

**To:** Russell Butchers, Auckland Council  
cc/- Drury Metropolitan Centre Consolidated Stages 1 and 2 Expert Panel

**From:** Mary Wong / Pamela Santos – Barker & Associates Limited

**Date:** 24 July 2025

**Re:** Response s67 further information memorandum recommended by Auckland Council

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This memorandum addresses Auckland Council’s ‘s67 - Further Information’ request dated 23 June 2025 (“Auckland Council memorandum”) regarding the Drury Metropolitan Centre Consolidated Stages 1 and 2 listed project (“the Project”). The Auckland Council memorandum was sent to the Panel and copied to Kiwi Property No.2 Holdings Limited (“Kiwi Property”).

The Panel has not issued any directions regarding the memorandum and it does not constitute a formal further information request from the Panel under section 67 of the Fast-track Approvals Act 2024 (FTAA). Despite this, and in an effort to narrow the scope of issues, Kiwi Property has prepared a response to the matters raised in the memorandum. Kiwi Property will also endeavour to work with Auckland Council and/or interested parties as the Project progresses.

Kiwi Property’s responses to the individual information requests recommended by Auckland Council are contained in the table overleaf. This table consolidates responses from the project team relative to their respective disciplines. The following are also included as supporting attachments:

- Attachment 1 – Flood depth plots
- Attachment 2 – Water level difference plots
- Attachment 3 – Overland flow path assessment
- Attachment 4 – Subdivision scheme plans Stage 1 and 2
- Attachment 5 – Proposed draft consent conditions
- Attachment 6 – WFH modelling memo
- Attachment 7 – Vehicle tracking
- Attachment 8 – Engineering drawings
- Attachment 9 – Landscape drawings
- Attachment 10 – Signage review assessment
- Attachment 11 – Architectural drawings
- Attachment 12 – Adaptive Management Plan
- Attachment 13 – Stream ecological valuation
- Attachment 14 – Wetland delineation assessment points

As the Auckland Council memorandum was provided to the Panel, Kiwi Property’s responses have been copied to them as well.

# Memorandum

No. Auckland Council Information Request Applicant Response

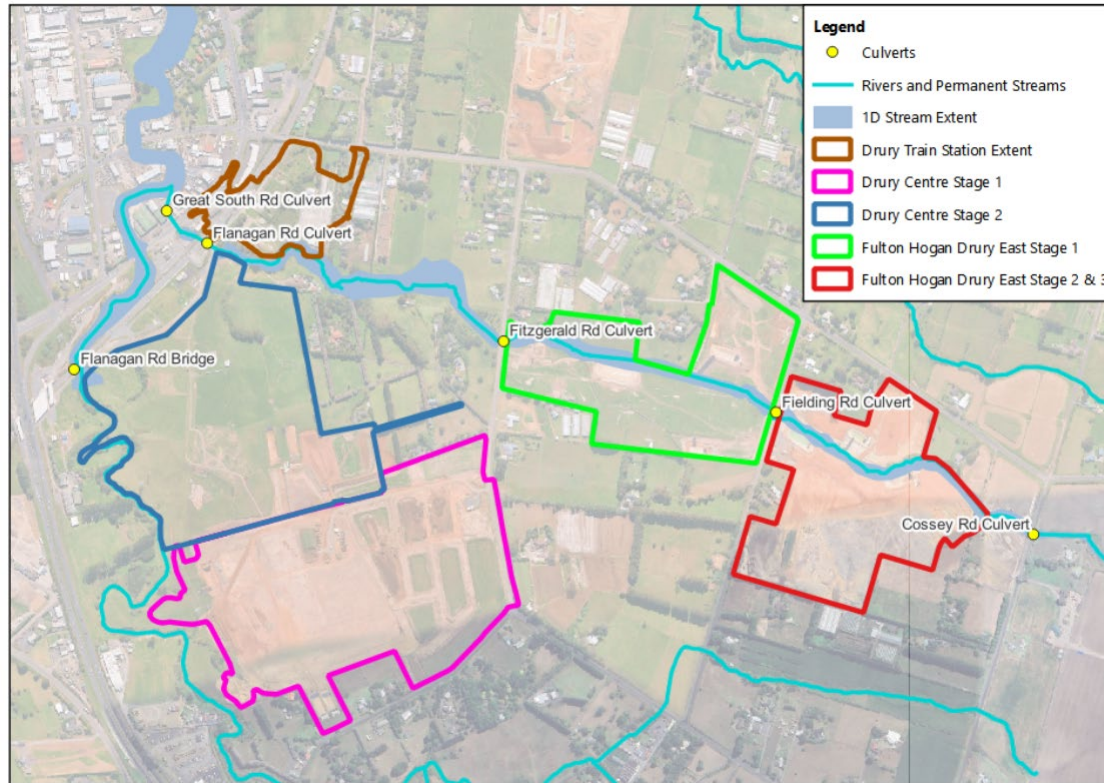
## Healthy Waters

1	<p>A copy of the Applicant's flood model for the Fitzgerald Stream including all of the modelled pre-development model and post-development scenarios. This should include:</p> <ul style="list-style-type: none"><li>a. Additional modelling and associated assessment of effects for the Fitzgerald Stream relative to existing land use and no climate change.</li><li>b. Additional modelling and associated assessment of effects for the Fitzgerald Stream considering 3.8-degree climate change.</li><li>c. Provide the modelling and associated assessment of effects for the flow attenuation scenario.</li></ul>	<p>The models and associated effects are attached for the following scenarios as requested. It is noted the models have been updated since the submission on 21/03/2025 with comments that have been received from Healthy Waters as part of the model review undertaken for the Fulton Hogan Drury East Stages 2 and 3 SIMP. Given the model review, it was deemed appropriate that the same review comments were implemented in the Drury Centre models being used for this application to ensure consistency between models.</p> <p>Therefore, the models and results for the following scenarios can be found in <b>Attachment 1</b> (flood depth plots), <b>Attachment 2</b> (water level difference plots) with a summary provided below. The areas being discussed is shown in the figure below.</p>
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Scenario	Storm event	Climate change	Land use and landform	Depth plots – Plan reference	Water level difference plot – Plan reference	Comments
Pre-development	2-year	No CC	Drury Train Station – Landform + 100% imperviousness LiDAR 2016 DEM data + existing imperviousness across model extent	P24-447-SKT-1001	N/A	Baseline model to compare post-development models
		2.10C		P24-447-SKT-1002		
		3.80C		P24-447-SKT-1003		
	10-year	No CC		P24-447-SKT-1004		
		2.10C		P24-447-SKT-1005		
		3.80C		P24-447-SKT-1006		
	100-year	No CC		P24-447-SKT-1007		

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Post-development		2.10C		P24-447-SKT-1008		
		3.8°C		P24-447-SKT-1009		
	2-year	No CC	Drury Train Station – Landform + 100%	P24-447-SKT-1013	P24-447-SKT-0001	No change
		2.1°C	imperviousness	P24-447-SKT-1014	P24-447-SKT-0002	No change
		3.8°C	Drury Centre Stage 1 – design landform + 100% imperviousness	P24-447-SKT-1015	P24-447-SKT-0003	No change
	10-year	No CC	Drury Centre Stage 2 – Land use and landform adopted as per master plan	P24-447-SKT-1016	P24-447-SKT-0004	Differences (increase) shown at Drury Train Station as highlighted in <b>Area A</b> in the flood depth and water level difference plots. This is discussed further below in this response.
		2.1°C		P24-447-SKT-1017	P24-447-SKT-0005	
		3.8°C	Fulton Hogan Stage 1 - Landform + existing Imperviousness	P24-447-SKT-1018	P24-447-SKT-0006	
	100-year	No CC	Fulton Hogan Stage 2 and 3 – Land use and landform adopted as per master plan	P24-447-SKT-1019	P24-447-SKT-0007	Differences (increase) shown upstream of Drury Centre Stage 2 within the Hingaia Stream and contained within the existing flood extent, adjacent to Drury Centre Stage 1 as highlighted as <b>Area B</b> in the flood depth and water level difference plots. This is further below in this response.
		2.1°C		P24-447-SKT-1020	P24-447-SKT-0008	
		3.8°C	LiDAR 2016 DEM data + existing imperviousness across model extent	P24-447-SKT-1021	P24-447-SKT-0009	
			Structures along Fitzgerald Tributary have been retained as per the pre-development scenario, except for Fielding Road culvert which is upgraded as part of the Fulton Hogan Stages 2 and 3 development.			

## Area A – Drury Train Station

Differences are observed around the Drury Train Station in the 10-year scenarios ranging from 50mm to 100mm depending on climate change scenario. The differences observed (increase) are due to upstream Fulton Hogan Drury East Stage 2 and 3 developments with the increase meeting the Fulton Hogan Drury East Stage 1 Precinct Fast-track consent conditions. Additional modelling undertaken confirms this and demonstrates the increases are not attributed to the proposed Drury Centre Stage 2 development.

A summary of the additional modelling is shown below.

Scenario	Storm event	Climate change	Land use and landform	Depth plots – Plan reference	Water level difference plot – Plan reference	Comments
Post-development with Drury Centre Stage 1 and 2 only	10-year	No CC	Drury Train Station – Landform + 100% imperviousness	P24-447-SKT-1031	P24-447-SKT-0019	Water level difference plot undertaken against pre-development models. No differences observed as a result of the proposed development in Drury Centre Stages 1 or 2 (Area A in the flood depth and water level difference plots).
		2.1°C	Drury Centre Stage 1 – design landform + 100% imperviousness	P24-447-SKT-1032	P24-447-SKT-0020	
		3.8°C	Drury Centre Stage 2 – Land use and landform adopted as per master plan	P24-447-SKT-1033	P24-447-SKT-0021	

## Area B – Upstream of Drury Centre Stage 2

Increases are observed around the Hingaia Stream (limited to the existing flood extent) adjacent to Drury Centre Stage 1. The differences observed (increase) are due to upstream development on Drury Centre Stage 1 and to the associated wetland which has already been consented with Drury Centre Stage 1 SIMP. Additional modelling undertaken confirms this and demonstrates the increases are not attributed to the proposed Drury Centre Stage 2.

A summary of the additional modelling is shown below.

Scenario	Storm event	Climate change	Land use and landform	Depth plots – Plan reference	Water level difference plot – Plan reference	Comments
Pre-development with Drury Centre Stage 1	100-year	No CC	Drury Train Station – Landform + 100% imperviousness	P24-447-SKT-1010	N/A	Used as a comparison for differences observed in Area B in the flood depth and water level difference plots
		2.1°C		P24-447-SKT-1011		
		3.8°C	Drury Centre Stage 1 – design landform + 100% imperviousness	P24-447-SKT-1012		
Post-development	100-year	No CC	Drury Train Station – Landform + 100% imperviousness	P24-447-SKT-1028	P24-447-SKT-0022	Water level difference plot undertaken against pre-development models with Drury Centre Stage 1
		2.1°C	Drury Centre Stage 1 – design landform + 100% imperviousness	P24-447-SKT-1029	P24-447-SKT-0023	
		3.8°C		P24-447-SKT-1030	P24-447-SKT-0024	No differences observed within Area B in the flood

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				Drury Centre Stage 2 – Land use and landform adopted as per master plan Fulton Hogan Stage 1 - Landform + proposed Imperviousness Fulton Hogan Stage 2 and 3 – Land use and landform adopted as per master plan LiDAR 2016 DEM data + existing imperviousness across model extent Structures along Fitzgerald Tributary have been retained as per the pre-development scenario, except for Fielding Road culvert which is upgraded as part of the Fulton Hogan Stages 2 and 3 development.			depth and water level difference plots.
		<b>Attenuation runs</b>  Attenuation has been considered with the assessment undertaken detailed in the ‘Drury Centre Stage 2 Stormwater Assessment’ as a flood management strategy for the portion of the site that discharges to the Fitzgerald Tributary. The assessment concludes that the peak water levels are controlled by backwater effects from Hingaia Stream and that attenuating flows from areas of Drury Centre Stage 2 results in higher peak water levels in Fitzgerald Stream due to effects of timing. Therefore, this option has been discounted. The analysis has been undertaken for 24-hour duration and models have been provided as requested.					
2	Justification of how the effects of the proposed development can be accurately assessed with the modelled post-development scenario land use and landform assumptions/conditions that include the consented developments of Drury	The inclusion of landform for Drury Centre Stage 1 and Fulton Hogan Drury East Stage 2 and 3, as per the original application, was based on best available information at the time of the submission.  As per Healthy Waters’ request, additional modelling has now been simulated to also allow for the impervious coverages of Fulton Hogan Drury East Stage 1 with a summary of the models provided below. The water level difference plots indicate no differences. Plots are included in Attachment A and B.					

	Centre Stage 1 and Fulton Hogan Stage 2 & 3, but exclude the consented development of Fulton Hogan Stage 1	<table><tr><th>Scenario</th><th>Storm event</th><th>Climate change</th><th>Land use and landform</th><th>Depth plots – Plan reference</th><th>Water level difference plot – Plan reference</th><th>Comments</th></tr><tr><td rowspan="10">Post-development with imperviousness of Fulton Hogan Stage 1</td><td rowspan="3">2-year</td><td>No CC</td><td>Drury Train Station – Landform + 100% imperviousness</td><td>P24-447-SKT-1022</td><td>P24-447-SKT-0010</td><td rowspan="10">Water level difference plot undertaken against pre-development models. No differences observed as a result of imperviousness of Fulton Hogan Drury East Stage 1</td></tr><tr><td>2.1°C</td><td>Drury Centre Stage 1 – design landform + 100% imperviousness</td><td>P24-447-SKT-1023</td><td>P24-447-SKT-0011</td></tr><tr><td>3.8°C</td><td></td><td>P24-447-SKT-1024</td><td>P24-447-SKT-0012</td></tr><tr><td rowspan="3">10-year</td><td>No CC</td><td>Drury Centre Stage 2 – Land use and landform adopted as per master plan</td><td>P24-447-SKT-1025</td><td>P24-447-SKT-0013</td></tr><tr><td>2.1°C</td><td>Fulton Hogan Stage 1 - Landform + proposed imperviousness</td><td>P24-447-SKT-1026</td><td>P24-447-SKT-0014</td></tr><tr><td>3.8°C</td><td>Fulton Hogan Stage 1 - Landform + proposed imperviousness</td><td>P24-447-SKT-1027</td><td>P24-447-SKT-0015</td></tr><tr><td rowspan="4">100-year</td><td>No CC</td><td>Fulton Hogan Stage 2 and 3 – Land use and landform adopted as per master plan</td><td>P24-447-SKT-1028</td><td>P24-447-SKT-0016</td></tr><tr><td>2.1°C</td><td>LiDAR 2016 DEM data + existing imperviousness across model extent</td><td>P24-447-SKT-1029</td><td>P24-447-SKT-0017</td></tr><tr><td>3.8°C</td><td>Structures along Fitzgerald Tributary have been retained as per the pre-development scenario, except for Fielding Road culvert which is upgraded as part of the Fulton Hogan Stages 2 and 3 development.</td><td>P24-447-SKT-1030</td><td>P24-447-SKT-0018</td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	Scenario	Storm event	Climate change	Land use and landform	Depth plots – Plan reference	Water level difference plot – Plan reference	Comments	Post-development with imperviousness of Fulton Hogan Stage 1	2-year	No CC	Drury Train Station – Landform + 100% imperviousness	P24-447-SKT-1022	P24-447-SKT-0010	Water level difference plot undertaken against pre-development models. No differences observed as a result of imperviousness of Fulton Hogan Drury East Stage 1	2.1°C	Drury Centre Stage 1 – design landform + 100% imperviousness	P24-447-SKT-1023	P24-447-SKT-0011	3.8°C		P24-447-SKT-1024	P24-447-SKT-0012	10-year	No CC	Drury Centre Stage 2 – Land use and landform adopted as per master plan	P24-447-SKT-1025	P24-447-SKT-0013	2.1°C	Fulton Hogan Stage 1 - Landform + proposed imperviousness	P24-447-SKT-1026	P24-447-SKT-0014	3.8°C	Fulton Hogan Stage 1 - Landform + proposed imperviousness	P24-447-SKT-1027	P24-447-SKT-0015	100-year	No CC	Fulton Hogan Stage 2 and 3 – Land use and landform adopted as per master plan	P24-447-SKT-1028	P24-447-SKT-0016	2.1°C	LiDAR 2016 DEM data + existing imperviousness across model extent	P24-447-SKT-1029	P24-447-SKT-0017	3.8°C	Structures along Fitzgerald Tributary have been retained as per the pre-development scenario, except for Fielding Road culvert which is upgraded as part of the Fulton Hogan Stages 2 and 3 development.	P24-447-SKT-1030	P24-447-SKT-0018				
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3	Overland flow path assessment including catchment plans and representative cross-sections of the overland flow conveyance corridors, with supporting calculations assuming Maximum Probable	<p>Please refer to ‘Memorandum – overland flow path assessment’ dated 14/07/2025 – <b>Attachment 3</b>.</p> <p>An overland flow path assessment has been undertaken for the proposed Drury Centre Stage 2 development. The assessment estimated peak flows at critical locations along the proposed road network for a 100-year ARI storm event, incorporating a 3.8°C climate change uplift and accounting for primary stormwater network blockage in accordance with SWCoP (Version 4).</p> <p>Flood depth and velocities were calculated using Hydraulic Toolbox and assessed against the criteria outlined in Table 3 of the Road Drainage chapter in the AT TDM.</p>																																																				

	Development (MPD) and 3.8-degree climate change.	The results confirm that all assessed cross-section locations comply with the relevant requirements for vehicular and pedestrian safety specified in the AT TDM.
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#### Parks Community Facilities

4	<b>Non-delivery of Indicative Open Space (Homestead Park):</b> The indicative park identified in the Auckland Unitary Plan's Drury Centre Precinct Plan has not been proposed. The proposed substitution (Valley Park) lacks sufficient justification and assessment in terms of spatial distribution, service provision, functional equivalency, and enhancing primary recreation close to a civic pace. The provision of at least 3,000m <sup>2</sup> should be allocated to the formalised park provision. Further analysis and assessment outlining the reasons for the non-provision is requested	<p>Precinct Plan 2 depicts the key Structuring Elements for the Drury Centre Precinct and this includes Homestead Park. Importantly, there is a note at the bottom of Precinct Plan 2 which reads "All elements shown are indicative only and subject to detailed design and investigation as part of the resource consent process."</p> <p>This detailed design has occurred as part of the design process for the Project and the Homestead Park as indicatively shown on Precinct Plan 2 is no longer proposed. The analysis and assessment for not providing the Homestead Park is addressed in sections 5.3.1 and 5.3.2 of the Urban Design Report in Appendix 14 of the application material.</p>
5	<b>Clarification of Reserve Classification and Updated Scheme Plans:</b> A clear distinction is required between land proposed to vest as a recreation reserve and land proposed as a local purpose (drainage) reserve. Updated	<p>The updated subdivision scheme plans included as <b>Attachment 4</b> demonstrate that the only reserve in the Project proposed to be vested with Council is Lot 610 which is the 20m wide esplanade reserve adjacent to the Hingaia Stream. The subdivision consent conditions included as <b>Attachment 5</b> have been updated to reflect this by deleting subdivision conditions 24, 33, 36, 94-98, 120-124 and 131-135.</p> <p>All other reserves shown on the scheme plans that either have a stormwater drainage or recreation function are to be retained in private ownership by Kiwi Property. This is consistent with the approach of the Drury Centre</p>



	<p>scheme plans should reflect this delineation to enable accurate assessment of recreational function, amenity provision, and acquisition suitability. Further clarification is also needed to distinguish the respective scopes of Healthy Waters and Parks, particularly where recreational assets are proposed on land primarily functioning as stormwater infrastructure. It must be confirmed whether such land is suitable for recreational purposes, particularly if a park is not formally proposed in accordance with Council standards.</p>	<p>Stage 1 fast-track consent which only vests the esplanade reserve with Council, with all other reserves to be retained in private ownership and maintained by Kiwi Property.</p>
6	<p><b>Land Suitability for Recreational Use:</b> Confirmation is required that the proposed open space areas, particularly those with secondary drainage functions, can support a primary recreational purpose, in line with neighbourhood park provision standards. Currently, a conflict exists between the proposed recreational function and the underlying stormwater management needs of the land. As currently proposed, Valley Park does not meet Auckland</p>	<p>The appropriateness of the open space provisions for recreational purposes have been addressed in section 5.3 of the Urban Design Report in Appendix 17.</p>

	Council's criteria for recreational open space provision. Further assessment is requested from the applicant on how recreational values would be provided.	
7	<p><b>Amenity Development Commitment:</b> The extent of the proposed open space falls short of what was initially anticipated. Further detail is required from the applicant to confirm a commitment to fully fund, construct, and maintain all open space assets and service provisions, prior to vesting, and in accordance with Council-approved standards. The current draft conditions only secure the delivery of stormwater, transport infrastructure, and landscaping of roads and reserves, with no clear obligations relating to the development of recreational or amenity assets.</p>	<p>The open space network forms an inherent part of the Project to be developed by Kiwi Property and is illustrated and described in the architectural drawings (Appendix 6), landscape design report (Appendix 7) and subdivision scheme plans (Appendix 8). The open space network forms part of the Project that will be developed and delivered by Kiwi Property. While Homestead Park is no longer proposed as part of the development, Valley Park has been significantly expanded to provide a focal point for the civic and public activity. The more extensive design of Valley Park is a response to the stormwater/ecological requirements needed to enhance Stream A. This aligns with the Drury Centre precinct provisions which seeks to maintain and enhance the waterways on site, integrating them with the open space network as a key feature. The open space areas are, overall, as effective functionally, as conveniently accessed, and as attractive as the original proposal.</p> <p>In our view, it is unnecessary to impose consent conditions requiring the development of open spaces when they are already inherently part of the Project and are consistently depicted on the application drawings which illustrate the proposed activities. We also note that Condition 1 Activity in Accordance with Application requires the consent holder to undertake the works in general accordance with the application and this is considered to be sufficient.</p>
8	<p><b>Maintenance and Asset Handover Strategy:</b> An interim open space maintenance plan is requested, outlining the proposed approach to maintenance during the period</p>	<p>An interim open space maintenance plan is considered to be unnecessary because all open spaces, other than Lot 610 containing the esplanade reserve to be vested, will be privately owned and maintained by Kiwi Property. Council will not have any obligation to fund purchase or maintenance of almost all of the land. Further, Kiwi Property's corporate experience is that it puts far more care and resourcing into developing and maintaining the</p>

	<p>between asset establishment, after asset establishment and formal handover. Accordingly, no capital (CAPEX) or operational (OPEX) funding has been allocated for its acquisition, development, or maintenance within this period. Advancing acquisition and development ahead of the planned sequencing presents both funding and operational risks.</p>	<p>open space areas within and around its large centres (e.g.: Sylvia Park) than does the relevant territorial authority.</p>
9	<p><b>Revised Landscaping and Planting Schedules:</b> There is a gap in the proposed planting schedules regarding species selection within the streetscape and civic spaces that would support medium to large tree canopy closure within the street environment and thrive in these conditions. The following matters should be addressed:</p> <ol style="list-style-type: none"> <li>Removal of Karaka (<i>Corynocarpus laevigatus</i>) due to toxicity concerns for dogs.</li> <li>Greater tree species diversity to enhance</li> </ol>	<p>Most of the roads as part of the Proposal will remain in private ownership and only Road 2 and Road 25 are to be vested. As such, the response below is only relevant to the roads that are to be vested. Kiwi Property is happy to work with Council officers regarding the text of a suitable condition.</p> <p><b>Karaka Removal</b></p> <p>Kiwi Property notes and accepts the recommendation to remove <i>Corynocarpus laevigatus</i> (karaka)</p> <p><b>Canopy Closure and Suitability for Street Conditions</b></p> <p>The proposed species have been reviewed in the context of their performance across various urban realm projects, including Federal Street, Quay Street, Wynyard Quarter, Viaduct Basin, K Road, and Hurstmere Road.</p> <p>The following native species are generally considered suitable for urban environments, provided appropriate planting conditions are in place (eg adequate soil volume, tree pit construction, and long-term maintenance):</p> <ul style="list-style-type: none"> <li>• <i>Metrosideros excelsa</i> 'Māori Princess' (pōhutukawa)</li> <li>• <i>Alectryon excelsus</i> (tītoki)</li> <li>• <i>Podocarpus totara</i> (tōtara)</li> <li>• <i>Vitex lucens</i> (pūriri)</li> </ul>

	<p>ecological resilience; the currently proposed species have demonstrated limited survival in similar streetscape environments and contribute minimally to long-term canopy outcomes (Excluding the Pohutukawa trees).</p> <p><b>Note:</b> Council considers this matter may be suitably addressed by condition and encourages early engagement on wording ahead of the Panel's section 70 invitation to comment on draft conditions.</p>	<ul style="list-style-type: none"> <li>• Pouteria costata (tāwāpou)</li> <li>• Beilschmiedia tarairi (taraire)</li> <li>• Knightia excelsa (rewarewa)</li> <li>• Dysoxylum spectabile (kohekohe)</li> </ul> <p>It is acknowledged that Rhopalostylis sapida (nīkau) and Cordyline australis (cabbage tree) are not typically used for canopy closure but can perform well in urban settings. Their contribution is more appropriate in streetscape gardens or plazas rather than as primary street trees</p> <p>There are other species included in the current schedule that may not be suitable as standalone street trees but could be well-integrated into community pocket parks and rain gardens. Where possible, Kiwi Property aims to establish visual and ecological continuity between streetscape planting and stormwater edge planting to enhance precinct-level cohesiveness.</p> <p><b>Tree Pit Design &amp; Urban Constraints</b></p> <p>Long-term canopy success is highly dependent on appropriate tree pit design. Kiwi Property anticipates further coordination with civil and structural engineers to optimise soil volumes and rooting environments.</p> <p><b>Consideration of Exotic Species</b></p> <p>As the species list is refined, this may need further discussion with the client team, mana whenua, and the ecologist. While Kiwi Property remains committed to prioritising native species, it acknowledges that exotic trees may perform better in highly constrained urban environments. There may be value in considering whether a mixed approach is appropriate in some locations.</p>
10	<p><b>Active Mode Connectivity:</b> The proposal lacks confirmation of a fully integrated active mode network. Key structuring links, such as the original Station Road east- west connection, have been altered, and it remains</p>	<p>Section 5.2.1 of the Urban Design Report in Appendix 14 assesses the block structure and connectivity of the proposal with reference to the location of indicative collector roads shown on Precinct Plan 2 and the road design of the Project. This assessment concludes that:</p> <ul style="list-style-type: none"> <li>• The proposed street network is generally aligned with the locations of the key roads in the Drury Centre Precinct Plan 2;</li> </ul>

	<p>unclear whether alternative alignments will deliver equivalent connectivity outcomes across reserves, civic spaces, and the transport network, especially where civic spaces and primary recreation areas have been altered.</p>	<ul style="list-style-type: none"> <li>• ‘Station Road’ varies in its location due to the fixed constraint of the State Highway 1 Drury off-ramp but east-west connectivity is future proofed across the development through the provision of Road 6 and Rauika Road; and</li> <li>• The block structure is configured to create a well-connected street layout, linking Drury Centre to the wider network and the future Drury Centre Train Station to the north.</li> </ul> <p>Section 4.2 of the ITA in Appendix 16 provides confirmation that the Project has been designed ensure high standards of service and safety for active modes of transport such as walking and cycling within the Precinct. Overall, the entire precinct provides the required active mode connectivity. All collector roads provide protected cycleways, and all local roads provide traffic calming to enable safe cyclist road sharing. This is regardless as to whether roads are public or private. Footpaths are provided on all roads, and raised active mode crossings are provided at all intersections and in many mid-blocks.</p>
11	<p><b>Implementation and Maintenance of Open Space:</b> While draft consent conditions include some landscaping and maintenance provisions in accordance with the Councils practise (2 year minimum maintenance obligation for street landscaping and 5 years minimum for Reserve), the enforceability, scope, and alignment of these measures with Auckland Council’s standards and operational expectations require further detail, particularly for vested assets.</p> <p><b>Note:</b> Council considers this matter may be suitably addressed by condition and encourages early engagement on wording ahead of the Panel’s section</p>	<p>Noted and Kiwi Property acknowledges that the proposed consent conditions are likely to be refined throughout the consenting process.</p>

	70 invitation to comment on draft conditions.	
<b>Auckland Transport</b>		
12	There is insufficient evidence provided by the Applicant on the trip generation calculations relating to the work from home (WFH) rates. AT is unsure if the WFH rates may allow for a certain level of development to occur but not trigger the associated transport upgrades required to support the development. The Applicant should provide further information in the form sensitivity/scenario testing of the WFH assumption as AT cannot be certain of the WFH adjustments potential extent of adverse effects on the transport network.	There have been several meetings with Auckland Transport and NZTA to discuss this item, which resulted in some further information regarding the methodology behind the WFH adjustments being supplied. A separate memo (dated 21 July 2025) has been prepared to collate the further information shared through those meetings and is included as <b>Attachment 6</b> .
13	The Applicant should confirm whether this 1.5% reduction has been applied to retail trips, and if so, provide further information on the calculations and methodology used to derive this figure. Without this information, AT cannot be certain how the WFH adjustment affects retail trip	Refer to <b>Attachment 6</b> for the response to this item.

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	generation or fully understand the potential extent of adverse effects on the transport network.	
14	The Applicant should provide further information demonstrating that no WFH rate adjustment has been made for either visitor accommodation or the commercial activities. Without confirmation, AT cannot be certain of the baseline trip generation from these sources and therefore cannot fully assess the potential extent of adverse effects on the transport network.	It is confirmed that no adjustments have been made to any other activities, other than residential and retail discussed previously and addressed in <b>Attachment 6</b> .
15	The Applicant should provide further information to demonstrate for each activity type and on each row of the proposed Table 11, the trip generation rate used (specifying the rate per activity type and for each relevant year of stage), and clearly reference these rates back to the specific rates in the Southern Growth Program (SGP) report. Without this information, AT cannot fully assess the potential extent of adverse effects on the transport network.	Refer to <b>Attachment 6</b> for the response to this item.

16	Table 11 proposed to re-sequence some required infrastructure delivery across different development threshold (rows). The Applicant should provide further information to demonstrate the effects of allowing for an additional 49,000m <sup>2</sup> of retail GFA be built before the State Highway 1 (SH1) six-lane works is complete in 2030. The Applicant has relied on previous modelling undertaken as part of the plan change, but this proposed change in the thresholds has not been modelled.	Refer to <b>Attachment 6</b> for the response to this item.
17	The Applicant should provide further information to demonstrate what calculations go into the Table 11 Row F 'assessment of public transport uptake', what uptake expectations are needed to be met in order to determine that public transport is actually being effective in reducing private vehicle trip generation, and what planning mechanism is proposed to ensure this level of assessment is provided at the relevant time.	Refer to <b>Attachment 6</b> for the response to this item.



18	<p>The interim bus route (and potentially permanent if Road 25 is not provided) will use Road 3 and Road 6 to access the Drury Train Station. These are private roads. The Applicant should provide further information to demonstrate how bus circulation will be operative at all times on the proposed private roads as the buses are subject to potential road closures.</p>	<p>Bus circulation on private roads within commercial retail centres owned and operated by Kiwi Property are not unusual or unprecedented. For example, public buses have travelled through private roads at Sylvia Park for 20 years and there are bus stops along private roads in Sylvia Park also. There is no easement or other mechanism for securing tenure for AT on Sylvia Park. The private ownership of these roads has not affected bus circulation at Sylvia Park over that time period.</p> <p>This is anticipated to be the case also for Drury Centre in terms of bus circulation being maintained on private roads along the interim bus route, until the ultimate bus route is formed.</p>
19	<p>The Applicant should provide further information to demonstrate how Road 6, Road 3 and Flanagan Road have been designed to have correct geometry dimensions and pavement capabilities to accommodate buses.</p>	<p>Please refer to the vehicle tracking completed by CKL at the intersections and bus stops (<b>Attachment 7</b>). The engineering drawings (<b>Attachment 8</b>) have been updated per other comments to provide two-way vehicle clearance at bus stops, and in accommodation of bus tracking at intersections along this route. Flanagan Road is not proposed to be upgraded to an urban standard. However, a mini-roundabout has been introduced at the intersection of Road 3 and Flanagan Road to ensure good connectivity at that location.</p> <p>Woods Pavement design has been completed to a preliminary level only. Detailed design, calculations and reporting is expected to be subject to Engineering Plan Approval prior to construction which is a more appropriate time for Auckland Transport to review the design alongside pavement standards and design vehicle specifications current at that time. As this is standard practice, we do not believe that a specific condition is required to reserve this outcome.</p>
20	<p>Relying on a large portion of privately owned roads can create severance between the public road connections and limit the efficient movement of vehicles and public transport. The Applicant should provide further information to demonstrate how the</p>	<p>Kiwi Property does not agree that privately owned roads will create severance. Major centres around New Zealand like Sylvia Park (Auckland); Botany (Auckland); and The Base (Hamilton) which include extensive private road networks all function without issue. Kiwi Property confirms that closures on private roads is a rare and unlikely event, not least because such closures would compromise the operation of the centre and hence the commercial interests of both tenants and Kiwi Property. In the unlikely event of private road closures Kiwi Property will implement appropriate traffic management measures to ensure traffic is appropriately diverted and the traffic network will continue to function safely and efficiently.</p>

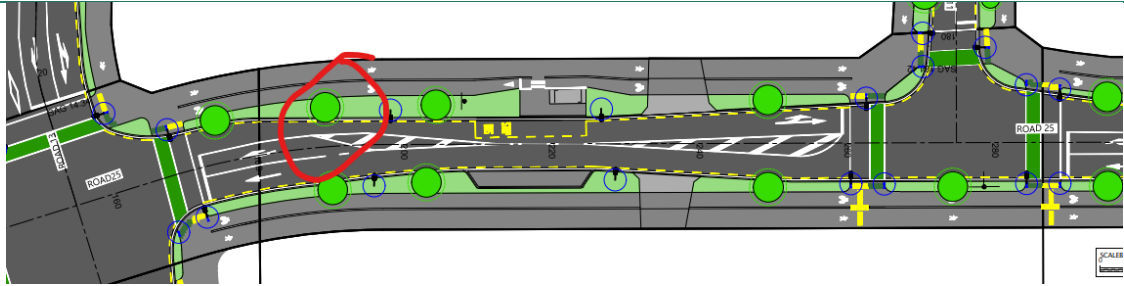
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	vehicles will circulate the road network when there are closures on private roads.	
21	The Applicant should provide further information to demonstrate how they intend to maintain public access on private roads for emergency services, bus infrastructure and active modes. AT recommends the Applicant demonstrates how an easement can be provided.	The recommendation for an easement on private roads for public access by emergency service vehicles, bus infrastructure and active modes is not supported by Kiwi Property. The private roads to be owned and maintained by Kiwi Property in this project have been designed to comply with the relevant road function and required design elements table in the precinct provisions which can sufficiently accommodate emergency service vehicles. Other centres owned and operated by Kiwi Property (such as Sylvia Park and Lynmall for example) do not feature easements on the private internal roads to provide legal access for emergency service vehicles or bus infrastructure. Notwithstanding this, buses and emergency vehicles have in the past operated and will in the future continue to operate on the private road networks on Kiwi Property's centres with no issues in the absence of any easement legally allowing this. Therefore, it is considered unnecessary to impose such an easement.
22	It is not clear if Flanagan Road will be fully upgraded to an urban standard and connected to the Drury Train Station. If this is not done, then it leaves a gap in the road network that will remain as its current standard being an unsealed road which is not suitable for bus operation. The Applicant should provide further information to demonstrate when this upgrade will occur and if there is enough width for the relevant road elements.	<p>Flanagan Road is not proposed to be upgraded to an urban standard as part of the Project. However, a mini-roundabout has been introduced at the intersection of Road 3 and Flanagan Road to ensure good connectivity at that location.</p> <p>The Drury Centre Precinct provisions contain standard I450.6.6 Road Design and Upgrade of Existing Rural Roads which specify the roads that must be upgraded to an urban standard where vehicle access is proposed for any new activity, development and/or subdivision to or from specified roads. Standard I450.6.6(2) specifically identifies that Fitzgerald Road and/or Brookfield Road (which will be the key local roads serving the centre) must be upgraded to an urban standard but does not include Flanagan Road (which will have a limited role for private vehicle traffic pending completion of the works related to the Drury Railway Station).</p> <p>Note: Fitzgerald Road and Brookfield Road are required to be upgraded to an urban standard as part of Kiwi Property's Stage 1 fast-track consent.</p>

23	<p>On the typical cross-section drawings, none of the roads have a back berm. In centres, the AT Engineering Design Code for Footpaths and The Public Realm requires the replacement of such berm with a 1m wide paved frontage strip alongside a 2.4m wide footpath. While many of the proposed footpaths are 2.7m wide, this width is insufficient to account for the missing required 1m paved frontage strip, effectively falling short of the combined 3.4m width required by the standard overall. The Applicant needs to provide further information demonstrating how the required road elements can be accommodated within the road reserve.</p>	<p>Drawings have been amended to provide a minimum of 3.4m path width on all roads in compliance with the AT Engineering Design Code for Footpaths and the Public Realm (refer to <b>Attachment 8</b> for updated engineering drawings and <b>Attachment 9</b> for updated landscaping drawings set).</p>
24	<p>On Engineering drawing P24-447-01-2501-RD, at the location of Road 25, the road has narrow through lanes, and some road sections features wider right turn and flush medians than are wider than the adjacent through lanes. The Applicant needs to provide further information to demonstrate there is adequate lane space for all appropriate vehicles.</p>	<p>The lane arrangement has been amended in response. Please refer to the revised drawing P24-447-01-2501-RD that address this comment.</p>

		
25	Lot F and H have frontage to Flanagan Road but don't appear to be getting upgraded. The Applicant should provide further information demonstrating when and how they will provide the necessary frontage upgrades. This should be supported by detailed cross-sections.	Refer response provided in item 22 above – Flanagan Road is not proposed to be upgraded to an urban standard. However, a mini-roundabout has been introduced at the intersection of Road 3 and Flanagan Road to ensure good connectivity at that location.
26	The Applicant should provide further information demonstrating who will own, operate and maintain the signalised intersections.	Kiwi Property will own, operate and maintain the signalised intersections. The Applicant currently operates signalised intersections around New Zealand. A good example of one of these is the private intersection located at Te Kahu Way/Te Tata Avenue at Sylvia Park. Sylvia Park is the most visited shopping centre in New Zealand.
27	The plans provided demonstrate that there will be a shared user path on Road 2, however, detailed information is lacking regarding the design of this path as it continues north, particularly past the Road 2 /	Road 2 north of Road 13 will be an NZTA asset and its sole connection is to SH1 as an offramp and overbridge. There is no connection to Flanagan Road from Road 2 as this road bridges the rail corridor. It is considered that a footpath at grade and alongside this portion of NZTA road is not safe and a path is proposed in the reserve land to the west which connects to Flanagan Road. Again – this is the subject of a separate approval process currently underway by NZTA. Please refer to the plans provided for the indicative shared path route (refer to sheet P24-447-01-2040-RD of <b>Attachment 8</b> ).


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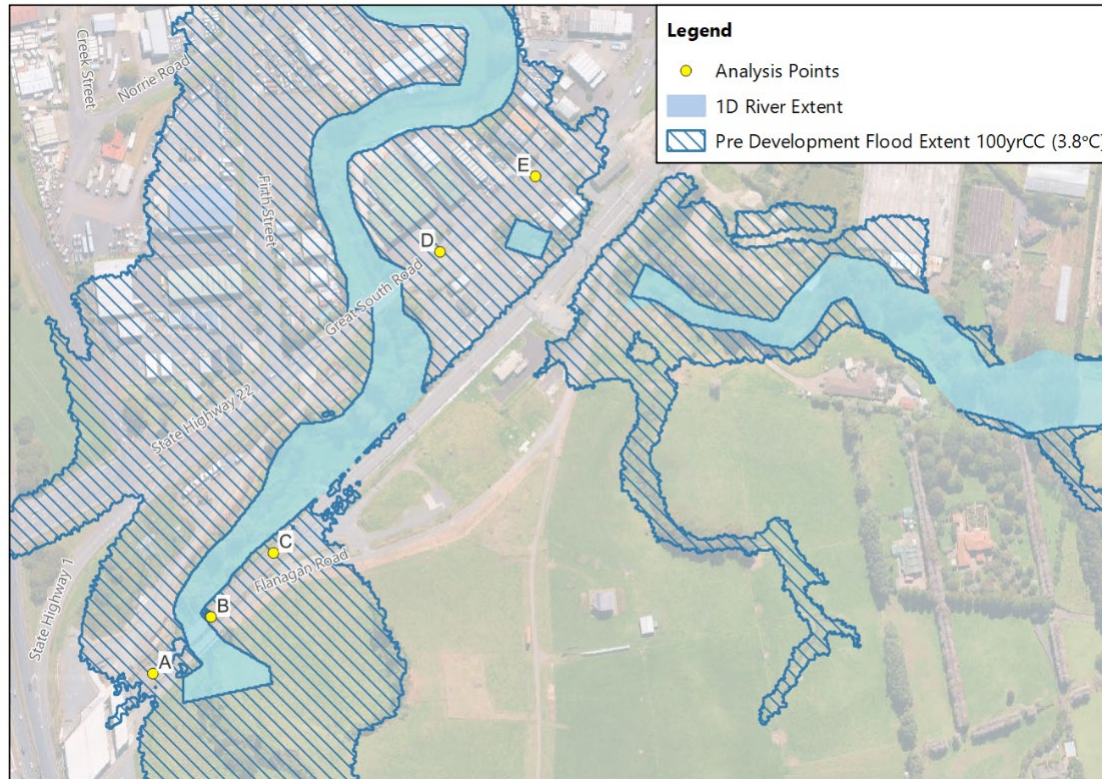
	Road 13 / SH1 off ramp intersection towards the Drury Train Station via Flanagan Road. The Applicant needs to provide further information to demonstrate how the future shared user path will connect back into Flanagan Road.	
28	The vehicle crossing at Lot C that connects to Road 25 is proposed to be 21m wide and form part of a future signalised intersection, acting as fourth leg. The Applicant should provide further information to demonstrate how the vehicle crossing accommodates for a safe crossing point for active modes.	The Road 25 / Road 13 / Lot C intersection shown in the application plan sets was indicative given the early development stage of the Lot C site. However, further work has now been undertaken to develop the design, as per the image below. The image shows a narrowing of the crossing distance over the eastern signalised arm of the intersection (to ~10m). As with all intersections within the Precinct, it will be raised for further safety provision.

29	<p>There is a vehicle crossing coming out directly into the signalised intersection of Roads 6 / Road 25 on the eastern side. This is not considered an acceptable outcome from a safety perspective. The Applicant needs to provide further information demonstrating how this arrangement will operate safely and efficiently.</p>	<p>The Road 25 / Road 6 / Lot K JOAL intersection was indicative but has now been developed further, as shown in the image below. The JOAL on the eastern arm of the intersection will be signalised as shown. To ensure that this is legible to road users, a red coloured surface treatment has been adopted as per existing examples of this scenario. This is considered an interim option, until the road is extended east as per the Indicative Collector Road in I450.10.2. Drury Centre: Precinct Plan 2 – Structural Elements Map. There are several examples of this arrangement throughout Auckland, including the Upper Harbour Medical Centre access onto Hobsonville Road.</p>

		
30	<p>A Flood Hazard Risk Assessment Report was prepared against AUP Chapter E36.9 Section a, which included flood frequency, duration and scale. The assessment prepared by the Applicant speaks to the scale of flooding (i.e., peak flows and peak depths/extents) but does not assess scale or duration. Can the Applicant provide further information to demonstrate that flooding does not occur more frequently or for a longer duration as this could have significant</p>	<p>Information on duration of flooding on existing roads (Flanagan Rd and Great South Rd) has been provided for the points located as shown on figure below.</p>



adverse safety effects on future transport network users.



The analysis undertaken (Table 1) summarises that the duration of flooding has negligible change, the differences observed are limited to the 100-year scenarios with increases in inundation time generally less 8mins for full post development which is inclusive of Drury Centre and Fulton Hogan Drury East Stage 2 and 3. Similar to the response provided in Query 1 for Area A, the increases (less than 8 mins) are not considered to be attributed to Drury Centre Stage 2 development as the comparison undertaken allows for the full upstream Fulton Hogan Drury East Stage 2 and 3 developments and this is summarised in Table 2.



- 100yr – No Climate Change assumed – Inundation time goes from 152mins in the predevelopment scenario to 160mins at Location D (8min increase) and 156mins to 164mins (8min increase) at Location E.
- 100yr – 2.1°C temperature increase assumed - Inundation time goes from 244mins in the predevelopment scenario to 248mins at Location D (4min increase) and 248mins in the predevelopment scenario to 253mins in the full post development scenario at Location E (5 min increase).
- 100yr – 3.8°C temperature increase assumed – Inundation time goes from 305mins in the predevelopment scenario to 300 mins at Location D (5min decrease) and 306mins in the predevelopment scenario to 301mins in the full post development scenario at Location E (5min decrease).

**Table 1: Flood duration for pre and post**

	Pre Development Flood Duration (mins)						Post Development Flood Duration (mins)						Flood Duration Difference (mins)					
	10yr ARI			100yr ARI			10yr ARI			100yr ARI			10yr ARI			100yr ARI		
	No	2.1°	3.8°	No	2.1°	3.8°	No	2.1°	3.8°	No	2.1°	3.8°	No	2.1°	3.8°	No	2.1°	3.8°
A	-	-	-	-	-	75	-	-	-	-	-	65	-	-	-	-	-	-10
B	-	-	-	-	-	92	-	-	-	-	-	85	-	-	-	-	-	-7
C	-	-	-	-	38	158	-	-	-	-	27	156	-	-	-	-	-11	-2
D	-	-	-	152	244	305	-	-	-	160	248	300	-	-	-	8	4	-5
E	-	-	-	156	248	306	-	-	-	164	253	301	-	-	-	8	5	-5

As discussed in the response above, the increases in inundation time are not a result of the development at Drury Centre Stage 2, rather an impact of the Fulton Hogan Drury East Stage 2 and 3, which is the same as the response for Area A in Query 1. An additional assessment has been conducted at these locations to validate this, considering the development of Drury Centre Stages 1 and 2 only.

- 100yr – No Climate Change assumed – Inundation time goes from 152mins in the predevelopment scenario to 149mins at Location D (3min decrease) and 156mins to 152mins (4min decrease) at Location E.

- 100yr – 2.1°C temperature increase assumed - Inundation time goes from 244mins in the predevelopment scenario to 242mins at Location D (2min decrease) and 248mins in the predevelopment scenario to 246mins in the full post development scenario at Location E (2 min decrease).
- 100yr – 3.8°C temperature increase assumed – Inundation time goes from 305mins in the predevelopment scenario to 303 mins at Location D (2min decrease) and 306mins in the predevelopment scenario to 306mins in the full post development scenario at Location E (2min decrease).

**Table 2: Flood duration for pre and post (Drury Centre Stage 1 and 2 only)**

	Pre Development Flood Duration (mins)						Post Development with Drury Centre Stage 1 & 2 Only Flood Duration (mins)						Flood Duration Difference (mins)					
	10yr ARI			100yr ARI			10yr ARI			100yr ARI			10yr ARI			100yr ARI		
	No	2.1°	3.8°	No	2.1°	3.8°	No	2.1°	3.8°	No	2.1°	3.8°	No	2.1°	3.8°	No	2.1°	3.8°
D	-	-	-	152	244	305	-	-	-	149	242	303	-	-	-	-3	-2	-2
E	-	-	-	156	248	306	-	-	-	152	246	304	-	-	-	-4	-2	-2

31

It appears that none of the 292 vacant residential lots under Stage 1 will seek access off Brookfield Road or Fitzgerald Road. The Applicant should provide further information to demonstrate what planning mechanism they will use to ensure access onto these roads directly does not occur.

**Note:** Council considers this matter may be suitably addressed by condition and encourages early engagement on wording ahead of the Panel's section

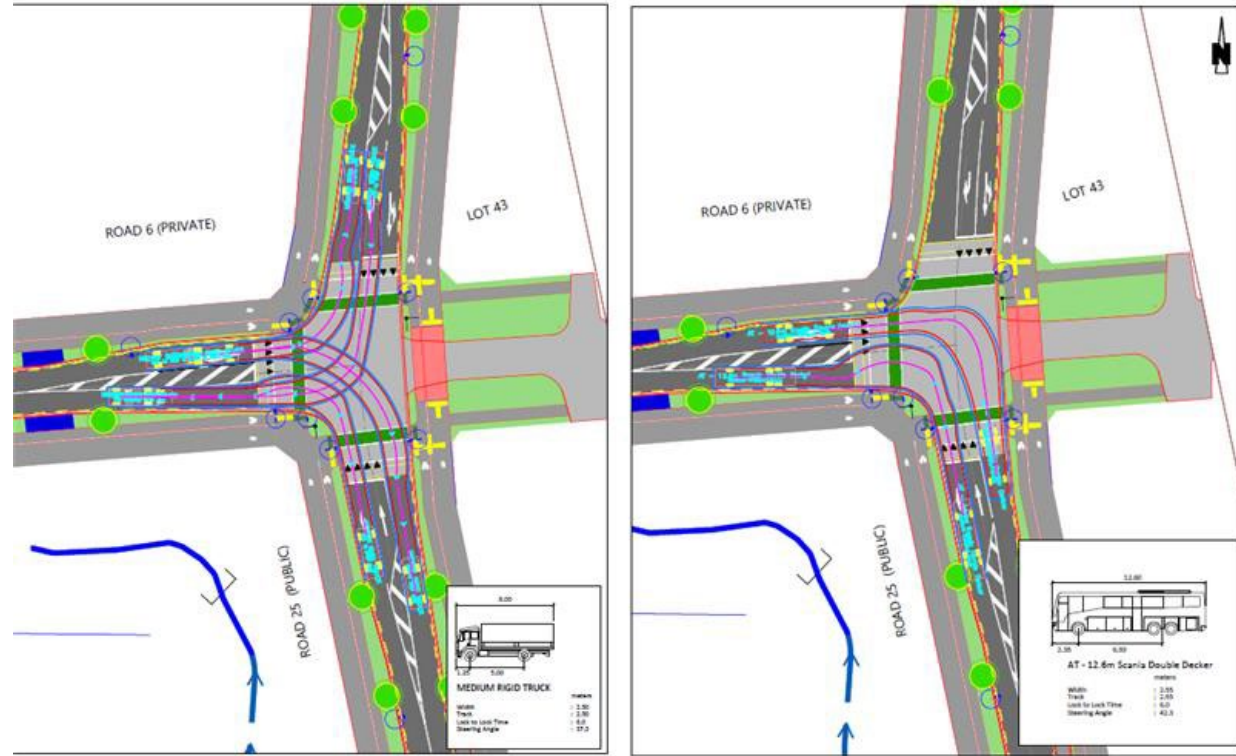
The configuration of the fee simple subdivision in the Stage 1 Residential area has been designed such that none of the proposed lots would gain vehicle access directly from Fitzgerald Road or Brookfield Road. This specifically applies to superlot 11, 15, 18, 19 and 22 which have frontage to these roads. The subdivision layout deliberately includes JOALs to provide vehicle access from the rear and not directly from Fitzgerald or Brookfield Road for traffic safety purposes.

To ensure this, it is considered appropriate to include a consent notice on the relevant lots (Lots 1114-1118, 1506-1513, 1808-1814, 1907-1919, 2205-2217) which prevents vehicle access directly from Fitzgerald or Brookfield Road. This is now included in the revised proposed consent conditions in **Attachment 5**.

	70 invitation to comment on draft conditions.	
<b>Traffic Engineering</b>		
32	<p>Stage 1 Subdivision</p> <p>Stage 1 Lot 500 (JOAL for superlot R10) is proposed to gain access to Road 1. The vehicle crossing location does not comply with E27.6.4.1.(3)(a) as it has less than 10m separation 10m from Road 1/Road 23 intersection. Further, Road 1 is identified as a collector road in I450.10.3 Drury Centre: Precinct plan 3. We recommend that the applicant provide further assessment of the potential safety and efficiency effects for users of the JOAL and road users for the adjacent road network and consider whether these effects could be avoided by gaining access vehicle access to Lot 500 via Road 22 instead of Road 1.</p>	The JOAL arrangements for Stage 1 have been amended such that there are no new vehicle crossings within 10m of an intersection. Please refer to updated scheme plan and engineering drawings ( <b>Attachment 4 and 8</b> ).
33	<p>Stage 1 Lot 511 and Lot 512 do not comply with E27.6.4.1.(3)(a) as they have less than 10m separation 10m from Road 10/Road 23 and Road 21/Road 22 intersections respectively.</p>	The JOAL arrangements for Stage 1 have been amended such that there are no new vehicle crossings within 10m of an intersection. Please refer to updated scheme plan and engineering drawings ( <b>Attachment 4 and 8</b> ).

	We recommend that the applicant provide further assessment of the potential safety and efficiency effects for users of the JOAL and road users for the adjacent road network	
34	<p>Stage 2 General</p> <p>Some of the Lots appear to have no pedestrian facilities connecting to and within the carparking area. It is likely that some pedestrians will enter the sites via the vehicle crossings and people who park will be walking through the carpark area. We recommend that the applicant provide further detail on how the carparks will provide safe pedestrian access and circulation. This should include trolley bays and paths should accommodate trolley widths.</p>	Proposed condition 24(a) wording in <b>Attachment 5</b> has been updated to include final locations of pedestrian paths and trolley bays within carparking areas to be provided as part of the final architectural design plans.
35	Only limited vehicle tracking assessments are provided for proposed private roads and within sites, and the assessments that are provided lack sufficient detail to allow suitable review. We recommend that the applicant provide detailed vehicle tracking assessments for the expected	<p>All the relevant vehicle tracking checks at the intersections within the internal Drury Metropolitan Centre network have been carried out. In summary, there will be some refinement to kerb lines in most instances and vehicle tracking demonstrating proposed changes are included as <b>Attachment 7</b>.</p> <p>Road 13 has been designed to accommodate 17.9m or a 19.45m articulated trucks. From Road 13, these vehicles can connect to the wider road network via Road 25 and Road 1 to the south and Road 2 to the north or south. All other intersections within the site have been designed to accommodate an 8m design vehicle and an 11.5m check vehicle and a 13.5m bus where appropriate. Consequently, all roads (other than Road 13) will require a</p>

<p>types of vehicles that will use these roads and access sites.</p>	<p>departure from standard application. To ensure the operating speeds of all intersections are around 30km/h, as discussed prior to lodgement and similarly to the Road 1 designs, all intersections are to be raised.</p> <p><u>Interim bus routes – Road 6 intersections</u></p> <p>Road 6 will accommodate buses for the interim period until the bus route until the Road 25 connection is made to the north to connect with the bus station.</p> <p>Both intersections with Road 6 (Road 25 and Road 3) have been checked using vehicle tracking analysis. TDM requirements include a check vehicle of 17.9m, however, as this vehicle is not anticipated to use this part of the internal road network and to ensure that the road carriageway is as narrow as possible, these intersections have been designed using the 8.0m rigid truck design vehicle, shown below for reference.</p>
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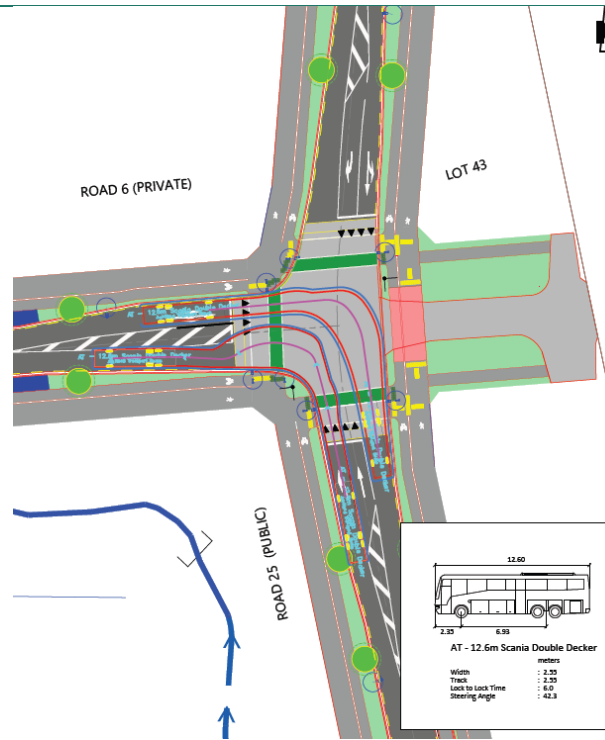
As Road 6 is not anticipated to be used by buses in the longer term (once Road 25 is connected directly to the bus station to the north), it was decided to implement an interim design on Road 6 at its intersections with Road 25 and Road 3, rather than significantly widen those intersections to accommodate buses.

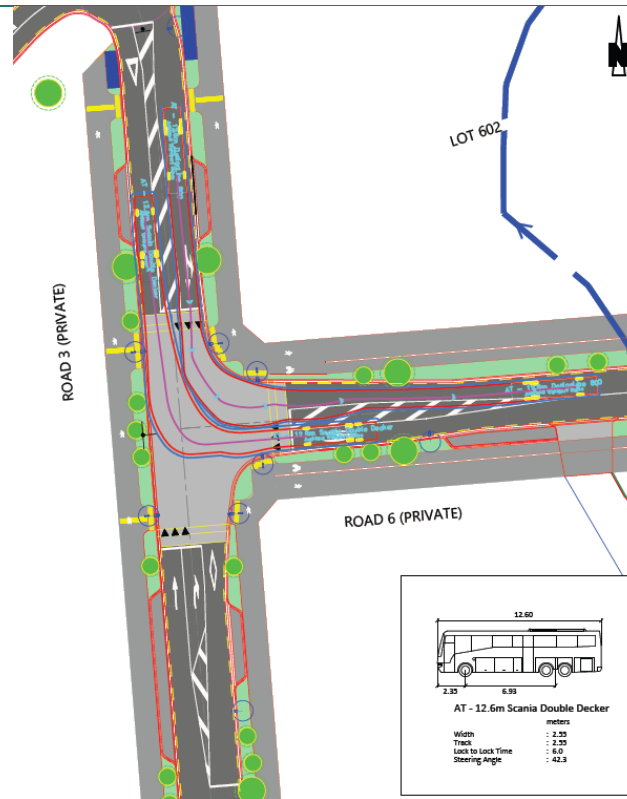
The interim designs will consist of converting the additional approach turning lanes on Road 6 to extra wide receiving lanes that can accommodate the bus turning. Once the busses no longer use this Road 6 route, the turning lanes will be reinstated. The tracking is shown below for clarity.

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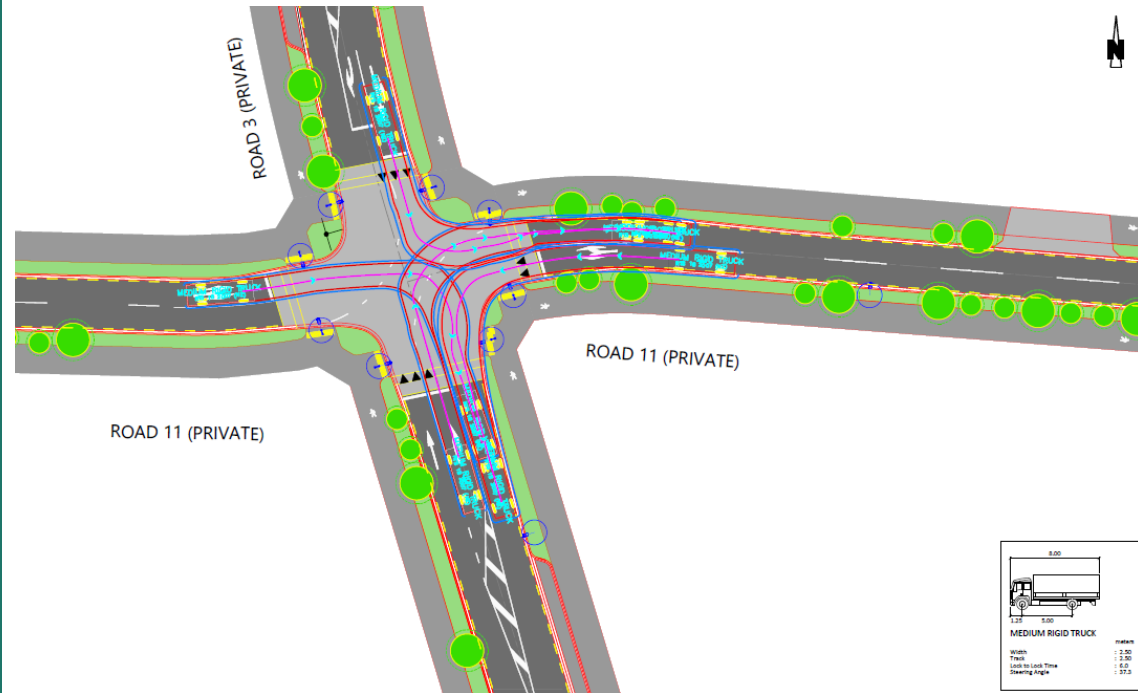


It should be noted that the design for the Road 6/Road 3 intersection does not permit two buses to turn simultaneously, however, this scenario is unlikely to occur. In the low likelihood that two vehicles do meet at the intersection, drivers are expected to be courteous and will give way to one another. If necessary, road markings can be used to ensure conflicts do not occur such as at the Grafton Bridge/Symonds St intersection.

#### Road 3/Road 11 intersection



Road 3/Road 11 intersection has been designed to accommodate a right turn pocket on the northern approach to access the Lot D and F cul-de-sac road. The location of the right-turn pocket/lane has been identified to ensure the 8.0m rigid truck can turn unobstructed.



36

Section 6.2.1 of the AEE and Appendix 6 to the AEE provide details on Comprehensive development signage, and draft Condition 30 requires that detailed information must be provided to Council before

A signage Review Assessment has been undertaken and included as **Attachment 10**.

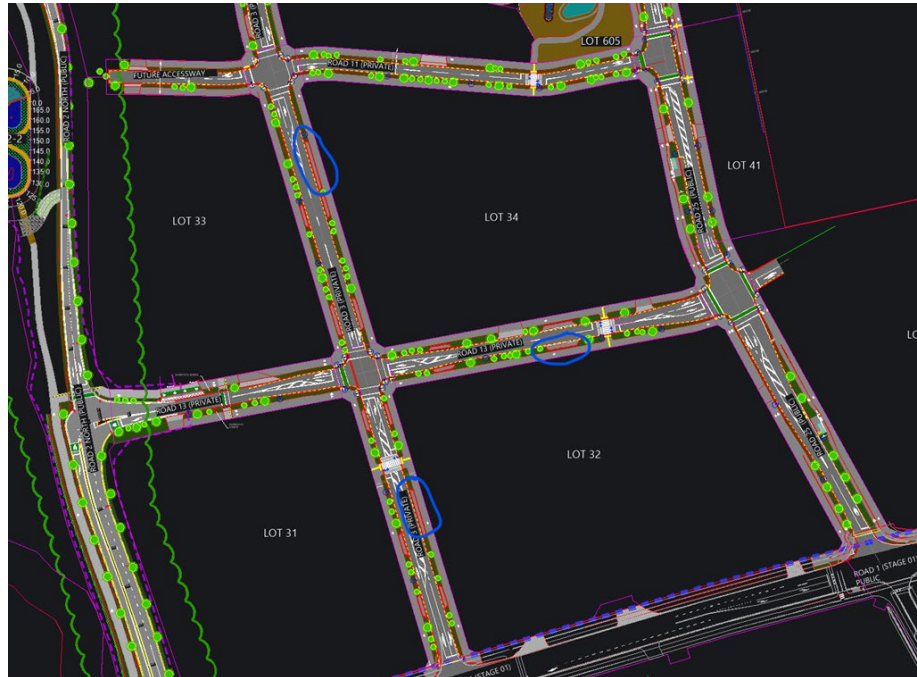
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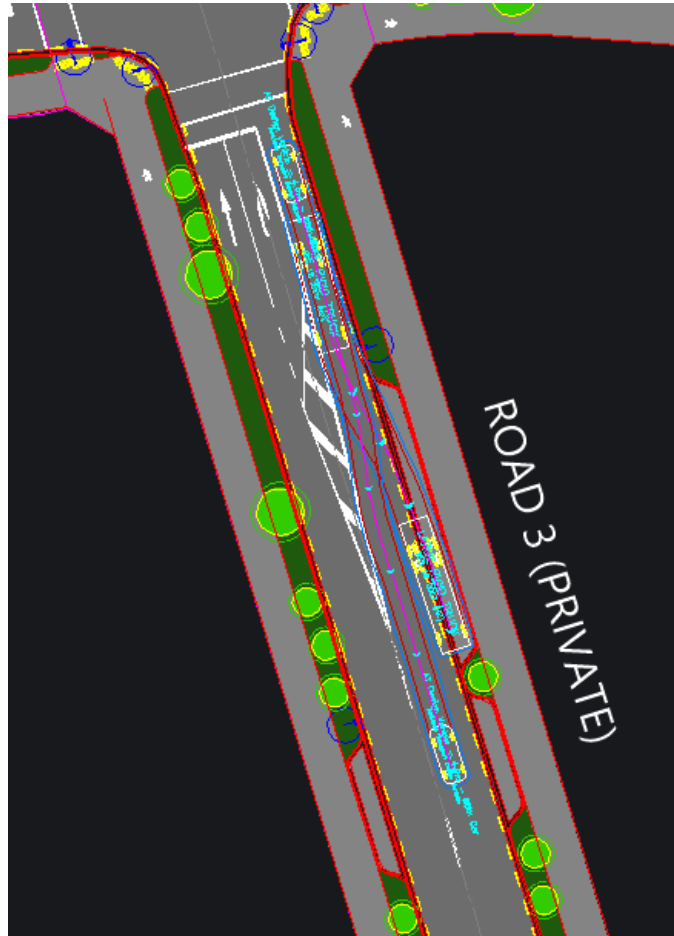
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	installation. The ITA has not assessed the potential traffic and pedestrian safety effects of the proposed signage. We recommend that the applicant provide an assessment against E23.8.2.(2)(b) and (c).	
37	Figure 36 of the ITA shows bicycle parking at key locations throughout Stage 2. However, no bicycle parking is shown on the Architectural Drawings or Engineering Drawings. We recommend that the applicant confirm how bicycle parking will be provided.	<p>The ITA provides indicative locations for bicycle parking and Table 11 of the AEE confirms that bicycle parking provision will comply with the minimum AUP requirements.</p> <p>Condition 24(a) of the proposed consent conditions requires the final location of bike parking facilities to be shown on the final architectural design plans. This is consistent with the approach of the Stage 1 fast-track consent which also required the final location of bike parking spaces to be shown on the final architectural design plans too.</p>
38	Lots with multiple tenancies have one or more loading areas near the major tenancies. It is unclear if the minor retail tenancies will have access to the loading areas. We recommend that the applicant provide further detail on how minor retail tenancies will conduct loading operations	<p>New on-street loading spaces have been introduced onto Roads 13 and 3 to accommodate loading for the smaller tenancies, and the updated plan sets reflect this. Care has been taken to ensure that vehicles parking in loading spaces would not obstruct sightlines to mid-block pedestrian crossings. The overall image showing their locations is below, alongside vehicle tracking for each. Please see also updated Architectural set (sheet 00-1101 for overall site loading bay location updates and pleas A-1301, D-1301, H1-1302 &amp; H2-1302) included as <b>Attachment 11</b> for loading bay location updates within each lot.</p>

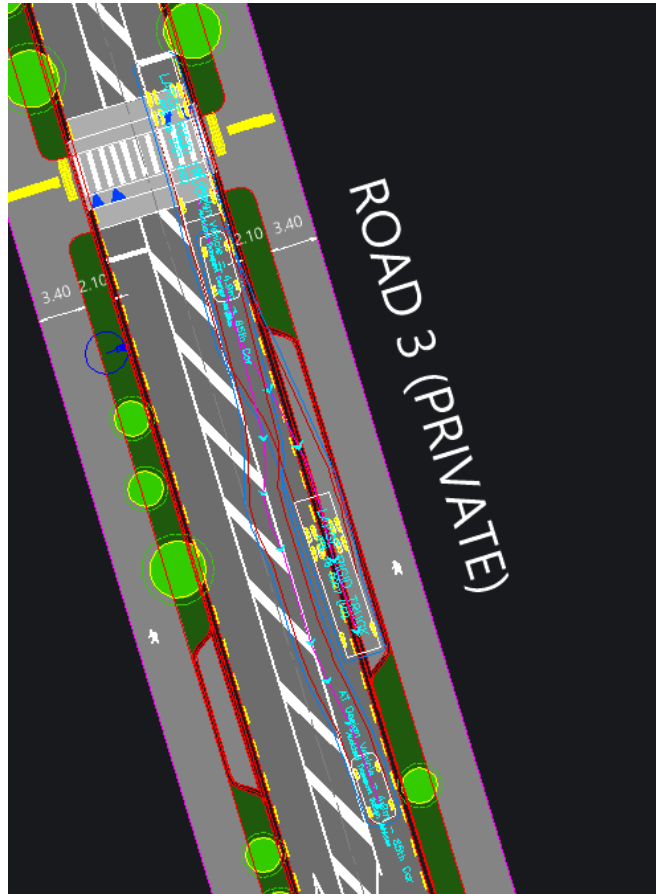
Overall loading space location plan:



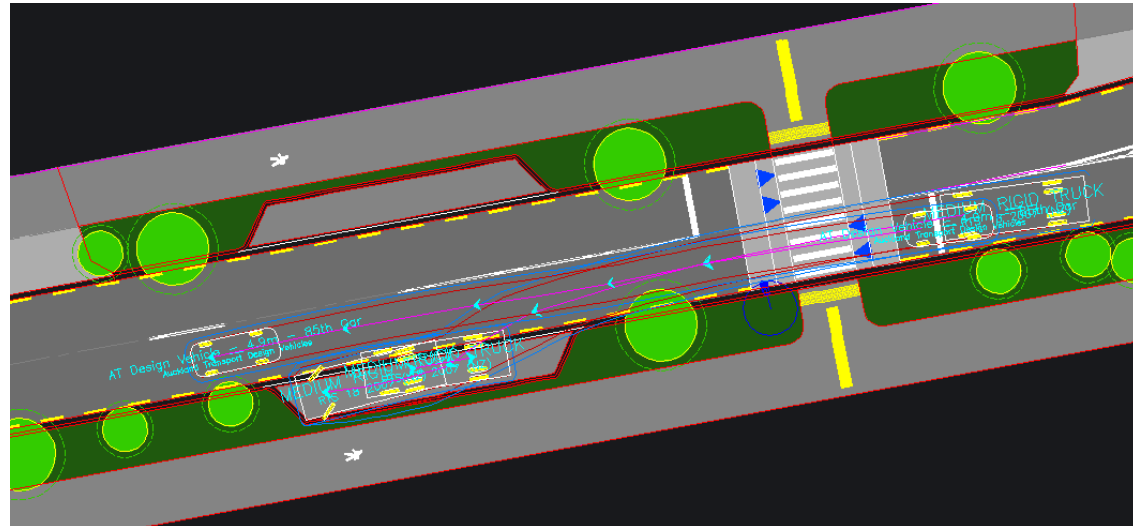
Road 3 (north) on-street loading tracking:



Road 3 (south) on-street loading tracking:



Road 13 on-street loading tracking:



It is considered that each location is safe and a logical position to undertake loading activities. In detailed design / EPA, further details on berm crossing locations etc will be provided.

39

Some lots have multiple levels of car parking, accessed by a mix of straight and curved ramps. Vehicle tracking and ramp gradients (along the inside curve for curved ramps) do not appear to be included in the application documents. Further, it is unclear how driver interaction at the toe/head of

As noted in Section E27.6.4.4. of the Unitary Plan, for curved ramps and driveways, the gradient is measured along the inside radius (refer to Figure E27.6.4.4.1). To avoid the underside of the car striking the ground, as illustrated in Figure E27.6.4.4.2, access with a change in gradient exceeding 1 in 8 (greater than 12.5 per cent change) at the summit or a 1 in 6.7 (15 per cent change) at a sag must include transition sections to achieve adequate ground clearance, refer to Figure E27.6.4.4.3. Typically, a transition section requires a minimum length of 2m.

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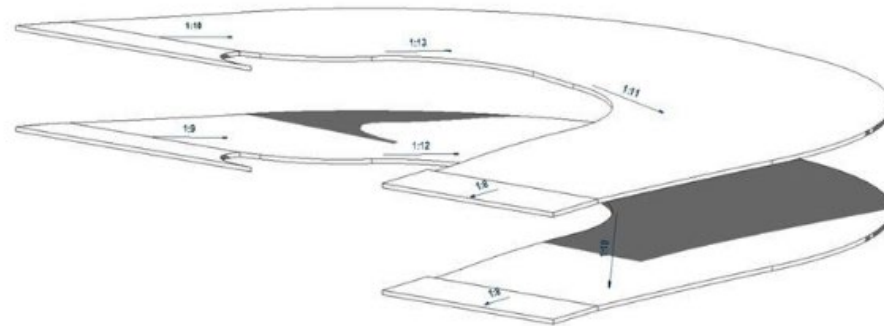
the ramp will be managed – i.e. whether give way markings are required and how the ramp will be physically separated from the adjacent parking aisle. We recommend that the applicant provide further assessment of these matters.

Lots A, B, D and E contain curved ramps and are assessed below with the gradients identified within the inside bend of the ramp. The proposed gradients are provided with sufficient transition sections to ensure that the underside of the vehicle does not strike the ground.

The steeper gradients on the inside edge of the ramp are due to the curved alignment, since the inside radius is shorter, the same change in elevation results in a steeper slope compared to the centreline or outside edge. This is a common outcome in curved ramp design. On the straight ramp sections, gradients comply with development control T159 of the Unitary Plan, as the longer travel distance allows for a more gradual elevation change and better control over the slope.

Vehicle tracking analysis has also been undertaken to demonstrate how the ramps would operate. In regards to give-way markings, it is confirmed that these will be developed at building consent stage in order to manage vehicle movements and provide direction to visitors.

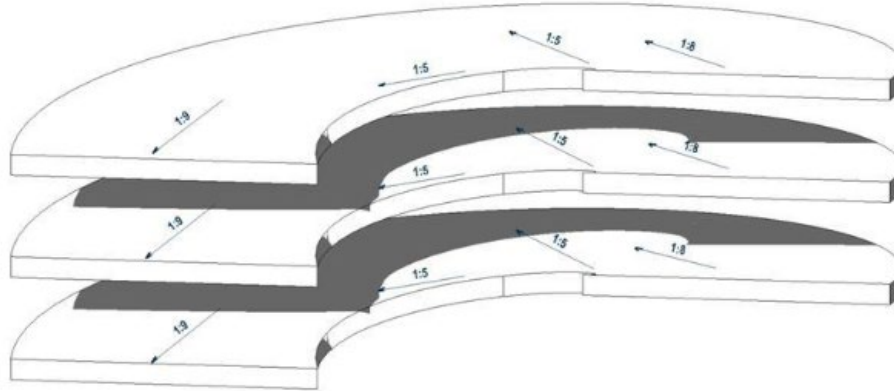
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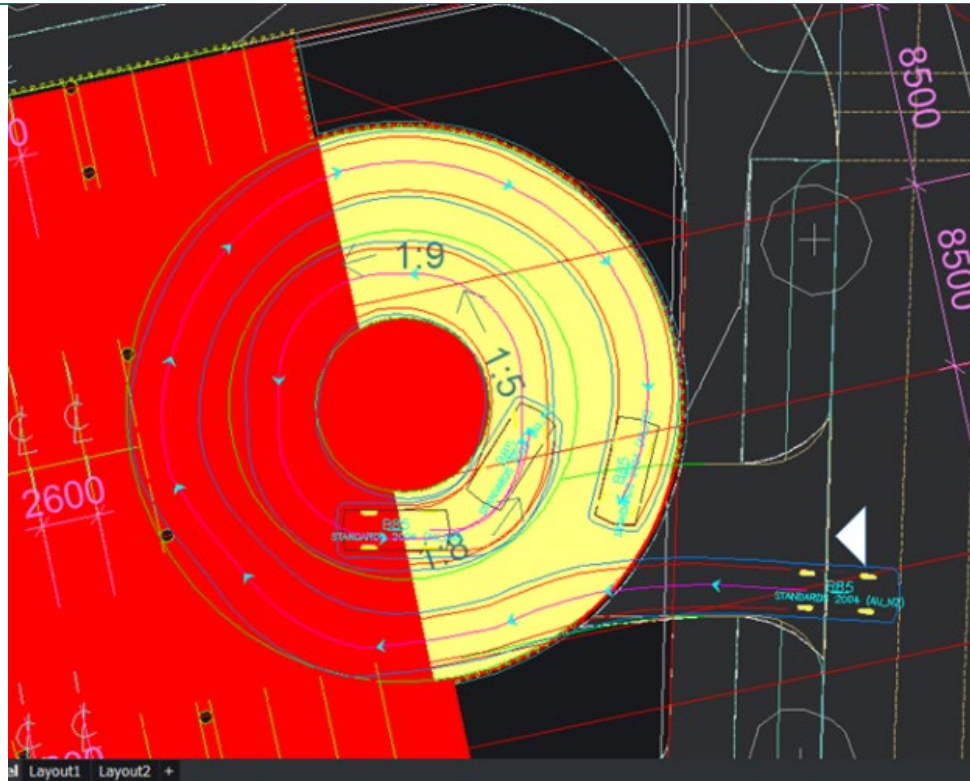
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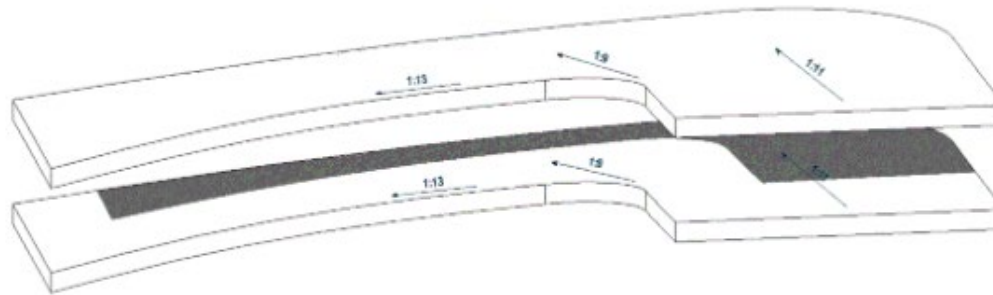
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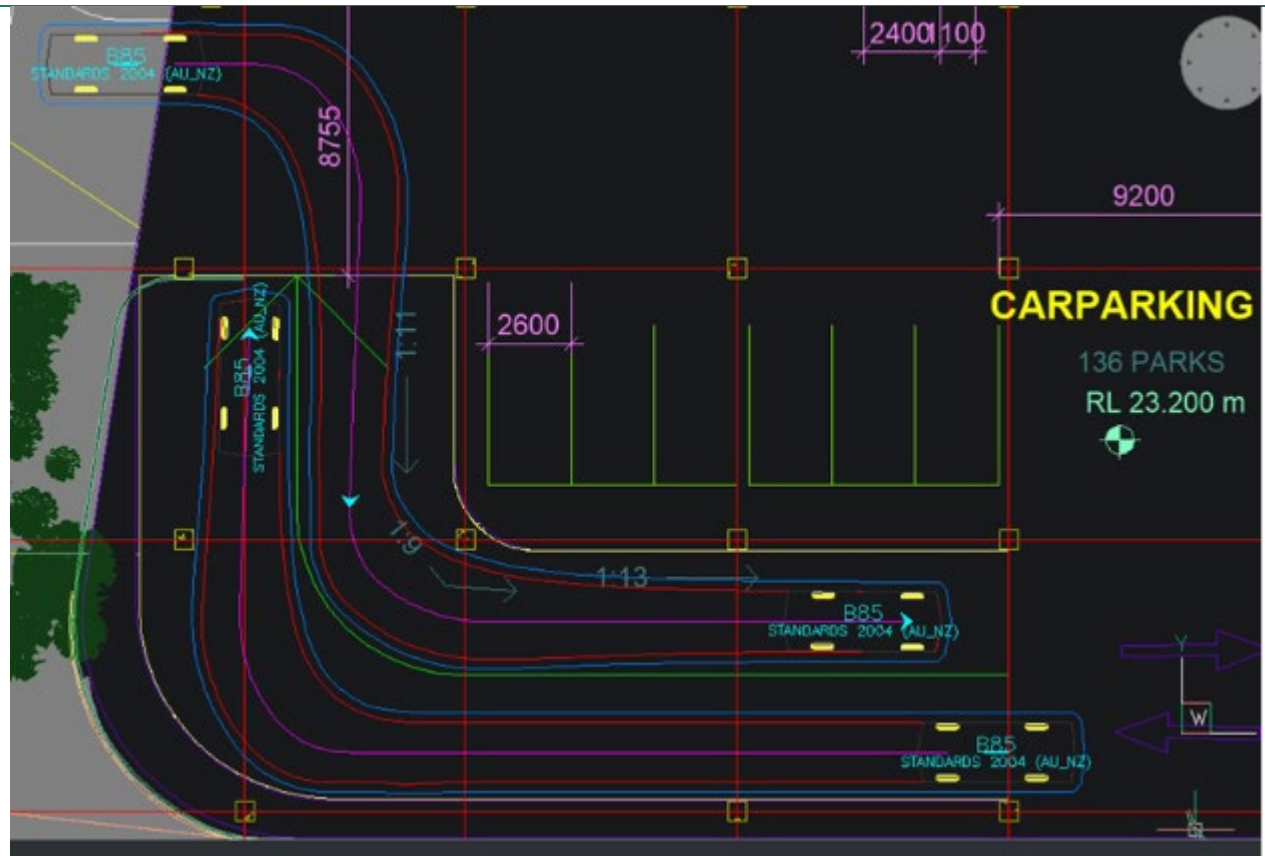
Lot D:



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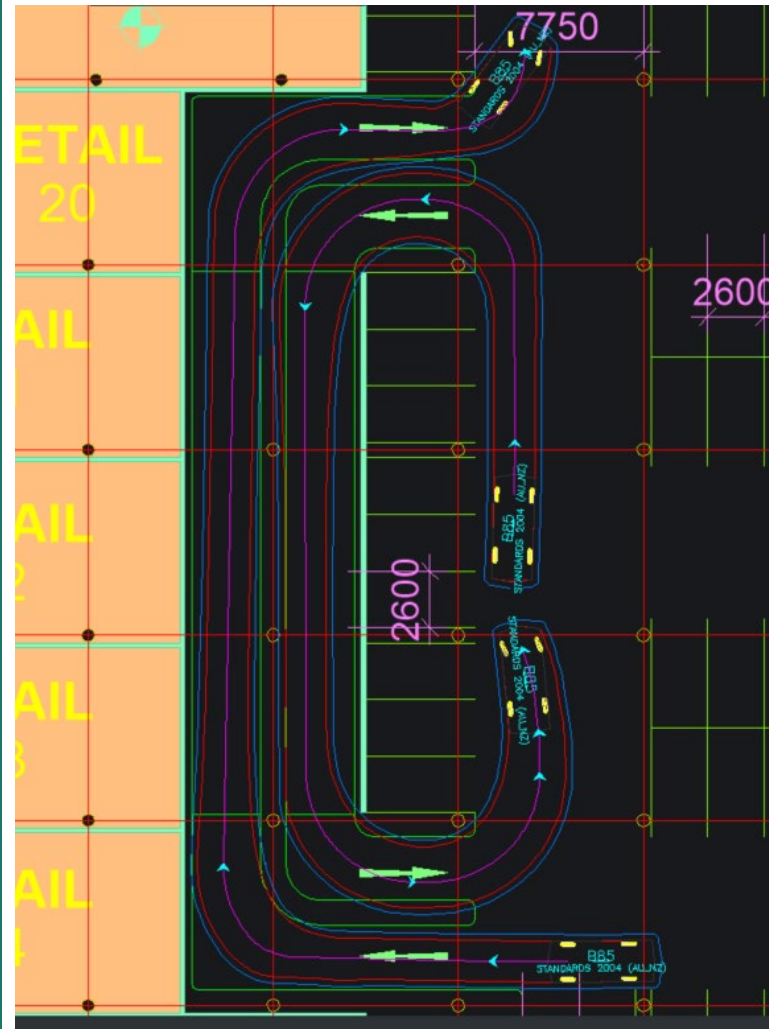


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Lot E:

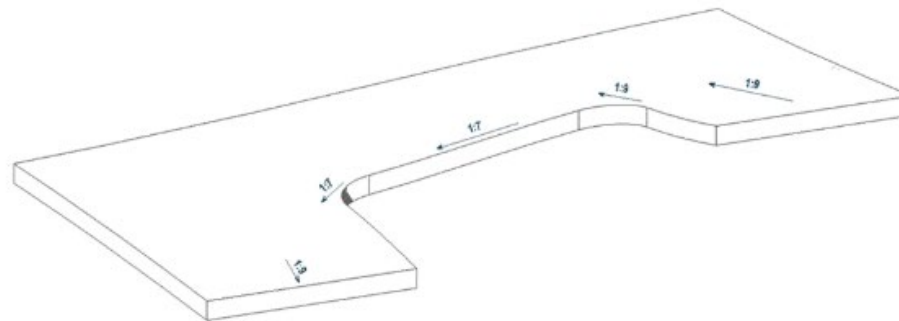
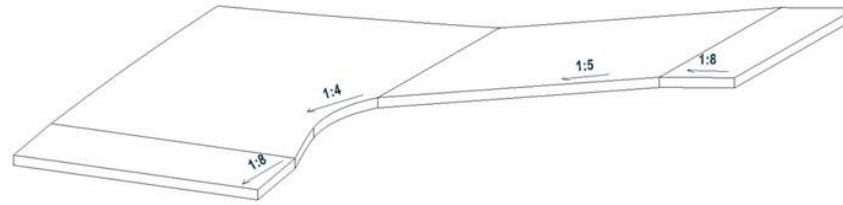


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	<p>As shown in the snip below, the steepest section of the ramp is proposed to be 1:4 and this is on the inside curve of the ramp. The gradient measured through the middle of the ramp is 1:5 at the steepest. This gradient therefore does not comply with the requirements of the Unitary Plan, in accordance with T159 the maximum gradient permitted is 1:6. From a safety perspective the inter-storey ramp is protected from inclement weather and there are no concerns regarding loss of wheel traction due to surface wetting. A high-friction surface treatment, such as brushed concrete or similar can be incorporated into the steep section of the ramp to ensure traction is maintained and as a form of mitigation for the steep section.</p> <p>Furthermore, users of this car park are tenants of the proposed offices and therefore would be considered 'regular' users and will be anticipate the manoeuvring required on the steep section of the ramp. No pedestrians or cyclists will use the ramp.</p> <p>Transition sections that are 2.0m long on either side of the steep section are proposed to ensure that the underside of the vehicle does not strike the ground.</p> <p>Section E27 of the Unitary Plan permits a 1:4 driveway gradient for individual sites, acknowledging that such gradients can be negotiated by private vehicles.</p> <p>From a standards perspective, we have reviewed the requirements specified in Australian/New Zealand Standard Parking Facilities Part 1: Off-street car parking (AS/NZS 2890.1:2004). This is an industry accepted standard for road design.</p> <p>It is stated that:</p> <p><i>2.5.3. Circulation roadway and ramp gradients</i></p> <p><i>(b) Straight ramps: private or residential car parks (other than domestic driveways) as follows</i></p> <p><i>(ii) Ramps up to 20m long – 1 in 4 (25%) maximum. The allowable 20m minimum length shall include any parts of grade change transition</i></p> <p><i>(iii) A stepped ramp comprising a series of lengths each exceeding 1 in 5 (20%) grade shall have each two lengths separated by a grade of not more than 1 in 9 and at least 10m long.</i></p> <p><i>(c) curved ramps – as for straight ramps, except that the grade shall be measured along the inside edge.</i></p> <p>The 1:4 section of the ramp is 2.4m and therefore complies with AS/NZS 2890.1:2004.</p>
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40	<p>Stage 2 – roading network</p> <p>Road 3, Road 6, and Road 11 will form an integral part of the transport network, providing access and permeability within the Drury Metropolitan Centre. However, these roads are proposed to be privately owned. It is unclear whether easements to allow public access over these roads is proposed, or whether access could be restricted. We recommend that the applicant confirm if public access will be restricted at any time and, if so, how this could affect access and permeability of the transport network for all transport users, including pedestrians, cyclists, public transport users and public transport services, emergency services, heavy vehicles, and general traffic. Further, we recommend that the applicant provide confirmation of how maintenance will be committed to ensure an appropriate level of asset quality is provided.</p>	<p>This has been responded to in items 20 and 21 above.</p>
41	<p>Architectural Drawing A -1301 shows a footpath on Road 13 and Road 2,</p>	<p>Please refer to the revised footpath layout in both referenced architectural drawing set included as <b>Attachment 11</b>. No footpath is proposed on the Eastern side of Road 2, due to this being the continuation of the proposed</p>

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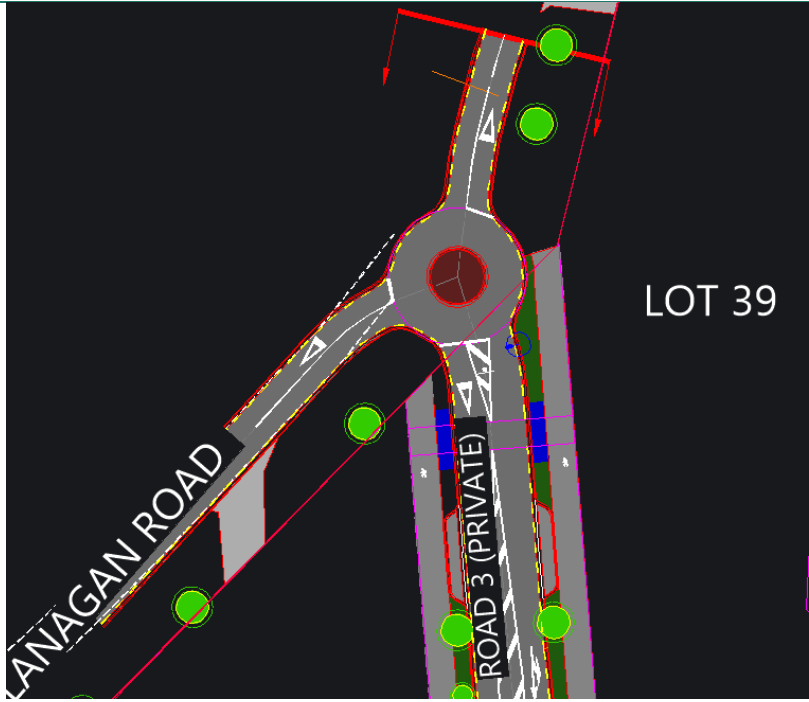
	<p>along the site frontage of Lot A. However, Woods Drawing 2001-DR shows the footpath on Road 13 terminating halfway along the Lot A frontage, and no footpath on Road 2. We recommend that the applicant consider how pedestrians will access Lot A, including people who may park in the Lot A carpark and seek to access the footpath on Road 13 and/or Road 2.</p>	<p>SH1 offramp and overbridge and it is not considered an appropriate space for pedestrians. In addition, the buildings fronting Road 2 are multi-level carparks, with the town-centre further East. Road 2 is not expected to have any pedestrian demand apart from access to the shared path that is proposed within the Hingaia Reserve. A crossing is proposed at the signalised intersection of Road 2 with Road 13.</p>
42	<p>Architectural Drawing F1-1301, H1-1310, and H2-1301 show a footpath on Flanagan Road, along the site frontage of Lots F1, H1 and H2. However, Woods Drawing 2004-DR shows that only street trees are proposed on Flanagan Road, with no other urbanisation (including the absence of a footpath). We recommend that the applicant consider how pedestrians will access Lot F1, and who will undertake urbanisation of Flanagan Road along the site frontages.</p>	<p>Refer response provided in item 22 above – Flanagan Road is not proposed to be upgraded to an urban standard. However, a mini-roundabout has been introduced at the intersection of Road 3 and Flanagan Road to ensure good connectivity at that location.</p>
43	<p>Woods Drawing 2003-DR shows Road 11, west of Road 3, as “FUTURE ACCESSWAY”. However, the</p>	<p>Please refer to the updated engineering drawings set (<b>Attachment 8</b>), which now detail the former accessway as a privately owned road. Snip below.</p>

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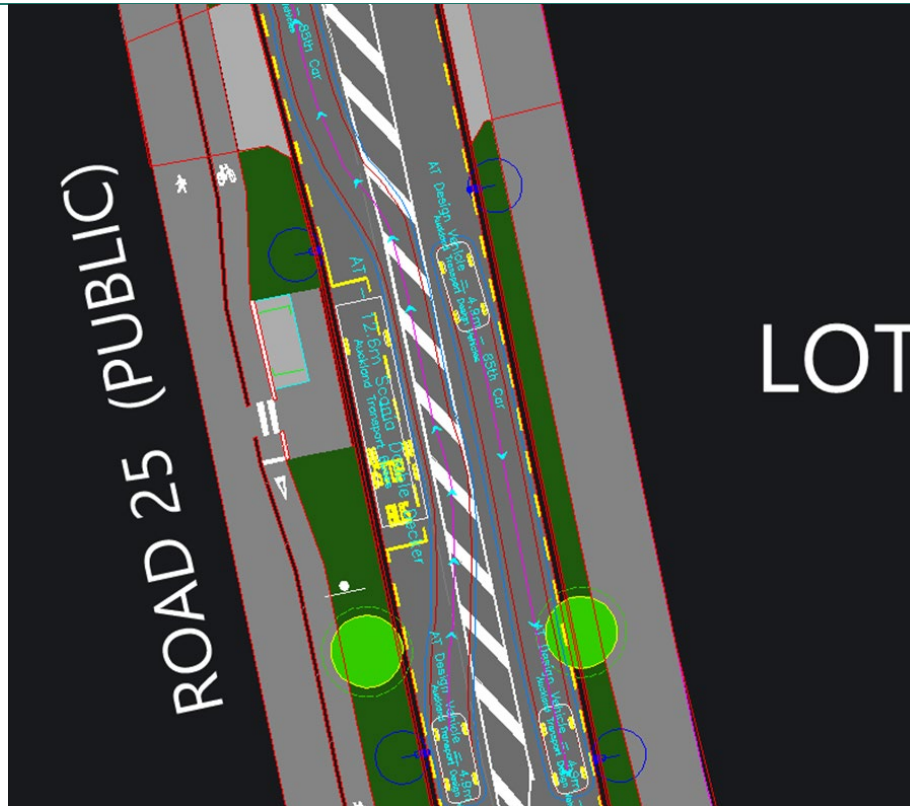
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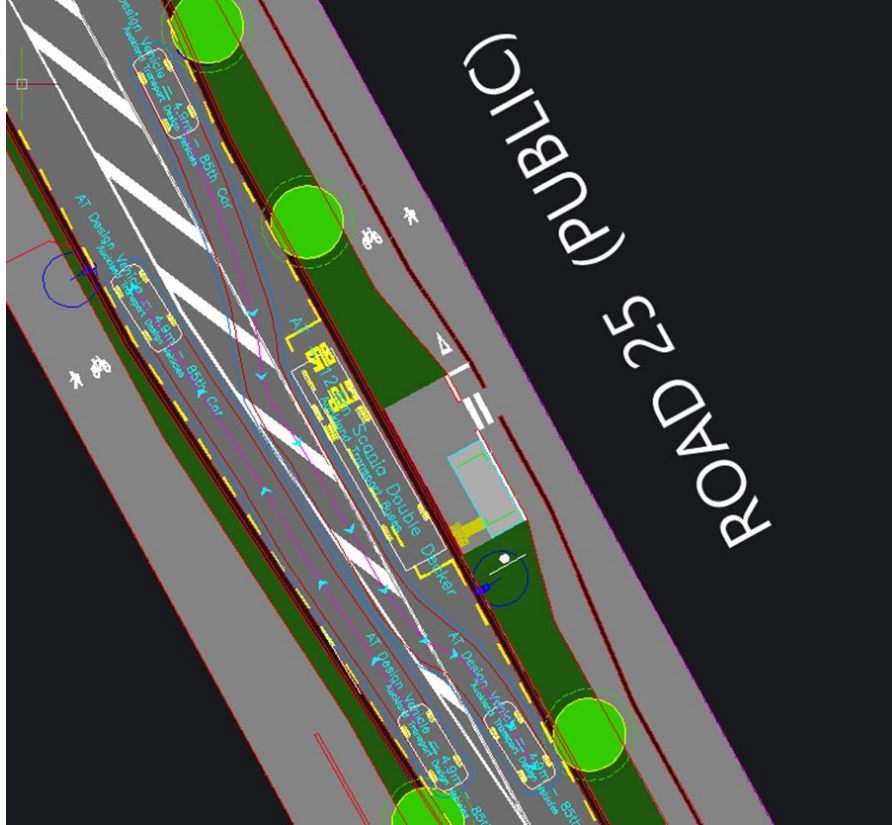
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	<p>Architectural Drawings show that this road is required to access Lot D and Lot F. We recommend that the applicant include the design of this road within the civil engineering drawing package.</p> 	
<p>44</p>	<p>Woods Drawing 2053-RD shows the intersection of Road 3 and Flanagan Road, although it is acknowledged this lies just outside of the boundary of the Drury Stage 2 extents. There is no detail of intersection treatment or consideration of any requirement for turning bays. We recommend more work be undertaken to determine the intersection control and layout.</p>	<p>Please refer to the updated engineering drawings set (<b>Attachment 8</b>) which now detail that a mini-roundabout will be provided at this intersection. A snip showing the design is provided below for ease of reference.</p>

		
45	<p>The new signalised intersections on private roads will need to be managed by the Auckland Transport Operations Centre (ATOC). This is essential to ensure the SCATS systems that control signal timings are appropriately managed and integrate with the wider network management. Confirmation is required of the signal design to ensure</p>	<p>Agreed, there is a mechanism to achieve this outcome, and detailed Signals Layout Plans will be provided at Engineering Approval stage, including necessary coordination with ATOC.</p>

	<p>they will work safely and efficiently as a system. This will include:</p> <ul style="list-style-type: none"> <li>a. integration with neighbouring signals in terms of timings;</li> <li>b. testing lane configurations and lengths are sufficient to manage queuing;</li> <li>c. providing full protection for pedestrian and (where cycle crossings are available) cycle movements.</li> </ul>	
46	<p>Woods drawing 2830-DR show an example of an in-lane (floating) bus box. This takes up the majority of but not all of the lane (noting there is no marked centreline). We recommend an assessment be undertaken to demonstrate that two-way movement of traffic past stationary buses can be managed safely and there is no ambiguity with respect to decision making for vehicles in the same lane as stationary buses. Alternately it is recommended that the bus bays are indented to allow for two-way movement of general traffic.</p>	<p>The lane arrangement has been amended to better cater for two-way traffic movement in instances where a bus is parked at the stop. See snips below and updated engineering drawings included as <b>Attachment 8</b>.</p> <p>Indented bus laybys are no longer considered good practice as they remove priority from buses to passing cars. Given that the lane arrangement has been amended, indented bus laybys are not considered to be required.</p>



		
47	<p>Stage 2 – Lot A</p> <p>The vehicle crossing serving the carpark and the western loading dock access (inbound) are combined at the</p>	<p>The building code specifies in section D1 “Access Routes”<sup>1</sup> that for vehicular access, the designer shall refer to AS/NZS 2890 Part 1. As stated in the Australia / New Zealand Standard for Parking facilities Part 1: Off-street car parking’, sight triangles recommended only on the right-hand side of the access. The requirement is measured from the property boundary.</p>

<sup>1</sup> <https://www.building.govt.nz/assets/Uploads/building-code-compliance/d-access/d1-access-routes/asvm/d1-access-routes-2nd-edition-amendment6.pdf>

	<p>kerb, creating a crossing width of approximately 19m as shown on Architectural Drawing A-1301 and Figure 33 of the ITA. Further, heavy vehicle tracking when turning left into the site may conflict with outbound cars as shown in Figure 43 of the ITA. It is unclear whether there is suitable intervisibility between pedestrians and turning vehicles and if appropriate mechanisms are proposed to manage vehicle speeds using these vehicle crossings. We recommend that the applicant provide further assessment of the potential conflict between vehicles at this combined crossing and assess pedestrian safety and amenity due to the over-width vehicle crossing.</p>	<p>This is particularly pertinent to item 47, whilst a back berm could be developed, a superior design would account for the 2.5m wide visibility splay that would provide clear visibility of pedestrians and cyclists on the footpath.</p> <p>It is confirmed that the visibility splay design is adopted throughout the Drury Centre building design. Where visibility splays are not marked on the drawings, intervisibility is achieved through permeable facade treatments, such as vertical timber Batten screens, example shown below for reference.</p> <p>Please refer to sheet 00-1201, A-1301, D-1301 &amp; E-1301 of the architectural drawings set included as <b>Attachment 11</b> for visibility splay updates.</p>
48	<p><u>Stage 2 – Lot B</u></p> <p>There are two vehicle crossings on Road 1 serving the loading dock. Architectural Drawing B-1301 and ITA Figure 44 show these crossings spaced approximately 40m apart, however</p>	<p>Please refer to the correction on the Engineering drawings set (<b>Attachment 8</b>) in alignment with the layout presented on the architectural drawings showing these crossings approximately 40m apart.</p>

	Engineering Drawing 2001-DR shows less than 10m spacing. We recommend that the applicant confirm the proposed spacing of vehicle crossings.	
49	There is one vehicle crossing on Road 1 serving the car parking area. This vehicle crossing is close to the Road 1/Road 25 signalised intersection. Vehicles turning right into the vehicle crossing may cause queuing into the Road 1/Road 25 signalised intersection, and vehicles turning right out of the site may have limited visibility. We recommend that the applicant provide further assessment of delays and queuing.	This vehicle crossing is intended to be a left in, left out movement only. Right turns movements would otherwise have to cross 2x East-bound through lanes and a right turn lane into stage 1.
50	<p>Stage 2 – Lot C</p> <p>Lot C proposes a vehicle access as the eastern arm of the Road 25/Road 13 signalised intersection. The vehicle crossing location does not comply with the intent of E27.6.4.1.(3)(a) as it has less than 10m separation 10m from Road 25/Road 13 intersection – noting that Road 13 is a private road therefore E27.6.4.1.(3)(a) may not</p>	<p>As described in item 28 above, the Road 25 / Road 13 / Lot C intersection shown in the application plan sets was indicative given the early development stage of the Lot C site. However, further work has now been undertaken to develop the design (Refer to sheet 00-1101, 00-1201 &amp; C-1301 for crossing updates), as per the image below. The image shows a narrowing of the crossing distance over the eastern signalised arm of the intersection (to ~10m). As with all intersections within the Precinct, it will be raised for further safety provision.</p> <p>Confirming that the eastern Lot C arm of the intersection will be fully signalised. It is not considered that E27.6.4.1.(3)(a) applies in this instance.</p>



	<p>technically apply. The Lot C access does not appear to be signalised, which could make access unsafe for drivers and crossing unsafe for pedestrians. We recommend that the applicant provide an assessment of how Lot C will be provided with safe and efficient access, and how pedestrian movement across the vehicle accesses to Lot C will be managed safely.</p>	
51	<p><u>Stage 2 – Lot D</u></p> <p>Woods Drawing 2003-DR and 2509-DR show lengthy vehicle crossings on the north side of Road 13 which allow for the swept path of trucks across the shared path into and out of the loading dock. It is unclear whether there is suitable intervisibility between pedestrians and turning vehicles and if appropriate mechanisms are proposed to manage vehicle speeds using these vehicle crossings. We recommend that the applicant provide further assessment of pedestrian safety and amenity due to the over-width vehicle crossing.</p>	<p>Please refer to updated plans that now detail a shared path on both sides of Road 13 in place of a pedestrian and cycle path with vertical separation. Snip below.</p> <p>There will be sufficient visibility between pedestrians and vehicles as the road is straight and sightlines unobstructed. All vehicle crossings (throughout the precinct) will afford priority to pedestrians over vehicles, and</p>

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		surface treatments and footpath levels will ensure this is legible to all users. The ramp for cars up to footpath level is clearly shown on the above snip. Further, as described earlier, the 2.5 x 2.5m pedestrian visibility envelope will be provided at all locations where cars cross footpaths.
52	Queuing could occur on Road 13 where the vehicle crossings for the shopper carpark and loading area entry are located close to each other and close to the Road 2/Road 13/SH1 off ramp intersection. We recommend that the applicant provides an assessment of the potential for queuing at the Lot D vehicle crossings onto Road 13.	<p>The driveway to lot D has been moved 7m to the east, as shown in the below snip (Refer to sheet 00-1201, A-1301 &amp; D-1301 for vehicle crossing updates). This introduces two advantages from a queuing perspective:</p> <ul style="list-style-type: none"> <li>(a) It provides an additional car queuing length.</li> <li>(b) The revised driveway will enter the Lot D car park aisle directly, rather than having manoeuvre inside the car park. As such the likelihood of queuing occurring outside the site is low, and that queue reaching the Road 2 signals negligible.</li> </ul> <p>While moving the Lot D car park entry point further east would have moved it closer to the loading dock entry, that has now also been moved further east to reduce overlap.</p>
53	<p>Stage 2 – Lot E</p> <p>Table 7 of the ITA states that informal loading is anticipated to occur in the eastern car park, and that a formal loading space is provided in the western car park. Figure 48 of the ITA an 8m truck entering the eastern car park, however vehicle tracking is not provided for the western car park. The vehicle tracking for the eastern car park shows potential conflict with columns and informal loading may conflict with other vehicle movements, and it is unclear whether the truck can safely access the loading</p>	<p>Updated vehicle tracking analysis has been undertaken and demonstrates that loading can be undertaken safely and efficiently within the western car parking building. The vehicle tracking is undertaken using an 8.0m truck and is shown below.</p>

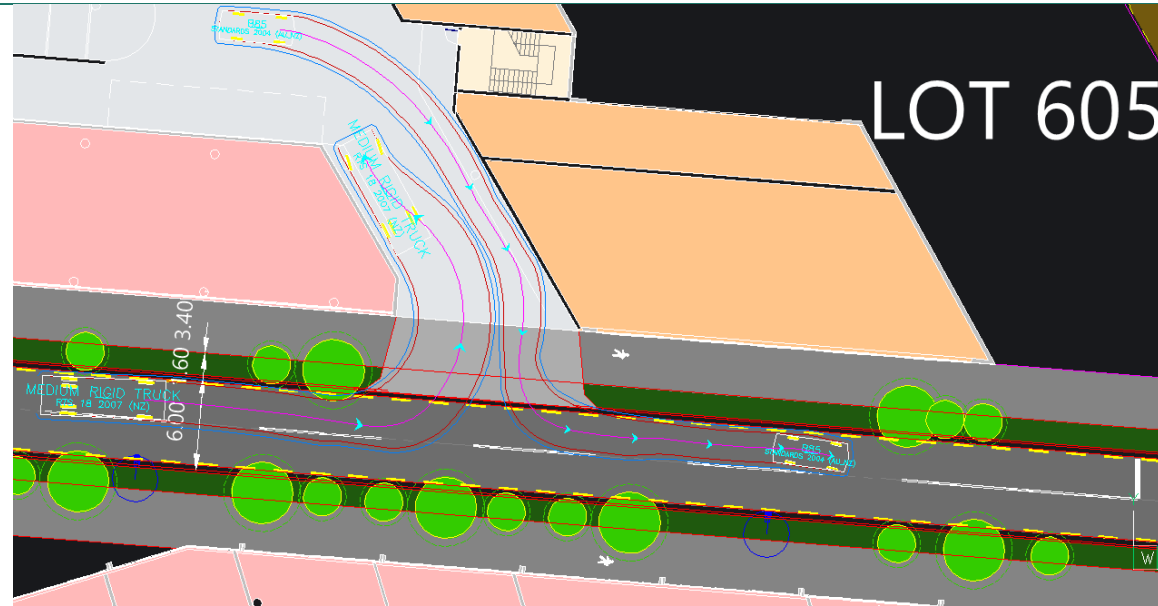
	<p>space in the western car park. We consider this may affect the safe and efficient operation of the site and adjacent transport network. We recommend that the applicant confirm how practical loading and servicing can be provided.</p>	
54	<p>Stage 2 – Lot F1</p> <p>The northern vehicle crossing onto Flanagan Road is not at right angles to the road. This can encourage high vehicle speeds across the footpath and limit driver visibility of pedestrians. We recommend that the applicant amend the design.</p>	<p>The vehicle crossing mentioned is a left in, left out entrance to a pick-up-drop-off area. This movement affords good visibility to any pedestrians, whereas an out-only, or two-way movement would not. A standard vehicle crossing has been tested, but the vehicle tracking would require a non-complying and excessive crossing width at the boundary which could read to drivers as a two-way crossing when it is not. We propose to keep the vehicle crossing in the presented form and seek a departure from standards at the time of Engineering Approval.</p>
55	<p>Stage 2 – Lot G2</p>	<p>Two trucks cannot pass one another here at this vehicle crossing, however, trucks are not expected to need to pass one another. Signage can be provided internally advising drivers to give way to turning vehicles. Tracking checks have been undertaken for truck vs car and this is shown below:</p>

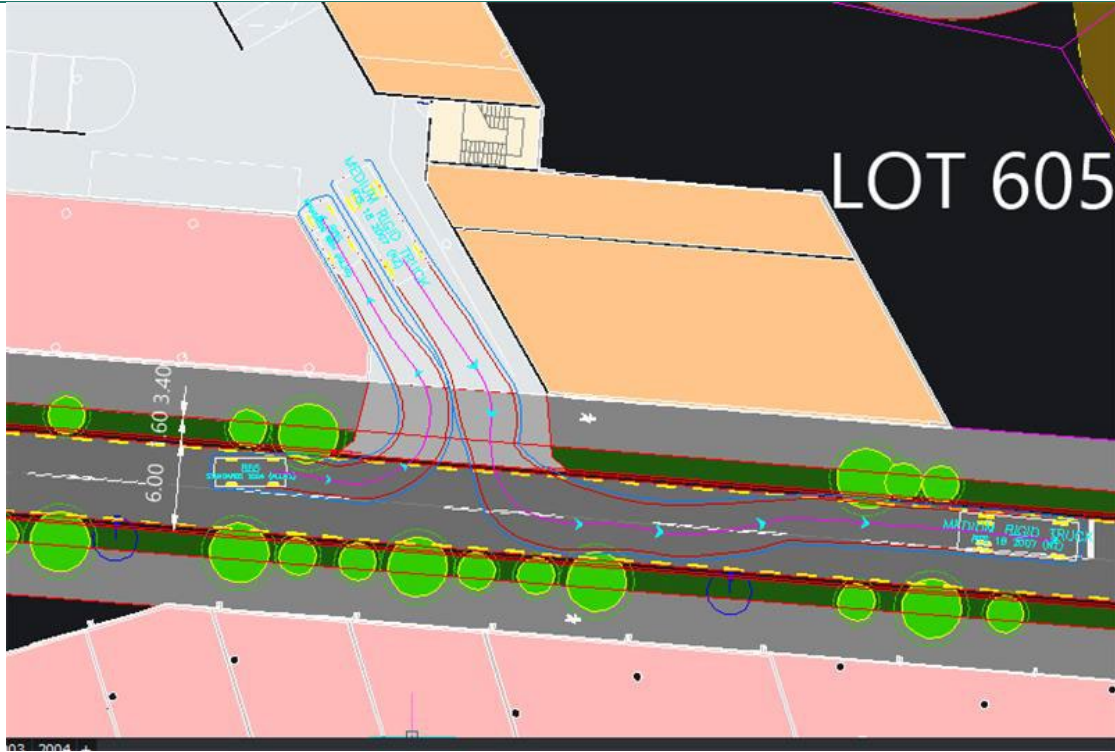
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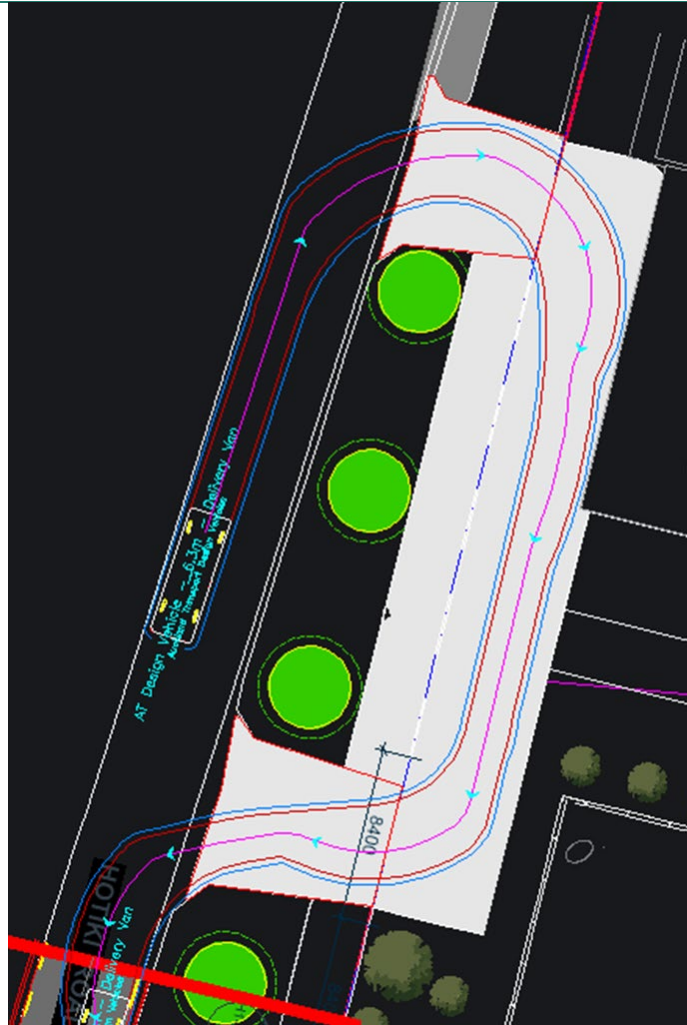
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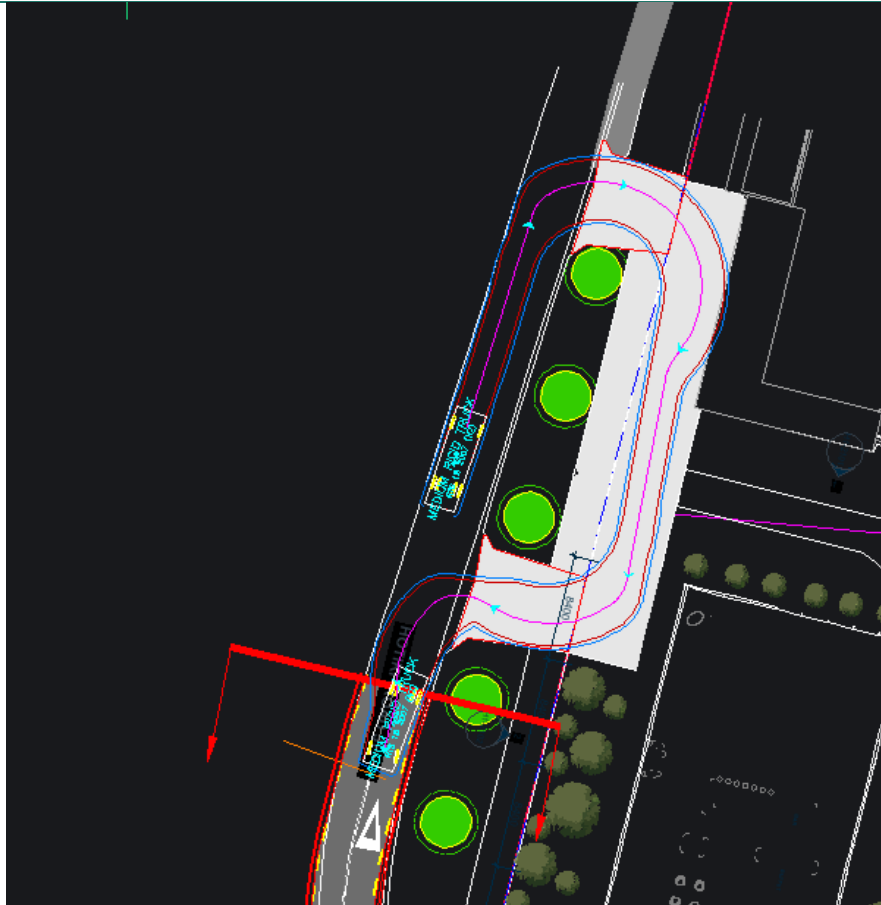
Figure 54 of the ITA an 8m truck entering the parking level, and Table 7 of the ITA states that loading is anticipated to occur parking level. The vehicle tracking shows conflict with opposing vehicle movements, and it is unclear whether the truck can safely access the loading space shown on Ignite Drawing GS-1302. We consider this may affect the safe and efficient operation of the site and adjacent transport network. We recommend that the applicant confirm how practical loading and servicing can be provided.



		
56	<p>Stage 2 – Lot H1</p> <p>Figure 55 of the ITA shows a loading space will be provided on Road 3 adjacent to Lot H1; however, this loading space is not shown on Woods Drawing 2004-DR. We recommend that the applicant confirm how</p>	<p>The proposed loading space has been reviewed and amended to that presented in the application. A new one-way loading zone is proposed in private land between H1 and H2, utilising the proposed H1 vehicle crossing for the entry, and the exit in front of H2.</p> <p>Vehicle tracking for a delivery van and an 8m truck provided below:</p>

practical loading and servicing can be provided.





It is noted that the current 8m truck tracking requires further refinement however, this will be resolved in detailed design / building consent. A condition of consent will be accepted that ensures that redesign will occur at the appropriate design stage.

57

Stage 2 – Lot H2

This has been responded to in item 56 above.


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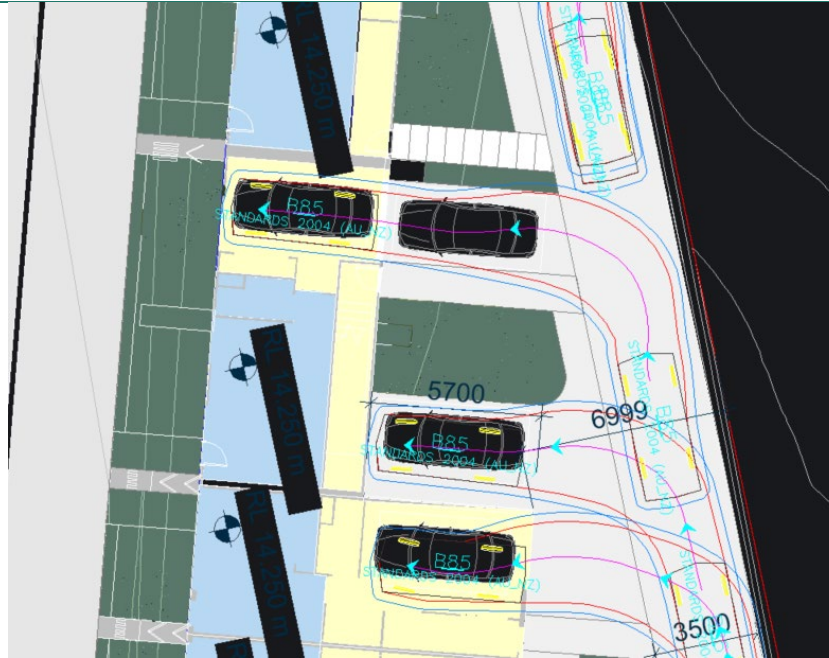
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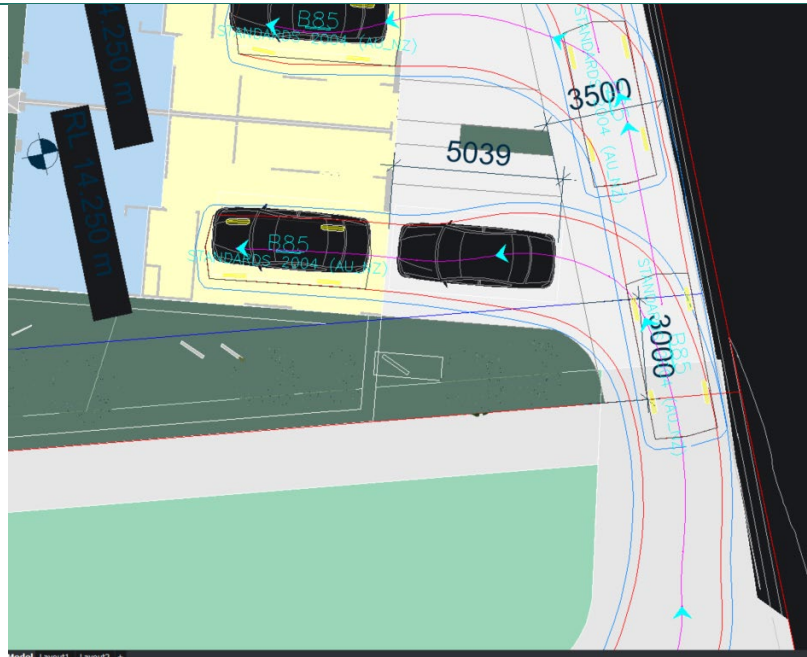
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	<p>Figure 55 of the ITA shows loading is anticipated to occur within the vehicle accessway to the basement of Lot H2, with the heavy vehicle blocking the accessway and requiring a reverse manoeuvre onto/off the site. We consider this may affect the safe and efficient operation of the site and adjacent transport network. We recommend that the applicant confirm how practical loading and servicing can be provided.</p>	
58	<p>Stage 2 – Lot K</p> <p>Stage 2 Lot 508 (JOAL for Lot K) is proposed to gain access to the Road 25/Road 6 intersection. The vehicle crossing location does not comply with the intent of E27.6.4.1.(3)(a) as it has less than 10m separation 10m from the Road 25/Road 6 intersection – noting that Road 6 is a private road therefore E27.6.4.1.(3)(a) may not technically apply. The Lot C access does not appear to be signalised, which could make access unsafe for drivers. We recommend that the applicant provide further assessment of the potential safety and efficiency</p>	<p>This has been responded to in item 29 above.</p>



	effects for users of Lot 508 and road users for the adjacent road network.	
59	<p>Block 1 and Block 2 dwellings may have insufficient parking space depth. It appears that dwellings are intended to provide parking pads in front of garages, however some of these are less than 5m deep. This could result in obstruction of the JOAL. We recommend that the application provide further detail on parking provision for these dwellings.</p>	<p>Vehicle tracking analysis using a B85 vehicle has been undertaken, and all parking pads and garages can be safely and appropriately accessed. The internal ROW is accommodated with a 1.0m berm on the northern side that will provide further clearance. Vehicle tracking is shown below.</p> 





## Regional Earthworks

60	Please provide the final page of the Adaptive Management Plan which appears to be missing.	The page numbering of the Adaptive Management Plan in Appendix 25D of the application material was an error and it is confirmed that there are 9 pages to this document only. This has been corrected and is enclosed as <b>Attachment 12</b> .
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## Ecology

61	The Stream Ecological Valuation (SEV) calculator in excel format.	This is enclosed as <b>Attachment 13</b> .
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62	A map of the wetland delineation assessment points	This is enclosed as <b>Attachment 14</b> .
63	Clarify and confirm the mechanism that ensures Stream A will be daylighted as proposed, noting that reach of Stream A envisioned to be daylighted is not within the applicant's control.	<p>That portion of Stream A proposed to be daylighted is on land owned and controlled by Kiwi Property. Figure 2 of the AEE confirms the properties that are owned by Kiwi Property and Figure 26 of the AEE shows of Stream A which is proposed to be daylighted across 64 and 68 Flanagan Road. For the avoidance of doubt, Kiwi Property own and control both 64 and 68 Flanagan Road.</p> <p>Part D of the proposed consent conditions relate to the streamworks consent. Specifically, conditions 6 and 7 requires a Stream Enhancement Plan to be prepared and provided to Council for certification and plans showing the length of stream to enhanced, created or daylighted. For completeness, condition 6 of the streamworks consent has been amended to note that the certified Stream Enhancement Plan must be implemented.</p> <p><b>Stream Enhancement Plan</b></p> <p>6. Prior to streamworks commencing, a Stream Enhancement Plan (<b>SEP</b>) must be prepared and submitted to the Council for certification.</p> <p>7. The objective of the SEP is to provide the detailed and finalised design for the enhancement of Stream A. The Stream Enhancement Plan must be in general accordance with Ecology Assessment referenced in Condition 1, geomorphically appropriate for the stream type and location in catchment, and include detail regarding the following, but not limited to:</p> <ul style="list-style-type: none"> <li>(a) The identification and description of all streams to be impacted or restored.</li> <li>(b) Timing, staging and programme of works.</li> <li>(c) Stream restoration design details identifying all elements of the activities authorised by this consent and their associated locations. The plans must show the length of stream to be ecologically enhanced, created or daylighted and indicative locations of instream habitat and geomorphological features are appropriate for the stream type and the position in the catchment as well as clearly depicting the widths of all riparian margins and representative stream cross-section and long-section plans.</li> </ul>
64	The Ecological Impact Assessment ( <b>EclA</b> ) identifies that the area of the catchment contributing surface water	According to the geotechnical investigations (undertaken by Aurecon during Stage 1 works), Wetland 1 is groundwater fed from the Hingaia Stream. Therefore, while surface water inputs contribute to the hydrology of

	<p>to Wetland 1 will be reduced by approximately 50%. The EclA assesses that the magnitude of the effect could range from moderate to negligible. The Applicant should provide further information to qualify what the change in surface flow inputs would mean for the wetland extent, in terms of area, and duration (the length of time the wetland will continue to display wetland characteristics across the year).</p>	<p>Wetland 1, they are <u>not</u> the sustaining hydrological feature. Thus, Kiwi Property expects most of the extent of Wetland 1 to remain intact and continue to function as wetland.</p> <p>Following further calculations, it is anticipated that the surface water catchment would reduce from 1.79 ha to 0.11 ha (approx. 94%). Because the surface water input to the wetland hydrology has been identified as 'contributing', it would be anticipated that such a significant reduction of the surface water catchment would still result only in a minor change to the wetland extent (due to the wetland being groundwater fed). Further, we would anticipate this change to be permanent due to the permanent reduction of the surface water catchment.</p> <p>As Wetland 1 is located within a depression, any changes to the wetland extent from hydrological changes would be expected at the wetland margins, especially where the wetland extends into more elevated areas.</p> <p>As such, we would expect a loss of a moderate portion of the wetland extent in a worst-case scenario. We assessed a moderate loss of wetland extent as a <b>moderate</b> magnitude of effect. A moderate magnitude of effect combined with a <b>low</b> ecological value results in a <b>low</b> overall ecological effect (Ecological Impact Assessment guidelines 2018).</p>
65	<p>The Applicant should provide an updated assessment that includes the effects management hierarchy of the National Policy Statement: Freshwater Management which has not been applied to the proposed reclamation of the Stream A Wetland.</p>	<p>An effects management hierarchy assessment for the proposed reclamation of the Stream A wetland has been completed and can be found in section 10.12 of the AEE submitted with the application.</p>
66	<p>It is not clear what is the proposed action is if the Stream Ecological Report (<b>SER</b>) required by proposed Streamworks condition 34 does not</p>	<p>It is acknowledged that the current drafting of condition 34 does not specify the subsequent actions that need to be undertaken if the new streams are not on a trajectory to achieve the required stream ecological value in the long term, as intended.</p>

	meet the predicted or is not on-track to meet the reported ecological outcomes.	To address this, a new condition 35 in <b>Attachment 5</b> is proposed to be included in the proposed conditions specifying subsequent actions that need to be undertaken.
67	Stream A is reported in the EclA as having an average width of 1.2 m at present. The realigned channel is reported as having a low-flow channel width of 1.4 m (page 28 of the EclA). No effect of the increase in width on the water depth is given, and whether sufficient water depth is retained, throughout the year, to provide aquatic habitat.	<p>The natural width of Stream A along the open channel varies between 0.5 and 3 meters. This variation results from natural channel morphology that creates pools and run stream habitats. The detailed design for the proposed daylighting of Stream A has not yet been completed; however, it is expected to include a range of pools, run, and riffle habitats that will accommodate varying stream widths.</p> <p>Overall, the typical width of the realigned channel is expected to be slightly wider than existing streams. With the provision of a variety of habitats such as pools, runs, and riffles, it is anticipated that sufficient habitat will be available, particularly in pools and runs. Therefore, the additional stream width is not expected to have any effects on the stream ecosystem.</p>

#### Contamination

68	Clarify whether a development buffer zone is proposed around the former landfill area to ensure safe working conditions and mitigate potential risk to site occupants. If so, please provide a plan showing the extent of this buffer and rationale for its size.	No development buffer zone is proposed. Given the extent of the filled area adjacent to earthworks (i.e. eastern and southern fill boundary) is an estimate only, our revised proposal is to advance hand augers to confirm the extent of contamination, if any, in this area prior to commencing bulk earthworks. This approach is discussed further below.
69	Confirm whether the presence of the landfill has been assessed in accordance with the HAIL H classification under the NES:CS, and provide a clear assessment of its	The Conceptual Site Model (CSM) includes historical fill material on 108 Flanagan Road as a source of contamination at the site. The approximate extent of this area is shown on Figure 4 appended to the Remedial Action Plan in Appendix 15 of the application. Given the material is on-site, we have classified and assessed the area as HAIL G3: Landfill sites.

<p>implications for the activity status of the proposal and relevant consent requirements.</p>	<p>As discussed in the CSM, the potential risk to human health is considered acceptable based on the concentration of contaminants of concern measured in samples from this area being below the adopted human health criteria and no disturbance or active future use of this area is currently proposed. The boundary of the planned earthworks area is outside of, but close to, the estimated fill area boundary. Given the filled area boundary is an estimate only, we propose to advance hand augers along the suspected southern and eastern fill boundary prior to commencing bulk earthworks. This could be done in conjunction with the additional assessment of environmental discharge risks proposed in the Remedial Action Plan (RAP) (i.e. installation and monitoring of a minimum of four shallow groundwater wells along the hydraulically downgradient edge of the filled area).</p> <p>The hand auger investigation of the southern and eastern fill boundary extent will result in one of the following three scenarios:</p> <ul style="list-style-type: none"> <li>a. no contaminated fill is encountered, and the earthworks proceed as planned; or</li> <li>b. contaminated fill is encountered within the planned earthworks area, tested and the controls in the RAP are confirmed as appropriate for handling fill when performing earthworks in this portion of the site; or</li> <li>c. contaminated fill is encountered, tested and the controls in the RAP are updated to account for the additional / different contamination encountered when performing earthworks in this portion of the site.</li> </ul> <p>Irrespective of the outcome in either of the above scenarios, this does not change the consent requirements under the NES or AUP which have already been applied for in the application and AEE.</p>
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