

MEMORANDUM

To: Auckland Council: Michael Luong

From: Barker & Associates

Date: 3 April 2020

Re: Drury East Plan Change: Planning RFI Response

Drury East Plan Change Request – Fulton and Hogan Land Development

I write in response to your request dated 5 March 2020 for further information under Clause 23(1) to Schedule 1 of the Resource Management Act 1991 relating to the above private plan change request. This letter sets out our responses to the matters raised in your letter, and is supported by the following attachment prepared by the technical specialists supporting the plan change request:

- Attachment 1: Drury East Plan Change Application dated 2 April 2020
- Attachment 2: Drury East Plan Change dated 2 April 2020
- Attachment 3: Urban Design Assessment dated 30 March 2020
- Attachment 4: Response to Urban Design Request for Further Information
- Attachment 5: Landscape and Visual Effects Assessment
- Attachment 6: Response to Geotech Request for Further Information
- Attachment 7: Response to Ecology Request for Further Information
- Attachment 8: Response to Stormwater Request for Further Information
- Attachment 9: Response to Transport Request for Further Information
- Attachment 10: Auckland Unitary Plan and Drury Centre Precinct Provisions for Roads, Open Spaces

The requests and our responses are set out below.

1.0 PLANNING

1.1 TRANSIT ORIENTATED DEVELOPMENT

Request 1: *Given the announcement around early station provision (with location of these stations being a separate issue), can you please advise whether and how the plan change request would be altered given the greater certainty now provided over early access to public transport?*

Stantec has undertaken further transport modelling to determine the impact of the transport infrastructure projects that the Government has confirmed funding for including bringing forward the delivery of the Drury Central train station. This updated modelling now shows that the standards which seek to stage development with transport upgrades can be significantly simplified. In particular the local upgrades required to enable certain development capacities include:

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- Safety improvements of the Great South Road/Waihoehoe Road intersection (required in approximately 2026); and
- Capacity improvements of the Great South Road/Waihoehoe Road intersection (required in approximately 2038 if there is direct access to the centre from SH1 and 2033 if there is not direct access).

In addition to simplifying the triggers criteria are now proposed to ensure that internal pedestrian and cycling linkages to the Drury Central train station are staged with development. This is discussed further within Section 1.8.2 of this response.

Request 2: *Given the importance attached to transit access in managing transport pressures, as well as shaping urban form, has consideration been given to the plan change only coming into effect once the Drury Central train station is operational? Could provision be made for enabling works to occur in the meantime?*

Delaying the Plan Change so that it comes into effect once the Drury Central train station is operational is not necessary nor is this supported. Since the lodgement of the Drury East Plan Change applications the Government has committed to funding the Drury Central Train Station, with construction due to be completed late 2024 *refer Figure 1*. Given it is likely to take two years for the Plan Changes to become operative followed by two years of enabling works to prepare the land at Drury East for development, it is highly likely that the train station will be operational prior to the occupation of any new dwellings, retail or commercial buildings. As there is general alignment between the delivery of the train station and construction of Drury East getting underway, it is not necessary to delay the Plan Change.

Notwithstanding that there is alignment of the timeframes, the proposed delay of the Plan Change is not supported. It is not essential for the Drury Central train station to be aligned with the first dwellings to deliver a development that is well supported by public transport. Now that there is commitment from the Government to deliver the Drury Central train station by 2024 the Plan Change can with more certainty seek to enable a planning framework that seeks to respond to this through ensuring there are road, walking and cycling connections to the train station at the early stages of development within the walkable catchment of the station. Auckland Transport's approach to providing public transport services is that they continue to monitor growth and transport conditions and prioritise the necessary infrastructure and service improvements as circumstances demand and budgets and practicalities allow¹. Therefore, demand will drive the investment in supporting public transport services and a level of development is necessary prior to completion of the train station will provide a population to support investment in supporting bus networks.

¹ Joint statement of evidence of Alastair Cribbens, Steve Wrenn and Liam Winter on behalf of Auckland Transport for Auckland Unitary Plan Topic 080 and 081 Rezoning and Precincts dated 3 December 2015 pg 14.

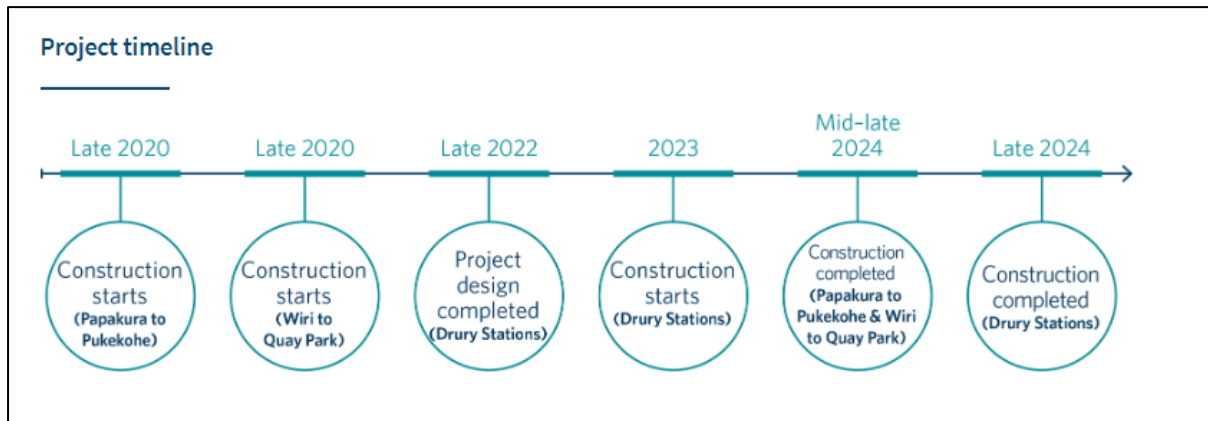


Figure 1: Drury Train Station Project Timeline Source: NZTA

1.2 CO-ORDINATION / INTEGRATION ACROSS THREE PLAN CHANGES

Request P3: Please advise on the risks associated with implementation of the three plan changes as separate precincts and how those risks are to be mitigated?

Transport Request 1: The transport modelling assessment and planning provisions currently speak to all three PPCs being accepted as a package and progressing in parallel. In the event that the PPCs are disaggregated, or deviate from each other in terms of timing as a result of the public notification process/resolution of critical elements, please provide further information as to how the transport effects of each individual PPC can be understood and mitigated and how the provisions may need to be amended as a result. Please confirm to what extent the PPC relies on the PPCs submitted by FHDL and Oyster Capital, and how the delay or rejection of one or both of these PPCs might affect the Kiwi Property PPC.

In our view the risks associated with implementation of the three plan changes as separate precincts largely relates to the integrated delivery of transport infrastructure. Since the initial drafting of the Plan Change the Government has announced an infrastructure funding package which brings forward the delivery of many key projects such as the Drury Central train station and the Mill Road corridor.

The results of the updated modelling undertaken by Stantec accounting for the early delivery of now funded infrastructure projects has shown a delay in the timing for unfunded local upgrades that need to occur to enable development. The unfunded local roading projects that are required to enable capacity are now largely confined these to safety and capacity improvements to the Great South Road and Waihoehoe Road intersection. In addition, new provisions are now proposed to require the developers to stage the early delivery of internal linkages to the train station within their precinct or Plan Change area. The precinct provisions for these internal linkages have been developed in an integrated way across the Plan Changes, but do not rely on infrastructure works being undertaken by another party, given that there are options to access the Drury Central train station via interim upgrades to the existing road network.

In parallel with the Plan Changes, the Drury East developers intend to develop an infrastructure funding agreement between themselves, the Council and other relevant parties addressing these

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required but as of yet unfunded local transport upgrades. This funding agreement will minimise the risks with implementation of the three plan changes as separate precincts and is intended to be in place prior to a hearing on the Plan Change. If that were to occur there is an option to remove the transport staging provisions from the Plan Change entirely.

The developers have already reached agreement with Watercare around network upgrades required to be installed and these works have physically commenced.

In our view, there are no other risks associated with managing the development of the three Plan Change areas via separate precincts given that the zoning framework and planning provisions have, and continue to be developed, in an integrated manner. However, we provide specific responses to the three potential risks listed on page 2 of the Planning RFI:

Issue noted in the Planning RFI	B&A Response
The proposed rules associated with infrastructure delivery and how these may be interpreted if only one or two of the Plan Changes are operative	The transport infrastructure rules have been simplified. The upgrades to the transport network would be triggered by one or all of the developments as the rule applies to the entire Drury East area (refer to the precinct plans showing the transport staging boundary). In this regard, there would be no difference if the development progressed concurrently or one development proceeded ahead of the other.
How costs are to be shared across the three Plan Change areas for required (identified) upgrades if development in one of the plan change area exceeds the triggers, but the other plan changes are not operative.	As noted above, the Drury East developers intend to enter into a Development Agreement to fund the necessary local upgrades prior to the Hearing on the Plan Change.

1.3 URBAN DESIGN

Request 4: Please advise as to whether any consideration has been given to incorporating best practice outcomes relating to urban form and urban design. AUP Policy B2.3 A quality built environment should be referenced.

The proposed Plan Change relies largely on standard zones and Auckland-wide provisions to manage the way in which the Plan Change area is used and developed, which is the policy intent of precincts under the AUP. In this regard we note that the AUP sets out a clear hierarchy of provisions in A1 – Introduction. The purpose of precincts is to “enable local differences to be recognised by providing detailed place-based provisions which can vary the outcomes sought by the zone or Auckland-wide provisions and can be more restrictive or more enabling”². In a greenfield context, these place-based provisions relate to specific environmental features that development needs to respond to, and which

² Refer A1.6.5 of the AUP.

are justified following a s32 analysis. This approach does not support the use of precincts to provide a greater or lesser degree of regulation than the zone or Auckland-wide provisions, unless there are clear place-based reasons for doing so, which are different to other parts of the region.

Consistent with other greenfield precincts within the Auckland Unitary Plan, the Plan Change includes a precinct, which includes place based provisions that create a spatial framework for development. In our view, the precinct provisions are appropriately focused on the layout of development necessary to achieve the objectives of the AUP, including:

- Achieving an appropriate urban layout;
- Providing an integrated and connected street network;
- Providing a network of open space which integrates with the natural features of the area; and
- Ensuring development integrates with public transport and that development coordinates with the required infrastructure upgrades.

On balance, this approach enables the Plan Change area to develop to a scale and intensity which is broadly consistent with areas of similar zoning patterns across the region. Additional provisions have been incorporated to Drury East Precinct to achieve best practice outcomes relating to urban form and urban design in accordance with AUP Policy B2.3 A quality built environment. In particular additional provisions are included to:

- Requiring consent with additional assessment criteria for roads to ensure a connected street network which integrates with the wider Drury area;
- The road cross sections will ensure there are pedestrian and cycle paths to encourage active transport modes;
- The assessment criteria for roads will also ensure that the delivery of pedestrian and cycling linkages to the train station are staged with development; and
- Additional policy direction is provided within the precinct to integrate the network of public open spaces with natural features including the stream network.

1.4 WAIHOEHOE ROAD FRONTAGE

***Request 5:** Please advise how urban design considerations will be addressed for development that abuts Waihoehoe Road to ensure a consistent approach on both sides of the road.*

The proposed zoning pattern will result in the Terrace Housing Apartment Building (**THAB**), Mixed Housing Urban (**MHU**) and Mixed Housing Suburban (**MHS**) zones locating across the road from the Future Urban zone. Eventually however, the zoning pattern on the northern side of Waihoehoe Road will reflect the zoning pattern in the Plan Change area if it follows the proposed layout of the Drury Opaheke Structure Plan Change. This will ensure a consistent urban form either side of the road. Furthermore, within these zones, assessment criteria for all new buildings (**THAB**) and four or more dwellings (**MHS** and **MHU**) are relevant. The assessment criteria will ensure that development achieves attractive and safe streets.

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1.5 ZONE BOUNDARIES

Request 6: Please provide a rationale for the split zoning across small lots or advise whether the zone boundaries could be amended?

While every effort has been made to apply zones so that they align with cadastral boundaries this cannot always be achieved. As the Plan Change area is made up of large rural residential blocks these will be subdivided to provide for urban redevelopment. Therefore, the approach has been to prioritise achieving a sensible zoning pattern. We note that the zoning pattern of other greenfield areas do not necessarily follow cadastral boundaries, including Drury 1 precinct, Whenuapai Plan Change, Wainui and Hingaia, and the undeveloped parts of Hobsonville to name a few.

1.6 OBJECTIVES

Proposed objective	Further information request	Response
Drury East is a comprehensively developed residential environment that integrates with the Drury Centre, public transport and the natural environment.	7. It is unclear from the objective and associated policies how development is to 'integrate with public transport', versus development to support public transport use.	Agree that the wording of this objective is not correct. Precinct provisions have been amended accordingly.
	8. Please advise why the term 'transit-oriented' is not used in the objective?	Given that the Drury Central train station will not be located within the precinct the term transit-orientated is not proposed. However, given that supporting public transport use is important as noted above, this reference has been included and is considered more appropriate for this precinct.
Access to the precinct occurs in an effective, efficient and safe manner that manages significant adverse effects on State Highway 1 and the surrounding road network.	9. Please explain why this objective refers to managing impacts on the State Highway and road network, but does not refer in a positive way to supporting public transport use (rail, bus), consistent with transport assessments.	This objective is specifically focused on alleviating any adverse effects on the road network. Transit-orientated development and connections to public transport are addressed in Objective 1 and Policies 4, 6, 7, 15 and 16.
	10. Please consider whether the objective should refer to achieving a high modal split for access to and from the precinct by train and bus to better reflect the outcomes of the transport assessments.	Disagree. This is a base assumption of the transport modelling and the precinct provisions, both of which include provisions to encourage access to public transport.
Development is supported by appropriate infrastructure	11. Please advise whether this objective is necessary given similar objectives in the AUP RPS.	The Plan Change is enabling the urbanisation of a greenfield area where supporting infrastructure is still to be developed. The live

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Proposed objective	Further information request	Response
		zoning provides certainty for developers and infrastructure providers to work through the delivery of this infrastructure so that development occurs in a coordinated manner. This objective acknowledges this outcome which is being sought within the precinct.
	12. Please advise whether this objective should rather focus on ensuring development is integrated with necessary infrastructure by early delivery of key 'urban form shaping infrastructure and place making development'.	We are of the view that this objective is sufficiently broad to cover both longer term infrastructure that is required and infrastructure that is required in the shorter term to support placemaking.
Freshwater and sediment quality is progressively improved over time in the Drury Centre precinct.	13. The objective refers to Drury Centre, when the objective is to apply to the Drury East Precinct.	This is an error. The precinct provisions have been amended accordingly.
	14. Please advise whether this objective accurately reflects the outcomes sought by the Stormwater Management Plan?"	This objective is consistent with Objective E1.2(1), which the SMP has been prepared in accordance with. Yes, this objective supports the outcomes of the SMP.

1.7 POLICIES

Proposed policy	Comment	Response
Require collector roads to be generally in the locations shown in IX.10.X Drury East: Precinct Plan 1 while allowing for variation where it would achieve a highly connected street layout that integrates with the surrounding transport network.	15. It is noted that the east-west collector road may have an important function in assisting direct access to the proposed centre and train station by bus. Does the policy fully reflect the intended role and purpose of the road?	Yes it does given that the precinct plan shows this connectivity clearly. This Policy achieves Objective 1, which sets out the intent to integrate with the Drury Centre and ensure development supports public transport use.
Ensure that development provides a local road network that achieves a highly connected street layout that integrates with the collector road network within the precinct and the and surrounding transport network.	16. Please consider whether, in addition to providing a connected road network, the local road network should also support the desired urban form and design outcomes through appropriate block depths, widths and road cross sections.	Agree in part. The local road network should also support the desired urban form and design outcomes through appropriate block depths and widths and street cross sections. This guidance however, is more appropriately provided as assessment criteria. Therefore, matters of discretion and assessment criteria have been updated accordingly.

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Proposed policy	Comment	Response
Require streets to be attractively designed and appropriately provide for all transport modes.	17. Please advise whether this policy repeats matters already addressed in relevant Auckland wide chapters.	This policy provides a policy linkage for <i>Activity (A1) Development of public or private roads</i> which links to matters for discretion/assessment criteria that require roads to be generally laid out in accordance with the street sections included within Appendix 1 of the Precinct, which are consistent with Auckland Transport guidance.
Ensure that the timing of development in Drury East Precinct is coordinated with the transport network infrastructure upgrades necessary to mitigate any significant adverse effects of development on the following parts of the transport network: (a) The State Highway 1 interchange at Drury; (b) Great South Road from the Drury interchange to the immediate north of Waihoehoe Road; (c) Intersection of Great South Road and Waihoehoe Road; (d) Waihoehoe Road.	18. Without quantification of the term 'significant adverse effect', this policy may be very difficult to administer. Please explain was is considered to be a significant effect.	As previously discussed Stantec has undertaken further traffic modelling to determine the impact of the transport infrastructure projects that the Government has confirmed funding for. This updated modelling now shows that the standard which seeks to stage development with transport upgrades can be significantly simplified. Accordingly, this policy is now proposed to be simplified to align with the updated standard.
	19. This policy does not make reference to any of the public transport infrastructure referred to in the infrastructure trigger rules. Please explain.	
	20. Has consideration been given to what 'internal' roading needs to be in place early to provide bus, walking and cycling access to the train station?	
Ensure that the following is taken into account when considering whether a proposal would have significant adverse effects on the transport network: increased use of public transport will support greater efficiency in the transport network and may provide additional capacity; implementing the southern section of the Mill Road Corridor	21. It is noted that if anticipated use of public transport is not achieved (such as from poor access to the station and lack of supportive urban form) this may create adverse effects that need to be addressed through other infrastructure investments. Equally, other urban developments in the wider area may take up available capacity of	This policy is proposed to be deleted.

Proposed policy	Comment	Response
from the Drury South interchange to Fitzgerald Road, or any further roading upgrades, that may provide additional capacity in the transport network and may delay the timing of required upgrades at the Drury interchange and the Great South Road/Waihoehoe Road intersection.	<p>some of the additional network infrastructure to be provided.</p> <p>Have these outcomes been considered in the formulation of the policy?</p>	
Support improvements to water quality and habitat, including by providing planting on the riparian margins of permanent and intermittent streams.	<p>22. It is noted that a number of precinct specific on-site stormwater management methods may be needed. If this is so, then policy support for a higher standard of on-site management of stormwater will be required, for example if more than SMAF1 type outcome is to be delivered.</p> <p>Please comment whether this policy provides sufficient guidance over intended methods.</p>	<p>The SMP is proposing a higher standard of stormwater management than what is required within SMAF 1. In particular all roads are proposed to be treated irrespective of whether they are high contaminant generating or not. This method will support improvements to water quality, and for this reason, no amendments to this policy are proposed.</p>

1.8 METHODS

1.8.1 Collector Roads

Request 23: *Given the role of collector roads in providing access to adjoining sites and areas, please explain if the above notification rule provides scope for notification of applications that involve alternative alignments?*

The intention of the notification rule was to preclude notification only for Collector Roads in the location shown on Precinct Plan 1. Alternative alignments would be subject to the normal tests for notification. We have amended the wording of the notification provision to make this clear.

1.8.2 Staging of Development with Transport Upgrades

Request 23: *Can you please explain whether the rule is capable of being administered efficiently and effectively, having regard to these issues?*

We agree that the incorporation of permitted activity standards to coordinate the release of development capacity with infrastructure introduces a level of complexity into the Plan Change. The Drury East Developers are currently progressing a developer funding agreement to confirm the funding of the required local road upgrades. It is our preference that once this funding agreement is in place, that the permitted activity standards to coordinate the release of development capacity with

infrastructure be deleted from the Plan Change. In the interim however, it is important to include the proposed permitted standards to ensure there is transport infrastructure to service development.

As previously discussed Stantec has undertaken further traffic modelling to determine the impact of the transport infrastructure projects that the Government has confirmed funding for including bringing forward the delivery of the Drury Central train station. This updated modelling now shows that the standard which seeks to stage development with transport upgrades can be significantly simplified. In particular the local upgrades required to enable certain development capacities³ are now limited to:

- Interim safety upgrade to the Waihoehoe / Great South Road intersection to provide safe crossing facilities for pedestrians and cyclists on all approaches.
- Upgrade and signalisation to the Great South Road/Waihoehoe Road intersection to signals.
- Capacity upgrade of the Waihoehoe / Great South Road intersection.

The simplification of the triggers will significantly assist with the administration of the rule. The first local road upgrade is a safety upgrade to the Waihoehoe / Great South Road to provide safe crossing facilities for pedestrians and cyclists on all approaches. This must occur prior to any new dwellings, retail or commercial development. Therefore, this is straightforward to implement/monitor. The second required upgrade is signalisation of the Waihoehoe / Great South road intersection. The dwelling and GFA thresholds are projected to be reached in 2033 or 2038 depending on whether or not direct access is provided from State Highway 1 into the Drury Centre. These timeframes are long term and beyond of the life of the AUP. Therefore, at plan review there will be an opportunity to check whether this rule is still relevant prior to these thresholds being met.

Notwithstanding this, it is recognised that to administer this permitted standard, Council will be required to keep a register of the number of dwellings that are new or additional, including valid but unimplemented land use and subdivision resource consents. The standard requires all vacant lot subdivisions and new dwellings to comply with this standard. This includes vacant lots created via super lots or subdivision for house lots as well as 4+ dwellings in the residential zones or any development in the business zones. Where a developer wants to construct a single dwelling on a site as a permitted activity, that unit would already have been 'counted' under the subdivision consent that created the lot. Council has the ability and technology to monitor this - it will just be a matter of putting a system in place.

The RFI also raises concerns that an individual will not be able to determine compliance with the trip generation limits. A transport assessment will need to be undertaken to determine compliance with trip generation limits. Importantly, this is a restricted discretionary activity and not a permitted activity. The purpose of the inclusion of Standard IX6.3 Trip Generation Limit is to provide for developments which are just over the dwelling and GFA thresholds to apply for resource consent as a restricted discretionary activity rather than a full discretionary activity. Therefore, a transport assessment will be required anyway.

The incorporation of permitted activity standards to coordinate the release of development capacity with infrastructure is accepted practice within the AUP. In particular, similar rules have been included

³ Development capacities are divided into a threshold for dwellings, a commercial GF threshold and a retail GFA threshold. The required local upgrade is required when any of the thresholds are exceeded. The thresholds that are listed for each required local upgrade are cumulative.

into existing AUP precincts⁴. While it is accepted that this approach introduces complexity to the planning provisions, a live urban zoning is required to be in place to provide enough certainty for developers to fund local infrastructure. We will continue to work with Council to refine the details of transport staging rule prior to notifying the Plan Change.

1.8.3 Riparian Margins

Council’s planning, stormwater and ecology experts have all requested further information regarding the required riparian margin rule.

Requests for Further Information: Riparian Planting	
RFI	Request
E14	Further detail is requested as to why the full 20 m anticipated by the Structure Plan is not proposed and the effect this deviation from the structure plan guidance will have in terms of ecological connectivity across the plan change area.
E16	Further detail is requested as to what protection measures for revegetation measures are proposed and if any measures are required within the plan change to ensure such measures are adopted, noting that elsewhere similar riparian vegetation standards have specified that such margins must be offered to Council for vesting (at no cost) or are required to be covenanted.
SW 06	Please explain why a 10m wide riparian margin is proposed when the Drury-Opāheke Structure Plan Stormwater Management Plan identified a 20m riparian margin as being appropriate. No evaluation of these two options is provided including their consistency with the objectives and policies of the AUP.
P24	Please advise as to the advantages and disadvantages of a 20m, 15m or 10m wide riparian margin building setback for the streams in the precinct.
P25	Please explain how the revegetation rule would be implemented.

Responses to these requests are provided below and within the updated Section 32 report *refer Section 11.3.4*.

Spatial Extent of the Planted Setback

Further information has been requested by Council’s Ecologist and Stormwater Expert in relation to the spatial extent of the required planted riparian margin. The Drury - Opāheke structure plan generally proposes a 20m riparian restoration margin along streams while noting that the actual width of the riparian restoration margin will be subject to more detailed investigation at the Plan Change Stage and may differ from 20m⁵.

In response to this request for further information additional analysis is provided within the Section 32 Assessment Report to support the inclusion of the proposed 10m planted riparian margin requirement. In summary a 10m planted riparian margin is still the preferred option for the following reasons:

⁴ Drury 1, Franklin, Glenbrook 3, Huapai Triangle, Opāheke 1, Whenuapai 1 & 2, Beachlands 1, Karaka North, Clevedon Waterways, Puhinui, Redhills, Wainui and St Lukes

⁵ Drury - Opāheke structure plan pg 21

- The 10m minimum required planted riparian margin ensures that indigenous biodiversity along streams is restored to enhance the ecological values of streams, while maintaining flexibility for appropriate development of cycle and pedestrian paths which must be located outside of planted riparian margins and generally within the wider esplanade reserve;
- The 10m minimum required planted riparian margin aligns with Auckland Regional Council Technical Publication TP148 Riparian Management Guideline (Becker et al., 2001) which recommends a 10m riparian buffer width based on research undertaken into what constitutes a sustainable riparian zone that is self-seeding and able to minimise weed growth;
- The 10m minimum required planted riparian margin also aligns with the Auckland Design Manual which recommends a 10 m width planted on each stream bank with wider strips of 20 m or more are encouraged for larger rivers⁶; and
- The proposed precinct provisions are consistent with those incorporated within other greenfield precincts within the AUP⁷ which incorporate a 10m planted riparian margin.

Spatial Extent of Building Setback from Streams

Request 24 of the Planning RFI asks for an assessment of the advantages and disadvantages of a 20m, 15m or 10m wide riparian margin building setback for the streams in the precinct. A 10m riparian margin building setback already applies within the underlying Terrace Housing and Apartment Building zone. A 20m building setback aligns with future esplanade requirements for subdivision. As this is a greenfield environment and it is likely subdivision will occur first we agree that it is sensible to introduce a 20m building setback along streams greater than 3m in width to align with the esplanade reserve requirements under the subdivision provisions. Therefore, Standard IX6.3 Riparian Margins has been updated accordingly.

Implementation of the Riparian Planting Rule

Further detail has been requested by Council's planner (Request 25) regarding when planting should occur, how much planting is required and whether planting can occur in stages as development proceeds. Riparian margin planting of streams is required as a permitted activity standard. As the plan change area is a greenfield environment an application for land modification, development and subdivision which adjoins a permanent or intermittent stream will trigger the requirement to show compliance with this standard. The special information requirement will direct applications for land modification, development and subdivision to be accompanied by a riparian planting plan identifying the location, species, planter bag size and density of the plants. Council will then approve the planting plan as part of the consent application.

Protection of Riparian Planting

⁶ <http://www.aucklanddesignmanual.co.nz/regulations/technical-guidance/wsd/guidance/conceptdesign/enhancingthereceivingenvironment/riparianbuffers>

⁷ Birdwood 2, Clarks Beach, Drury 1, Drury South, Flat Bush, Franklin 2, Glenbrook 3, Hingaia 1,2 & 3, Long Bay, Redhills and Whenuapai 3 (Proposed)

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Further detail has been requested by Council's Ecologist (Ecology Request 16) regarding what protection measures for revegetated areas are proposed⁸. The ecologist has suggested that riparian margins should be offered to Council for vesting or protected through covenanting.

No specific rules are included within the Plan Change to protect the required planted riparian margins because this can be effectively managed via conditions on the resource consent that are enforceable by the Council. There is also the option to vest the riparian margin and this would be at Council's discretion as part of the resource consent process, although we note that the Council often has limited funds to do this.

Application of Riparian Planting Rule to Wetlands

Wetlands are dynamic and complex environments and therefore unlike streams technical analysis, including soil sampling, is required to determine the edge of a wetland from which a required planted riparian margin would apply. Consequently, there is not enough certainty to apply the riparian planting rule to wetlands as a permitted activity standard.

1.8.4 Streams

Request P26: *Please advise whether the permanent and intermittent stream locations should be shown on a precinct plan.*

It is not proposed to map the streams on the precinct plan. The precinct plans are drawn within illustrator and are not spatially accurate. Therefore, depicting the streams on precinct plans will not assist with determining compliance with the planted riparian margin rule or required esplanade setback. In any case, E3 of the AUP effectively manages streams, and in our opinion, there is no resource management reasons for taking a place-specific approach to this matter given that it would not link with any specific method in the Drury East Precinct.

1.8.5 Stormwater Management

Request P27: *Please advise if stormwater provisions need to be added to the precinct provisions following the assessment of stream erosion risks that is underway, and if so the wording of these provisions.*

A stream erosion assessment has been tried based on the Auckland Council Stream Erosion Risk Tool however issues have been encountered with the tool, that mean this assessment cannot be completed within the timeframes of the RFI response. The technology and understanding in this area are evolving but is not ready yet and we will continue to work with Council to complete this assessment prior to the hearing of the Plan Change.

Notwithstanding the issues being encountered with the analysis, it would not be possible to identify any additional measures to avoid/mitigate effects at this stage because these will need to be discussed with Mana Whenua to seek their views.

⁸ Kiwi E14, Fulton and Hogan E16, Oyster E13

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1.9 SECTION 32 ANALYSIS

RFI	Request	Response
P28	Please explain the risks to plan change implementation in the event that Council is not in a position to undertake the monitoring required and if an appropriate development / funding agreement cannot be completed across all affected land owners in the three Precincts?	Refer to Section 11.3.2 of the Section 32 Assessment Report.
P29	Does the proposed method address other infrastructure to be provided by Council (eg social and community facilities) or Watercare?	<p>As noted above, the Applicant has already entered into an agreement with Watercare and the works are already underway to service the area.</p> <p>The provision of other social facilities will require on-going discussions with Council's community facilities team. This is not different to planning for schools and healthcare in greenfield areas undertaken by the Ministries of Education and Health.</p> <p>The Drury-Opaheke Structure Plan was the appropriate time to undertake a needs assessment and for Council to start planning for these essential social facilities. We understand that the Ministry of Education is already well underway with this. Planning for the provision of these facilities will occur separately but alongside the Plan Change process.</p>
P30	Please advise whether the proposed staging rule is an efficient and effective method of implementing the objective, particularly objective 1, in comparison to other possible options?	Refer to Section 11.3.2 of the Section 32 Assessment Report.
P31	Please clarify what additional "quality" outcomes are being sought from proposed option 2, over and above those already provided for by the AUP.	<p>The additional provisions to achieve quality outcomes within the Drury East Precinct include:</p> <ul style="list-style-type: none"> • Requiring consent with additional assessment criteria for roads to ensure a connected street network which integrates with the wider Drury area; • The road cross sections will ensure there are pedestrian and cycle paths to encourage active transport modes; • The assessment criteria for roads will also ensure that the delivery of pedestrian and cycling linkages to the train station are staged with development; and • Additional policy direction is provided within the precinct to integrate the

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		network of public open spaces with natural features including the stream network, in addition to the Auckland-wide subdivision policies.
P32	Please advise whether any consideration has been given to specific or additional measures in relation to built form outcomes.	Refer to Section 1.3 of this letter.

2.0 URBAN DESIGN

The Urban Design requests for further information and our responses are set out below.

RFI Number	Request	Response
UD3	Please provide a plan showing the extent of land holding currently controlled by Fulton Hogan Land Development.	<p>We understand that FHLDL has extensive land holdings in the Plan Change area, accounting for about half of the land area. We also understand that negotiations are ongoing for other sites in the Plan Change area. Given the commercial sensitivity of these discussions, land ownership information cannot be provided at this time, however, FHLDL do intend to acquire more land throughout the planning phase of the project.</p> <p>Other landowners in the Plan Change area have been consulted on the intended land use through the Council's Structure Plan process and there will be opportunity for them to be involved in the Plan Change through the submissions phase.</p>
UD4	The proposal description (Section 1.3) in the UD report notes the goal of providing quality, compact neighbourhoods adjacent to a town centre and business-zoned land. To achieve this 'quality, compact' outcome, how critical is the sequencing of delivery of the town (or Metropolitan) centre amenities, services and employment together with the primary rail transit?	<p>As previously discussed in Section 1.1 there is now a commitment from the Government to deliver the Drury Central train station by 2024. This generally aligns with when development within Drury East is intended to get underway and therefore this will support compact neighbourhoods in walking distance to the train station. In particular the Plan Change enables a planning more intensive residential zoning in close walking proximity to the train station and requires road, walking and cycling connections to the train station to be delivered at the early stages of development.</p> <p>In terms of sequencing development with the Drury Centre we acknowledge that development of the centre will likely happen over a longer period of time compared with the surrounding residential development.</p>

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		<p>However, this is typical of many greenfield developments, and the Drury Centre will develop in response to growth in the surrounding residential catchment, including the subject site. Further, the existing Drury Village would provide for the day-to-day needs of residents in the Plan Change area in a reasonable distance, while the Drury Centre is developing.</p>
UD5	<p>Section 2.2 of the UD report makes reference to the Council’s Drury – Opaheke Structure Plan (the “Structure Plan”). However, no reference is made to the accompanying ‘Southern Structure Plan Area Neighbourhood Design Statement: Drury- Opaheke and Pukekohe-Paerata’ (August 2019) (the “NDS”). Please provide an analysis of how the proposed Plan Change provisions respond to the five key themes outlined in the NDS.</p>	<p>Please refer to the updated Urban Design Report.</p>
UD6	<p>Section 2.3 of the report sets out a description of natural features in the area and identifies a number of opportunities and constraints in relation to these. Please advise how these have been addressed in the PC provisions.</p>	<p>There are three opportunities listed in relation to the natural features in the area.</p> <p>The first opportunity relates to restoring the natural stream networks where practicable and identifying ecological corridors to provide both open space amenity for residents and areas for stormwater management. The Plan Change will enhance streams by retaining streams and incorporating a riparian planting requirement. The Auckland-wide rules require reclamation of streams to be avoided unless in certain circumstances. There is no need to replicate this in the precinct provisions. Buildings are also required to be setback from streams to align with the esplanade reserve requirements to allow for open space along streams.</p> <p>An additional policy (policy 4) is also included in the precinct, that will ensure that open spaces integrate with stream network, amongst other matters. This will enable the indicative open space network outlined in the Urban Design report to be delivered, while providing flexibility and acknowledging that the final location of open space would be most appropriately determined at the resource consent stage, when the location of roads and other services, including schools etc, are known.</p> <p>The Urban Design report and the Ecological Effects Assessment both identify a stand of</p>

		<p>Puriri trees to the north east corner of the Plan Change area towards Drury Hills Road. It is not proposed to include provisions within this Plan Change to protect these trees as they are already protected through a consent notice and the Mill Road alignment is likely to require their removal in any case.</p> <p>The third opportunity relates to offer pedestrian and cycle connectivity along Waihoehoe and Hingaia permanent stream networks towards Fitzgerald Road to the west and south, and link these to the proposed neighbourhood and suburban parks. The building setback from streams is 20m so there is space to provide for pedestrian and cycle connections along streams. Further, there are specific cross section details for park-edge roads in Appendix 1 that shared path facilities for cyclists that are not otherwise required for local roads.</p>
UD7	Section 3.2 of the UD report sets out a number of development principles as 'goals'. Please provide an analysis of how the proposed PC provisions address these goals.	The Woods Urban Design Report set out a series of development principles as goals and key moves. These largely relate to iwi aspirations, the open space and pedestrian and cycle networks.
UD8	Similarly, please identify how the 'key moves' set out in Section 4.1 of the UD report will be delivered through the PC provisions. In particular, please identify how the creation of open space linkages and a series of open spaces along the stream corridor will be required and spatially co-ordinated. A spatial arrangement of the open space network is shown on the Structure Plan in Figure 12, but is not included in any Precinct Plan. Key Move 3 notes that areas of steep contour where it is inappropriate for high density residential have been identified. Please detail this analysis.	<p><i>Iwi Aspirations</i></p> <p>In preparing the Plan Change the applicant has undertaken extensive consultation with Iwi authorities who have an interest in the Plan Change area. Iwi have also prepared Cultural Value Assessments. The outcomes of this consultation and the assessments have directly informed the development of the Plan Change. Refer to Section 5.1.2.6 of the Section 32 Assessment Report which provides an overview of the outcomes sought by Mana Whenua and how these are being provided for within the Plan Change.</p>
UD9	How will the outcomes depicted in the Walking and Cycling Network plan on p.37 of the UD report be achieved through the Plan Change provisions, in particular, the spatial relationship between streets, recreational pedestrian and cycle routes and open space corridors.	<p><i>Open Space</i></p> <p>The Urban Design Report prepared by Woods sets out key moves and project goals which seek to provide quality public spaces, identify key ecological corridors and retain the natural values of existing streams. The approach to delivering these key moves and project goals within the Plan Change area involves relying on the Auckland-wide provisions and also incorporating place-based provisions into the precinct.</p>

		<p>There is a policy direction included within the Drury East Precinct to integrate the provision of open space with the natural features of the Plan Change area. This will ensure that consideration is given to locating open space around stream networks to create ecological corridors.</p> <p>E38 Subdivision – Urban provisions applies within the Plan Change area and includes policies and assessment criteria to guide the provision of open space generally across the Plan Change area. These provisions will ensure that there is adequate provision of open space across the Plan Change area to meet the recreational needs for the future population.</p> <p>Tailored rules are proposed to apply with the Drury East Precinct that require riparian margins to be planted either side of a permanent or intermittent stream to a minimum width of 10m measured from the bank of the stream.</p> <p><i>Connected Street Network</i></p> <p>The Urban Design Report prepared by Woods sets out key moves and project goals which seek to develop a permeable grid, establish a connected community with a focus on active modes of transport and improve connections to existing and future communities. To achieve this the Urban Design Report depicts a walking and cycling network and an integrated movement network to achieve a connected and safe transport network that caters for all transport modes. The approach to delivering this movement network within the Plan Change area involves relying on the Auckland-wide provisions and also incorporating place-based provisions into the precinct.</p> <p>Throughout the rest of the Plan Change area the final layout and design of the street network will be guided through the Plan Change provisions but determined at the detailed design/resource consent process. The approach within the Plan Change in providing for the establishment of a street network is to provide a balance between providing enough certainty to carry through key elements of the proposed integrated movement network, while allowing</p>
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		<p>flexibility to finalise design and location when undertaking detailed design.</p> <p>To achieve an integrated street layout, resource consent is required for the development of public or private roads within the Plan Change area as a restricted discretionary activity. Precinct Plan 2 sets out the key new collector roads required to support future development of the Plan Change area. The assessment criteria within section IX.8.2 of the Plan Change provides further guidance to both Council and an applicant as to how the street network should be established across the Plan Change area, including the local road network which is not shown on the precinct plans as the exact layout will not be determined until detailed design.</p> <p>The Urban Design Report sets out cross-sections for various street typologies across the Plan Change area. These cross-sections are included within Appendix 1 of the Plan Change. On the major vehicle routes through and around the Plan Change area provision has been made for segregated cycle facilities with physical buffers. Footpath widths vary depending on location and function of the road.</p> <p>The cross-sections will require the roads that provide connections from the Plan Change area to the future Metropolitan Centre and Drury South Industrial area to provide walking and cycling paths, to increase the use of active transport modes to move between these areas.</p> <p>Refer to Page 45 of the Urban Design report for further information regarding how the Plan Change responds to topographical constraints.</p> <p>Refer to Attachment 10 for a complete set of the AUP and Plan Change provisions that apply to roads and open space.</p>
UD10	Please advise how active mode connections will be provided to the employment area of Drury South.	The Plan Change sets out cross-sections for various street typologies across the Plan Change area (Appendix 1 of the Plan Change). On the major vehicle routes through and around the Plan Change area provision has been made for segregated cycle facilities with physical buffers. Footpath widths vary depending on location and function of the road.

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UD11	Please explain how the boundaries between the different residential zones has been determined. The Precinct Plan has adopted the concentric ring pattern of zoning shown in the Council's Structure Plan. Please advise whether a more fine-grained approach has been considered and would be more appropriate, such as providing for greater density along the central green spine and around larger open spaces.	Please refer to the Urban Design RFI Response.
UD12	Page 49 of the Urban Design report includes a 'Zoning Plan'. Please advise what this refers to as it does not reflect any plans contained in the proposed Plan Change provisions.	This map has been updated to align with the zoning map provided as part of the Plan Change. Please refer to the Urban Design Report.
UD13	The zoning (and Precinct Plan) show a mixed use area to the south (at the intersection of Appleby Rd and Fitzgerald Road). Is this the best location for a neighbourhood centre delivering local services to a population of up to 8,000 to 10,000 people? Please provide an analysis of whether the area could support additional small centres more central to the residential neighbourhoods. The Masterplan document attached to the Kiwi Property Plan Change request Urban Design Assessment include indicative masterplan diagrams for the combined Kiwi, Oyster and Fulton Hogan Land Development Plan Change areas. This depicts a local centre further to the north and east, associated with some higher intensity housing. Please provide some commentary/analysis of this as an alternative structure.	<p>In response to this request the location of the Drury East Mixed Use convenience centre has been reviewed, although we do note that the location shown originally was consistent with the Council's Structure Plan for Drury-Opaheke. The Drury east mixed-use area is now proposed to be moved into the centre of the residential community where it will remain highly connected via a collector to its north which runs in an east-west direction. The mixed-use centre is now more or less in the same position as shown in the TFUG (2017), along Cossey road and to the south of Waihoehoe road. This location is determined to be optimum, as is more accessible to future residents of the Plan Change area.</p> <p>Refer to page 47 of the Urban Design Report.</p>
UD14	As noted in Section 5.1.1 of the UD report, Waihoehoe Road is identified as Arterial Road, with associated access limitations. In addition to the analysis provided about block depth, please advise how the PC provisions will ensure an appropriate built interface is created, given the important role of this street as an axis and bus route through the area.	The nature of the restrictions of vehicle restrictions accessing an arterial road would likely encourage the development of rear servicing lanes accessed via proposed connector or local roads intersecting with Waihoehoe Road in the longer term. In the short term there are also a number of existing vehicle crossovers along Waihoehoe Road which would likely be retained and utilised to facilitate vehicular access and development. As such there are no specific limits to creating active built edges. Regardless, the land fronting Waihoehoe Road is proposed to be zoned a mixture of Terrace Housing and Apartment Building, Mixed Housing Urban and Mixed

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		<p>Housing Suburban zones. Within these zones, assessment criteria for all new buildings (THAB) and four or more dwellings (Mixed Housing Urban and Suburban) are relevant. The assessment criteria ensure that development achieves attractive and safe streets.</p>
<p>UD15</p>	<p>The UD report includes a number of different street cross sections for different street functions and conditions. The proposed Precinct includes Appendix 1 which sets out dimensions for the different street types. Please advise whether regard has been had to Auckland Transport’s relevant street guidelines (e.g. the Urban Streets and Road Design Guide) and whether a more flexible a and outcomes focussed approach to determining street design would be appropriate.</p>	<p>Please refer to the Transport response to the RFI (T10).</p> <p>The Plan Change sets out a variety of street typologies with a range of sizes (refer to Appendix 1: Road Cross Section Details), to ensure flexibility. The Plan Change enables a principle-based approach that will focus on the outcomes rather than focusing on one design. For instance, certain design elements might be replaced with other elements, such as on-street kerbside parking may be replaced with cycle parking. Space for pedestrians must always be provided, in the form of a footpath or shared street/ path.</p>
<p>UD16</p>	<p>The Drury Centre Precinct as proposed by the Kiwi Property Plan Change proposes a Business - Mixed Use zone on the western of Fitzgerald Road. Please provide an analysis of the compatibility of locating residential zones (THAB and MHU) on the opposite side of the street and consideration of a Business - Mixed Use zone extending across the street.</p>	<p>This proposed zoning pattern will result in the location of the THAB and MHU zones locating across the road from the Business – Mixed Use zone, on the western edge of Fitzgerald Road. This arrangement is anticipated within the AUP.</p> <p>The proposed zoning pattern will result in the THAB zone locating on the northern side of Waihoehoe Road and the Business – Mixed Use zone locating on the southern side of Waihoehoe Road. This arrangement is anticipated within the AUP and there are many examples of this occurring in Auckland, including Broadway, Newmarket; Park Road, Grafton; Great North Road, Pt Chevalier; Ash Street, New Lynn and Great North Road, Glen Eden, to name a few.</p> <p>The Mixed Use zone requires buildings to be setback 6m above 18m in height when opposite a residential zone, which would provide a consistent street frontage height along Fitzgerald Road. Also, within these zones, assessment criteria for all new buildings are relevant. The assessment criteria ensure that development achieves attractive and safe streets.</p> <p>This is also discussed further in the updated Urban Design Report by Woods.</p>

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UD17	I note that the Plan Change request does not include a Landscape and Visual Effects Assessment. Please provide an assessment by a suitably qualified person. This may draw on the site and context analysis set out in the Urban Design report.	A Landscape and visual Effects Assessment has now been provided by Boffa Miskel. Please refer to Attachment 4.
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3.0 ECOLOGY

The Ecology requests for further information and our responses are set out below.

RFI	Request	Response
E10	<p>Section 8.1.14 of the Application Report notes that to facilitate urban development of the land, some stream removal is likely to be required. Section 4.1 of the Ecology Report estimates that based on the proposed master plan, the stream removal totals 655 m, comprised of 188 m of intermittent and 467 m of permanent streams.</p> <p>Further detail is requested as to the total length of intermittent and permanent streams within the plan change area so that the relative scale of this level of stream loss can be assessed. The level of detail requested includes not only the stream length measurement but also that the Drury East Precinct be updated with a precinct map that shows all streams. It is common practice for all streams to be shown in precinct as they provide both an opportunity and constraint for future development to respond to.</p>	<p>The Plan Change does not propose to amend the Auckland-wide rules applying to lakes, rivers and streams (E3) and these would apply to future development as they relate to any proposed stream works.</p> <p>Some stream reclamation will be required to facilitate urban development in the Plan Change area. The required stream reclamation and if any offsetting required will be determined at the resource consent stage once a detailed design is finalised. There is no place-specific reason to apply a different approach to this Plan Change.</p> <p>Refer to the Drury East Plan Change – Ecology Response.</p>
E11	<p>Section 3.1.3 of the Ecology Report notes the potential effects of land use and earthworks on the ecological values of the receiving environment. The receiving environment includes areas of the Manukau Harbour scheduled as Significant Ecological Areas (SEA) within the AUP:OP.</p> <p>In order to assess the potential effect of the plan change re-zoning on the life-supporting capacity of the receiving environment, further detail is requested by way of the potential ecological effects, such as hydrological change in the stream</p>	<p>Refer to Section 1 of the combined Ecology RFI response.</p>

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	network and the effects of both deposited and suspended fine sediments, in the receiving environment and if any measures are required to address these effects.	
E12	<p>Change from the current, rural land use to predominantly residential land uses is associated with increased imperviousness, which has the potential to alter the stormwater regime, in regard to both stormwater quantity and quality. Both stormwater quantity and quality can have adverse effects on water quality in the receiving environment. Section 4.2.5.2 of the Drury-Opāheke Structure Plan notes that stream erosion is a significant issue because the resulting sediment is a major contaminant.</p> <p>Although noted as a potential effect, insufficient detail has been provided on the effect the increased imperviousness would have on stream erosion. It is considered that further, more detailed, site specific stream erosion assessments may be required, either now or at a time preceding development, to prevent exacerbating stream erosion issues.</p> <p>It is noted that Stormwater Management Area Flow 1 (SMAF 1) provisions will apply within the plan change area, but no corresponding assessment has been provided as to if this represents the best practicable option and adequately manages this potential effect.</p>	Refer to Section 1 of the combined Ecology RFI response.
E13	<p>The Stormwater Management Plan identifies that the northern portion of the plan change area currently discharges to the Slippery Creek catchment; yet once developed is proposed to discharge to the Hingaia Stream catchment.</p> <p>No ecological assessment is provided in relation to the effect of this on either the Slippery Creek or Hingaia Stream catchment. Further detail is requested in this regard.</p>	Refer to the Drury East Plan Change – Ecology Response.
E14	The Drury-Opāheke Structure Plan proposes the restoration of 20 m riparian margins along streams, although it also notes that the actual width provided would be subject to more detailed investigation. The proposed precinct proposes a minimum of 10 m of riparian restoration	Refer to <i>Section 1.8.4 Riparian Margins</i> of this letter and Section 11.3.4 of the Section 32 Assessment Report.

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	<p>along streams, without any corresponding detailed investigation or assessment of the effect of this change.</p> <p>Further detail is requested as to why the full 20 m anticipated by the Structure Plan is not proposed and the effect this deviation from the structure plan guidance will have in terms of ecological connectivity across the plan change area.</p>	
E15	<p>The Drury-Opāheke Structure Plan Blue-Green Network also shows an area in the northeast of the plan change area that is not reflected in the zoning plan. This particular area of the Blue-Green Network is considered to be of potentially higher ecological value given that it connects to multiple SEAs on the other side of Drury Hills Road.</p> <p>Further detail is required as to why this section of the Blue-Green Network is not proposed and the effect this deviation from the Drury-Opāheke Structure Plan Blue-Green Network will have in terms of ecological connectivity across the plan change area .</p>	Refer to the Drury East Plan Change – Ecology Response.
E16	<p>The Drury-Opāheke Structure Plan notes that protection of the riparian planting is envisioned through esplanade reserves or other methods. No mention of protection measures is contained within the application material.</p> <p>Further detail is requested as to what protection measures for revegetation measures are proposed and if any measures are required within the plan change to ensure such measures are adopted, noting that elsewhere similar riparian vegetation standards have specified that such margins must be offered to Council for vesting (at no cost) or are required to be covenanted.</p>	Refer to <i>Section 1.8.4 Riparian Margins</i> of this letter and Section 11.3.4 of the Section 32 Assessment Report.
E18	<p>The IX.4 Activity Table within the Drury East Precinct Plan specifies that the activity table give effects to, amongst others, sections 9(2) and 13 of the Resource Management Act (RMA). It is not clear what corresponding activities within the IX.4 Activity Table would be considered under sections 9(2) and 13 of the RMA and why the existing provisions of the AUP:OP cannot be relied upon.</p>	This is standard wording used in the AUP precinct template.

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E19	The Drury East Precinct Plan includes IX.6.2, a standard for riparian planting. It is not clear when this standard would be triggered, and greater clarity is considered necessary to avoid future doubt.	Refer to <i>Section 1.8.4 Riparian Margins</i> of this letter and Section 11.3.4 of the Section 32 Assessment Report.
E20	The Drury East Precinct Plan includes IX.9 Special Information Requirements, including (1) Riparian Planting Plan. For the purposes of consistency with the AUP:OP it is considered that further detail by way of reference to Appendix 16 of the AUP:OP for appropriate guidance for native revegetation plantings be included.	Appendix 16 applies to subdivision in rural zones and is specifically tailored to replanting of native vegetation under the Subdivision - Rural section of the Unitary Plan. Given this different context, in our view, reference to Appendix 16 is not required, and the special information requirements proposed in the precinct are appropriate.

4.0 STORMWATER MANAGEMENT

The Stormwater requests for further information and our responses are set out below.

RFI		Request	Response
01	Stormwater Planning	<p>Please provide an assessment of how the proposed plan changes meet the outcomes of the NPS-FM and the related matters in the AUP Regional Policy Statement.</p> <p>How does the s32 report acknowledge and address methods to meet regional policy statement objectives that are relevant to the plan change areas, including B7.3 E1.3.8 and E1.310? Please update if necessary.</p>	Refer to Section 8.1.4 of the Section 32 Assessment Report. Refer to Section 1 of the combined Ecology Response memo.
02	Stormwater quality	Please clarify how objectives in the AUP for water quality will be met. The Planning report (pg46) emphasises that high contaminant generating roads and carparks will be treated (treatment of these roads is covered by region wide rules in Chapter E9 AUP). However, it is unclear how many roads are anticipated to meet the thresholds to trigger E9 rules and if additional roads should be	Refer to Section 1 of the Stormwater memo.

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		<p>treated to meet the proposed objective.</p> <p>There is also reference in the Drury East Plan Change request (page 46) to a treatment train approach and secondary treatment but it is unclear if this is part of the approach to treat high contaminant generating roads or is an additional response applied to all roads to meet objectives E1.3.8 and E1.3.8 and meet Schedule 4 NDC requirements greenfield developments.</p> <p>A matrix showing what tools will be used in what proposed land use zone to avoid any adverse effects on water quality should be included in the SMPs as part of identifying how adverse effects will be mitigated and how these achieve AUP policies for water quality.</p>	
03	Water quality	<p>Please more fully describe how the water quality policies in E1 will be achieved, and what options have been considered to meet the policies.</p>	<p>Refer to Section 8.1.4 of the Section 32 Assessment Report. Refer to Section 1 of the combined Ecology Response memo.</p>
04	Hydrology Mitigation	<p>Please provide an assessment of the degree to which SMAF1 avoids or remedies changes in hydrology which will result from the urban land uses proposed in the plan changes.</p> <p>A Regional Erosion Threshold Metric risk assessment identifies areas at risk of erosion and provides some quantification of the amount of erosion caused, however it does not address how effects will be avoided, remedied or mitigated.</p> <p>Identification of measures to avoid effects and mitigate should also be made and the BSTEM model is appropriate for</p>	<p>Refer to Section 2 of the Stormwater memo.</p>

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		this task. More detail on this tool is being supplied to the applicants.	
05	Flooding	<p>Please address the matters identified and discussed in the memo to Healthy Waters from Tonkin and Taylor dated 19 Feb 2020.</p> <p>We note that all applicants need to explain what the effect cumulatively across developments will be on the Drury township flooding and parts of the catchment that interact with the Slippery Creek floodplain.</p>	Refer to Section 3 of the Stormwater memo.
06	Riparian Margins	Please explain why a 10m wide riparian margin is proposed when the Drury-Opaheke Structure Plan Stormwater Management Plan identified a 20m riparian margin as being appropriate. No evaluation of these two options is provided including their consistency with the objectives and policies of the AUP.	Refer to <i>Section 1.8.4 Riparian Margins</i> of this letter and Section 11.3.4 of the Section 32 Assessment Report.
07	Ecological corridors and blue green network.	<p>Please clarify what the ecological corridors are and how they contribute to meeting objectives and policies of the AUP.</p> <p>They are mentioned briefly but there is no description on how these align to the Blue-Green network identified in the Drury-Opaheke Structure Plan, nor are the streams or corridors noted specifically in the precinct plan or stormwater management plan.</p> <p>Planning provisions to enable the ecological corridor are not provided in the precinct plan nor is an assessment given in s32 assessment reports.</p>	Refer to Section 3 of the combined Ecology Response memo.
08	Development staging	Please explain if and how the precinct plan is to manage flood	Refer to Appendix A of the Stormwater Memo.

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		<p>risks (such as staging of development in conjunction with flood mitigation measures).</p> <p>Flood attenuation is proposed in the SMP but there are no precinct plan provisions to ensure that flood attenuation is provided or when it would be appropriate to not have flood attenuation.</p>	
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