking early contractor involvement or contracting an integrator.

4.5 Future stages

ALR CC2M will form the first part of Auckland's rapid transit network. ALR CC2M will form the spine of the network and will integrate with the Waitematā Harbour Connections project which is planning a multi-modal transport option, including light rail, across the Waitematā Harbour to Orewa. Other future stages include integrating with the Northwest Rapid Transit Project, which will connect the City Centre to Kumeū / Huapai.

Future stages are outside the scope of the Transport Commercial Case.

Figure 9: Project scope elements

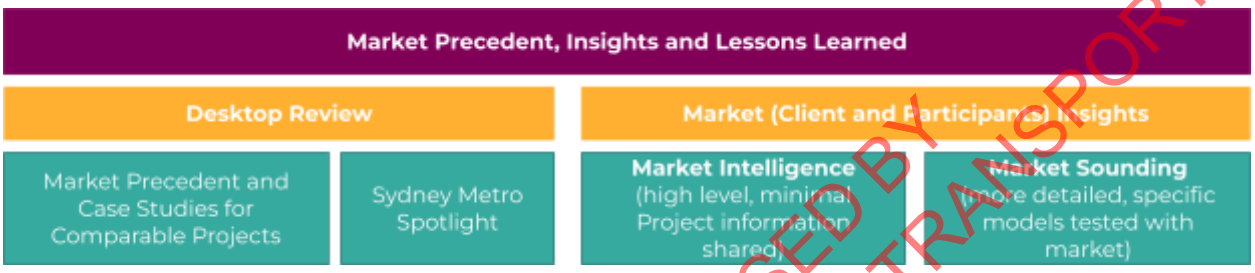


5. Market precedent and trends

5.1 Overview and relevance

Recent market precedent and lessons learned from comparable large scale transport projects has been a critical input to the development of the Procurement Strategy.

Figure 10: Precedent and trend insight



5.2 Precedent project reviews

A review of recent similar infrastructure projects in New Zealand, Australia and globally was undertaken. The case studies identify the types of commercial models adopted, outcomes, and lessons learned. They provide insights into emerging market trends in major transport projects, and the potential application for the ALR CC2M Project.

The case studies considered are outlined in the table below, with the detail provided in the Appendix. The projects are in different stages of their lifecycle, from procurement, into delivery and / or operations.

Figure 11: Case study project considered

	Major Tunnelling Projects	Major At-Grade Projects
Road	North East Link (Victoria, Australia) Great Western Highway Upgrade (New South Wales (NSW), Australia) Western Harbour Tunnel (NSW, Australia)	Pūhoi to Warkworth Motorway (New Zealand) Transmission Gully Motorway (New Zealand) Auckland Manukau Eastern Transport Initiative (AMETI)/ The Eastern Busway Central Interceptor (New Zealand)
Rail	City Rail Link (New Zealand) Melbourne Metro Tunnel (Victoria, Australia) Sydney Metro - City and South West (NSW, Australia) Sydney Metro - North West (NSW, Australia) Sydney Metro - Western Sydney Airport (NSW, Australia) Sydney Metro - West (NSW, Australia) Cross River Rail (Queensland, Australia)	Parramatta Light Rail (New South Wales, Australia) Sydney Light Rail (New South Wales, Australia) Canberra Light Rail (Australian Capital Territory, Australia) Gold Coast Light Rail (Queensland, Australia)

5.3 Market intelligence

A 'Market Intelligence Process' (the Process) was undertaken to develop a more detailed understanding of selected precedent projects, their procurement model, the client and market response and lessons learned. The findings from the Process supplemented the analysis completed as part of the precedent project review.

The Market Intelligence Process engaged with sponsors and market participants of a number of precedent projects of relatable scope, scale / size, range of contracting model and local market context. Projects included were:

Figure 12: Client participants for Market Intelligence Process

5.3.1 Participants and insights explored

The Market Intelligence Process involved meeting with select client sponsor and market participants involved in the development and delivery of those selected projects:

- **Sponsors** provided insight into market appetite and behaviours, risk profile, and responses to different procurement models. They also shared their experiences using different governance and Government delivery entity models.
- **Financiers / investors** provided insight into project outcomes, risk profile, contractor behaviour, and different structuring and procurement models.
- **Civil contractors** participating in recent projects provide insight on project success factors and experience operating under different project structures, packaging and contracting models, approaches to project risks and client / sponsor models.
- **Rolling stock, systems and operations contractors** including rolling stock providers, O&M contractors, and systems providers shared experience in their areas of expertise and critical integration and interface issues.
- **Property developers** shared insight on procuring transport infrastructure alongside and / or integrated with broader property and precinct development.

5.3.2 Key themes

Overarching messages from the Market Intelligence Process include:

- **'No single best model':** Delivery models respond to project circumstances, with different procurement models adopted on projects across Australia. Whilst there are some preferences, the market can respond to the various models.
- **'Don't start too early':** Clearly define requirements upfront, secure agreement in client team and across stakeholders. Clarity of project definition and acceptance is essential.

- **'Avoid 'temptation to tinker':** Manage client team changes, design review and stakeholder change during delivery. Reduce temptation to make it expensive and disruptive during delivery.
- **'Keep it familiar':** The proposed Project is extremely complex. Complex or unproven structures make it unnecessarily difficult to manage and challenging to attract a new market.
- **'Capable and appropriately resourced client':** Success isn't defined by an organisational structure or contract model, but rather a capable client making decisions efficiently and managing stakeholders.
- **Scale:** While the nature of the package scope and risks impact market capacity and scale, generally, packages in the order of $4-5bn were seen as the upper limit.

Refer Appendix F for a more detailed summary of the Market Intelligence Process.

5.3.3 Spotlight on Sydney Metro

Sydney Metro is a multi-stage automated rail system connecting major activity centres across Sydney. It is being delivered through four projects, with the first stage operational (Northwest), and other three in various stages of procurement and delivery.

Figure 13: Overview of Sydney Metro

Sydney Metro is an excellent case study for ALR CC2M because of the similarity in scope and scale between each of the underlying projects and ALR CC2M, which is shown below.

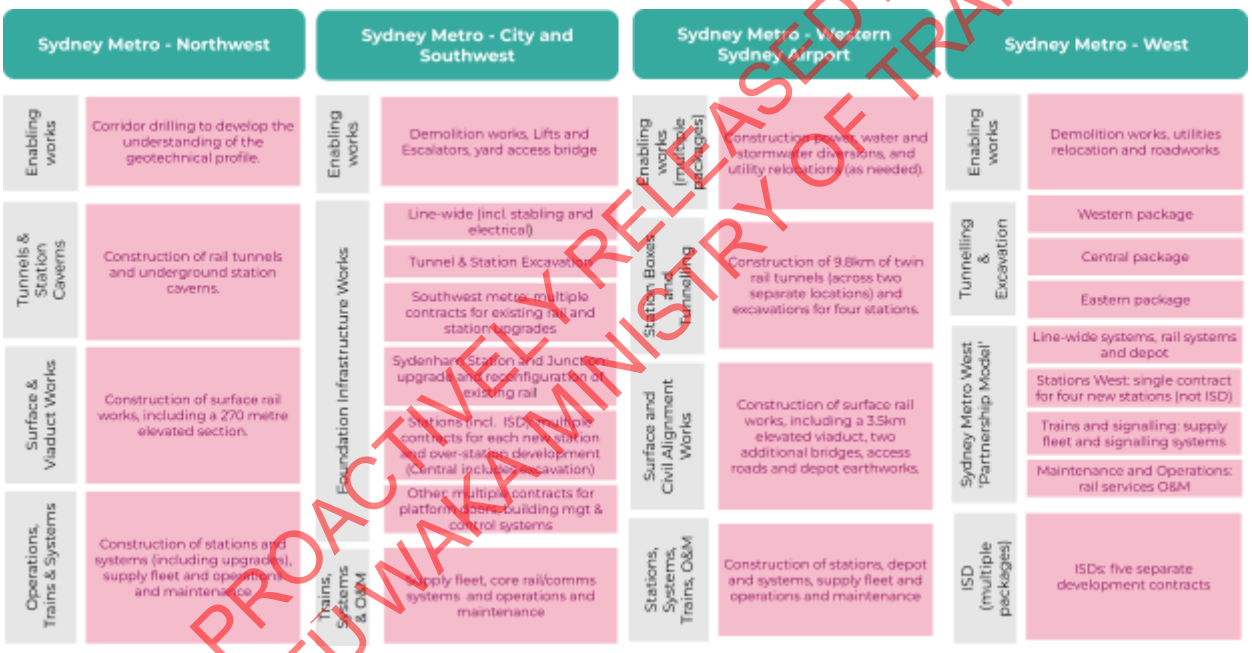
Figure 14: Sydney Metro scope similarities to ALR CC2M

	Large Scale ($5bn +)	Tunnel	Metro Rail	Automated	Property Development	Urban Environment
ALR CC2M	✔	✔	✔	✔	✔	✔
Sydney Metro	✔	✔	✔	✔	✔	✔

Sydney Metro has iterated its procurement models over time, with each project being procured through a different approach. The lessons learned through delivering the projects under different procurement models has been used as a critical input into the development of the Procurement Strategy for ALR CC2M.

A simplified summary of the Sydney Metro packaging approaches is provided below.

Figure 15: Simplified Sydney Metro packaging and procurement



Sydney Metro Northwest and Western Sydney Airport have more aggregation, and reduced interface risk required for the client to manage. Sydney Metro West has developed a new but untested model, enabled by Sydney Metro's maturity as an organisation.

Insights and lessons learned through the different Sydney Metro projects were collected directly through engagement sessions with 'Sydney Metro' (as the client delivery agency), and contractors with experience (tendering and delivering) with the project.

Key lessons and insights:

- **Client capacity / capability:** Sydney Metro has built strong organisational experience through multiple large scale projects. As this capability and capacity has grown, the ability to undertake more innovative approaches (and to take 'risk') expands.
- **Packaging and interfaces:** More aggregated procurement models (North West and Western Sydney Airport) are simpler to manage from an interface and integration perspective. As projects increase in scale, further disaggregation may be required.

- **Tunnelling:** Procuring tunnel contracts before other main works contracts can provide programme benefits.
- **Risk allocation:** The market is steering away generally from taking on too much risk, with less aggressive risk allocations and / or collaborative approaches becoming more normal. Fixed price contracts have been able to be procured however, including a $5bn PPP for Western Sydney Airport in 2022.
- **Market capacity:** The market has been able to respond to significant infrastructure works, and the programme of works has supported new contractors entering the Australian construction market.
- **Trains, Systems, Operations Maintenance (TSOM):** The market understands a TSOM type package and sees value in trains, systems, signalling, operations, maintenance and / or depot together. Non-rail systems and / or station fit out are commonly procured separately where 'TSOM' type packages become too large.
- **Urban development:** ISDs can deliver quality outcomes. Where developments are not procured with the stations, it is critical to ensure master planning is done and the design of the station does not limit the property development above (and the corresponding urban outcomes in the surrounds).

5.4 Targeted market sounding

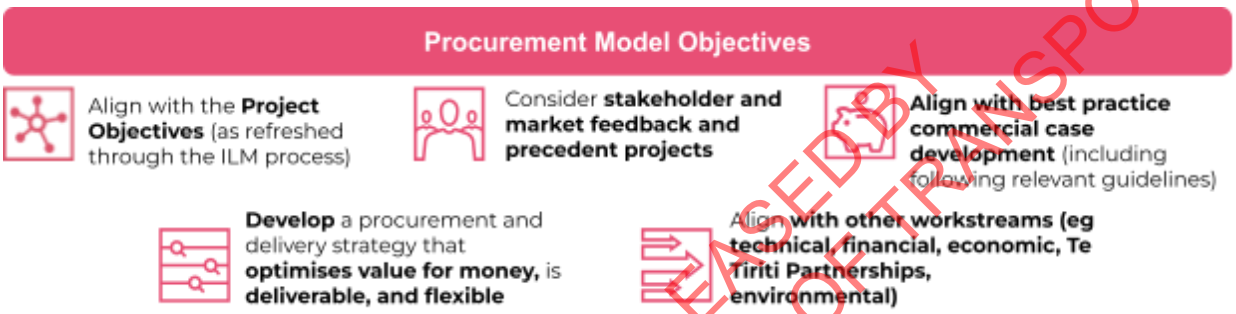
[Drafting Note: To be included following detailed market sounding specific to ALR, expected post October - this section may also be embedded in the options assessment.]

6. Procurement methodology and approach

6.1 Context

The Procurement Strategy defines the approach to contracting for the delivery of the various components of the Project's scope elements and services. The Strategy spans planning, design, construction, commissioning, maintenance, and operations. The following objectives were used to influence the selection of a preferred model.

Figure 16: Procurement model objectives



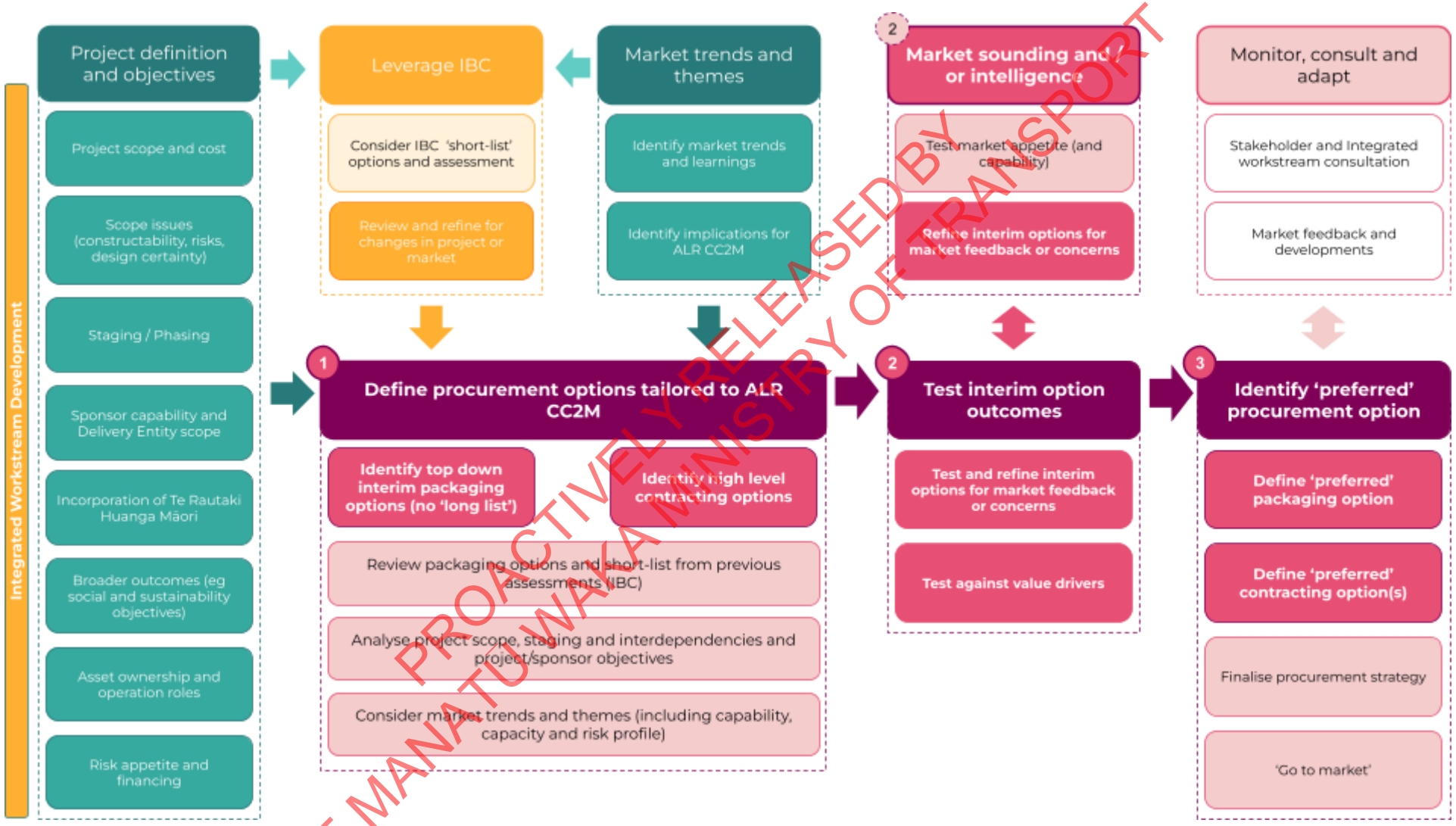
6.2 Practical application

The overarching principle for the Procurement Strategy was adopting a practical rather than theoretical approach. While theoretically, there are a large number of potential packaging and contracting combinations, a project of the scale and complexity of ALR CC2M requires a practical approach that draws on precedent projects and the experience of the Project team, market participants and clients sponsors. This practical approach considered:

- **Project complexity:** The Project is of a scale and nature that is considered highly complex, in any market. This is particularly important in the New Zealand context, as ALR CC2M will be a first of a kind GOA4 Project, and of a scale not previously delivered.
- **Market and client sponsor feedback:** Feedback obtained from client sponsors and industry through Market Intelligence sessions in New Zealand and Australia provided insight in relation to packaging. [Drafting Note: To be updated and refined for detailed market sounding]
- **Collaborative Project team sessions:** SMEs from the Design, Financial, Urban Commercial, Te Tiriti Partnerships, and Sustainability workstreams (a summary of these sessions is provided in Appendix B).
- **Previous IBC analysis:** Significant analysis was undertaken at the IBC and earlier stages on potential packaging models, considering where interfaces and integration is particularly complex or risky, identifying detailed 'long-list' and 'short-list' assessments (bottom up) which supplement the top down approach.

A high level summary of the overall approach to developing the Procurement Strategy is provided below, with further detail provided in Appendix B.

Figure 17: Overall methodology of procurement process



6.3 Guiding value drivers

In considering packaging and contracting for ALR CC2M, guiding value drivers have been identified through the market context and precedent projects, and are informed by Project objectives. The guiding principles are similar to those developed as part of the IBC, which align with the GPRs.

The value drivers are set out in Table 5 below. These drivers apply to both packaging and contracting models, although will vary in relative importance or extent to which the value drivers influence respective packaging and contracting model choices.

The combined value drivers are expected to inform an overarching value for money outcome, including optimising market appetite, driving competition and whole-of-life outcomes.

Table 5: Value drivers

Value drivers	Considerations
Customer outcomes	The extent to which the approach supports customer outcomes. This includes factors such as an operator voice in design, the ability to select the preferred operator, and operational commissioning approaches.
Design	The extent to which the approach provides for market participants ('scope' expertise) to inform design outcomes, and manage design interface risks.
Timing	The extent to which the approach optimises the programme to commencement of operations, and supports other milestones such as procurement and construction commencement.
Risk management	The extent to which the approach supports effective risk management including interface risks, interdependencies across design, construction, O&M and cope specific delivery risks.
Market appetite	The extent to which the approach attracts market interest.
Urban outcomes	The extent to which the approach supports outcomes related to integrated property development (eg OSD).
Innovation	The extent to which the approach encourages innovation (through the procurement process, design and delivery phases).
Flexibility and staging	The extent to which the approach is flexible to accommodate unexpected changes to scope or specification during delivery (i.e. changes in stakeholder approvals, client changes) and support future stages / augmentation(s).
Broader Outcomes	The extent to which the approach supports Broader Outcomes (noting these are part of detailed specifications regardless of option).

7. Packaging assessment

7.1 Top-down approach to packaging

Packaging is an important, and in many ways foundational, element of the Procurement Strategy. It determines how the overall scope is 'packaged' together for contracting and delivery purposes. The packaging approach underpins the procurement model, with contract models optimised for each package of works.

The 'top-down' approach to packaging draws heavily on insights from the Market Intelligence Process and precedent projects. This experience provided clear guidance on a preference for **aggregated packages**, reducing the number and extent of interfaces between contractors and different market participants to be managed at a client level.

In this context, the starting point for the top-down approach is to deliver the Project in a single 'aggregated' package (i.e. all works in a single contract). However, as the scale of ALR CC2M is too large for the market to deliver in a single package, scope elements are then disaggregated. The extent and nature of the disaggregation (ie packaging) is then considered in context of the value drivers.

7.2 Establishing broad packaging structure

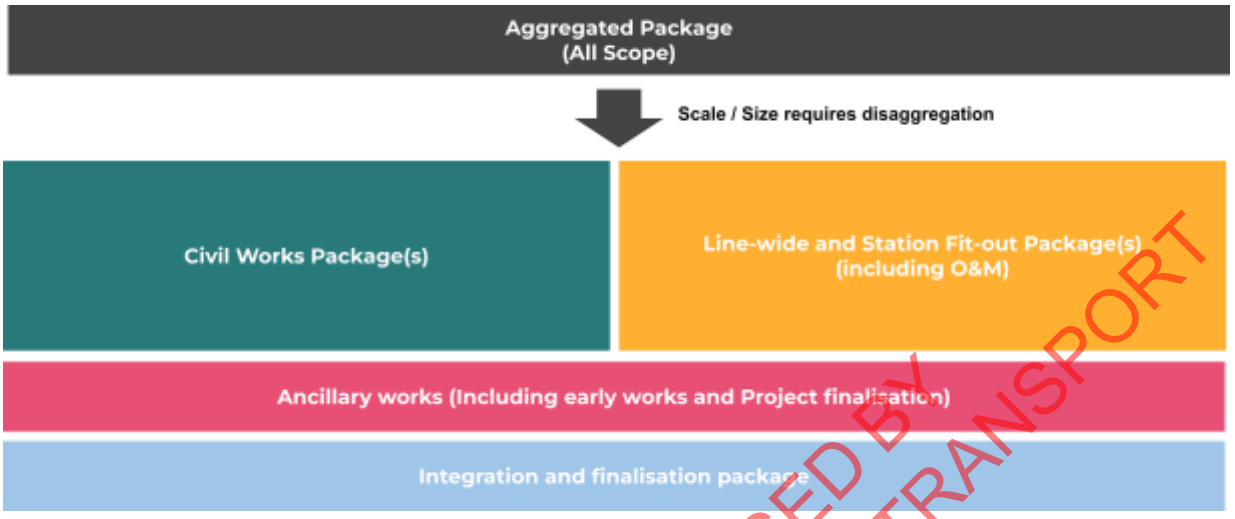
Consistent themes from the market intelligence and precedent experience guided the development of a broad packaging structure.

Table 6: Principles informing the development of packaging options

Theme	Description	Relevance to ALR CC2M packaging
Civil works	Civil works typically of a high capital cost and can be delivered discreetly.	• ALR civils include tunnels, at grade, trenched and elevated structures. These could be packaged together or separately, with scale and market capacity influencing a need for further disaggregation in packaging.
Moving rail	Critical interfaces between 'moving rail' components (rail systems, signalling, fleet, O&M) should to the extent possible be delivered together.	• The complexity of a GoA4 railway and extent of critical interfaces needs all parties working effectively together. This has been more effectively achieved through combining these aspects in a single package. • Subject to scale and market depth, related packaging decisions include design and delivery of depot, delivery of line-wide track, station fit-out and 'non-rail' systems.
Operator involvement	Packages should enable early input from experienced operators.	• Operator input to track design, station design, maintenance facilities and aspects impacting customer outcomes and operational performance is beneficial. • This can be achieved within a package or through package interface arrangements, but regardless, requires 'early input' of an operator.
De-risking civils	Early works packages can de-risk the corridor.	• The risk exposure for large civils packages from utilities and ground conditions can be significant. Early works packages that help to de-risk these aspects can support the value of larger scale civil packages.

Adopting these themes, the following broad packages were developed (Figure 18):

Figure 18: Broad packaging solution



The broad scope in each of these packages includes:

- **Civils:** Tunnelling, excavation, at grade and elevated structures (including bridges and viaducts).
- **Line-wide and Stations:** Line-wide works, such as track, rolling stock, systems and signalling, station fit out, O&M and depot. As a preliminary position, this includes station fit-out in response to line-wide integration and operation design elements. Further analysis will explore inclusion or separation of this scope.
- **Ancillary works:** Enabling and de-risking works procured early and packaged separately from main civils.
- **Integration:** Overall Project integration, such as adjacent corridor works, parking, landscaping and other areas to be considered separately.

Further analysis of the number of Packages within each broad category, and / or where certain scope elements may be allocated between civils and line-wide, is considered in the following Sections. This includes review of "contestable scope elements" which could reasonably be included in multiple broad package categories.

7.3 Interface overview

Physical or commercial interfaces exist between most, if not all, scope elements in the delivery and operation of significant transport infrastructure projects like ALR CC2M. The packaging approach allocates responsibility for the delivery and, together with the contract model, management of interfaces.

The degree of interface between each scope element informs the packaging approach, with a preference to package scope elements together where there is a higher degree of interface.

Other considerations related to interfaces informing packaging analysis includes:

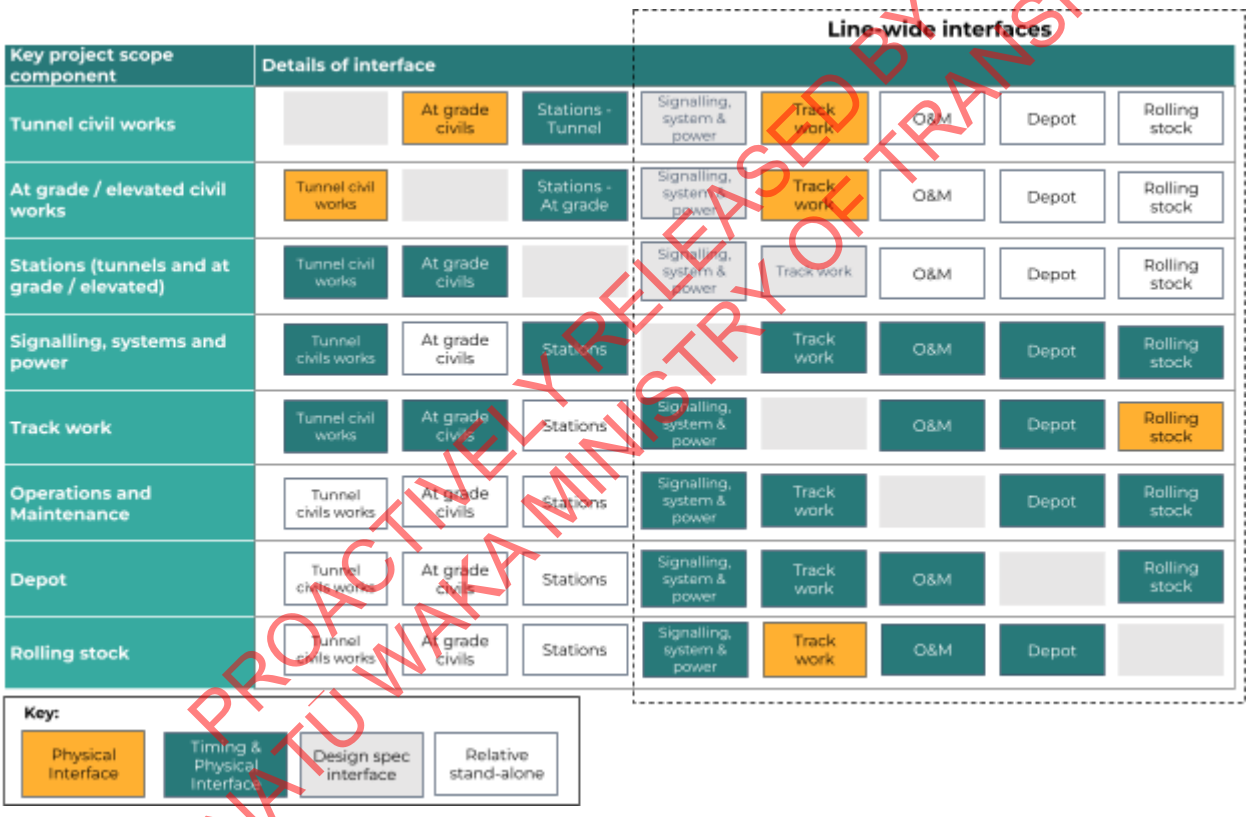
- **Client team impact:** Generally, a more disaggregated model (i.e. greater number of packages) requires the Project Sponsor (ALR Ltd) to retain greater responsibility for

interface management. Conversely, a more aggregated packaging approach (i.e. fewer packages) transfers primary responsibility for the management of interfaces to the head contractor(s) for each package. Whilst interface risk can be transferred to the contractor(s) via the packaging approach, overall Project integration still ultimately rests with the Project Sponsor.

- **Staging and augmentations:** The ALR CC2M interfaces are not confined to interfaces between specific scope elements within a package. There will be interfaces between concurrent or consecutive Project Stages (refer to Section 4.5), as well as with the existing (and planned) transport network and services. Responsibility for these interfaces, will likely need to be retained by ALR Ltd (or other Project Sponsors).

The following diagram illustrates the key interfaces between scope elements, including those identified as 'line-wide' (i.e. spanning different geographical sections of the existing stage).

Figure 19: Key interfaces between scope elements



These interfaces are provided to inform the consideration of packaging (and subsequently, contracting) options for ALR CC2M.

7.4 Packaging the civil works

7.4.1 Overview

As identified in Section 4.2, ALR CC2M consists of 24 kilometers of civil works, including major tunnel works between Wesley and the Auckland CBD with elevated, at grade, and trenched works for the remainder of the alignment.

Feedback from the market indicated a likely maximum package size of $4-5bn, which is less than the estimated cost of civil works. Accordingly, a single aggregated civils package is not considered to be feasible for market capacity and risk appetite.

7.4.2 Civil works package value drivers

The civil packages can be split into two packages, reflecting precedent projects and the different skills and expertise for the different construction methodologies:

- tunnelling and station excavation works package
- at grade / trenched / elevated works package.

Guiding considerations for the split in civil works, and interfaces with other potential scope / packages, as against the value drivers set out in Table 5 are summarised below:

Table 7: Civil works packaging value drivers

Value drivers	Tunnel package	At Grade / elevated package
Customer outcomes	Not a distinguishing factor.	Not a distinguishing factor.
Design interface	Relatively limited design interface with other civil works. Impact of other packages on tunnel design limited (subject to tunnel specifications being set up front, and some track design impact).	Relatively limited design interface with tunnels. Impact of other packages on base design also limited (subject to structures specifications being set up front, and some track design impact).
Timing	Splitting tunnels and civils could allow one package to go ahead of others and optimise the programme. Delays to the package will impact other packages.	As per tunnel regarding the commencement timing. Stage 1a may be procured significantly earlier than Stage 3a / 3b. Construction methodology for Stage 1a to 3b also changes between surface, viaduct, bridge structures and trenched sections, limiting efficiencies of a single civils package across stages. Opportunities to extend or augment Stage 1a could be explored or embedded in contract for Stage 3a works, subject to budget, performance and market depth. Stage 3b is assumed to be delivered by [Auckland Airport] utilising their designations. [DN: TBC]
Risk management	Civil risks (ground conditions, etc) can be managed within the package. Access regimes will be needed for commencement of line-wide works.	Civil risks can be managed within the package and are relatively contained. Access regimes will be needed for commencement of line-wide works.
Market Appetite	Scale of single tunnel bore likely to be manageable. It is assumed there will be one TBM continuous drive north from Wesley to Te Waihorotiu, breaking at Dominion Junction. There is likely a significant appetite from tunneling contractors. Additional material	Works for Stage 1a, Stage 3a and Stage 3b are significant. There will likely be a significant appetite from civil contractors. [DN: Total package scale to be confirmed] There may be opportunities to explore smaller discrete packages as 'early works' for local contractors or as contestable

	scope may limit capacity.	items (refer Section [XX]), subject to managing programme risks (this could also be embedded in head contractor requirements).
Urban outcomes	Limited influence on package separation with other civils. The main influence with station design and urban planning requirements is established by the client, and flexibility for line-wide design inputs.	As per tunnel.
Innovation	Construction methodology innovations within the package.	Construction methodology innovations within the package.
Flexibility and Staging	Limited flexibility with core tunnels during delivery regardless of package.	Limited flexibility with core civils during delivery regardless of package split with tunnels (flexibility limited to the specific scope element / type of work).
Broader outcomes	Defined within package requirements irrespective of split.	Defined within package requirements irrespective of split.

7.4.3 Civil works emerging preferred packages

The emerging preferred option for the civil works is:

- **Tunnel and stations - Stage 1b and Stage 2:** Tunnel and station excavation works procured as a single package, reflecting the construction methodology (single TBM drive) and expected timing. This may require a joint venture / team with contractors.
- **Civils package - Stage 1a:** Single package of sufficient scale for market interest, and can be procured ahead of Stage 3a.
- **Civils package - Stage 3a:** Single package, separately contracted from Stage 1a. Subject to timing, and Stage 1a performance, potential for Stage 1a contractor to have an option or right to deliver Stage 3a (regime to be embedded with Stage 1a), or for this stage to be procured separately to drive competitive outcomes.
- **TBC civils package - Stage 3b:** [Drafting Note - Stage 3b procurement strategy to be further developed for next iteration of the Commercial Case, subject to airport requirements]

Refer to discussion of Contestable Items at section 7.5, which discusses specific scope items may be excluded from the civil packages (such as specific bridge structures, viaducts and flyover ramps) or added to the civil packages (such as power systems and track slab).

7.4.4 Packaging line-wide works

7.4.5 Overview

Market feedback and project precedents suggest where possible, integrating line-wide works is a more attractive market opportunity, and supports management of critical interfaces and customer outcomes. Feedback consistently suggested GOA4 systems and infrastructure (rail systems, signalling, rolling stock and depot) should be packaged together.

This approach is subject to the scale of the package not being too large and ensuring the relative influence of participants, is balanced through the tender process (i.e. not dominated by capital costs).

The scope areas with sufficient scale to reduce the overall scale of the integrated line-wide package, whilst allowing the majority of the 'moving rail' to remain together include station fit out and non-rail systems (such as heating, ventilation, and air conditioning (HVAC)).

7.4.6 Line-wide package value drivers

The two packaging options considered against the value drivers are:

- **Single line-wide package** - including track, signalling and systems, telecommunications, power, depot, rolling stock, station design and fit-out and O&M.
- **Line-wide package and a station package** - separating station design and fit-out from the line-wide package. (Track is considered as a contestable item (refer to section 7.5) rather than a separate package).

[Drafting Note - The cost, size and scale of line-wide packages is to be determined and tested against the market capacity]

Table 8: Line-wide packaging value drivers

Value drivers	Single line-wide package	Line-wide package and station package
Customer outcomes	The approach to adopting a line-wide package is fundamental to achieving positive customer outcomes.	'Breaking' stations away from line-wide delivery may compromise customer outcomes in station design. Approaches to manage this can be provided through operator input into stations. Counter to this, relative cost of stations to total package cost may impact the operators ability to 'stand out' in a consortium and selection of ALR Ltd preferred operator. Note also discussions re staging and relative cost of stations under different staging approaches.
Design interface	As above. Integrated package provides for the most efficient design integration.	As above, the ability for the operator (line-wide package participants) to influence station design is expected to be critical to both delivery interfaces and operational outcomes. Strong management of interfaces between packages is critical.
Timing	Subject to handover regimes and access to the civil works package sites, the integrated line-wide and stations package should deliver a more efficient programme.	'Breaking' stations from line-wide delivery creates additional access / separation requirements, with potential for delays between packages compromising programme outcomes.
Risk management	An integrated package provides for the most efficient risk management, including with respect to commissioning and operational outcomes.	Some additional risk management complexities are introduced with separate station delivery (including design and access as addressed above).
Market appetite	[Drafting Note: Subject to capacity and staging] There is likely to be significant interest for the combined works from various	[Drafting note: Subject to capacity and staging] As with a single line-wide package, expected to attract significant market

	providers irrespective of the packaging approach with stations. The approach to staging may also impact appetite as a result of capacity and scale. Inclusion of stations for all stages may be the factor that makes the package 'too large' (refer staging discussion).	interest.
Urban outcomes	Integrated station and urban development outcomes can be achieved through line-wide packages. However, station design is likely to be influenced more by operational / customer needs than by urban outcome objectives.	The separation of stations allows increased focus on urban outcomes and integrated station and precinct activity, with a differential in relative influence of operations / rail elements.
Innovation	Integrated package encourages more innovation (during bid and delivery) for the various parties to work together to optimise outcomes.	Opportunities for innovation within each package remain. As for customer outcomes, operator influence into stations is limited to one party (the selected line-wide operator) and may be more difficult to influence outcomes within the package.
Flexibility and Staging	The integrated package provides flexibility to manage scope elements and respond to changes within the package. The extent to which this results in time and cost changes is influenced by the contract model (refer to contracting assessment Section 8). Staging presents a particular challenge for the integrated line-wide package which cut across all stages. From a practical and value standpoint this limits the ability to separately procure line-wide packages for each stage: • the O&M provider for Stage 1 will be the operator for the network • rolling stock and systems providers tend to be the same. This generally requires a single line-wide package for all stages. However, approaches to drive value through augmentation could allow for: • O&M, fleet, systems in the initial package appointed for all stages (pre-priced options, rates, margins) • other (civils) providers committed for say Stage 1 and 2, and then separately contested for Stage 3. Further consideration of commercial regimes for augmentation and staging are in the contract model assessment.	The line-wide package will have flexibility as with the single line-wide package. However, there is likely to be less flexibility for changes at the interface between stations and other line-wide scope elements (again, subject to contracting models). Separation of stations (and associated civil costs) may provide more value for different staging options, given the need to commit to the predominant aspects of the line-wide package at the outset (ie stations may be procured separately for future stages).
Broader outcomes	Defined within package requirements irrespective of split (noting urban outcomes separately assessed).	As per single packages.

7.4.7 Line-wide emerging preferred package

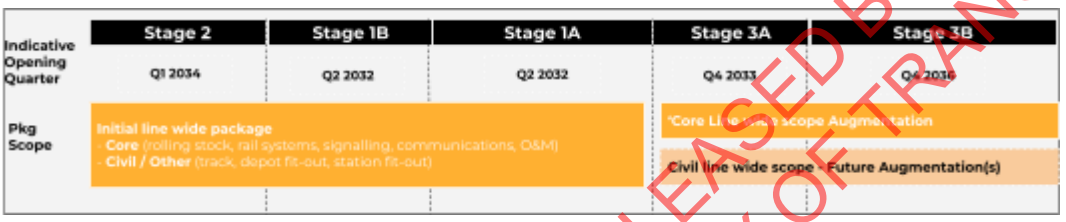
[Drafting note: Subject to further review of staging, 3b airport role and cost and scale]

The emerging preferred option for the line-wide scope is:

- **Single line-wide package:** full scope (rolling stock, systems, signalling, communications depot, track, stations and O&M) for Stage 1 and Stage 2 with 'core' operational scope subject to agreed commercial augmentation regimes for stage 3 (noting other aspects of Stage 3 can be separately procured subject to timing).

Figure 20: Emerging solution for initial single line-wide package

Figure 21: Illustrative packaging and staging approach for line-wide



7.5 Line-wide and civil package contestable scope

[Drafting Note: To be refined with detailed capital costs and market testing]

The detailed scope and specifications of the civils and line-wide packages set out above will require development during the tender preparation phases. There will be areas of scope detail to be tested as to whether they best sit in the respective civils or line-wide package(s).

These detailed scope decisions may be influenced by options to address scale, opportunities to engage different market participants, or to drive Broader Outcomes such as local content.

The Table below sets out examples or areas that may present opportunities for refinement in the packaging structures. The purpose of this analysis is not to identify all scope elements, but rather to identify areas where precedent or market feedback has varied. These will need to be tested during the procurement and tender documentation phase.

Table 9: Contestable scope options

Scope item	Project and market considerations
Civil structures: • Bridge structure (Māngere) • Viaducts (Onehunga and Wesley) • Dominion Road flyover	• Currently assumed to be part of the Civils package, these structures / works could be separated and procured as standalone and discrete works packages, with their own design and work programme. • This may assist in reducing the total size of an at grade / elevated civils package that is too large for one contractor / consortium. • Separation of the bridge may also allow local contractors to bid directly and deliver (although main civils packages can also require this participation).

ramps	• Benefits would need to be balanced against risks of delays and design interfaces.
Depot civils	• Currently assumed to be part of the line-wide package, there is an option for depot build to be contracted separate to line-wide. • The depot civils and structures could be procured separately as a discrete package or moved into the main civils package. The preferred approach will depend on timing and market capacity. More importantly, it will be subject to the ability of the O&M and systems providers to influence the depot design. • Site preparation could be procured separately (as early works package and / or with the civils package).
Systems and power civils (eg conduits and poles)	• Currently assumed to be part of the line-wide package, there are a number of civils elements that have direct physical interfaces with the line-wide systems and power scope elements. This includes but is not limited to poles and conduits for the rolling stock power. • Given the close interface with the systems and power contractor, these scope elements may be included in either the civils or line-wide packages, depending on the package scale and capacity. • Critical to a preferred solution will be the level of design influence able to be achieved from O&M and systems providers (from the line-wide package).
Track works (slab track)	• Currently assumed to be part of the line-wide package, track work is more civil works in nature and could be delivered as part of the civils packages, or as separate stand-alone packages. • Given the size and scale of the line-wide package, there may be benefits in separating track work. • As with systems and power civils, critical to the preferred solution will be the level of design influence from the O&M and fleet provider. • A further consideration is the extent to which the track work requires separated and 'free' access to the civil works sites (i.e. post completion or during delivery of broader works). This may vary within the tunnel relative to the at grade and elevated areas.
Platform screen doors	• Currently assumed to be part of the line-wide package, platform screen doors (PSD) present a material interface at stations and with operations, systems and fleet. • There may be an opportunity to separately procure the PSDs, provided as free order materials to the line-wide package (or separate station package if adopted), and enabling selection of the PSD supplier ahead of / separate to the line-wide. Design interfaces remain critical.
Station fit-out	• As discussed in the packaging approach for the line-wide package, there is potential for station fit-out to be packaged as a stand-alone stations package (as discussed at the line-wde package and subject to scale and staging). • Some aspects of the station fit-out could be packaged within a civils package, where appropriate (likely dependent on civils construction methodology and / or timing - eg underground versus at grade stations, or by operational staging)

	• Location specific choices may be required for stations, for example where there is material OSD / ISD works, these may be better placed as a separate package. • [Drafting note - packaging of station fit-out, in any of the methods above, is to be further tested during the next iteration, once the OSD / ISD opportunities are further developed, and specific opportunities have been tested with the market]
Non-rail systems	• Whilst the interface between rail systems and signalling, rolling stock and the O&M is very high, there is a lower (but still high) level of interface between other 'non-rail' line-wide systems (HVAC, ventilation etc). • There remains the opportunity to procure these works separately, where scope and scale requires it.
Vertical transport	• Vertical transport includes escalators, passenger lifts and fire lifts. It allows passengers and emergency services personnel to access underground and elevated stations. • Like PSDs. there may be options for this scope to be packaged separately or as part of a station fit-out package. • [Drafting Note - To be tested through market sounding]

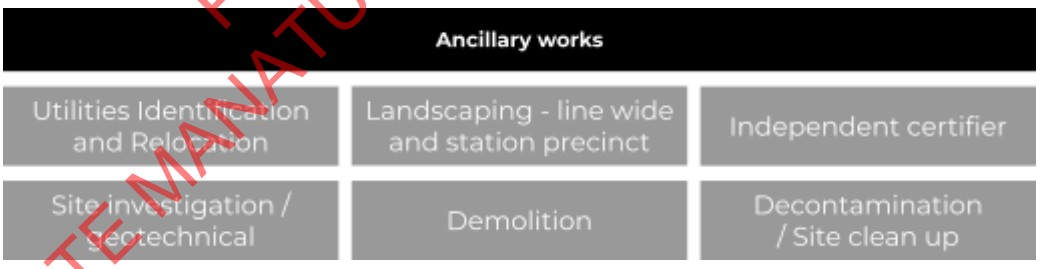
7.6 Ancillary works package(s)

7.6.1 Overview

Within the context of a broad preference for aggregation on major transport projects, the market feedback also identified opportunities for smaller, discrete works packages procured ahead of 'main works' to de-risk the Project. Common ancillary works often include utility relocations, geotechnical investigations (and site clean up if required) and demolition works as enablers for the main project, or discrete adjacent works such as enabling road works.

Potential scope that could be delivered as ancillary packages or as discrete components in the broader procurement strategy, have been identified as:

Figure 22: Potential ancillary scope items



7.6.2 Ancillary works packaging considerations

By their nature, ancillary work packages seek to optimise broader procurement strategy(ies), rather than a driver of material value themselves. As such, the consideration against the full suite of value drivers is not appropriate. Rather each is considered against selected drivers being **timing, market appetite, and risk management**.

The Table below outlines a high level review of the potential for the ancillary package to enhance value to the overall packaging strategy. Like the contestable scope items, detailed scope definition and preparations during the procurement phase are expected to influence the ancillary works packages.

[Drafting Note - Value to larger civils packages is to be tested through market sounding]

Table 10: Potential scope items for ancillary works

Scope item	Project and market considerations	Emerging solution
Utilities identification and relocation	• Utilities are a high risk scope item, often lacking reliable information on location, type and ownership. • Where there is strong understanding of the type and location of assets, there is limited value in a separate works package (ie it adds time without reducing risk). • Investigations to date have identified utilities around Dominion Junction and Mt Albert Road as high risk (within a developed area and significant underground power). • **Risk / market:** It is expected there will be value to the main package in a separate package that identifies and relocates utilities in key risk areas along the corridor, reducing risk to civil packages. • **Timing:** Delayed relocations can have broader consequences to main works. Procuring them in time to provide timely site access for main contracts is critical.	**Procured as a separate package(s) of works** for targeted, higher risk areas to de-risk and provide greater certainty in pricing to main works packages. Consideration as to timing for procurement to minimise risk of delay causing delays to main packages. Could be procured in separate discrete packages for certain areas on the corridor and as part of Stage 1 and 2 separate to Stage 3.
Site Investigation / Geotechnical	• Geotechnical risks (particularly with tunnelling) are a major risk for underground metro rail projects. • **Risk / market:** Sufficient (extensive) site investigation and geotechnical studies can inform TBM design, program assumptions, construction methodology and price. • **Timing:** As with utilities, site and geotechnical investigations needed to be sufficiently ahead of civil procurement to realise value.	**Delivered as a separate package of works,** procured as early as possible. (Note some of these works have commenced).
Landscaping of station and line-wide	• Landscaping is typically one of the final scope elements completed on a Project. • Given the long delivery program, it may be reasonable to procure station and line-wide landscaping separately (and closer to completion). • **Risk / market:** This can add flexibility to inform design requirements and enable	Options to procure a package as a whole or in stages, as the Project is completed.

	different providers to participate in the Project. • **Timing:** Timing needs to be managed to ensure the Project is not completed ahead of landscaping works.	
Demolition	• The Project will require the demolition of substantial amounts of property and land. • **Risk:** Procured early, following land acquisition, this can de-risk a site and expedite main works contracts. • **Timing:** As with other ancillary packages, timing of works needs to ensure start of main works is not delayed.	**Procured as a separate package of works** for high value or higher risk sites.
Decontamination / site clean up	• Subject to geotechnical and demolition works, there may be areas that require decontamination and site clean up. • **Risk:** Procured early, with appropriate disposal methods, and if the market can rely on outcomes this can materially de-risk main works. • **Timing:** Time needed to decontaminate and access a site may add to the overall programme, and defer main works start. If managed by a main works contractor, a more optimal programme may be achieved.	Subject to further site studies and findings.
Independent Certifier	• Standard practice in major infrastructure projects, noting they must be appropriately resourced, and provided with reasonable decision making power to avoid double up of review activities with the Project Team.	**Procured as a separate package of works,** with interface agreements between relevant contracts.

7.7 Integration package

7.7.1 Overview and scope

There is a need to integrate all packages with ALR Ltd responsible for integration and interface between packages. Due to the size, scale and complexity of ALR CC2M, there are a number of intricate interfaces and stakeholders that will need to be managed.

Subject to the structure of the ALR Ltd team, there may be value in a separately appointed and accountable 'Project integrator' to guide and direct integration activity. This should be considered in the context of the integrated line-wide package that will be responsible for many of the critical interfaces, and could subject to their detailed scope and specifications be accountable for package interfaces.

Given the complexity of the Project, ALR Ltd may consider the support of a third party to assist with and / or lead the management of interfaces between packages.

[Drafting Note: Integration section to be further developed pending input from the Management Case, given strong interface with organisational structure and governance]

7.8 Broader objects and outcomes

Mana whenua and opportunities for Māori businesses

Regardless of the packaging approach, the procurement process and commercial principles will ensure that benefits of the Project to local contractors and mana whenua and Māori businesses are a key driver, and set the local market up for future success. As relevant, irrespective of the package, these are to be embedded in the procurement processes and evaluation criteria, design / technical specifications, and contract positions.

[Drafting note - future iterations will continue to identify standalone opportunities for Manu Whenua and Maori opportunities to be reflected in tender processes and contracts]

Environmental

As with mana whenua and Māori businesses, the packaging approach itself is not expected to influence environmental outcomes. These are defined by the design / technical specifications for the scope elements, and not their inclusion within a package type.

Local content

While the scale and large package sizes may make it more challenging for direct local participation (local contractors are unlikely to have capacity to bid alone and will need to partner with internationals). It is expected that the procurement processes and evaluation criteria can encourage appropriate local participation and opportunities for the local market.

Local content targets and levels will need to be considered for specific elements such as rolling stock) with reference to existing capabilities in New Zealand, ability to mobilise for the Project and future pipelines.

7.9 Overall packaging model: Emerging solution

7.9.1 Overview

Based on the above analysis, the proposed packaging solution currently include:

1. **Civils packages**
    a. **Tunnel and stations - Stage 1b and Stage 2:** tunnel and station excavation as a single package, reflecting the construction methodology (single TBM drive) and expected timing. May require a joint venture / team with contractors.
    b. **Civils package - Stage 1a:** Single package of sufficient scale for market interest.
    c. **Civils package - Stage 3a:** Single package, separately contracted from Stage 1a. Subject to timing, and Stage 1a performance, potential for Stage 1a contractor to have an option or right to deliver Stage 3a (regime to be embedded with stage 1a), or for this stage to be procured separately.
    d. **TBC civils package - Stage 3b:** [Drafting Note - Stage 3b to be tested]
2. **A Line wide package, with future augmentations**
    a. **Single line-wide package:** full scope (rolling stock, systems, signalling, communications depot, track, stations and O&M) for Stage 1 and Stage 2 with 'core' operational scope subject to agreed commercial augmentation regimes

for stage 3 (noting other aspects of Stage 3 can be separately procured subject to timing).

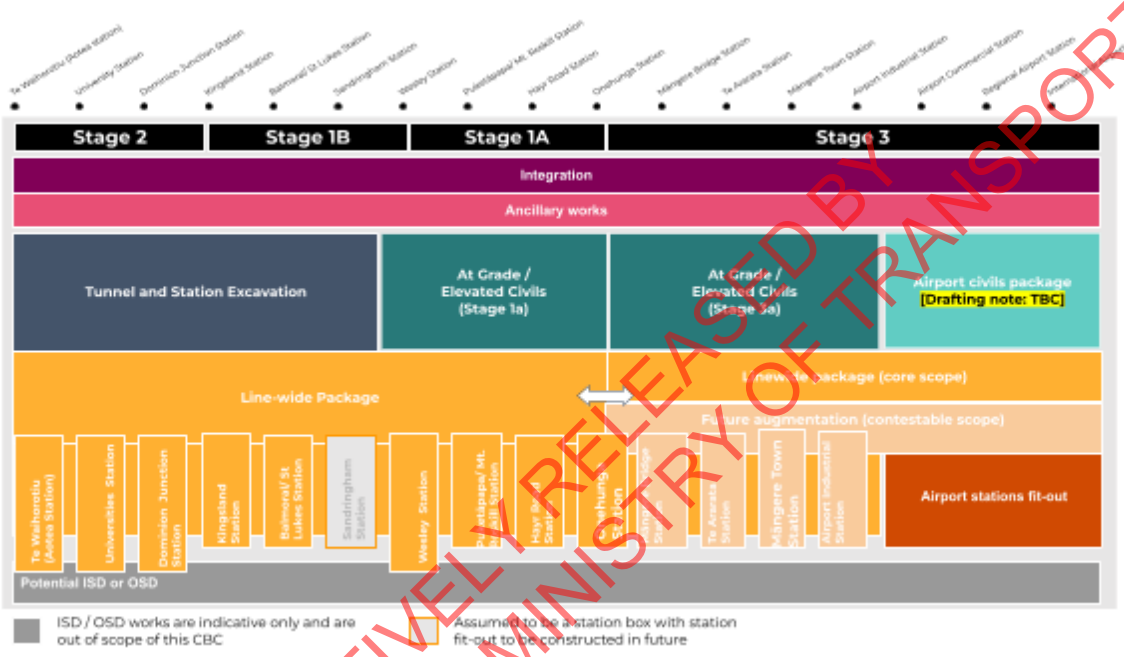
b. [OSD / ISD packaging approach subject to further testing in coordination with Urban Business Case]

3. **Other packages**

a. Ancillary works packages
b. Integration package

The emerging packaging solution for the Project is summarised in Figure 23 below.

Figure 23: Emerging packaging solution



8. Contracting model assessment

8.1 Introduction and approach

The procurement strategy will be a combination of contracting models selected as appropriate for each package. This reflects large-scale transport infrastructure projects that have adopted different contracting models in response to emerging market trends and project specific characteristics. Notably, with an increasing scale and complexity of projects, there has been an increasing shift to risk sharing mechanisms and collaborative models.

As with packaging, a practical approach has been adopted to assess different contracting models for each package. Informing this approach is a shortlist of precedent contracting model types, identified through market participants, client sponsors and precedent projects.

Importantly, each of these contract types has the flexibility to adapt to project specific requirements through refinements to underlying procurement processes and commercial principles. Areas for refinement are identified through the contract model selection process.

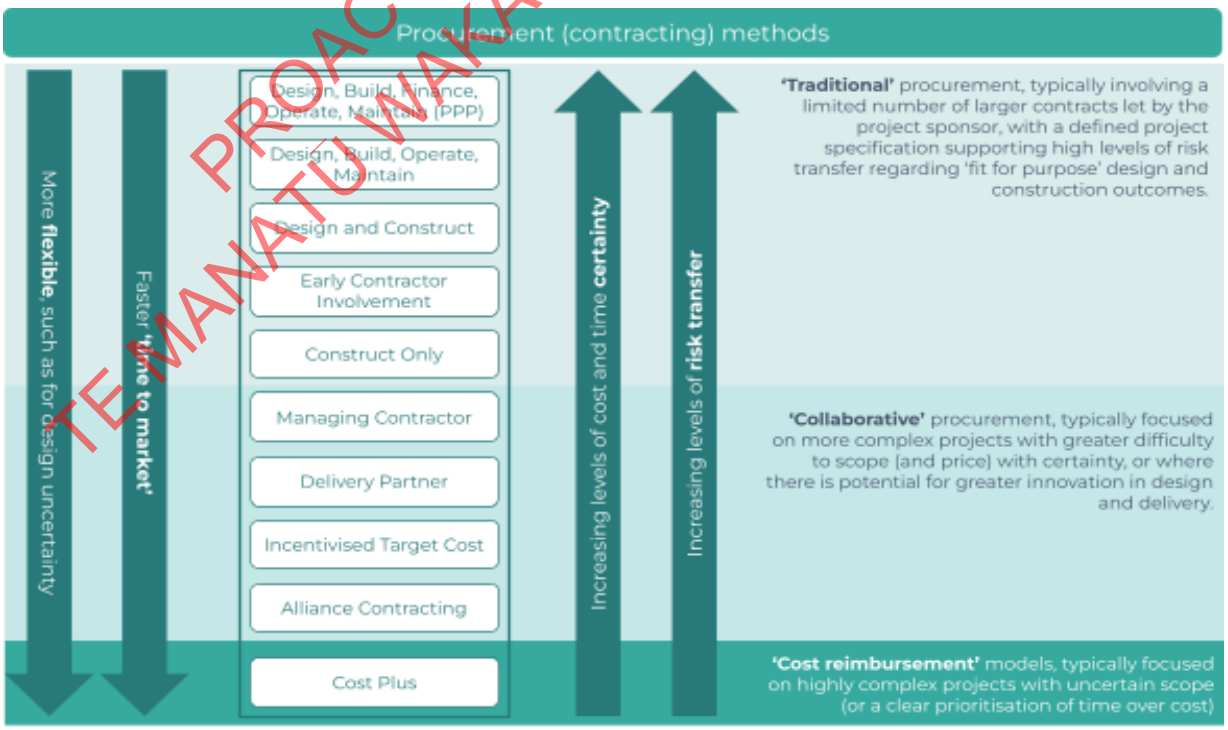
Package characteristics, market capabilities and sponsor objectives were considered in shortlisting contracting options appropriate to particular packages.

[Drafting Note: A preferred contracting model will be identified for each package post the market sounding and once the exact scope and associated risks for each package is known]

8.2 Overview of contracting model options

Generally, a large spectrum of contracting options exist, which can be represented as below:

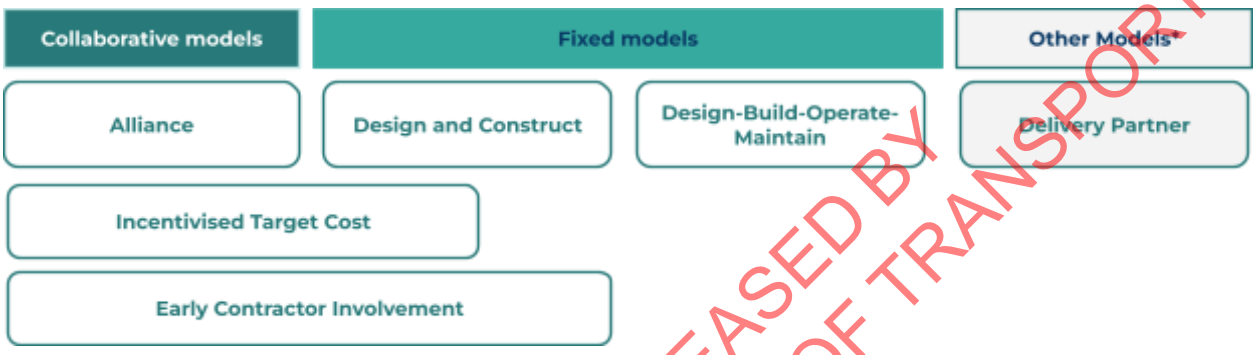
Figure 24: Representative contracting models



Noting the potential for refinement within each contract (eg specific risk sharing regimes can be adopted in a fixed price D&C contract), a shortlist of preferred contracting models has been selected. These models were deemed most appropriate in the context of the Project scope and requirements and preferred packaging approach. They also reflect market precedent and are supported by the analysis undertaken during the IBC.

The different contracting models were split between two broad categories: collaborative models and fixed price models. A third category 'other' includes procurement approaches that can be used alongside other models (ie early contractor involvement approach that converts to a fixed price design and construct contract).

Figure 25: Shortlisted contracting models



The rationale for shortlisting each contracting model is outlined in the Table below. A detailed overview of each contracting model, including advantages and disadvantages can be found in Appendix F.

Table 11: Overview of shortlisted contracting models

Model	Description and relevance to ALR CC2M
Collaborative models	
Alliance	• Characterised by a cooperative and flexible approach to design, Project delivery, innovation, and shared commercial risk and reward (Target Outturn Cost (TOC)). • Alliance's have been adopted for technically complex packages with unknown scope aspects, risks and significant integration requirements. They establish long term collaborative working relationships between parties. • Alliances can progress to procurement earlier, as a result of not requiring detailed specifications to be priced in the procurement process. Depending on whether a competitive TOC process is adopted, they can however require extended procurement to appointment. • The Alliance model is well understood and accepted by the market, particularly in large civil packages and brownfield risk elements.
Incentivised Target Cost (ITC)	• An adaptation of an Alliance model, this contracting model provides a collaborative, open book, shared risk approach. • A key differential for the model is fixed time delivery (excluding adjustment events), increasing time certainty for Project delivery through contractors sharing in cost exposure risks but bearing time risk. • ITC can have a higher level or risk transfer than a traditional Alliance, with a painshare / gainshare arrangement commonly limited margins. • ITC's are becoming more accepted in the Australian market as a 'middle ground' between fixed price D&C contracts and Alliance contracts. • ITC's can be adapted to a risk profile that is suitable for the market's risk

	appetite as well as the specific risks of the Project. Given the emergence of this model in recent years a more detailed summary of this model is included in Appendix F.
Fixed time and cost models	
Design and Construct (D&C)	• A "traditional" approach whereby a Contractor is engaged to deliver to a well defined scope with risks able to be managed and priced by the market. • During RFP, the Contractor responds to a preliminary design and project parameters to tender to design and construct the asset within contracted price. • This model provides a level of price and time certainty and is well understood on traditional civil projects, allowing contractors to develop their response and manage risks appropriately. • Decreasing market appetite to accept fixed price risk for high risk scope areas, with emerging D&C positions to include some risk sharing of specific risk areas.
Design-build-operate-maintain (DBOM)	• Similar to the D&C model for the delivery phase, whilst merging also the operations and maintenance arrangements under fixed price regimes. • Benefits include integrated design, construction and maintenance development and potential for innovation, with all parties working together to develop the delivery model solution and accepting integration and commissioning risks. • This model can improve certainty for operations integration and provide whole of life outcomes, where the full lifecycle of the asset is considered from design, to delivery and operations.
Early Contractor Involvement (ECI)	• Merging Alliance principles with the D&C, the model engages contractors early through a detailed design development and pricing process (similar to the Alliance), however, on completion, contractors are appointed under a fixed price D&C (rather than the Alliance TOC pain / gain share mode). • This model was shortlisted as it is reasonably well understood by the market and merges principles of the collaborative alliance with D&C. It has been used in both early works and main works packages.
Other models	
Delivery Partner	• The delivery partner model enables a client to supplement its internal capability through bringing on a partner to assist with tasks such as planning, design oversight and construction management. • This model was shortlisted because of the delivery benefits it brings to complex projects, particularly those implementing complex procurement strategies. • Can be overlayed with other contracting models.

8.3 Civil works packages

8.3.1 Emerging preferred packaging approach

The emerging preferred packaging approach includes (at least) two civils works packages:

- tunnelling and station excavation
- at grade / elevated civil works.

The key features impacting the potential contracting model for the civil works packages are summarised in the Table below.

8.3.2 Application of the value drivers

Table 12: Application of value drivers to civil works packages contract model

Principle	Contract model considerations for civil works packages
Customer outcomes	• Less relevant to the civil works packages, given the operational input is largely being managed through the packaging approach and line-wide. • Contractual mechanisms to enable the operator and systems provider to feed into contractor design are likely to be beneficial. • Collaborative models that provide more flexibility for change can assist with delivering customer outcomes, to the extent there are changes driven by an operator / systems provider post contractual close.
Design	• ALR Ltd will develop the Reference Design and undertake consenting on that basis. The contracting models reflect the level of constructability design responsibility that will transfer to the party(ies) contracting for delivery scope elements. • The timing and extent of the design for each package needs to be appropriately coordinated. For example, if there is a need for early design input from one package to another, this may impact the preferred contracting model. • Preference for flexibility to be incorporated into the timing and extent of design for each scope element / package such that there is sufficient design integration between packages.
Timing	• The preferred contracting models should consider the expected / required time to market and tensions within the contract to manage risks that result in delays to ensure an optimised delivery programme as well as ensuring that market expectations are met. • Collaborative models can be procured faster, but do not necessarily result in faster delivery, with collaborative processes for key decisions in delivery.
Risk management	• Risk items should be transferred / retained through the contracting model by the party who can best manage them. • Market trends show a move towards more collaborative, risk sharing approaches for main delivery packages (either collaborative contract or as part of fixed price contract). The appropriate contract model depends on extent of scope definition, and package risk profiles. • Bespoke 'hybrid' models may be pursued where specific scope elements with less uncertainty are incorporated as 'fixed price' elements, and more uncertain elements are collaborative. • Preference for risk sharing mechanisms for high risk scope items which are unable to be appropriately priced and managed by a contractor. • Delivering the at grade / trenched / civil works in a highly urban environment has significant risk and complexity, which may be better delivered via a collaborative model. • ITC and fixed price models have been adopted for major tunnels. Approaches to managing project specific risks such as contamination (eg Westgate Tunnel in Victoria) are required in any model. Major early and enabling work packages (utilities / demolition) can help reduce risk.
Market appetite	• Market expectations for major greenfield civil works in a complex urban environment, and / or for major tunnelling works are that the contracting model is not fixed price (ie is an Alliance or ITC). • The civil works required for the Project are of significant scale, including major tunnel works, elevated, at grade and trenched works over 24 kms.

	• With a desire for greater aggregation of packages to reduce interface risk, the packages are of a significant size and scale. • At this scale, the market will have increasing difficulty achieving a fixed price.
Urban outcomes	• Additional flexibility available through risk sharing models enables greater flexibility to respond to urban value drivers if not part of an integrated contract (noting higher interfaces in line-wide rather than civils). • Ability for the approach to support outcomes related to property development.
Innovation	• During the Market Intelligence Process the market outlined its preference to provide innovative solutions for the Project. Innovation can be driven through the procurement process (compete to win) or through delivery. • The preferred contracting models should provide sufficient flexibility to allow for innovative solutions, helping to drive cost and time efficiencies, as well as greater customer outcomes. • The preference to provide contractors with scope for innovation.
Flexibility and staging	• Generally collaborative models, where the scope and cost are less fixed, are more flexible to respond to changes and / or staging. This supports a preference for collaborative models where scope flexibility is required. • Augmentation regime needs to be considered for line-wide packages to respond to the staging profile.
Broader outcomes	• Broader Outcomes can be incentivised through all contracting models. • Collaborative models have generally delivered well against the broader outcomes, provided the broader outcomes form part of the Key Responsibility Areas (KRAs) / Key Performance Indicators (KPIs).

8.3.3 Shortlisted contracting models

Both of the civil works packages are large scale packages with complex construction and potentially high risk elements. They require significant coordination of contractors, programme and cost. reflective of market precedent for packages of this scale and nature, the Alliance, ITC and D&C contracting models have been shortlisted for the civils packages

Figure 26: Contracting models for the civil works packages

8.3.4 Contracting model assessment

The contracting model assessment for the civil works packages is provided in the table below. Generally, the assessment of the different contracting models follows a similar logic for both the Civils Packaging analysis.

Table 13: Tunnel and station excavation shortlisted contracting models

Contracting model	Civil works packages
Alliance	• Fast to procure, subject to tender process and if competitive TOC, although does not necessarily result in overall programme benefits. • The ability to procure faster reflects the ability to develop detailed specifications and Project requirements collaboratively. This ability to defer some decisions and collaboratively manage risks presents flexibility benefits, and to respond to unknown Project conditions, but does necessarily drive fixed time outcomes and presents a challenge impacting flow on packages (line-wide, station fit-out, etc). • Collaborative environment assists in managing significant unknown risks, potentially helping to realise greater value for money outcomes, as there may be reduced risk pricing and claims during delivery. However, where risks are relatively more known or understood, contractors may be better placed to manage directly rather than sharing risk exposure with the sponsor. • Flexible to adapt to design changes from approvals (ie if consented post procurement) or other packages (ie line-wide) subject to timing of changes. • Collaborative models allow decisions to be deferred and managed together during delivery, which provides more flexibility however can also result in a tendency to make more changes during delivery which remain costly.
Incentivised Target Cost (ITC)	• Similar time to procure as an Alliance, subject to competitive tender process. • An ITC provides similar 'open-book' pricing and collaborative approach to setting target price as the Alliance model. It also supports a collaborative detailed design development process. • However, the ITC model introduces increased tension on contractors to deliver on time. A liquidated damages regime alongside Key Result Areas (KRAs) can be implemented to incentivise on time completion. • Somewhat flexible to adapt to design changes from other packages (ie line-wide) subject to iming of change. • With a major early and enabling works package, the scope is somewhat de-risked across the alignment, which may provide opportunity for a greater level of risk transfer under an ITC relative to an alliance.
Design and Construct (D&C)	• A D&C model requires a more developed understanding of project scope prior to procurement. Contractors need sufficient information to appropriately price scope and risks of the works. This may increase the procurement time of the Project, and requires clients to make key decisions up front to avoid costly changes. • This model may provide a level of price certainty, subject to the understanding and nature of particular risks. Experience has shown where risks cannot be appropriately priced they can attract premiums or result in claims. Risk sharing regimes for specific risks can be applied. For example, ground conditions and utilities risk sharing with fixed price and time on all other areas of delivery. • This model provides fixed time mechanisms to incentivise on time delivery. • Market appetite to participate will need to be tested. • Less flexibility to change from other packages, without raising claims.

8.3.5 Emerging solution - Tunnel and Station Excavation Package

[Drafting Note - the following remains subject to further development of the project scope and analysis, and to be tested through market sounding. Following that, the preferred solution will be presented].

8.3.6 Emerging solution - At Grade / Elevated Civil Works Package

[Drafting Note - the following remains subject to further development of the project scope and analysis, and to be tested through market sounding. Following that, the preferred solution will be presented].

8.3.7 Emerging solution - Airport Civil Works Package

[Drafting Note - the following remains subject to further development of the project scope and analysis, and to be tested through market sounding. Following that, the preferred solution will be presented].

Civils works in Stage 3b, which are completed within Auckland International Airport Limited's (AIAL) designation and a live airport environment, are particularly high risk and may need to be delivered or contracted by AIAL. This supports a more collaborative approach.

8.4 Line-wide package(s)

8.4.1 Emerging preferred packaging approach

The emerging packaging solution identified an initial **single line-wide package**. This package will include all line-wide scope such as rolling stock, track, rail systems, signalling, communications, depot fit-out, station fit-out and O&M.

8.4.2 Application of the value drivers

Table 14: Application of value drivers to line-wide packages contract model

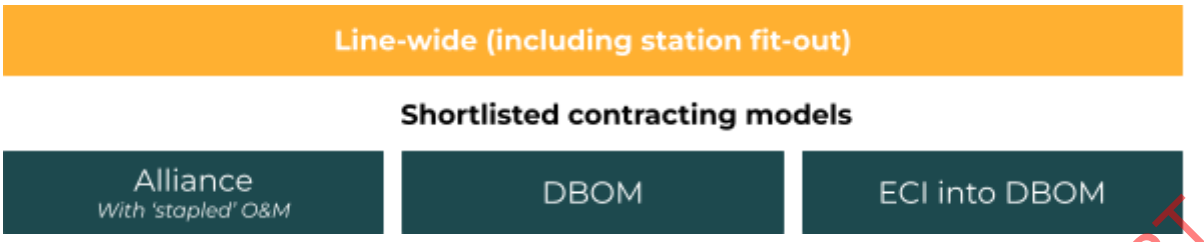
Value Drivers	Contract model considerations for line-wide package(s)
Customer outcomes	• Increased focus on customer outcomes generated through combining delivery, operations and maintenance, which is reflected in the packaging approach. • Contracting models can differ in relation to how embedded the operator is in the early phases, and the extent to which a 'consortium' is responsible for delivering the customer and whole of life outcomes. Delivery phase contracts with a 'stapled' O&M role likely to be less effective than a consortium approach that extends into operations. • Carefully designed KRAs during the contracting phase may achieve better performance and value over the lifespan of the contract.
Design	• ALR Ltd develops Reference Design and consenting on that basis. The contract models reflect a level of constructability design responsibility to transfer to the party(ies) contracting for delivery scope elements. • The line-wide package structure seeks to encourage more active input from Operators and System providers into the detailed design. Contract models that reinforce this position can enhance outcomes. • Flexibility within the package contract needed to allow the operational interface. Flexibility to respond to design changes from other packages may also be needed (although line-wide may be more likely to influence other packages, rather than civil packages needing line-wide flexibility).
Timing	• Operator involvement in the delivery phase is critical, which is addressed through the package scope. Line-wide design and delivery interfaces with the

	major civils package may require earlier appointment of line-wide. • Fixed time tensions may support programme outcomes, with the ability to manage interfaces with the package driving outcomes.
Risk Management	• Systems integration, interface with civil works, commissioning risk are the major risks for the line-wide package. Rolling Stock supply is likely to be lower risk given the less bespoke model chosen. • With most, if not all major systems in the package, most of the major complex project interfaces are managed within the package. The consortium will need to manage these internal interfaces (design, physical or timing) within the bid. Incentives to manage these may vary depending on the nature of the contract. • Whilst not providing fixed priced (for D&C), an Alliance structure will provide a collaborative environment to manage significant unknown risks. However, in the greenfield environment for GOA4, the expertise to manage these is likely within the consortium parties and as such they may be best placed to manage within the contract, rather than sharing responsibility with the client.
Market Appetite	• With a desire for greater aggregation of packages to reduce interface risks at the client level, the line-wide package is likely to be of a significant size and scale. However, this is subject to the contestable items and staging discussion in Section 7, and will be structured to be manageable for the market. • Alliance / ITC models have strong appetite for major civils, market feedback varies for line-wide scope. A consortium model with fixed scope and price across the package is preferred in some areas, and reflects predominant precedent. • Some areas of scope may require some risk sharing regimes, for example, interfaces with civil packages, with the line-wide expected to take a more active role in overall Project integration than the civil works parties.
Urban outcomes	• Contracting models for the delivery phase associated with the station fit-out components may benefit from having additional flexibility to deliver urban outcomes. • [Drafting note: To be considered further once the urban development solution has been further progressed, and the packaging approach at stations is further defined.]
Innovation	• The packaging approach brings together the suite of scope elements and participants from the outside, driving innovation in the integration approach both during procurement and through delivery. • Output specifications can enhance opportunities for the market to develop and deliver solutions that respond to these outcomes as distinct from client defined inputs. Output specifications are more relevant in fixed price models. • An Alliance model provides more flexibility for change during delivery which may drive innovation in response to a challenge or risk.
Flexibility and staging	• Augmentation regime needs to be considered for line-wide packages to respond to the staging profile and address the need for the Operator, systems and fleet providers to be across the whole network.
Broader outcomes	• Broader Outcomes can be incentivised through all contracting models and would be expected to form part of the KRAs /KPIs.

8.4.3 Shortlisted contracting models

Two contracting models have been shortlisted, which are summarised below.

Figure 27: Line-wide packages contracting models



Of note:

- **Alliance and O&M:** Given the scope and nature of the package, with O&M part of the delivery, an Alliance model is proposed to include a 'stapled O&M' contract. This brings O&M into the Alliance participants from the outset, and post delivery the Alliance falls away and a new O&M contract commences, with the O&M provider (and potentially fleet and systems as maintenance) accepting operational performance risks and network / asset conditions 'as built' by the Alliance to which they were a party.
- **DBOM model:** is a single contract that embeds the O&M (and other operational parties) into the consortium with fixed price and scope at outset. There is stronger market precedent for privately financed Design, Build, Finance, Operate, Maintain (DBFOM), (this contracting model wasn't shortlisted based on Sponsor guidance) then a DBOM. However, the DBOM features closely align with the DBFOM.
- **ECI into DBOM:** A variant on the Alliance and DBOM is an ECI process that results in fixed price DBOM. Alliance principles during procurement and establishment of the contract (price, scope, time) lead into a traditional DBOM contract with all scope elements.

Similar to the Alliance model, the ITC could be adopted for delivery, bringing fixed time tensions. However, it is expected given the nature of the line-wide package and complexities that time risks are as embedded with the package as delivery cost risks and the ITC not expected to enhance outcomes. If the Alliance is preferred, this could be re-tested.

8.4.4 Contracting model assessment

Key value drivers impacting the potential contracting model for line-wide works are summarised in the table below.

Table 15: Value drivers impacting the contracting model for line-wide works

Contract model	Line-wide package (including O&M)
Alliance with stapled O&M	• Fast to procure, subject to tender process and if competitive TOC, although does not necessarily result in overall programme benefits. • Collaborative models allow decisions to be deferred and managed together during delivery. This provides flexibility but can result in a tendency to make more changes during delivery, which add time and cost. • Where risks are known or understood by the market participants within the consortium, those parties may be better placed to manage directly rather than sharing risk exposure with the sponsor. With the line-wide package, the main

	risks relate to interfaces between complex rail systems and 'moving rail' scope. These may be best managed by participants and not the sponsor. • While Alliance brings O&M into delivery, the contract structure is more unusual on the O&M obligations and links to the delivery phase (relative to the DBOM). Under the risk sharing model, the Alliance is unlikely to have any continuing obligations into O&M and as such, the O&M contract would need to accept the Alliance outcomes as part of its fixed contract. Augmentation: • Subject to the timing of whether the alliance has finished or not, there will be flexibility to add scope / changes for future stages, with fixed margins and open book pricing. • The stapled O&M contract would require negotiated changes with some opportunity for pre-agreed augmentations for example, fleet pricing, O&M pricing, performance regimes.
DBOM	• A DBOM requires a developed understanding of Project scope prior to procurement. Contractors need sufficient information to appropriately price scope and risks of the works. This may increase the procurement time of the Project, and requires clients to make key decisions up front to avoid costly changes. • This model provides price and time certainty subject to the understanding and nature of particular risks. In a greenfield environment, it is expected that the scope of the line-wide package will be relatively well understood with the complexity and risks part of the contractor expertise (unlike ground conditions and utilities risk in major civils which can be genuinely unknown risks). • Market appetite to participate in DBOM is understood, however the scope / scale is to be tested. • Embedded operator outcomes during procurement, delivery and continuing into operations drive outcomes. **Augmentation:** • Subject to the timing of whether delivery works have finished or not, civil aspects of future stages could be procured separately or negotiated as a variation to DBOM scope, with fixed margins and open book pricing embedded in DBOM for those scope aspects. • The aspect of the DBOM would have pre-agreed augmentations. For example, fleet pricing, O&M pricing, performance regimes.
ECI into DBOM	**Hybrid modifications:** • An ECI process may provide similar outcomes to the Alliance during procurement (flexibility to work collaboratively through the design solution) and converts into the DBOM model. • The DBOM embeds the risk management into the consortium parties who have most expertise in the line-wide scope.

8.4.5 Emerging solution

[Drafting Note - the following remains subject to further development of the project scope and analysis, and to be tested through market sounding. Following that, the preferred solution will be presented]

8.5 Ancillary / standalone works

8.5.1 Emerging preferred packaging approach

The emerging packaging solution identified the following works packages:

- utilities identification and relocation
- site investigation and geotechnical
- vertical transport
- line-wide and station landscaping
- demolition.

[Drafting Note: We will consider consolidating the analysis below for each of the individual ancillary works packages into a single piece of analysis as part of the next iteration].

8.5.2 Utilities identification and relocation

The shortlisted contracting models for the utilities identification and relocation package is outlined in Figure 28 with further analysis below.

Figure 28: Utilities identification and relocation shortlisted contracting models

8.5.2.1 Contracting model assessment

Key value drivers impacting the potential contracting model for utilities identification and relocation early works are summarised in the table below. By its nature the utilities package is addressing unknown and unidentified utilities and lends itself to the collaborative models.

However, the ability to manage timing of works being completed by utility owners/providers is likely to constrain the benefits of the ITC approach. As such, in principle the **Alliance model is preferred** for managing scope of this nature (noting the extent of scope is to be defined).

[Drafting Note - subject to further development of the project scope and analysis, and to be tested through market sounding. Following that, the preferred solution will be presented]

Table 16: Value drivers impacting the contracting model for utilities identification and relocation early works

Value Drivers	Alliance	ITC
Timing	• The Alliance model provides the opportunity to quickly procure a package.	• Procurement length could be slightly longer, given the need to agree to a fixed time component.
Market Appetite	• As a high risk package(s), with material unknowns, and some work which will not be capable of being	• Nature of works are unknown scope and likely to be unknown challenges dealing with utilities providers. The

	self performed, the market will expect a highly flexible and collaborative contracting model (Alliance). • Given the significant amount of unknowns, and the recent history of precedent projects in having challenges with utilities identification and relocation, an Alliance contract will be anticipated by the market	market may be hesitant to accept time risk.
Risk Management	• Flexibility of an Alliance model likely to be preferred given the scope and risk profile. Significant risk with utilities identification and relocation.	• Ability to manage utility providers may be constrained, reducing the effectiveness of the tensions on time of the ITC. • Risks (including time) associated with negotiating and interfacing with third parties would likely need to be retained.

8.5.3 Site investigation and geotechnical

The shortlisted contracting models for the site investigation and geotechnical package is outlined in Figure 29 with further analysis below.

Figure 29: site investigations and geotechnical shortlisted contracting models

8.5.3.1 Contracting model assessment

Unknown geotechnical or contamination issues present a significant risk to project costs and programme. Site investigation and geotechnical works should be procured as early as possible, ahead of and outside the main civil works, in order to de-risk those major packages.

The market has demonstrated capability and understanding of the scope, which means fixed priced scopes could be achieved. However, the number and extent of samples to be taken may need to respond to the findings, requiring either a flexible approach of an Alliance, or a D&C 'scope ladder' type approach for additional testing.

[Drafting Note - selection remains subject to further development of the package scope]

Key value drivers impacting the potential contracting model for site investigations and geotechnical surveys are summarised in the table below.

Table 17: Key Value Drivers impacting the contracting model for site investigation and geotechnical

Value Drivers	Alliance	Design and Construct

Risk Management	• Interface with third parties may create complexity when undertaking site investigations / geotechnical works. • Alliance provides flexibility to respond to unknown, critical, high risk third party interfaces.	• Known scope for site investigation and geotechnical work suits a fixed contracting approach, providing cost and programme certainty.
Timing	• The Alliance model provides the opportunity to quickly procure. Nature of the scope however suggests most models can be quickly procured.	• Similar to Alliance. Fixed time to delivery if scope is known may improve overall timing.
Flexibility and staging	• This approach offers flexibility to respond to any emerging risks or evolving scope, reducing Project cost and programme risk.	• Less flexibility for changes, unless embedded in an pre-agreed 'options' / variations regime (eg pre-agreed additional samples).
Market appetite	• Consistent with general market trends towards a more collaborative risk sharing models.	• Scope well understood by the market, and strong market precedent for similar works undertaken with D&C contracting approach.

8.5.4 Vertical transport

[Drafting Note - the following remains subject to further development of the project scope and analysis, and to be tested through market sounding. Following that, the preferred solution will be presented]

8.5.5 Line-wide and station landscaping

[Drafting Note - the following remains subject to further development of the project scope and analysis, and to be tested through market sounding. Following that, the preferred solution will be presented]

8.5.6 Demolition

[Drafting Note - the following remains subject to further development of the project scope and analysis, and to be tested through market sounding. Following that, the preferred solution will be presented]

8.6 Integration

8.6.1 Emerging solution

[Drafting Note - the following remains subject to further development, and will heavily leverage the outcome of the Management Case]

8.6.2 Assessment

[Drafting note: the assessment analysis and outcomes will be included in a later draft]

This section will set out the assessment of the different procurement models and will be informed by the 'market intelligence' activities completed in late August/Early September.

8.7 Preferred procurement option

[Drafting note: the preferred procurement option will be included in a later draft]

This section will outline the preferred procurement model (i.e. preferred packaging approach, with the preferred contracting model for each package of works).

9. Contractual arrangements

9.1 Type of contract

[Drafting note: the type of contract will be finalised following the delivery model assessment. Further details will be included in a later draft.]

This section will outline the type of contract used for each package.

9.2 Commercial principles

[Drafting note: the commercial principles will be developed following the delivery model assessment. High level commercial principles will be included in a later draft.]

This section will outline the commercial principles that underpin each of the contracts outlined in the section above (i.e. principles for design, approach to integration/interface management, future expansion/augmentation, fares, etc.).

9.3 Risk allocation

[Drafting note: the risk allocation will be developed following the delivery model assessment. A detailed risk allocation table has been provided in Appendix C]

This section will summarise the risk allocations for each of the contracts, with the detailed risk allocation tables included in the Appendix.

9.4 Performance framework

[Drafting note: a performance framework will be developed following in a later draft.]

This section will summarise the performance framework for the different contracts (e.g. KPIs/KRAs, etc.).

9.5 Payment mechanisms

[Drafting note: a payment mechanism will be developed following in a later draft.]

This section will summarise the payment mechanism proposed for each of the contracts, building upon the risk allocations and performance frameworks outlined in the sections above.

9.6 Contract management

[Drafting note: contract management will be developed following in a later draft.]

This section will outline how the contracts will be managed going forward.

10. Accounting implications

10.1 Accounting treatment

[Drafting note: the accounting treatment will be developed following in a later draft.]

This section will outline the accounting treatment for the preferred procurement model. Depending on the level of detail available/degree some options are still open, the potential implications of different implications will be included.

11. Procurement plan

11.1 Tendering process

[Drafting note: the procurement plan will be developed following in a later draft.]

This section will outline the proposed tendering process (e.g. the procurement timeline, whether a two-stage tender process will be used, etc.).

12. Evaluation team and process

[Drafting note: this chapter will be developed in a later draft.]

12.1 Procuring team

12.1.1 Roles and responsibilities

12.2 Evaluation methodology

12.2.1 Evaluation model

12.2.2 Evaluation criteria and weighting

12.2.3 Innovation

12.2.4 Assessment of bids against the evaluation criteria

12.2.5 Due diligence

12.2.6 Additional process

12.3 Key procurement and stakeholders

[Drafting note: this chapter will be developed pending clarity and further thought on the key messages for this section and updating of the Management Case]

13. Procurement timeline

[Drafting note: the procurement timeline will be developed in a later draft. Note that the procurement timeline should have reference to the delivery timelines - faster procurement doesn't necessarily reflect faster delivery, for example, design development could be in pre-procurement or post procurement pending the contracting model type]

14. Insurance plan

[Drafting note: the insurance plan will be developed in a later draft.]

15. Next steps

[Drafting note: next steps will be developed in a later draft.]

Appendix A Detailed performance output requirements

[Drafting note: the detailed performance output requirements will be developed in a later draft.]

Appendix B Procurement methodology

[Drafting note: a PDF of the procurement methodology report will be included once finalised]

Appendix C Packaging analysis

Civils package

The advantages and disadvantages of the emerging solution for civils packages are outlined in Table [xx].

Table [xx] Advantages and disadvantages of emerging civils packages

Emerging solution	Advantages	Disadvantages
Tunnel and station excavation	Allows for a consistent contractor to transfer lessons learned (and now experienced and skilled contractors) from the initial stage of the tunneling works (i.e. Stage 1B) to the second stage of tunneling works (i.e. Stage 2).	The depth of the tunneling market in NZ may not be sufficient for a single tunnelling contract. [Drafting note: to be tested in more formal market sounding]
	Facilitates an single end-to-end solution that could lead to better service and customer experience outcomes by better integrating works;	Limits opportunities for multiple tunneling contractors to get experience within NZ (and potentially limiting the future market for tunneling works).
	Reduces the design and construction interface risk between tunnels and stations given that this will be transferred to the same contractor;	
	Provides more scope for innovation as the contractor has greater flexibility to adjust the design, develop alternative staging or program solutions or adopt different construction approaches; and	
	Creates cost efficiencies as there will be one TBM operator and a single dive site required for both stages.	
At Grade, Trenched and Elevated	Allows for the lessons learned on the Stage 1A package to be understood immediately for Stage 3A, providing potential efficiencies.	Potential reduced competitive tension through aggregating large package of work.
	Where Stage 3A is not contracted immediately with Stage 1A (i.e. ALR Ltd has the right to go to market), the Stage 1A contractor is further incentivised to perform strongly.	Reduced number of packages available for the market to tender on, potentially impacting development of the broader contractor market in NZ.
	Reduced interfaces ALR Ltd will be required to manage (i.e. between Stage 1A and Stage 3A civil works).	Reduced competitive tension where Stage 3A is not more competitively tendered (noting

		ALR has the capacity to go to market).
	Reduced procurement costs for ALR Ltd.	

Line wide package

The advantages and disadvantages of the emerging solution for the line wide packages are outlined in Table [xx].

Table [xx] Advantages and disadvantages of emerging line wide packages

Emerging solution	Advantages	Disadvantages
Tunnel and station excavation	Reducing interface risk which ALR Ltd is required to manage particularly in the context of: • All complex systems (including rail systems) to be packaged together • All customer facing components packaged together • Rollingstock, depot and rail systems are packaged together • Complex non-civil components of delivery are packaged with O&M	The package will require complex JV's;
	Will allow for an operator and rail systems led design	ALR Ltd may lose flexibility to lose their preferred provider in all categories (i.e. proponents will be selected on a consortium basis, not an an individual major supplier basis);
	Reduced the need for multiple procurements	The scale of the package and complexity may be too significant for the market [drafting note - to be further tested during market sounding].
		The voice of the operator may be reduced in a package where their scope does not make up a material component (in $ terms) of the package.

Appendix D Detailed procurement plan

[Drafting note:a PDF of the procurement methodology report will be included once finalised]

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Appendix E Detailed risk allocation tables

The risk allocation table below allocates risks to the stakeholder who is best able to manage them in order to achieve the best value for money for ALR Ltd. Identified risks are either:

- Retained by ALR Ltd
- Transferred to the private sector; or
- shared between the parties

[The risk register will be developed further for the next draft, headings and descriptions are indicative only for 50% draft]

Table [xx] Project Risk Summary

Risk No.	Type of risk	Description	ALR Ltd	Contractor	Shared
1	**Land Acquisition**				
2	**Site conditions**	Risk of unexpected geotechnical site conditions along the ALR CC2M corridor including flooding. Risk of managing/ removing contaminated sites discovered by the contracting party.			
3	**Force Majeure**	Risk that the project is delayed due to unexpected / unforeseen events.			
4	**Design risk**	Risk that the Project does not meet the contractual design requirements.			
5	**Construction delay risk**	Risk that construction is delayed and the Project is unable to be completed on time.			
6	**Construction cost overruns**	Risk that construction activities are completed over budget.			
7	**Interface risks**	Risk in managing interfaces and coordinating the combination of design, construction and O&M activities associated with ALR CC2M.			

8	**Other Government Projects**	Impact that other projects funded by the Government cause delay to the ALR CC2M Project activities.			
9	**Defects Risk**	Risk that post construction defects are identified in the Project.			
10	**Change of laws**	Risk that laws related to the construction of ALR CC2M change which directly impact the Project.			
11	**Financing**	Risk that financing is unable to be attained.			
12	**Foreign Exchange risk**	Risk of forex movements.			
13	**Market capacity**	The delivery and procurement of ALR Ltd is expected to occur concurrently with other Major projects around New Zealand (Lets get Wellington Moving, Waitemata Harbour Connections). There is significant risk that there will not be sufficient market capacity to deliver the desired outcomes of the Project.			
14	**Interface with the wider Auckland Rapid Transit Network**	The Project is a component of the potential network of rapid transit projects including Waitematā Harbour Connections and North West Rapid transit, resulting in interface and integration risks. associated with further extension.			
15	**Surrounding community**	Risks that construction imposes on the surrounding community and local businesses, considering the impacts COVID-19 lockdowns have had on similar businesses.			

16	**Commissioning**	Risk of late delivery due to complications involved in the commissioning process.			

Appendix F Detailed assessment of packaging and contracting options

[Drafting note: a PDF of the options assessment report will be included once finalised]

Table[xx] **Evaluation of contracting models**

Contracting Model	Pros	Cons
Design and Construct (D&C) In a Design and Construct delivery model, the main contractor takes on the responsibility for both the design and construction of the Project, and the O&M is separately procured. Under this model, the client will design a brief which outlines the functionality and key user requirements for the Project, which is less detailed than a construct only brief. The client will seek tenders for the Project, and tenderers will nominate a fixed price for design and construction of the Project.	• Potential early start on site as the construction is able to begin soon after the contract is awarded. Compared to other traditional methods, this method can result in an earlier completion. • Contractor is able to utilise its supply chain and flexibility in construction methodologies, this can result in design innovation. • There is a single point of responsibility for both design and construction resulting in less design/ construction interface. This may result in fewer disputes over design-related issues. • If requirements are clearly defined during the tender process, there can be a higher degree of cost certainty • Construction delays and cost overrun risks are transferred to the contractor • This contracting method would be suitable for a Project with a well defined scope and few 'unknown risks'. This allows for efficient transfer of risk and pricing.	• This contracting model is less suited for projects that have highly complex design requirements or require exceptional quality • The contractor generally has the choice of final selection of systems and materials • Tender period is long, as the contractors need enough time to develop the design proposals. These designs also need to be assessed alongside the programme, construction methodology and price • Cost of tendering tends to be higher than a traditional model, resulting in fewer applicants in the tender process • This contracting model may not be suitable if the client wants to have a significant level of control over the design phase • Limited opportunity to drive value over the whole of Project life through design innovation • Difficult to mitigate risk of cost overruns and time delays.
Construct Only Under a construct only contracting model, ALR Ltd is responsible for the design of the Project (either	• ALR Ltd retains control of the design process • Fixed price and time construction contracts	• ALR Ltd retains the scoping, interface and design risks. This can lead to price uncertainty as the final construction price depends

internal or external). A tender process is then conducted for the construction phase of the Project and awarded on a fixed price basis.	provides budgeting certainty to ALR Ltd.	on the completeness and accuracy of the design • Tunneling represents a complex element of the ALR CC2M Project, and these risks are unlikely to be transferred to the contractor.
Managing Contractor Under a managing contractor model, the client prepares a project brief (with a budget and estimated completion dates), and the managing contractor must work with the client in order to revise and refine the design and Project delivery eg engaging with subcontractors, thereby accepting some of the Project risk.	• ALR Ltd is able to retain control over the Project, while a reliable contractor is able to manage the Project and risks. • This type of model is suitable for Projects with high risk components and uncertain scope.	• ALR Ltd would retain the risk of cost overruns • No incentive to consider costs from an end to end view • Given the large number of stakeholders in ALR Ltd, the contractor would need to manage these expectations. This could be complex • The New Zealand construction market is unlikely to be able to provide a single managing contractor.
Design, Build, Operate, Maintain (DBOM) A DBOM model allows the contractor to procure the Projects O&M services for a specified period of time, as well as the Design and construct delivery model. This model would allow ALR Ltd to retain legal and economic ownership of ALR CC2M assets whilst transferring the responsibility of the design, construction and O&M to a contractor.	• This contracting model is suitable if the private sector is best placed to manage operating and maintenance risks • As the contractor is responsible for combined design, construction and O&M there is more incentive for innovation compared to a traditional D&C model • The contractor is encouraged to reduce 'whole of life' costs as some of the life cycle risk is transferred to the contractor • The contractor is accountable for everything (benefit for the client).	• Funding is provided progressively, and so risk is not fully transferred during construction • As the contractor is not only required to be paid upon completion of the works (as in a PPP model), risks of cost overruns and delays are difficult to mitigate for the client. • Tends to have longer tender processes and the client must evaluate both design, construction and O&M risks.
Alliance Delivery Model In an Alliance delivery model, the client and one or more parties work together to jointly execute the Project, sharing the	• Allows for innovation and improves efficiency from collaboration. • The project team works together throughout planning, design and	• Contract and negligence related matters are commonly excluded from legal claims. Claims are generally limited to matters

risks and rewards. This fosters a strong group culture where unanimous decision making is required. An Alliance delivery model is a collaborative procurement method, and is usually used for larger and more complex projects that would be challenging to price and deliver under a more traditional procurement method.	construction, encouraging decisions that are 'best for the Project.' • Supports knowledge transfer between all teams. • Fewer disputes as a result of aligned commercial interests. • Alliance incentivised to work together in order to reduce time and costs spent on the Project. • Suitable for complex projects with wide impacts. • Suitable for projects where significant risks are still unknown. As there will inevitably be unpredictable risks that cannot be identified prior to contracting and therefore cannot be costed, it can be best to manage these risks collaboratively • Ideal for a Project that has many stakeholder interfaces, especially with those that have competing interests • Allows for greater collaboration • Allows for continuous improvement, as the scope can vary.	of wilful default or insolvency. • In order to meet cost and timing demands, quality can often be overlooked • Requires significant resourcing from the client to implement the correct structures needed to govern the Alliance. • The client needs to ensure they are implementing the correct culture from the beginning of the project. This is imperative for the success of the Alliance. All parties must work together and collaborate on all issues • The client ultimately bears the risk related to price.
Incentivised Target Cost (ITC)	• Earlier focus on scoping, design, costing and risk assessment • Scope and design are able to be collaboratively developed and costed in the ITC contract suite, while ensuring an appropriate amount of competitive tension can be leveraged to drive innovation and efficiency in costing. • Greater transparency on actual cost and delivery information, so the Project team can be a more active and informed client over time in the application of cost and risk benchmarking • More balanced risk	• Reduced time and cost certainty to the Client due to risk sharing nature of the contract • Contracts are less likely to be appropriate where a projects risk profile can be understood and efficiently priced by the contractor market • Risk of direct exposure for the Client and time and cost overruns under the Risk and Reward Regime • The success of the collaborative contract elements are contingent on Client having the necessary capability and capacity to provide robust interrogation

	allocation, which is more attractive to the market. • Risk is allocated to the party that is best suited to manage it • Parties are appropriately incentivised to deliver on time • Cost performance regime that better aligns with the interests of the Client and the Contractor. • Robust set of KPIs structured as a positive financial incentives to drive desired behaviours • Strong cost management	of proposed costs, both during the procurement process and into delivery.
Early Contractor Involvement (ECI) ECI occurs in order to engage contractors early on in the Project and gain early advice and involvement from a contractor into the optimisation and feasibility of designs.	• Can improve costs and time savings • More chance for innovation with early involvement • Greater change for design optimisation • The Project is able to commit to construction resources earlier, especially helpful with elements.	• ALR Ltd would retain all of the delivery risk • In order to manage interfaces with other packages, ALR Ltd would need to be proactive in maintaining a detailed schedule of works and completion date. • It may be difficult to find the personnel with the required skills and expertise to complete the works • There is often uncertainty around price due to lack of competition. This may inflate costs.

Appendix G Market engagement

[Drafting note: copy of market engagement process and methodology to be included once finalised - to cover the market intelligence process and subsequent market sounding to be completed post this draft]

Appendix H Delivering the Broader Outcomes and sustainable procurement

[Drafting note: a PDF of the broader outcomes and sustainable procurement report will be included once finalised]

Appendix I Property acquisition strategy

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[Drafting note: a PDF of the procurement methodology report will be included once finalised]

Appendix J Consenting strategy

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[Drafting note: a PDF of the procurement methodology report will be included once finalised]