

UNITARY PLAN UPDATE REQUEST MEMORANDUM

TO Celia Davison, Manager Planning – Central South

FROM Sanjay Bangs, Senior Policy Planner – Central South

DATE 20 October 2021






SUBJECT **Plan Modification of the Auckland Unitary Plan (AUP)
Operative in part (15 November 2016)**



This memorandum requests an update to Auckland Unitary Plan Operative in part

Reason for update – Plan Change 46 (PC46) – Drury South to be made operative.	
Background	<p>A decision on PC46 was notified on 25 March 2021 (refer to Attachment 1). No appeals were received, and therefore the Planning Committee directed council officers to update the AUP to make PC46 operative on 3 June 2021 (refer to Planning Committee resolution in Attachment 2).</p> <p>It was since discovered that the changes made by PC46 to Chapter I410.11.1 Drury South Industrial Appendix were overlayed on an outdated base text. As such, the council sought dispensation from the Environment Court to overlay the PC46 changes over current operative base text.</p> <p>On 14 October 2021 the Environment Court granted the council's application for dispensation and directed the council to update the AUP accordingly, so that PC46 is overlayed over the current operative base text (refer to Attachment 3).</p> <p>As such, PC46 can now be made operative. Note: The PC46 changes to Appendix I140.11.1 within Chapter I410.11.1 reflects the text submitted to the Environment Court in support of the council's application for dispensation. This is shown in Appendix 1 to Attachment 4 to this memo.</p> <p>This request is accompanied by corrections to minor errors under Clause 20A to Schedule 1 of the RMA:</p> <ul style="list-style-type: none">• Clause 20A to reintroduce a section of text in Chapter I410.11.1 previously deleted by Plan Change 4 in error;• Clause 20A to amend the precinct name to make it easier to depict on the AUP Viewer.
Chapter	Chapter I Precincts AUP Viewer
Section	I410 Drury South Industrial Precinct I410.11.1 Drury South Industrial Appendix
Changes to text (shown in underline and strikethrough)	Refer to text in Attachment 4 .
Changes to diagrams	Revised versions of Precinct plans 1 and 2. Refer pages 34 – 37 of Attachment 5 .
Changes to spatial data	Rezone land and amend precinct boundaries as shown in Attachment 3 .
Attachments	Attachment 1: PC46 decision incl. erratum Attachment 2: Planning Committee resolution to make operative PC46

	<p>Attachment 3: Environment Court application and dispensation</p> <p>Attachment 4: PC46 text changes shown in strikethrough and underline</p> <p>Attachment 5: PC46 spatial changes</p> <p>Attachment 6: Further Clause 20A changes to text – Reinsert Appendix 2</p> <p>Attachment 7: Further Clause 20A changes to text – Numbering corrections</p> <p>Attachment 8: Further Clause 20A changes to text – Precinct Name</p> <p>Attachment 9: PC 46 Updated Text clean version</p>
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<p>Prepared by: Sanjay Bangs Senior Policy Planner – Central South</p>	<p>Text Entered by: Sarah El Karamany Planning Technician</p>
<p>Signature:</p> 	<p>Signature:</p> 
<p>Maps prepared by: Shelley Glassey Geospatial Analyst</p>	<p>Reviewed by: Craig Cairncross Team Leader – Central South</p>
<p>Signature:</p> 	<p>Signature:</p> 
<p>Signed off by: Celia Davison Manager Planning – Central South</p>	
<p>Signature:</p> 	

Attachment 1: PC46 decision

Decision following the hearing of a Private Plan Change under the Resource Management Act 1991 – Proposed Private Plan Change 46 –to the Auckland Unitary Plan



Proposal - in summary.

To rezone land within the Drury South Industrial Precinct (DSIP) at Maketu Road, Quarry Road and Fitzgerald Road from Business – Light Industry to Business – Mixed Use, and from Business – Heavy Industry to Business – Light Industry, and amend the precinct provisions.

This plan modification is **APPROVED** with additional modifications to that notified. The reasons are set out below.

Plan modification number:	46
Site address:	Maketu Road, Quarry Road and Fitzgerald Road
Applicant:	Drury South Limited (DSL)
Hearing	Thursday, 3 December 2020
Hearing panel:	Greg Hill (Chairperson) Mark Farnsworth Gavin Lister
Appearances:	<p><u>For the Applicant:</u></p> <p>Daniel Minhinnick (Counsel) Stephen Hughes (Corporate) Gregory Akehurst (Economics) Matthew Riley (Urban Design) Bridget Gilbert (Landscape and Visual) Curt Robinson (Acoustic) Rachel Morgan (Planning)</p> <p><u>For the Submitters:</u></p> <p>Counties Power Limited represented by Rachel Bilbe and Jo Michalakakis</p> <p><u>For the Council:</u></p> <p>Marc Dendale (Team Leader) Sanjay Bangs (Planning)</p>

	<p>Tracey Ogden Cork (Urban Design) Rob Pryor (Landscape and Visual) Jon Styles (Noise) Tim Heath (Economics) Bevan Donovan (Hearings Advisor)</p> <p><u>Tabled Statements</u> Waka Kotahi New Zealand Transport Agency Auckland Transport Lomai Properties Limited Kainga Ora – Homes and Communities</p>
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Abbreviation	Meaning
'PC46' or 'Plan Change'	Proposed Plan Change 46
RMA	Resource Management Act 1991
AUP(OP)	Auckland Unitary Plan (Operative in Part)
LIZ	Business – Light Industry Zone
HIZ	Business – Heavy Industry Zone
MUZ	Business – Mixed Use Zone
DSL	Drury South Limited (the applicant)
DSIP	Drury South Industrial Precinct
DSRP	Drury South Residential Precinct
AT	Auckland Transport
NZTA	New Zealand Transport Agency

INTRODUCTION

1. This decision is made on behalf of the Auckland Council (“the Council”) by Independent Hearing Commissioners Greg Hill (Chair), Mark Farnsworth and Gavin Lister appointed and acting under delegated authority under sections 34 and 34A of the Resource Management Act 1991 (“the RMA”).
2. The Commissioners have been delegated the authority by the Council to make a decision on Plan Change 46 (“PC 46”) to the Auckland Council Unitary Plan Operative in Part (“AUP (OP)”) after considering all the submissions, the section 32 evaluation, the section 42A report prepared by the officers for the hearing, legal submissions and the evidence presented during the hearing of submissions, expert joint witness statements (JWS) and closing submissions.
3. The private Plan Change request was made under Clause 21 of Schedule 1 to the Resource Management Act 1991 (‘RMA’) and was accepted by Auckland Council (“the Council”), under clause 25(2)(b) of Schedule 1 to the RMA on 2 July 2020.
4. PC 46 was publicly notified on 27 July 2020 following a feedback process involving Iwi, as required by Clause 4A of Schedule 1. The submission period closed on the 27 August 2020. Seven primary submissions were received. A summary of

submissions was publicly notified on the 11 September with two further submissions received within the submission period. No submissions were received late.

SUMMARY OF PLAN CHANGE

5. The Drury South Industrial Precinct (DSIP) comprises some 257 hectares at the southern extent of the Drury area contained within the Rural Urban Boundary. The precinct is primarily zoned: Business; Light Industry and Business: Heavy Industry. It contains provisions related to landscaping, provision of an internal transport network and stormwater devices.
6. The proposed Plan Change is described in detail¹ in the Council's section 42A hearing report. An executive summary is set out below.
7. PC 46 seeks to rezone land and amend precinct provisions within the DSIP at Maketu Road, Quarry Road and Fitzgerald Road, Drury. Specifically, PC46 seeks to:
 - a. rezone 10ha of land from Business – Light Industry ('LIZ') to Business – Mixed Use ('MUZ');
 - b. rezone 20ha of land from Business – Heavy Industry ('HIZ') to Business – Light Industry; and
 - c. amend the provisions of the Drury South Industrial Precinct, including the extent of the precinct and sub-precinct boundaries.
8. The purpose of PC46, as expressed² by the Applicant, is to provide for a greater range of activities in sub-precinct C reflecting the changing planning and policy context; more appropriately provide for light industrial activities, and more efficiently and effectively manage the visual effects of development on the surrounding area through amendments to the landscaping and building form precinct provisions.
9. The Precinct is divided into five sub-precincts. Of particular relevance to PC46 is Sub-Precinct C, which applies to some 20ha of land zoned LIZ. Sub-Precinct C enables the development of office activity and limited retail activity. PC46 seeks to reduce the extent of Sub-Precinct C to 10ha and rezone this land to MUZ.
10. A report in accordance with section 32 of the RMA was prepared in support of the proposed Plan Change, for the purpose of considering the appropriateness of the proposed provisions.
11. We note that prior to the hearing there was a high level of agreement about PC 46's provisions. At the hearing, the key remaining areas of difference between Council, the Applicant and/or Submitters were:

¹ Section 42A Report at Section 4

² Application at [5.2]

- a) The proposed rezoning of 20ha of land from Business – Heavy Industry to Business – Light Industry Zone;
 - b) Noise and ventilation provisions and restrictive no-complaints covenant provisions proposed within Sub-precinct C, which Kāinga Ora Homes and Communities seek to remove;
 - c) Exclusions to public and limited notification proposed by Drury South Limited within the precinct;
 - d) Requirements to vest roads within the precinct; and
 - e) Landscaping provisions sought by Counties Power Limited and agreed by Drury South Limited within Sub-precinct B.
12. These issues were further narrowed following the adjournment of the hearing.
13. Following the adjournment of the hearing on 3 December 2020, expert conferencing, as directed by the Hearing Panel, was carried out in relation to economics and planning. Joint Witness Statements (JWS) on these matters were filed with the Hearing Panel on 22 December 2020.
14. We note that there remains some disagreement between the Applicant's and Council's economists. We address this later in this decision report. However, notwithstanding that disagreement, the planners, in their JWS, were in agreement that PC 46 would give effect to Part 2 of the RMA, the National Policy Statement on Urban Development 2020 ("NPS-UD")³ and the Regional Policy Statement ("RPS").
15. The key question arising from the JWS was whether or not the plan provisions required the inclusion of additional subdivision controls (to require larger lots in the area that is proposed to be rezoned LIZ). Mr Bangs' opinion was that it did and Ms Morgan's opinion was that it did not. The only other point of disagreement between the planners related to the proposed notification provisions. We address these matters later in this decision report.
16. Overall, DSL's position was that PC 46 should be approved subject to the provisions attached to its closing legal submissions. The only change from the provisions (provided at the hearing as Appendix A to the evidence of Ms Morgan) was an updated assessment criterion I410.7.2(1)(b)(iii) in relation to the motorway interface.
17. We agree that the PC 46 should be approved. Given there was a high level of agreement between the Applicant, Submitters and Council, we have mainly focused on those matters in contention. In this respect we have accepted the section 42A report and the evidence where 'agreements' have been reached between the parties. We therefore do not repeat much of that material, but, in section 32AA terms, focus on the matters that were not in agreement between the parties.

³ With caveats from Mr Bangs – addressed later in this decision

18. The section 32 evaluation and associated documentation related to PC46, the section 42A report and the further evaluation under section 32AA, and the evidence we heard, has all been considered in making our decision on PC46.

EXISTING PLAN PROVISIONS

19. The PC46 land is subject to the Drury South Industrial Precinct, which is zoned as a combination of Business – Light Industry, Business – Heavy Industry and Open Space – Conservation.
20. The current zoning of the site and surrounds is depicted in **Figure 1** below.

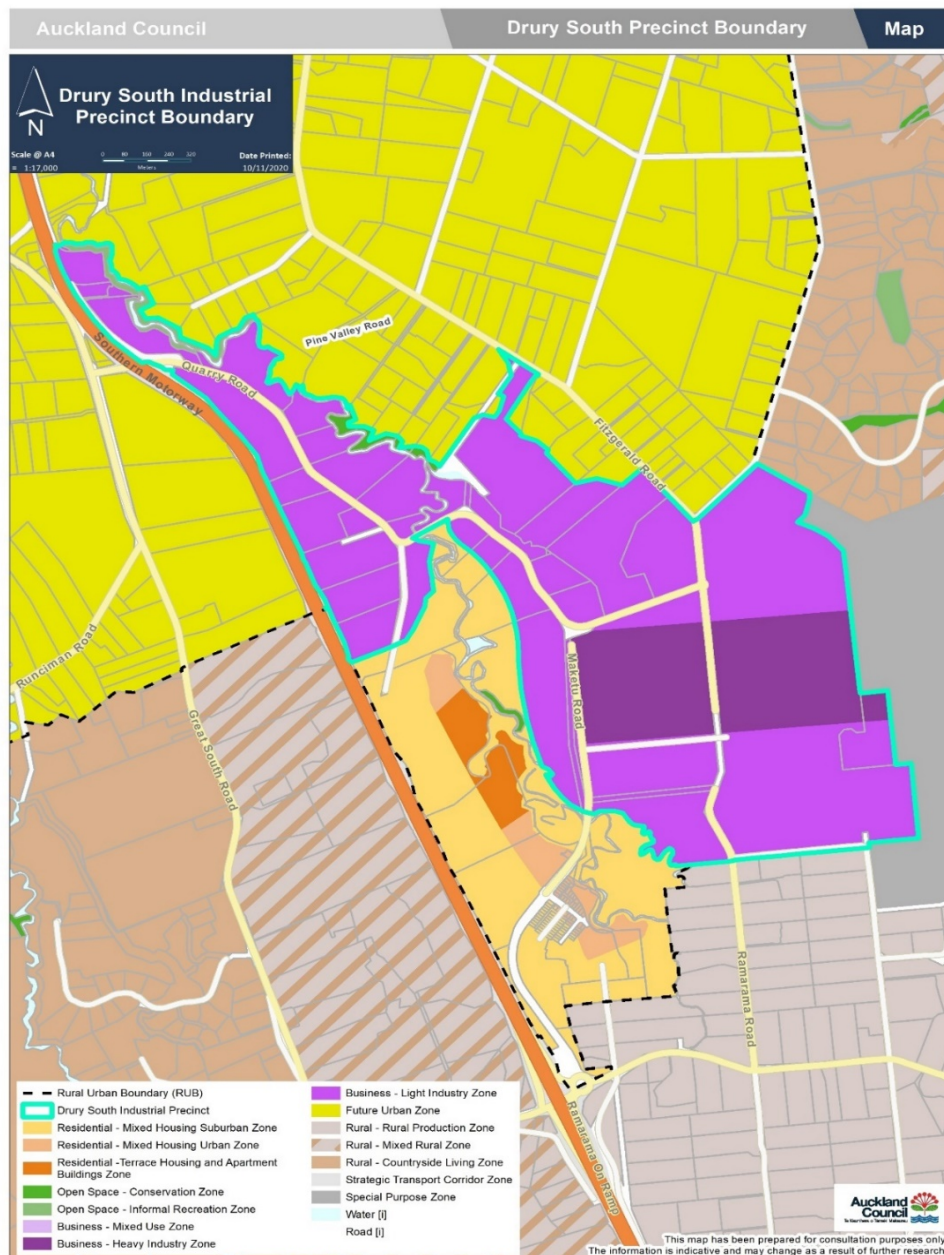


Figure 1

21. The DSIP applies to the PC46 land, and seeks to provide for 'land extensive' industrial activity. The precinct comprises five sub-precincts:
- *Sub-precinct A Light Industry*, which applies to the majority of the precinct (approximately 115ha). The sub-precinct departs from the underlying Business – Light Industry Zone by prohibiting all retail over 450m², and making limited provision for commercial services, dairies, drive-through restaurants, entertainment facilities and food and beverage (as non-complying activities);
 - *Sub-precinct B Motorway edge (Light Industry)*, which provides for the same activities as Sub-precinct A, but sets out additional landscaping and building design requirements to reflect its position adjacent to the State Highway 1 corridor;
 - *Sub-precinct C Commercial Services*, which applies to 21ha of land and enables a greater range of commercial activity than the LIZ, by providing for office activity, and limited supporting activities such as commercial services, food and beverage and childcare and healthcare facilities as permitted activities;
 - *Sub-precinct D Open Space / Stormwater Management, zoned Light Industry* but to be rezoned to an open space zoning once the Public Open Space / Stormwater Management Areas shown on Precinct Plan 1 are developed and vested;
 - *Sub-precinct E Heavy Industry*, which applies to 46ha of land, and enabled buildings of up to 25m in height (compared with 20m in the underlying provisions).
22. The DSIP contains precinct-wide provisions, of which the following are notable:
- Bespoke landscaping requirements for industrial sites. These includes front yard landscaping comprising a 3-metre wide continuous planting of *Phormium tenax* (flax) planted at 1.5m centres in staggered rows on a grid. There is also a requirement for side and rear boundaries in the LIZ and HIZ to be planted with a row of either Leyland Cypress, Casuarina (sheoak) or Macrocarpa at 3 metre centres located 1.5 metres in from the side or rear boundary buildings must be setback from the relevant boundary by a minimum of 3.5 metres.
 - Requirements for an internal transport network to be constructed and vested to council upon subdivision and development, including roads and pedestrian and bicycle routes). This indicative network is identified on Precinct Plan 1 and 2 within the precinct.
 - Requirements for Sub-precinct D to be developed as stormwater management areas upon subdivision and development of the relevant area.
 - Standards requiring the construction of wastewater services, by connections to Watercare's existing network, including upgrades to the network if required,

and the construction of wastewater treatment plant to service the precinct, to be constructed in accordance with Watercare’s design and operational standards.

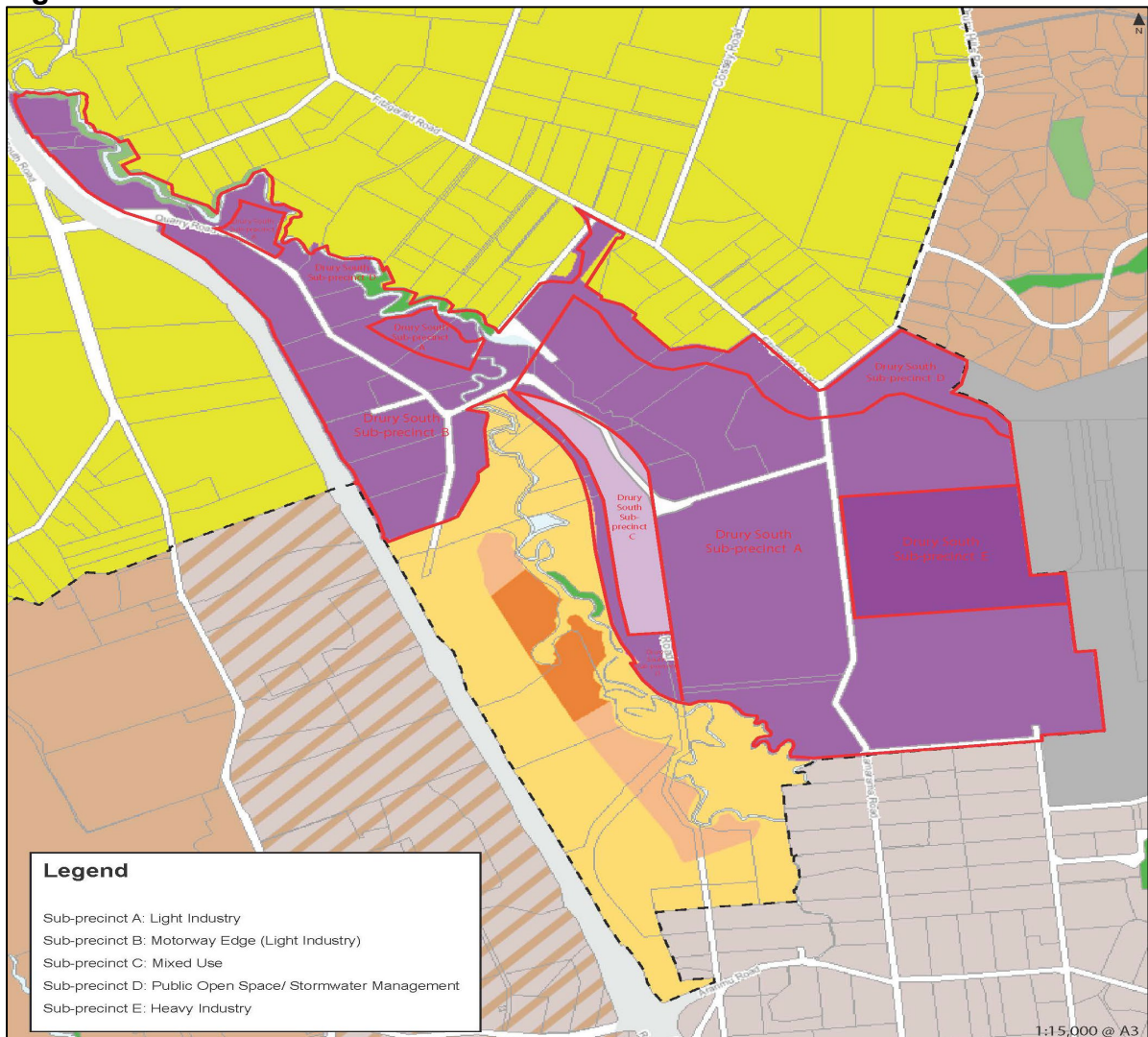
PROPOSED PLAN CHANGE PROVISIONS

23. The objective of the Plan Change, as stated by the Applicant, is to:

Provide for a greater range of activities in sub-precinct C reflecting the changing planning and policy context; more appropriately provide for light industrial activities, and more efficiently and effectively manage the visual effects of development on the surrounding area through amendments to the landscaping and building form precinct provisions.⁴

24. Figure 2: shows the proposed AUP(OP) zoning and DSIP proposed by PC46:

Figure 2



⁴ p.41 Section 32 Assessment (Attachment A)

25. Specifically, the Plan Change, as notified, sought to:
- a) Reduce the extent of the Drury South Industrial Precinct: Sub-precinct C from 21ha to 10ha, and rezone the land from Business - Light Industry Zone to Business – Mixed Use Zone;
 - b) Rezone approximately 20ha of land from Business – Heavy Industry to Business – Light Industry and reallocate this land from Sub-precinct E to Sub-precinct A, to provide an appropriate separation distance between the proposed Business – Mixed Use and the Business – Heavy Industry Zone;
 - c) Amend the Drury South Industrial Precinct: Sub-precinct C provisions as follows:
 - i. Introduce objectives and policies that support residential and commercial activities within Sub-precinct C, provided that commercial activities do not compromise the role and amenity of the Business – Metropolitan Centre Zone or Business – Town Centre Zone within the council approved Structure Plan for Drury;
 - ii. Enable a greater scale of retail activity, by enabling retail up to 200m² gross floor area ('GFA') per tenancy as a permitted activity, and retail greater than 200m² GFA per tenancy as a discretionary activity;
 - iii. Enable the establishment of one supermarket greater than 2,000m² GFA as a restricted discretionary activity;
 - iv. Provide for offices up to 500m² GFA per tenancy as a permitted activity, offices between 501m² - 1000m² GFA as a restricted discretionary activity, and offices greater than 1,000m² GFA per tenancy as a discretionary activity;
 - v. Provide for trade suppliers, garden centres, motor vehicle sales and marine retail as a permitted activity;
 - vi. Restrict department stores by providing for these as a non-complying activity;
 - vii. Apply cumulative GFA for retail, trade retail and office activities in sub-precinct C to manage traffic effects and effects on the hierarchy of centres;
 - viii. Provide for a maximum building height of 25m;
 - ix. Introducing noise and ventilation provisions, requiring buildings accommodating noise sensitive activities to provide acoustic insulation and ventilation in order to mitigate traffic noise from Maketu Road;
 - x. Introducing a no-complaints covenant requirement for noise sensitive activities in favour of the operator of the Drury Quarry;
 - d) Amend the bespoke landscaping requirements of the DSIP, by:

- i. Removing the requirement for a 3m front yard planted in flax within Sub-precincts A, D and E, and instead rely on the underlying LIZ front yard standards;
 - ii. Removing the standard requiring side and rear yard for industrial activities within Sub-precincts A, D and E to be planted in shelterbelt tree species;
 - iii. Introducing a standard requiring roofs of any new building to not exceed a reflectivity value of 30 per cent;
- e) Amend the wider DSIP provisions, by:
- i. Excluding restricted discretionary activities for subdivision or development from being subject to public or limited notification.
 - ii. Removing the requirement for roading network and stormwater devices to construct and vest these precinct elements in council upon subdivision and development;
 - iii. Providing greater flexibility for an alternative roading layout to be proposed, provided that an integrated approach between the DSIP and the Drury South Residential Precinct can be achieved; and
 - iv. Introducing assessment criteria seeking the implementation of a pedestrian and cycling connection between the DSIP and the Drury South Residential Precinct, in an alignment shown on Precinct Plan 1.
- f) Correct errors within the DSIP, by amending the precinct description and Precinct Plan 1 to exclude land that now falls within Drury South Residential Precinct;

NOTIFICATION PROCESS AND SUBMISSIONS

26. PC 46 was publicly notified on 27 July 2020. Seven submissions were received. These were from:

- Lomai Properties Limited;
- Waka Kotahi - The New Zealand Transport Agency;
- Counties Power Limited;
- Classic Development limited;
- Auckland Transport
- Ngāti Te Ata Waiohou (subsequently withdrawn)⁵; and

⁵ As discussed in the evidence of Ms Morgan and Mr Hughes, Ngāti Te Ata and DSL reached a resolution through engagement which resolved Ngāti Te Ata's concerns with PC46. Subsequently Ngāti Te Ata withdrew its submission. On this basis, we accept that the amendments recommended in the Section 42A are

- Kāinga Ora Homes and Communities.
27. The summary of decisions requested was notified on the 11 September 2020. Two further submissions were received. These were from
- Kāinga Ora Homes and Communities, and
 - Counties Power Limited
28. The main issues raised in the submissions related to:
- Noise and ventilation, and no complaints covenant;
 - Internal transport network;
 - Mill Road Corridor;
 - Maketu Road/Avenue Road intersection;
 - Ramarama Road connection;
 - Transport Infrastructure costs;
 - Trip generation thresholds;
 - Cycling network;
 - The drafting of the transport provisions;
 - Ngāti Te Ata Waiohū engagement and cultural preferences;
 - Notification exclusions;
 - Landscaping provisions; and
 - Retail and office activities.

HEARING AND HEARING PROCESS

29. The hearing commenced on the 3 December 2020, and was adjourned that day having heard from the Applicant, the Submitter who wished to be heard (Counties Power), and the Council.
30. It was agreed that expert conferencing should occur between the economists and the planners to see if the remaining issues between the two sets of experts could be agreed or not. The outstanding issues were:

unnecessary as the matters raised in Ngāti Te Ata's submission have been resolved. As the submission was withdrawn, we do not address the matters raised further

- The rezoning of 20ha in Sub-precinct E from Heavy Industry to Light Industry zoning; and
 - the notification provision (1410.5(2)) that would exclude a list of specific restricted discretionary activities that are provided for in the PC46 provisions from public or limited notification.
31. The JWSs for both set of expert witnesses were received on the 23 December 2020. The Hearing Panel issued a Memorandum on the 11 January 2021 setting out that having read the JWSs, it was not necessary to reconvene the hearing. Subsequently, the Applicant's Reply was received on the 27 January 2021.

RELEVANT STATUTORY PROVISIONS CONSIDERED

32. The RMA sets out an extensive set of requirements for the formulation of plans and changes to them. These requirements were set out in Applicant's Plan Change Request (including an evaluation pursuant to section 32) attached at Appendix 2 to the section 42A report and set out in section 7 - Statutory and Policy Assessment of the section 42A report. We do not need to repeat these again in any detail, as we accept the appropriate requirements for the formulation of a plan change has been comprehensively addressed in the material before us.
33. We also note that section 32 clarifies that analysis of efficiency and effectiveness of the plan change is to be at a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal. Having considered the evidence and relevant background documents, we are satisfied that PC 46 has been developed in accordance with the relevant statutory requirements.
34. Clause 10 of Schedule 1 requires that this decision must include the reasons for accepting or rejecting submissions. The decision must include a further evaluation of any proposed changes to the Plan Change arising from submissions; with that evaluation to be undertaken in accordance with section 32AA.
35. With regard to Section 32AA, we note that the evidence presented by submitters and Council effectively fulfils the requirements of this assessment, and that that material should be read in conjunction with this decision where we have determined that a change to PC 46 should be made. We address these matters below, as well as setting out our reasons for accepting or rejecting submissions.

FINDINGS ON THE PLAN CHANGE AND ON SUBMISSIONS AND FURTHER SUBMISSIONS

36. As we have already indicated, there was a high level of agreement between most of the parties in relation to the most appropriate zoning and provisions for PC 46; as set out in section 42A report and the evidence before us. We agree those provisions set

out (and agreed between the parties) are appropriate and address our section 32 and 32AA obligations.

37. Before addressing the matters that have not been agreed (accepting that they are not fundamental matters to the acceptance of PC 46), we set out our overall findings on the appropriateness of PC 46. We then return specifically to the matters not otherwise agreed.
38. We accept that PC46 builds on an extensive planning history to the development of Drury South Crossing. Following a structure planning process that was initiated by Stevenson in 2007, a comprehensive plan change process was carried out to rezone the Precinct from rural to industrial, which was subsequently approved in 2013. A key driver for this rezoning was to reduce the shortfall of industrial land in Auckland.
39. The industrial rezoning adjacent to the Drury Quarry was also intended to complement and future proof the Drury Quarry as a regionally significant resource. Following the rezoning of Drury South in 2013, through a review of the structure plan and given the high demand for residential dwellings in Auckland, it was identified that part of the Precinct would be more suited to residential development.
40. DSL sought, and obtained in 2015, a Special Housing Area (SHA) over part of the area. Following the identification of the SHA, DSL sought a Plan Variation (26) under the SHA legislation to rezone approximately 101 hectares of industrial land to a mix of Terrace Housing and Apartment Buildings zone, Mixed Housing Urban and Mixed Housing Suburban zones, creating the Drury South Residential Precinct (DSRP).
41. Plan Variation 26 was approved in 2016 and the DSRP is currently being developed by Classic Developments NZ Limited for housing. Since then, DSL has continued to build on its master-plan for an integrated mixed-use precinct. We acknowledge that PC46 seeks to build on this development approach by rezoning part of the Precinct to mixed use to provide for a greater range of activities to support residents and businesses in the area.
42. We acknowledge that urban growth in southern Auckland is occurring quickly, including in the Drury area. Partly in response to this, the Council, in 2019, adopted the Drury-Opāheke Structure Plan ("Structure Plan"), which provides an indicative land use pattern for comprehensive urban development in the Future Urban zoned land to the north of Drury South. That land is earmarked in the Structure Plan for industrial and residential development as well as the development of a main centre and other centres.
43. While this Precinct is outside the Structure Plan area, we acknowledge that, due to the rapid growth occurring, the Applicant considered it appropriate to consider the Structure Plan in preparing the provisions for PC46, particularly in respect of the extent to which PC46 supports the function, role and amenity of the centres envisaged in the adjacent area to the north.

44. PC46 reflects a proposed change to an already urban zoned area, rather than a greenfields plan change to urbanise rural zoned land. The Drury South Crossing project is well underway and we understand the infrastructure to support the development is in place and/or the investment is there for it to be brought forward in the short term. We also understand that comprehensive resource consents have been granted and development works are underway within the Precinct in accordance with those consents. This also includes the development of a reconfigured transport network to facilitate the development, which is being constructed now in collaboration with the Council and AT.
45. Having considered all of the evidence we find that
- The rezoning of Sub-precinct C to the MUZ will assist in providing a well-functioning urban environment with significant benefits to local residents and businesses given the zoning pattern (residential) that has resulted from various plan changes. In this regard, PC46 will give effect to the NPS-UD and RPS by enabling more residential, business and community services to establish in the DSIP and creating employment opportunities in an area with good transportation links.
 - The rezoning of the Sub-precincts is interrelated and designed to achieve a good overall planning outcome. Sub-precinct E will provide a buffer between sensitive activities in the proposed Mixed Use zone and the HIZ adjacent to the Drury Quarry.
 - The rezoning of Sub-precinct E to LIZ land gives effect to the NPS-UD and the RPS, as there will be sufficient supply of HIZ within the short term (by 2024) and the medium term (by 2031) in both the Auckland Region and Urban South catchment. We address this matter in more detail later in this report.
46. In summary, we accept that PC46 will enable the Drury South Crossing project to continue to develop in response to the changing context of the Drury area and market demand. PC46 will ensure an integrated development is provided with an increased range of opportunities for businesses and residents, which better provides for urban growth than the current zoning pattern. We accept that PC 46, subject to the plan provisions we have imposed will give effect to the RPS, the NPS-UD and Part 2 of the RMA.
47. While we address all of the submissions below, as already recorded most of the matters raised by submitters were either agreed or resolved through the hearings process. Accordingly, we have focussed most of the commentary on those matters not agreed between the parties – being:
- The proposed rezoning of 20ha of land from HIZ to LIZ and if additional subdivision controls are necessary;

- Noise and ventilation provisions and restrictive no-complaints covenant provisions proposed within Sub-precinct C⁶ and;
- Exclusions to public and limited notification proposed by Drury South Limited within the precinct;

The proposed rezoning of 20ha of land from HIZ to LIZ and if additional subdivision controls are necessary.

48. We have reviewed all of the relevant material in relation to this matter, including: the section 42A report; the Addendum to the section 42A report; all of the primary and supplementary evidence of the economists and planners; the JWS of the economists and planners as well as the closing legal submissions. Our findings, and decision, on this issue is set out below.
49. Notwithstanding that the two economists are not in complete agreement about the 'loss of HIZ land' and if there is sufficient land to meet demand (using the NPS-UDC estimates of Heavy Industrial Zone (HIZ) demand and supply (drawn from the Housing and Business Assessment Report, 2017)), both planners agree that PC46 could be approved. However, the caveat to this was that Mr Bangs considered that a new Sub-precinct (F) was required and would apply to the 20ha of HIZ land proposed to be rezoned to LIZ.
50. Mr Bangs set out that Sub-precinct F would have a set of objectives, policies and subdivision standards (for vacant lots) that would, in his view, protect against fragmentation of the 20 ha of HIZ land to be rezoned to LIZ land⁷. In short, Sub-precinct F would require lot sizes as prescribed for the HIZ zone (being 2000m² minimum and a 5000 m² average site size as opposed to 1000m² minimum and a 2000m² average site size). We address the need for or desirability of an additional sub-precinct below.
51. With respects to the two economists, agreement was not reached on a number of matters, in particular, that relating to the sufficiency of HIZ over the long term. As set out in the closing legal submissions, a key reason for the disagreements relates to Mr Heath's opposition to the "more granular" assessment carried out by Mr Akehurst, which focussed on noxious activities⁸.
52. On the issue of sufficiency of HIZ land in the short and medium term we note that:
- The economists agree that the National Policy Statement for Urban Development Capacity 2016 ("NPS-UDC") is the starting point for assessing demand and supply of HIZ land.⁹
 - The economists agree on those projections. Those projections are outlined

⁶ Kāinga Ora Homes and Communities seek to remove these provisions.

⁷ Attached to the planning JWS were proposed provisions to provide for that new Sub-precinct

⁸ Para 3.3 of the Applicant's closing legal submissions

⁹ JWS – at Item 1

in Figure 2 of the economic joint witness statement.

- The date ranges used in the figures in the JWS do not correspond directly to the short, medium and long-term timeframes in the NPS- UD. As explained by Ms Morgan and Mr Bangs in their JWS, the relevant timeframes are:
 - Short term – next 3 years.
 - Medium term – 3-10 years.
 - Long term – 10-30 years.
53. It is clear to us, that when viewed through these timeframes that, with the proposed rezoning of Sub-precinct E, there would still be sufficient HIZ capacity under the NPS-UD over the short and medium term, but not over the long term. We address the implications of use below.
54. Mr Bangs set out the following in the JWS¹⁰.

“Based on the NPS-UDC estimates, in my view there is a shortfall in HIZ land in the long term (by 2048) of 80ha. The rezoning of Sub-precinct E in its current form would contribute to this shortfall, and therefore will not give effect to Policy 2 of the NPS-UD. As such, PC46 in its current form will not, in my view, give effect to the NPS-UD.

However, I have turned my mind to the activities that the HIZ primarily seeks to accommodate, which are:

- *Noxious air discharging activities*
- *Land extensive industrial activities*

As outlined in Item 7, the demand for heavy industry industries involving noxious air discharges is decreasing over the next 30 years. Taking into account the site specific considerations, much of the existing 20ha of HIZ proposed to be rezoned to LIZ is unlikely to be used for typical heavy industries involving noxious air discharges, given the proximity to sensitive receiving activities enabled within the DSRP. Therefore, the primary function of the HIZ in this location would be to provide for land extensive industrial activities. In my view, the provisions as they are proposed enable further vacant lot subdivision of this 20ha of land, thus undermining the capability of this area to accommodate land extensive industrial activities.

Given the shortfall in HIZ land identified in the NPSUDC estimates, PC46 in my view would only be appropriate if large sites suitable for land extensive industrial activities were protected against further fragmentation. In my view, this could be achieved by rezoning the 20ha of HIZ land within Sub-precinct E to LIZ and applying provisions including objectives, policies and vacant lot

¹⁰ Item 12 - Overall evaluation of PC46

subdivision standards to protect large industrial sites for land extensive industrial activities. This would take the form of a new Sub-precinct (F), applying to the 20ha of HIZ land proposed to be rezoned”.

55. Ms Morgan, did not agree with Mr Bangs’ opinion that the NPS-UD would not be given effect to - and set out the following reasons in the JWS:

“In my view, PC46 as a whole will give effect to Part 2, the NPS-UD and the RPS, particularly when considering the benefits of rezoning Sub-precinct C and given that industrial activities will continue to be provided for within Sub-precinct E, in a manner that will meet expected demands and will manage potential reverse sensitivity effects. This recognises the particular opportunities and constraints of the area and appropriately places the policy considerations within a site-specific context.

While PC46 will increase the long-term shortfall of HIZ land using the NPS-UDC figures, it will increase the long term supply of LIZ land, which will cater for a significant proportion of HIZ demand. There is also a long-term over-supply of LIZ land, which offers flexibility to reappportion land within the Future Urban areas, or amend the AUP provisions if necessary, to address the HIZ shortfall, when those areas are ultimately rezoned. The additional analysis undertaken by Mr Akehurst also indicates that the NPS-UDC figures are conservative”.

I do not agree with Mr Bangs that the HIZ subdivision controls for vacant lot subdivision are efficient or necessary to give effect to the RPS or NPS:UD because:

- *Over the short and medium term there is sufficient HIZ capacity to meet expected demand, which is the critical planning period for the AUP. For this reason, Mr Bangs’ proposed provisions are not necessary to give effect to the RPS.*
- *It is not necessary to address the long term HIZ shortfall within the AUP at this time as there is sufficient long-term capacity of LIZ land in the urban south to address this shortfall at the appropriate time.*
- *The approved subdivision scheme plan for Drury South illustrates that site sizes are significantly in excess of the minimum vacant lot sizes in the HIZ and LIZ indicating that risk of further fragmentation occurring is currently low.”*

56. We have quoted at length from the JWS, as we find this section of the JWS goes to the crux of the matter we are addressing. We understand the concerns of Mr Bangs, who relies on Mr Heath’s opinion. However, we also accept Mr Akehurst’s position that, while there will be a long-term short fall of HIZ, it is relevant that many of the activities enabled in the HIZ are also enabled in the LIZ, that an important exception is noxious activities that require HIZ land, and that *“Based on my analysis – there is*

sufficient land to accommodate these noxious activities on Heavy Industry Land in the Urban South into the long term (30 years +)¹¹.

57. It is our finding that an additional sub-precinct (and its associated provisions) is unnecessary and inefficient. We essentially agree with the position of Ms Morgan. That is:

- It is the short and medium term assessments under the NPS-UD which re the critical planning periods for the AUP (OP). There is agreement that there is sufficient HIZ land to meet demand for those critical timeframes;
- It is not necessary to address the long term HIZ shortfall within the AUP(OP) at this time;
- The proposed re-zoning of Sub-precinct E to LIZ would not only increase the long-term capacity of LIZ in the urban south but would also accommodate activities that could locate in either the LIZ or HIZ.
- The entire DSIP (i.e. the current HIZ and LIZ zoned land) was originally zoned for land extensive industrial activities. The framework that currently exists (i.e. both the HIZ and LIZ provisions) can therefore be treated as providing for those activities. In that light, the distinction between HIZ and LIZ for land extensive industrial activities is, in our view, less relevant;
- The site sizes in the approved subdivision scheme plan for the Drury South Crossing project are significantly in excess of the minimum vacant lot sizes specified in the HIZ and LIZ which means that risk of further fragmentation is low; and
- The proposed zoning and plan provisions result in a better planning outcome (a mixed-use environment) in the context of the changed circumstance of the area from an 'industrial estate' to a mixed-use area as a consequence of the earlier SHA plan change.

Noise and ventilation provisions and restrictive no-complaints covenant provisions proposed within Sub-precinct C;

Sub. No	Submitter Name	Summary	Further subs
2.6	The New Zealand Transport Agency	Amend Objective I410.2(13) as follows: <i>(13) Activities sensitive to traffic noise adjacent to the are controlled on the strategic freight network (Maketu Road and New Quarry Access Road) serving the Drury Quarry and the Mill Road Corridor are protected from unreasonable levels of transport noise.</i>	-

¹¹ JWS - ITEM 5: Assessment of local demand for Heavy Industry Land can be assessed based on noxious activities only

2.7	The New Zealand Transport Agency	"Amend Objective I410.2(14) as follows: <u>Human health effects are managed for aActivities sensitive to noise in Sub-Precinct C by providing protection are protected from unreasonable levels of land transport noise.</u> "	-
2.11	The New Zealand Transport Agency	Amend Policy I410.3(23) as follows: (23) Control <u>Ensure activities sensitive to noise adjacent to en-the strategic freight network (Maketu Road and New Quarry Access Road) serving the Drury Quarry and the Mill Road Corridor are provided with reasonable levels of amenity and human health protection-so that occupants are not exposed to unreasonable levels of transport noise.</u>	Kāinga Ora – Oppose
2.19	The New Zealand Transport Agency	Amend proposed Standard I410.6.4(1) as follows and renumber subsequent parts of the rule: (1) Any building containing a noise sensitive space within Sub-Precinct C must be located and/or designed and/or insulated, or screened by suitable barriers, so that the design internal-noise levels in those rooms do not exceed: (a) 40 dB LAeq(24hours) inside any noise sensitive space; and (b) 70 dB LAeq(24h) In addition, the assessed incident noise level on any to a façade of any building-facing Maketu Road or Mill Road that accommodates a noise sensitive space must not exceed 70 dB LAeq(24 hour) <u>(2) Compliance with Standard I410.6.4(1) must be determined For the purpose of this rule, noise from Maketu Road shall be based on a road traffic noise level 10m from the nearest traffic lane of Maketu Road and Mill Road of 75 dB LAeq(24hour), 83dB Leq(24 hour) at 63 Hz and 79dB Leq(24 hour)at 125 Hz.</u>	Kāinga Ora – Oppose
2.20	The New Zealand Transport Agency	Amend proposed rule I410.6.4(2) as follows: (2) For residential activities dwellings, where the internal noise levels in Standard 1 can only be complied with when doors or windows to those rooms are closed, those rooms must be mechanically ventilated and/or cooled to achieve: (a) a system individually controllable across the range of airflows and temperatures by the building occupants; and (b) a system that generates a noise level of no greater than 35 dB LAeq(30s) when measured 1m from the diffuser at the minimum air flows required to achieve the design temperatures and air flows; and either:	-

		<i>(a) an internal temperature no greater than 25 degrees Celsius based on external design conditions of dry bulb conditions 25.1 degrees Celsius and wet bulb 20.1 degrees Celsius or;</i> <i>(b) a high volume of outdoor air supply to all habitable rooms with an outdoor air supply rate of no less than: ...</i>	
5.2	AT	Amend Precinct Objective I410.2(14) as follows: <i>“(14) Activities sensitive to noise in Sub-Precinct C are protected from unreasonable levels of land transport noise, <u>by subdivision and building development features</u>”</i> And any corresponding / consequential amendments to rules to give effect to this revised objective.	-
7.2	Kāinga Ora Homes and Communities	Delete Standards I410.6.4 Sub-Precinct C (Noise and Ventilation)	-
7.3	Kāinga Ora Homes and Communities	Delete Standards I410.6.5 Sub-Precinct C (Restrictive non-complaint covenant)	-
7.4	Kāinga Ora Homes and Communities	Any other alternative or consequential relief to give effect to this submission.	-

58. The Applicant had met with the transport agencies and had on-going discussions with them. Changes to the PC46 provisions in terms of the submissions were agreed to by the Applicant and accepted as appropriate by the Council. We agree and have accepted those changes and revised the plan provisions accordingly.
59. With respect to the Kāinga Ora Homes and Communities (Kāinga Ora) submissions, we set out our findings below.
60. For context to these submissions, PC46 would enable activities sensitive to noise, such as dwellings and integrated residential development, to establish in Sub-precinct C. This is anticipated to be a noisy environment due to transport noise arising from the use of Maketu Road and Mill Road, and in particular noise from trucks associated with the quarry operation. Standards I140.6.4 and I140.6.5 were proposed in PC46 to achieve minimum internal noise and ventilation levels in relation to land transport noise, and to apply a restrictive no-complaints covenant to activities sensitive to noise in Sub-precinct C. These would apply in addition to standards contained within Chapter E25 – Noise and vibration of the AUP(OP).
61. Mr Bangs and Mr Styles addressed Kāinga Ora’s submission in the 42A report¹². In summary Mr Styles did not consider there was a need for bespoke ventilation

¹² Paragraphs 251 to 266 of the Section 42A report

provisions within Standard I410.6.4(2), and that such requirements were already provided for in E25.6.10(3), which would apply to Sub-precinct C. Mr Styles suggested that that the majority of Standard I140.6.4(2) should be deleted, and instead a cross-reference be included to the relevant Auckland-wide provisions. Mr Bangs agreed. We accept this.

62. With respect to the restrictive non-complaint covenant, Mr Styles considered that activities sensitive to noise within Sub-Precinct C were unlikely to be subject to adverse quarry noise effects that would give rise to the potential for reverse sensitivity effects on the quarry operator. He noted that *“taking into account the acoustic insulation requirements of Sub-precinct and road noise from vehicles on Maketu Road, the proposed restrictive covenant is not necessary to mitigate noise levels the more distant quarry”*¹³.
63. Mr Bangs, relying on Mr Styles’ opinion, considered that if Standard I140.6.4 was retained (which it has been), a no-complaints covenant standard was not required to address adverse noise effects from the Drury Quarry. Notwithstanding the view set out in the section 42A report, in questioning at the hearing Mr Styles, and consequently Mr Bangs, having heard the Applicant’s expert evidence (Mr Robinson and Ms Morgan), were ‘agnostic’ as to whether the no-complaints covenant standard remained in PC 46.
64. Kāinga Ora tabled a statement (dated 3 December 2020) in relation to their submission seeking the deletion of Standards I140.6.4 and I140.6.5 – Noise and Ventilation and Restrictive non-complaint covenants. That statement set out that Kāinga Ora *“supports and endorses the analysis and findings of the reporting planner in the section 42A report and the assessment undertaken for the Council by Mr Jon Styles as they relate to the proposed use of restrictive non-complaint covenants”*. On this basis, Kāinga Ora elected not to provide further evidence but relied on the section 42A report and Mr Styles’ assessment.
65. The Applicant took no issue with the suggested amendments to PC46 in relation to Standard I140.6.4(2) and the cross-reference to the relevant Auckland-wide provisions. However, the deletion of the restrictive non-complaint covenants provisions was opposed. The reasons for this were set out in Ms Morgan’s evidence, but also addressed in the Applicant’s Closing Submissions. This was in response to a number of questions posed by the Hearing Panel in terms of the need for and efficiency of restrictive non-complaint covenants. For completeness we quote the Closing Submissions¹⁴:

“In relation to the proposed no-complaints covenant provision, Chairperson Hill and Commissioner Farnsworth queried the justification and benefits of that being included within the AUP.As a starting point, this approach is

¹³ Paragraph 265 of the section 42A report

¹⁴ Paragraphs 5.5 – 5.9 of the Applicant’s Closing Submissions

common in the AUP with other examples such as:

- I. the DSRP applies the same provision as proposed in the Plan Change, which applies in favour of the Drury Quarry;*
 - II. the Dairy Flat Precinct requires a no-complaint covenant in favour of the neighbouring North Shore Airport for activities sensitive to noise;*
 - III. the Whenuapai 2 Precinct requires no-complaints covenants in favour of the RNZAF Base Whenuapai, existing and permitted activities in the Light Industry zone on each title within the precinct and the Whenuapai School where the site adjoins the boundary of the school;*
 - IV. the City Centre Port Noise Overlay requires a no-complaints covenant in favour of Ports of Auckland Limited for new activities sensitive to noise; and*
 - V. the Wynyard Precinct requires a no-complaint covenant for dwellings in the areas identified on Precinct plan 7, which seeks to enable the continued operation of the marine industry in Wynyard, while providing for a broader range of activities in the area.*
- a) As noted by the Commissioners, DSL can still impose the no-complaints covenant irrespective of any plan requirement, as it owns all of the Sub-precinct C land, which the obligation would relate to. While that is acknowledged, inclusion of the requirement within the AUP serves three additional functions: provides further notice for future landowners of the Drury Quarry operations;*
 - b) provides notice to the Council, which may assist compliance officers if any complaints are made directly to the Council in the future; and*
 - c) it enables consistency with the DSRP provisions, which already include the same requirement (as noted above).*

A further query related to the effectiveness of the covenant itself, given it is not necessarily just quarry trucks using the adjacent road network. The effects of quarry movements can be generally distinguished from other truck movements largely in relation to the time of the day when they usually occur, which is predominantly early in the morning between the hours of 5 and 6 AM

- a) The Commissioners also queried whether the inclusion of the no-complaints provision would add any burden onto the Council. The short answer is "no". The enforcement of the no-complaints covenant will be DSL's responsibility. The only relevance to the Council is: In processing a relevant resource consent, where the processing planner will need to seek confirmation of the presence of the covenant. That is a*

straightforward exercise. To the extent that this places a burden on the Council, those costs are recoverable from the applicant.

- b) *In responding to any complaint that might be received. Complaints could be received by the Council irrespective of the covenant requirement. If anything, the presence of the provision may assist a Council enforcement officer in responding to any complaint.”*

66. We agree with the Applicant, for the reasons set out above.

Decision

67. Submission points 2.6, 2.7, 2.11, 2.19, 2.20 and 5.2 are accepted, and the opposing further submissions are rejected for the reasons set out above.
68. Submission points 7.2, is **accepted**, 7.3 is **rejected**, and 7.4 is **accepted in part** for the reasons set out above.

Exclusions to public and limited notification proposed by Drury South Limited within the precinct.

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
2.15	The New Zealand Transport Agency	Oppose the proposed amendment to I410.5.2 Notification as below: <i>(2) The council will consider applications for subdivision or development of land that is a restricted discretionary activity, without the need for public or limited notification.</i>	-
5.5	Auckland Transport	Amend I410.5(2) as follows: <i>“(2) Any application for resource consent for an activity listed in Tables I410.4.1 - I410.4.6 and which is not listed in I410.5(1) will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991. The council will consider applications for subdivision or development of land that is a restricted discretionary activity, without the need for public or limited notification.</i>	Kāinga Ora – Oppose

69. PC46 seeks to preclude restricted discretionary activities for the subdivision or development of land from being subject to public or limited notification. The Applicant in their Plan Change Request supported the proposed notification exclusions for the following reasons:

“The public will be able to comment on the appropriateness of restricted discretionary activities through this Plan Change application. Furthermore, the applicant is the majority landowner within Drury South. For these reasons we consider that this approach to notification provides an appropriate balance in terms of reducing risks to applicants (time and costs associated with uncertainty around notification) and providing for appropriate opportunities for public participation on applications for restricted discretionary activities.”

70. As set out in the section 42A report, we understand that DSL is the majority landholder at this present time, and that consequently there are few other owners /occupiers within the precinct. However, as the precinct land is further subdivided in accordance with the proposed provisions, new lots will likely be on-sold to third party developers/operators. The proposed notification exclusions would enable resource consents for restricted discretionary activities to be considered without the need for public or limited notification:
- A single supermarket greater than 2000m² gross floor area within Sub-precinct C;
 - Offices between 501m² – 1000m² per tenancy within Sub-precinct C;
 - Service stations within the Mixed Use Zone;
 - New buildings, and significant additions or alterations, within the Mixed Use Zone;
 - Development that does not comply with the standards of Sub-precinct C or the MUZ; and
 - Development that does not comply with Auckland-wide standards, such as those within Chapter E27 Transport, Chapter E38 Subdivision – Urban.
71. In the section 42A report, Mr Bangs considered that those activities could result in adverse effects relating to the detailed design of sites and buildings, including effects related to vehicle access, road safety, visual dominance, privacy and outlook, and connectivity/integration with surrounding activities. He also considered that these adverse effects may be of a scale and intensity that would otherwise require limited or public notification.
72. It was also Mr Bangs view that that the detailed design of sites and buildings within the precinct, and the potential adverse effects that may arise on surrounding landowners, has not been assessed through the plan change. And that Sub-precinct C could see residential activity coexisting with 'lower amenity' commercial activity including motor vehicle sales, trade suppliers and marine retail, or intensive office or apartment uses.
73. This matter was discussed in the planners' JWS. As recorded, Mr Bangs maintained his view as set out in the Section 42A report and as expressed at the hearing. It was his opinion that the proposed notification exclusions did not reflect the wide variety of activities that are enabled in Sub-precinct C, and the potential visual and amenity

effects that might arise at the interface between activities, particularly between residential activity and 'lower amenity' retail such as trade suppliers, motor vehicle sales and service stations.

74. Ms Morgan maintained her views, as set out in her evidence, that notification should be precluded for the reasons set out in her primary evidence, and as expressed at the hearing. She considered that the effects of the listed restricted discretionary activities had been broadly assessed through PC46, and that the provisions provided an appropriate degree of certainty to future landowners about the activities and level of development enabled.
75. Having considered the views of both planners, and the range and nature of the activities for which consent may be sought, we agree with Mr Bangs' view; for the reasons he expressed in the section 42A report and the JWS.

Decision on Submissions

76. That submissions 2.15 from NZTA and 5.5 from AT be **accepted** and that further submission #2 from Kāinga Ora be **rejected**.

Landscaping provisions sought by Counties Power Limited.

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
3.1	Counties Power Limited	Support Objective I410.2(9) as notified provided that the standards I410.6.2 (6) for tree planting are amended as suggested elsewhere in submission.	-
3.2	Counties Power Limited	Support Standard I410.6.2(5) as notified.	-
3.3	Counties Power Limited	Amend Standard I410.6.2. Sub-precincts A-E (6) to consider the following: - recognition of the rights that the Electricity Act 1992, New Zealand Electrical Code of Practice for Electrical Safe Distances, NZECP 34:2001 and the Electricity (Hazards from Trees) Regulations 2003 offer in order to protect the lines from encroachment from vegetation/ trees - consultation with Counties Power regarding the species of trees/shrubs proposed required by any standard in the vicinity of overhead lines in all Sub-precincts (i.e. around 8m from overhead lines) to ensure that due consideration is given to the height and spread of the tree and any potential hazards to the	-

		electricity network associated with the species of the tree.	
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77. Prior to the hearing Counties Power Limited and DSL met in order to resolve the concerns canvassed in the Counties Power Limited submission. As a result, the Applicant proposed the following amendments to the DSIP:
- f) Deletion of the part of Standard I140.6.2(6) specifying side and rear yard treatments that abut State Highway 1 within Sub-Precinct B;
 - g) Replacing the deleted provisions with assessment criteria I140.7.2(1)(b)(iii), applicable to new buildings within Sub-precinct B as below:

(iii) the extent to which planting is provided in side and rear boundaries adjoining State Highway 1 to provide a visually attractive frontage and maintain safe access to the National Grid for maintenance purposes. Appropriate species include: Pittosporum crassifolium (Karo), Pittosporum tenuifolium (Black Matipo), Phormium tenax (Harakeke), Phormium cookianum (Wharariki), Hebe stricta (Koromiko) and Carex.

78. At the hearing the Hearing Panel raised a number of questions relating to the assessment criterion set out above, and if it was appropriate to achieve the outcome sought. This matter was further discussed between Ms Morgan, Mr Bangs, and Ms Michalakos and Ms Bilbe of Counties Power. It was also addressed in the Planners JWS¹⁵.

79. Following the discussions between the parties, agreement was reached on the following amended criterion I410.7.2(1)(b)(iii):

(iii) the extent to which any planting along the State Highway 1 boundary does not restrict access to the electricity infrastructure for maintenance and does not compromise the safe and reliable operation of the electricity network. Where the operational requirements of the electricity infrastructure preclude the use of large tree and shrub species, the extent to which building design and appearance, and parking area design are integrated with any planting to achieve a high quality and visually attractive frontage to State Highway 1.

Advice note: In considering whether this criterion is met, the Council may take into account whether a review has been undertaken by or on behalf of Counties Power which confirms that the proposed planting will not affect the safe and reliable operation and maintenance of the electricity network.

80. While we accept the 'intent' of the assessment criterion, we have revised the wording to:

¹⁵ ITEM 10: The proposed landscaping provisions within Sub-precinct B (refer below) appropriately require consideration of how landscaping, buildings and parking area design will be integrated

(iii) *the extent to which the integrated site layout, building and landscape design provides a high quality and visually attractive frontage to State Highway 1, while ensuring any landscaping, including the use of large tree and shrub species, does not restrict access to the electricity infrastructure for maintenance and does not compromise the safe and reliable operation of the electricity network.*

81. It is our view that our wording is more appropriate as it more clearly states the importance of achieving both a high-quality frontage and the operation of the electricity lines as outlined in Ms Gilbert's evidence that a:

*"...more flexible approach is warranted which would allow future developers to design a location specific site layout, building design and planting outcome that carefully balance the infrastructure operational and maintenance requirements with design imperatives to manage visual amenity in views from the motorway and create a strong green buffer."*¹⁶

82. We accept that this additional criterion will provide the necessary flexibility in the use of planting and integrating building design and appearance from SH 1. This amendment will also complement and integrate with the subsequent criterion for building design and appearance, which will aid in addressing any visual amenity concerns in relation to a sense of openness and reduced visual impact.

Decision on Submissions

83. That submissions 3.1 – 3.3 from Counties Power Limited be **accepted**.

Transport Related Submissions

84. The following sections address the submissions received in relation to transportation related matters. Before addressing the specific submissions, we quote the 42A report in relation to meetings held and agreements reached with the submitters who raised transport related matters¹⁷:

"The applicant has met with the following submitters in order to address the relief sought in submissions and narrow the points of difference:

a. *New Zealand Transport Agency*

b. *AT*

d. *Lomai Properties Limited*

A consolidated copy of DSIP provisions reflecting amendments arising from these meetings was provided to council on 9 November 2020. This was

¹⁶ Paragraph 6.7 of Ms Gilbert's evidence-in-chief

¹⁷ Section 10.2.1 –Meetings between applicant and submitters - Paragraphs 247 -248

supported by communication passed on by the applicant from these submitters outlining their position on the proposed amendments:

- a. NZTA have advised¹⁸ that they accept the proposed changes;
- b. AT have advised¹⁹ that they accept the majority of changes made, with two further items remaining to be resolved:
 - I. The proposed table showing dimension and function of indicative roads; and
 - II. Reinstatement of road vesting provision.
- d. Lomai Properties Limited have since advised that they consider the additional traffic effects of PC46 to be acceptable²⁰.

85. We acknowledge that the majority of the transport related matters had been 'agreed' prior to the hearing. We accept those matters on which agreement has been reached. The following addresses our decision on those submissions having heard the legal submissions and all of the evidence including that of the Council officers.

Transport – General

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
1.1	Lomai Properties Limited	Approve PPC46 subject to confirmation that the adverse traffic effects external to the site are appropriately avoided, remedied or mitigated and the ability to develop the Drury-Opāheke Structure Plan is not hindered.	-

86. Lomai Properties Limited were concerned with:
- a. The distribution of traffic effects throughout the external network;
 - b. The granting of subdivision consents within the precinct regardless of the additional resultant traffic effects on the external network;
 - c. The assumption that urbanisation of the Drury-Opāheke Structure Plan area will alleviate traffic congestion by enabling residents to live and work in the area, given that this may not be the case in the short term
 - d. An increase in traffic effects from PC46 has the potential to prevent or hinder the outcomes sought in the Drury-Opāheke Structure Plan from being achieved, by using the existing transport network capacity and reducing the capacity for other developers.

¹⁸ In an email from Evan Keating dated 27 October 2020

¹⁹ In an email from Josephine Tam dated 6 November 2020

²⁰ In an email from Vijay Lala dated 5 November 2020

87. The submitter advised that following a meeting with the Applicant (and the preparation of two memos by Beca Limited), the additional traffic effects were acceptable to it from a traffic effects perspective.

Decision on Submission

88. That submission 1.1 from Lomai Properties Limited be **accepted**.

Internal transport network

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
2.5	The New Zealand Transport Agency	Retain Objective I140.2(7) as notified.	-
2.18	The New Zealand Transport Agency	Retain Standard I410.6.3(1) Subdivision or development preceding subdivision in Sub-precincts A– E as notified.	-
2.21	The New Zealand Transport Agency	Retain I410.7.2.1(f)(i) Matters of control as notified.	-
2.22	The New Zealand Transport Agency	Retain I410.8.1.2 Matters of discretion as notified.	-
2.24	The New Zealand Transport Agency	Retain I410.8.2.1(f)(vi) Assessment criteria as notified.	-
5.1	Auckland Transport	Approve the re-zoning to Business – Mixed Use and the creation of Sub-Precinct C – Mixed Use, subject to amended precinct provisions to manage transport effects and achieve land use transport integration.	-
5.4	Auckland Transport	Delete the proposed addition to Policy I410.3(140): “adequate”. Add to the end of policy (I410.3(140) on transport and infrastructure: <u>“This shall include the collector roads Maketu Road, Link Road, New Quarry Access Road and Ramarama Road through to Fitzgerald Road providing good public</u>	Counties Power – Support

		<u>transport, walking and cycling connections through the precinct and between the two future rail stations in Drury.</u>	
5.7	Auckland Transport	Re-instate the I410.6.3(1) provision that proposed roads (including pedestrian and cycle routes) identified on Precinct Plan 1 and Precinct Plan 2 must be vested in Council and at no cost to the Council upon subdivision or development.	Counties Power – Support
5.9	Auckland Transport	Amend Restricted Discretionary Assessment Criteria I410.8.2(1)(f) by adding (f)(x) as follows: <u>(f)(x) whether the new collector roads are designed to perform their required transport network functions, including public transport route capability, walking and cycling, heavy commercial vehicles where appropriate (freight route), connectivity, streetscape and landscaping, service berms, and any required stormwater management</u> Or alternative wording that achieves sufficient width of roads to perform their required functions	Counties Power – Support
5.10	Auckland Transport	If appropriate assessment criteria are not included in I410.8.2(1)(f), then amend the plan change to include high-level designs of the proposed collector roads.	-

89. As discussed earlier in this report, and as outlined in the section 42A report and the Applicant’s evidence and tabled statements from Waka Kotahi New Zealand Transport Agency, none of the transport issues remained in contention. Given this and that we accept the plan provisions are appropriate, there is no need to provide any further reasons in relation to our decision on the submissions.

Decision on Submissions

90. That submissions 2.5, 2.21, 2.22, 2.24, 5.1 from NZTA and 5.7 from AT be **accepted**.
91. That submission 2.18 from NZTA and 5.9 and 5.10 from AT and further submission #2 from Counties Power Limited **be accepted in part**.

Mill Road Corridor

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
2.1	The New Zealand Transport Agency	Include provision for the Mill Road Corridor within PC46. Waka Kotahi will work collaboratively with the applicant and Auckland Council on this outcome.	-
2.2	The New Zealand Transport Agency	Amend I410.10 Precinct Plan 2 so that Avenue Road is to be shown to intersect with Maketu Road further to the south to avoid interaction with the Mill Road Corridor.	-
2.3	The New Zealand Transport Agency	Amend I410.1. Precinct description as follows: <i>[...] Plan 1. The transportation network development requirements of the precinct are shown on Precinct plan 2 <u>and includes the Mill Road Corridor.</u> The precinct is [...]</i>	-
2.6	The New Zealand Transport Agency	Amend Objective I410.2(13) as follows: <i>(13) Activities sensitive to traffic noise <u>adjacent to the</u> are controlled on the strategic freight network (Maketu Road and New Quarry Access Road) serving the Drury Quarry and the Mill Road Corridor are protected from unreasonable levels of transport noise.</i>	-
2.11	The New Zealand Transport Agency	Amend Policy I410.3(23) as follows: <i>(23) Control <u>Ensure</u> activities sensitive to noise <u>adjacent to</u> on the strategic freight network (Maketu Road and New Quarry Access Road) serving the Drury Quarry and the Mill Road Corridor are provided with reasonable levels of amenity and human health protection. so that occupants are not exposed to unreasonable levels of transport noise.</i>	-
2.12	The New Zealand Transport Agency	Introduce new Policy I140.3(28): <i>(28) <u>Subdivision and development in the Precinct provides for and does not preclude the construction and operation of the Mill Road Corridor.</u></i>	-

2.13	The New Zealand Transport Agency	Introduce new Rule I140.4.1(A5): <i><u>(A5) Subdivision and development of land including or adjoining to the Mill Road Corridor Activity Status: Restricted Discretionary Activity.</u></i>	Kāinga Ora – Oppose
2.19	The New Zealand Transport Agency	Amend proposed Standard I410.6.4(1) as follows and renumber subsequent parts of the rule: <i>(1) Any <u>building containing a noise sensitive space within Sub-Precinct C must be located and/or designed and/or insulated, or screened by suitable barriers, so that the design internal-noise levels in these rooms do not exceed:</u></i> <i>(a) 40 dB LAeq(24hours) inside any noise sensitive space; and</i> <i>(b) 70 dB LAeq(24h) In addition, the assessed incident noise level on any to a façade of any building facing Maketu Road or Mill Road that accommodates a noise sensitive space must not exceed 70 dB LAeq(24 hour)</i> <i><u>(2) Compliance with Standard I410.6.4(1) must be determined</u> For the purpose of this rule, noise from Maketu Road shall be based on a road traffic noise level 10m from the nearest traffic lane of <u>Maketu Road and Mill Road of 75 dB LAeq(24hour), 83dB Leq(24 hour) at 63 Hz and 79dB Leq(24 hour) at 125 Hz.</u></i>	Kāinga Ora – Oppose
5.12	Auckland Transport	Amend Precinct Plan 1 and Precinct Plan 2 to show an acceptable high-level design for the intersection of Avenue Road with Maketu Road	-
5.14	Auckland Transport	Include the Mill Road extension as an indicative road on the precinct plans if the location is confirmed in time, along with its implications for precinct roads and intersection/access design.	-

92. As discussed earlier in this report, and as outlined in the section 42A report and the Applicant's evidence and tabled statements from Waka Kotahi New Zealand Transport Agency, none of the transport issues remained in contention. Given

this and that we accept the plan provisions are appropriate, there is no need to provide any further reasons in relation to our decision on the submissions.

Decision on Submissions

- 93. That submission 2.2 from NZTA be **accepted**.
- 94. That submissions 2.1, 2.3, 2.12, 2.13 from NZTA and 5.14 from AT be **rejected**.
- 95. That submissions 2.6 and 2.11 from NZTA be **rejected** insofar as they relate to referencing the Mill Road Corridor.
- 96. That further submission #2 from Kāinga Ora be **accepted** as it relates to the Mill Road Corridor.

Maketu Road/Avenue Road intersection alignment

<u>Submissions and further submissions</u> Sub. No	Submitter Name	Summary	Further subs
2.2	The New Zealand Transport Agency	Amend I410.10 Precinct Plan 2 so that Avenue Road is to be shown to intersect with Maketu Road further to the south to avoid interaction with the Mill Road Corridor.	-
5.12	Auckland Transport	Amend Precinct Plan 1 and Precinct Plan 2 to show an acceptable high-level design for the intersection of Avenue Road with Maketu Road	-

- 97. As discussed earlier in this report, and as outlined in the section 42A report and the Applicant’s evidence and tabled statements from Waka Kotahi New Zealand Transport Agency, none of the transport issues remained in contention. Given this and that we accept the plan provisions are appropriate, there is no need to provide any further reasons in relation to our decision on the submissions.

Decision on Submissions

- 98. That submission 2.2 from NZTA and 5.12 from AT be **accepted**.

Ramarama Road connection

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
5.8	Auckland Transport	Amend Restricted Discretionary Assessment Criteria I410.8.2(1)(f)(iv) as follows: “(iv) whether Ramarama Road, at the northern boundary of the precinct <u>remains open for light vehicles, public transport, walking and cycling, or if an alternative link providing for such is achieved to Fitzgerald Road as is closed to all vehicular traffic by the time 58 hectares of the developable area in the Ramarama Road Transport Area defined on Precinct Plan 2. has been subdivided or developed;</u>	Counties Power – Support in part
5.13	Auckland Transport	Amend Precinct Plan 1 and Precinct Plan 2 to show the northern end of Ramarama Road as Indicative Road intended to link through to Fitzgerald Road.	Counties Power – Support

99. As discussed earlier in this report, and as outlined in the section 42A report and the Applicant’s evidence and tabled statements from Waka Kotahi New Zealand Transport Agency, none of the transport issues remained in contention. Given this and that we accept the plan provisions are appropriate, there is no need to provide any further reasons in relation on our decision on the submissions.

Decision on Submissions

100. That submission 5.8 and 5.13 from AT be **accepted in part**.

Transport infrastructure costs

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
4.2	Classic Developments NZ Limited	Seeks that the infrastructure costs being apportioned to private developers through both precincts in respect of the ‘Spine Road’ (also referred to as ‘Maketu Road’) by way of Development Contributions levied by Auckland Council; should be reviewed to reflect the proposed zoning changes and any consequential effects on the nature, extent	-

		and scale of traffic distribution across the Precincts.	
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101. The public infrastructure costs required to support new activities and development is addressed by Auckland Council's Development Contributions Policy 2019 ("DCP"), which has the following purpose:

"to recover from those persons undertaking development a fair, equitable, and proportionate portion of the total cost of capital expenditure necessary to service growth over the long term"

102. The DCP and funding of public infrastructure costs is not part of this plan change. Accordingly, the submission cannot be addressed and must be rejected.

Decision on Submissions

103. That submission 4.2 from Classic Developments NZ Limited is **rejected**.

Trip generation

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further Subs
2.16	The New Zealand Transport Agency	Oppose the proposed amendment to I410.6 Standards as below: <i>I410.6. Standards</i> <i>The overlay, Auckland-wide and zone standards apply in this precinct, unless otherwise specified below.</i> <i>Rule E27.6.1 does not apply in the Drury South Industrial and Mixed Use Precinct.</i>	-
5.6	Auckland Transport	In I410.6. Standards, delete the proposed addition: <i>"Rule E27.6.1 does not apply in the Drury South Industrial and Mixed Use Precinct."</i>	-

104. As discussed earlier in this report, and as outlined in the section 42A report and the Applicant's evidence and tabled statements from Waka Kotahi New Zealand Transport Agency, none of the transport issues remained in contention. Given this and that we accept the plan provisions are appropriate, there is no need to provide any further reasons in relation on our decision on the submissions.

Decision on Submissions

105. That submission submissions 2.16 from NZTA and 5.6 from AT be **accepted in part**.

Cycling network

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
2.8	The New Zealand Transport Agency	Amend Policy I410.3(9) as follows: <i>(9) Ensure buildings in Sub-precinct C address and engage the street and public realm and exhibit a high standard of amenity and pedestrian <u>and cycling</u> safety and convenience.</i>	-
2.23	The New Zealand Transport Agency	Amend I410.8.2(5)(a) Assessment criteria as follows: <i>(a) the extent to which the activity affects the safe and efficient operation of the adjacent transport network including pedestrian <u>and cycling</u> movement, particularly at peak traffic times;</i>	-
5.3	Auckland Transport	Amend Precinct Policy I410.3(9) as follows: <i>“(9) Ensure buildings in Sub-precinct C address and engage the street and public realm and exhibit a high standard of amenity and pedestrian <u>and cycling</u> safety and convenience.”</i>	-
5.11	Auckland Transport	Amend I410.8.2(5)(a) as follows: <i>“(a) the extent to which the activity affects the safe and efficient operation of the adjacent transport network including pedestrian <u>and cycling</u> movement, particularly at peak traffic times;”.</i>	-

106. As discussed earlier in this report, and as outlined in the section 42A report and the Applicant’s evidence and tabled statements from Waka Kotahi New Zealand Transport Agency, none of the transport issues remained in contention. Given this and that we accept the plan provisions are appropriate, there is no need to provide any further reasons in relation to our decision on the submissions.

Decisions on Submissions

107. That submissions 2.8 and 2.23 from NZTA and 5.3 and 5.11 from AT be **accepted**

Drafting of transport provisions

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
2.4	The New Zealand Transport Agency	Amend Objective I410.2(6) as follows: <i>(6) The timely and co-ordinated provision of robust and sustainable <u>transport road</u>, stormwater, water, wastewater, energy and communications infrastructure networks are provided.</i>	-
2.9	The New Zealand Transport Agency	Amend Policy I410.3(10) as follows: <i>(10) Provide for adequate transport infrastructure and connections including the Maketu Rroad to support safe and efficient movement within the precinct and to and from the surrounding transport network.</i>	-
2.10	The New Zealand Transport Agency	Amend Policy I410.3(13) as follows: <i>(13) Co-ordinate <u>transport road</u> network (including the state highway) improvements both within and outside the precinct with development within the precinct to manage adverse effects on the safe and efficient operation of the surrounding <u>transport road</u> network.</i>	-
5.4	Auckland Transport	Delete the proposed addition to Policy I410.3(140): " <u>adequate</u> ". Add to the end of policy (I410.3(140) on transport and infrastructure: <i><u>"This shall include the collector roads Maketu Road, Link Road, New Quarry Access Road and Ramarama Road through to Fitzgerald Road providing good public transport, walking and cycling connections through the precinct and between the two future rail stations in Drury.</u></i>	-

108. As discussed earlier in this report, and as outlined in the section 42A report and the Applicant's evidence and tabled statements from Waka Kotahi New Zealand Transport Agency, none of the transport issues remained in contention. Given this

and that we accept the plan provisions are appropriate, there is no need to provide any further reasons in relation to our decision on the submissions.

Decisions on Submissions

109. That submissions 2.4, 2.9 and 2.10 from NZTA be **accepted**.

110. That submission 5.4 from AT be **accepted in part**.

Retail and office activity

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
2.14	The New Zealand Transport Agency	Retain Rules I410.4.4 Activity Table: (A27) and (A28) Retail (A29), (A30) and (A31) Office as notified.	-
2.17	The New Zealand Transport Agency	Retain Standard I410.6.1.1 Retail and Office Gross Floor Area as notified.	-

111. NZTA submitted in support of the activity statuses and GFA thresholds proposed to apply to retail and office activity. As outlined in Sections 7.1 and 7.3 of the section 42A report, Mr Collins supported these thresholds as a means to manage effects on the safe and efficient operation of the transport network. We agree.

Decision on Submissions

112. That submissions 2.14 and 2.17 from NZTA be **accepted**.

SECTION 32AA EVALUATION

113. Section 32AA of the RMA requires a further evaluation for any changes that are proposed to the notified plan change after the section 32 evaluation was carried out.²¹ This further evaluation must be undertaken at a level of detail that corresponds to the scale and significance of the changes.²²

114. In our view this decision report, which among other thing, addresses the modifications we have made to the provisions of PC 46, satisfies our section 32AA obligations.

DECISION

115. That pursuant to Schedule 1, Clause 10 of the Resource Management Act 1991, that Proposed Plan Change 46 to the Auckland Unitary Plan (Operative in Part) be approved, subject to the modifications as set out in this decision.

²¹ RMA, section 32AA(1)(a)

²² RMA, section 32AA(1)(c)

116. Submissions on the plan change are accepted, accepted in part and rejected in accordance with this decision.
117. In addition to the reasons set out above, the overall reasons for the decision are that PC 46:
- a. will assist the Council in achieving the purpose of the RMA;
 - b. is consistent with the Auckland Regional Policy Statement;
 - c. is consistent with the National Policy Statement – Urban Development;
 - d. is consistent with the provisions of Part 2 of the RMA;
 - e. is supported by necessary evaluation in accordance with section 32 and s32AA; and
 - (f) will help with the effective implementation of the AUP(OP).



Greg Hill - Chairperson

- for Commissioners Gavin Lister and Mark Farnsworth

8 March 2021

Amended Plan Provisions

The amended plan provisions are attached as Appendix 1.

Note – we have attached a track change and coloured coded version so parties can understand the changes that have been made.

APPENDIX ONE – Plan Change 46 PROVISIONS

I410. Drury South Industrial and Mixed Use Precinct

Amendments proposed by Plan Change 46 are recorded in underlined and ~~strikethrough~~.

Amendments proposed following the close of submissions and in response to the s42A report are shown underlined and ~~strikethrough~~.

Amendments proposed following the close of the hearing are shown underlined.

I410.1. Precinct description

The Drury South Industrial and Mixed Use Precinct applies to approximately ~~364~~ 257ha of land, bounded by State Highway 1 in the west, the Drury Quarry and the Hunua foothills in the east, the rural areas of Fitzgerald Road in the north and Ararimu Road in the south, as shown on Precinct Plan 1. The transportation network development requirements of the precinct are shown on Precinct plan 2. The precinct is characterised by a flat to subdued contour and is traversed by the Hingaia Stream and its tributaries including the Maketu Streams. Land which surrounds and defines the precinct has more pronounced topographical contours. The precinct lies between the Drury and Ramarama interchanges on State Highway 1 and local traffic patterns are dominated by truck traffic accessing the Drury Quarry.

The zones within the precinct are Business – Light Industry Zone, Business – Heavy Industry Zone, Business – Mixed Use, and Open Space – Conservation Zone. The purpose of the precinct is to provide for land extensive industrial activity ~~and~~ employment opportunities, and a mix of residential and supporting commercial in identified areas, as well as provide for areas of stormwater management, existing and proposed network utility infrastructure, public open space and proposed roads, while recognising the ecological, cultural, landscape and other environmental constraints of the locality.

The precinct is divided into the following sub-precincts:

- Sub-precinct A Light Industry (approximately ~~445~~ 130 ha)
- Sub-precinct B Motorway Edge (Light Industry) (approximately ~~80~~ 45ha)
- Sub-precinct C ~~Commercial Services~~ Mixed Use (Light Industry) (approximately ~~24~~ 10 ha)
- Sub-precinct D Open Space / Stormwater Management (approximately ~~404~~ 41 ha)

- Sub-precinct E: Heavy Industry (approximately 46 24 ha).

Sub-precinct A is zoned Business – Light Industry Zone. Activities within the sub-precinct are subject to additional standards.

Sub-precinct B is zoned Business – Light Industry Zone. The Transpower switchyard is located within this sub-precinct. Activities in the sub-precinct are subject to additional

landscaping and building layout design standards.

Sub-precinct C is zoned Business - Mixed Use. Activities within this sub-precinct are subject to additional standards. The sub-precinct also provides for certain commercial activities to enable a mix of residential and supporting commercial uses. ~~Business—Light Industry Zone. The sub-precinct provides for offices, commercial services and small-scale retail activities (such as food) and activities to support the industrial activities in the majority of the precinct.~~

Sub-precinct D is zoned Business – Light Industry Zone but provides for recreational uses and will be rezoned to an appropriate zone (e.g. Open Space - Informal Recreation Zone) once the Public Open Space / Stormwater Management Areas shown on Precinct Plan 1 are developed and vested.

Sub-precinct E has an underlying zoning of Business – Heavy Industry Zone. Activities within the sub-precinct are subject to additional standards.

1410.2. Objectives [rp/dp]

The objectives of the underlying Business – Light Industry Zone apply in sub-precincts A-~~CB~~, the objectives of the underlying Mixed Use zone apply in sub-Precinct C, the objectives of the Open Space – Informal Recreation Zone apply in sub-precinct D, the objectives of the underlying Business – Heavy Industry Zone apply in sub-precinct E and the Auckland-wide objectives as well as the precinct objectives below apply throughout in this the precinct, unless there is a conflict between the precinct objectives and the Auckland-wide objectives or underlying zone objectives, in which case the precinct objectives prevail.

- (1) Development maintains and enhances the stream ecology and the natural vegetation and habitat values of the Hingaia and Maketu streams.
- (2) The cultural heritage values of the precinct are maintained and enhanced.
- (3) Landscape and visual amenity values within the precinct are maintained and enhanced (particularly when viewed from State Highway 1).
- (4) The air quality, acoustic and other amenity values of surrounding areas are protected.
- (5) The establishment of a convenient and well-designed industrial area with good quality streetscapes and a ~~commercial-service~~ mixed use precinct is facilitated.
- (6) The timely and co-ordinated provision of robust and sustainable transport road, stormwater, water, wastewater, energy and communications infrastructure networks are provided.
- (7) A transport network to facilitate the safe and efficient movement of people, goods and services and manage effects on the safe and efficient operation of the surrounding transport network.
- (8) ~~Development and subsequent land use within the precinct avoids reverse-sensitivity effects on the operations of t~~ The Drury Quarry, activities within the Business – Heavy Industry Zone or the adjoining rural area operate efficiently and are not unreasonably constrained by other activities.

- (9) Development and land use within the precinct avoids or minimises adverse effects on significant existing high voltage electricity, natural gas and communications infrastructure.
- (10) Subdivision and development in the precinct area avoids or mitigates the adverse effects of stormwater runoff on surface and groundwater quality and avoids increased flood risks to habitable buildings upstream and downstream of the precinct.
- (11) Visual and physical links to the surrounding area are protected.
- (12) Landscaping themes are complementary, consistent and coherent throughout the precinct.
- (13) Activities sensitive to traffic noise are controlled on adjacent to the strategic freight network (Spine Maketu Road and New Quarry Access Road) serving the Drury Quarry are protected from unreasonable levels of transport noise.
- (14) Activities sensitive to noise in Sub-Precinct C are protected from unreasonable levels of land transport noise.
- (15) Activities in sub-precinct C do not compromise the function, role and amenity of the City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone and Business – Local Centre Zone (either zoned or identified in the Council approved Structure Plan for Drury).

I410.3. Policies [rp/dp]

The policies of the underlying Light Industry zone apply in sub-precincts A-~~B~~C, the policies of the underlying Mixed Use zone apply in sub-Precinct C, the policies of the Open Space – Informal Recreation Zone apply in Sub-precinct D, the policies of the Business – Heavy Industry Zone apply in sub-precinct E and the Auckland-wide policies as well as the precinct policies below apply throughout the precinct unless there is a conflict between the precinct policies or underlying zone policies and the Auckland- wide policies, in which case the precinct policies prevail.

- (1) Protect and enhance the significant streams and vegetation within Sub-precinct D.
- (2) Enhance the biodiversity of ecological resources and linkages and restore degraded ecosystems while reducing stream bank erosion through riparian planting along retained watercourses in sub-precincts B and D.
- (3) Reflect the cultural heritage values of the Hingaia and Maketu streams as cultural linkages between historical hill top pa and coastal areas in the development of

sub-precinct D.

- (4) Maintain a sense of openness and naturalness on land adjacent to State Highway 1.
- (5) Maintain visual and physical links to the surrounding area within the precinct.
- (6) Utilise complementary, consistent and coherent landscaping themes throughout the precinct.
- (7) Design and construct attractive wetland areas for stormwater treatment and detention that also provide reserve and visual amenity opportunities.
- (8) Provide public open space buffer areas between the land to be developed for business activities and surrounding rural land.
- (9) Ensure buildings in Sub-precinct C address and engage the street and public realm and exhibit a high standard of amenity and pedestrian safety and convenience.
- (10) ~~Locate higher employee generating activities in Sub-precinct C close to potential public transport routes.~~
- (140) Provide for adequate transport infrastructure and connections including the spine Maketu Road, Link Road, New Quarry Access Road and Ramarama Road through to Fitzgerald Road, to support safe and efficient movement for all modes within and through the precinct, and to and from the surrounding transport network.
- (121) Provide high quality public open spaces in Sub-precinct D that result in opportunities for passive surveillance.
- (132) Provide adequate stormwater, water, wastewater, communications and energy networks in a timely and co-ordinated manner to service ~~industrial activity~~ development within the precinct.
- (143) Co-ordinate road transport network (including the state highway) improvements both within and outside the precinct with development within the precinct to manage adverse effects on the safe and efficient operation of the surrounding road transport network.
- (154) Make adequate provision within Sub-precinct D to detain the 100 year Average Recurrence Interval (ARI) event without adverse effects on the extent of flooding of upstream and downstream areas.
- (165) Provide sufficient floodplain storage within Sub-precinct D to avoid increasing flood risk upstream and downstream, and manage increased flood risk within the precinct, to habitable rooms for all flood events from the 50% and up to the 1% AEP.
- (176) Undertake earthworks to form the modified floodplain in a manner which ensures flood effects on downstream or upstream areas are not exacerbated.
- (187) Avoid locating buildings within the 100 year ARI modified floodplain.
- (198) Avoid locating infrastructure within the 100 year modified ARI floodplain unless

it can be designed to be resilient to flood related damage and does not exacerbate flood risks for upstream or downstream activities.

- (2019) Identify overland flowpaths in a stormwater management plan or discharge consent and ensure that they remain unobstructed and able to convey surface water runoff safely into the reticulated stormwater network.
- (240) Avoid or mitigate adverse effects on surface or groundwater quality from stormwater runoff within the precinct through on-site stormwater management and containment and the provision of catchment based stormwater treatment ponds.
- (221) Mitigate any diversion or piping of existing degraded or modified watercourses by the ecological enhancement and landscape planting of existing natural and diverted watercourses within and immediately adjacent to the precinct.
- (232) In Sub-precinct A, B, D and E, Avoid the establishment of sensitive residential land uses within the precinct.
- ~~(24) Avoid locating potentially sensitive commercial services within 500 metres of the Quarry zone boundary or within 100 metres of the Business – Heavy Industry Zone or any rural zone boundary.~~
- (253) Control activities potentially sensitive to traffic noise **adjacent to** the strategic freight network (Spine Maketu Road and New Quarry Access Road) serving the Drury Quarry so that occupants are not exposed to unreasonable levels of transport noise.
- (264) Manage development and subsequent land use to minimise adverse effects on the efficient and safe operation of existing high voltage electrical transmission and distribution lines, fibre optic cables and the Vector natural gas pipeline.
- (25) Encourage a mix of residential and commercial uses within Sub-precinct C close to potential public transport routes and open space amenity, which provides opportunities to integrate with the Drury South Residential Precinct and the balance of the Drury South Industrial and Mixed Use Precinct.
- (26) Provide for a range of commercial activities in Sub-Precinct C that will not compromise the role and amenity of the Business – Metropolitan Centre zone, Business – Town Centre zone (either zoned or identified in the Council

approved Structure Plan for Drury) beyond those effects ordinarily associated with trade effects on trade competitors. In particular:

- (a) Discourage the concentration of retail activity in one part of sub-precinct C, having regard to the effects of the scale and type of retail activity proposed;
- (b) Appropriately stage the provision of retail (including supermarkets) in Sub-Precinct C over time as development in the surrounding area occurs;
- (c) Enable appropriately scaled office activities to establish in sub-precinct C that support surrounding land uses in the Drury South precinct.

(27) Encourage a complementary mix of convenience activities to locate in the southern part of sub-precinct C, where it would be most accessible to the Drury South Residential precinct and would support a local community focal point.

I410.4. Activity table

The provisions in any relevant overlays, zone and the Auckland-wide apply in this precinct unless otherwise specified below.

In the event of a conflict between the zone or Auckland-wide rules and the precinct rules, the precinct rules prevail.

Table I410.4.1 specifies the activity status of development and subdivision activities in the sub-precincts A-C and E pursuant to sections 9(3) and 11 of the Resource Management Act 1991.

Table I410.4.1 Activity table 1 – Sub-precincts A to E

Activity		Activity status
Development		
(A1)	Subdivision, or any development of land which precedes a subdivision, being undertaken which complies with Standard I410.6.3 below. (Note that for the purposes of this rule "development" means the carrying out of any work on the land including any earthworks or site preparation activities and the construction or alteration of any building)	RD
(A2)	Subdivision, or any development of land which precedes a subdivision, being undertaken which does not comply with Standard I410.6.3 below, or results in increased flood risk to habitable rooms for all flood events from the 50% and up to 1% AEP flood event downstream and upstream of the Structure Plan area.	NC
(A3)	The creation of vehicle access to any site with frontage to or from the Spine <u>Maketu Road</u> shown on Precinct Plan 2 which also has frontage to another road shown on that Plan	RD
(A4)	<u>Residential activities in sub-precinct C which do not comply with Standard I410.6.5 (no-complaints covenant)</u>	<u>NC</u>

Table I410.4.2 specifies the activity status of land use activities in Sub-precinct A pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.2 Activity table 2 – Sub-precinct A (Light Industry)

Activity		Activity status
Use		
Commerce		
(A45)	Commercial services	NC
(A56)	Dairies	NC
(A67)	Drive-through restaurants	NC
(A78)	Entertainment facilities	NC
(A89)	Food and beverage	NC
(A910)	Retail over 450m ² <u>except for Trade Suppliers</u>	Pr
A11)	<u>Trade Suppliers</u>	<u>P</u>
(A10)	Activities that do not comply with standards in I410.6.2(9)	D

Table I410.4.3 specifies the activity status of land use and development activities in Sub-precinct B pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.3 Activity table 3 – Sub-precinct B (Light Industry - Motorway Edge)

Activity		Activity status
Use		
Commerce		
(A142)	Commercial services	NC
(A123)	Dairies	NC
(A134)	Drive-through restaurants	NC
(A145)	Entertainment facilities	NC
(A156)	Food and beverage	NC
(A167)	Retail over 450m ²	Pr
Development		

(A178)	New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities	C
(A189)	Additions to buildings that are less than: <ul style="list-style-type: none"> • 10 per cent of the existing gross floor area of the building; or • 250m² whichever is the lesser	P
(A19-20)	Internal alterations to buildings	P
(A20)	Activities that do not comply with the standards in I410.6.2(9)	D

Table I410.4.4 specifies the activity status of land use and development activities in Sub-precinct C pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.4 Activity table 4 – Sub-precinct C (Light Industry – Commercial Services Business - Mixed Use)

<u>Activity</u>	<u>Activity status</u>
<u>Use</u>	
<u>Commerce</u>	
(A21) <u>Trade Suppliers</u>	<u>P</u>
(A22) <u>Garden Centres</u>	<u>P</u>
(A23) <u>Motor Vehicle Sales</u>	<u>P</u>
(A24) <u>Marine Retail</u>	<u>P</u>
(A25) <u>Department Stores</u>	<u>NC</u>
(A26) <u>A single supermarket greater than 2000m² gross floor area</u>	<u>RD</u>
(A27) <u>Retail not otherwise permitted up to 200m² gross floor area per tenancy</u>	<u>P</u>
(A28) <u>Retail not otherwise permitted greater than 200m² gross floor area per tenancy</u>	<u>D</u>
(A29) <u>Offices up to 500m² per tenancy</u>	<u>P</u>
(A30) <u>Offices between 501m² – 1000m² per tenancy</u>	<u>RD</u>
(A31) <u>Offices greater than 1000m² per tenancy</u>	<u>D</u>
(A32) <u>Activities that do not comply with the standards in I410.6.2(9)</u>	<u>D</u>

Activity		Activity status
Use		
Commerce		
(A21)	Commercial services	P
(A22)	Dairies up to 200m ² gross floor area	P
(A23)	Drive-through restaurants	P
(A24)	Retail over 450m ²	Pr
(A25)	Offices	P
Community		
(A26)	Childcare centres	P
(A27)	Tertiary Education facilities for industrial training purposes only	P
(A28)	Healthcare facilities	P
Development		
(A29)	New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities	G
(A30)	Additions to buildings that are less than: <ul style="list-style-type: none"> • 10 per cent of the existing GFA of the building; or • 250m² whichever is the lesser	P
(A31)	Internal alterations to buildings	P
(A32)	Activities that do not comply with Standards I410.6.1.1–I410.6.1.4	NC
(A33)	Activities that do not comply with the standards in I410.6.2	D

Table I410.4.5 specifies the activity status of land use activities in Sub-precinct D pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.5 Activity table 5 – Sub-Precinct D (Open Space – Informal Recreation Zone / Stormwater Management)

Activity	Activity status
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Use		
Community		
(A342)	Any activity listed as a permitted activity in the Open Space – Informal Recreation Zone	P
(A353)	Stormwater management devices	P
(A364)	Activities that do not comply with the standards in I410.6.2	D

Table I410.4.6 specifies the activity status of land use activities in Sub-precinct E pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.6 Activity table 6 – Sub-precinct E (Heavy Industry)

Activity		Activity status
Use		
Commerce		
(A375)	Dairies	NC
(A386)	Food and beverage	NC
(A397)	Activities that do not comply with the standards in I410.6.2	D

I410.5. Notification

- (1) An application for resource consent for a controlled activity listed in Tables I410.4.1 - I410.4.6 above will be considered without public or limited notification or the need to obtain written approval from affected parties unless the Council decides that special circumstances exist under section 95A(4) of the Resource Management Act 1991.
- (2) Any application for resource consent for an activity listed in Tables I410.4.1 - I410.4.6 and which is not listed in I410.5(1) will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.
- (3) When deciding who is an affected person in relation to any activity for the purposes of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in RuleC1.13(4).

I410.6. Standards

The overlay, Auckland-wide and zone standards apply in this precinct, unless otherwise specified below.

Rule E27.6.1 does not apply in the Drury South Industrial and Mixed Use Precinct.

For the purposes of Rule E27.6.1(2)(b), the following activities have been assessed as part of an Integrated Transport Assessment on which the Drury South Industrial and Mixed Use Precinct provisions for Sub-precinct A and C are based:

Activity	GFA (m²)
<u>Supermarket</u>	<u>4,500</u>
<u>Retail</u>	<u>4,400</u>
<u>Offices</u>	<u>15,000</u>
<u>Trade suppliers</u>	<u>11,000</u>
<u>Supporting commercial services</u>	<u>3,300</u>
<u>Residential – apartments</u>	<u>12,300</u>
Activity	GFA (m²)
<u>Residential – Retirement Villages</u>	<u>22,000</u>

I410.6.1. Sub-precinct C

All activities listed as permitted in Table I410.4.4 must comply with the following standards

I410.6.1.1 Retail and Office Gross Floor Area

- (1) Retail must not exceed a total of 1000m² gross floor area in Sub-Precinct C. This excludes one supermarket greater than 2000m², service stations, trade suppliers, garden centres, motor vehicle sales, marine retail and food and beverage.
- (2) Retail activities specified in (1) above, greater than 1000m² and up to and including 4,500m² in Sub-Precinct C will be assessed as a restricted discretionary activity on a non-notified basis.
- (3) Retail activities specified in (1) above, greater than 4,500m² in Sub-Precinct C will be assessed as a discretionary activity.
- (4) Offices must not exceed 15,000m² in total in Sub-Precinct C. Offices greater than 15,000m² will be assessed as a discretionary activity.
- (5) Trade suppliers within Sub-Precincts A and C must not exceed a total of 11,000m² gross floor area. Trade suppliers that are greater than 11,000m² gross floor area will be assessed as a restricted discretionary activity on a non-notified basis.

I410.6.1.1. Dairies

- (4) Dairies must not exceed 200m² gross floor area.
- (5) Dairies must be located more than 100 metres from the nearest rural zone boundary.

1410.6.1.2. Food and beverage

- (1) Food and beverage must not exceed 200m² gross floor area.
- (2) Food and beverage must be located more than 100 metres from the nearest rural zone boundary.

1410.6.1.3. Childcare centres

- (1) Childcare centres must be located more than 500 metres from the nearest Business – Heavy Industry Zone boundary. Childcare centres must be located more than 100 metres from the nearest rural zone boundary.

1410.6.1.4. Healthcare facilities

- (1) Healthcare facilities must be located more than 500 metres from the nearest Business – Heavy Industry Zone boundary.
- (2) Healthcare facilities must be located more than 100 metres from the nearest rural zone boundary.

1410.6.2. Sub-precincts A-E

The standards are those listed in the Auckland-wide rules (in respect of sub-precincts A-E), Business – Light Industry Zone (in respect of sub-precincts A-BC), Business – Mixed Use Zone (in respect of sub-precinct C), the Open Space – Informal Recreation Zone (in respect of sub-precinct D) and the Business – Heavy Industry Zone (in respect of Sub-precinct E) except as follows:

- (1) A minimum parking rate of 1 space per 40m² gross floor area applies to commercial services in Sub-precinct C.
- (21) Buildings must not exceed 25m in height in Sub-precinct E and Sub-Precinct C.
- (32) Within the Drury South Industrial and Mixed Use Precinct the industrial zone height in relation to boundary control will not apply, and instead, buildings must not project beyond a 45 degree recession plane measured from a point 2 metres vertically above ground level along the residential or public open space boundary.
- (43) All new roads must be designed and constructed to comply with the provisions of New Zealand Standard NZS6806:2010 "Acoustics – Road Traffic Noise – New and Altered Roads".
- (54) The upward waste light ratio from any luminaire must not be more than 3 per cent. The upward waste light ratio is defined as: "The ratio of the light flux emitted above the horizontal by a luminaire to the total light flux emitted, expressed as a percentage, evaluated for the upcast angle".
- (65) The front yard landscaping of sites used for an industrial purpose must comprise a 3 metre wide continuous (except for those areas used for vehicle and pedestrian access) planting of multi-row Phormium tenax (flax) planted at 1.5 metre centres in staggered rows on a grid. This planting requirement must not apply to sites within sub-precincts B or C. Any required security fence must be setback a minimum of 3 metres from the front boundary and such fencing (whether in front yards or on rear or side boundaries) must be 2 metre maximum height and must not incorporate barbed

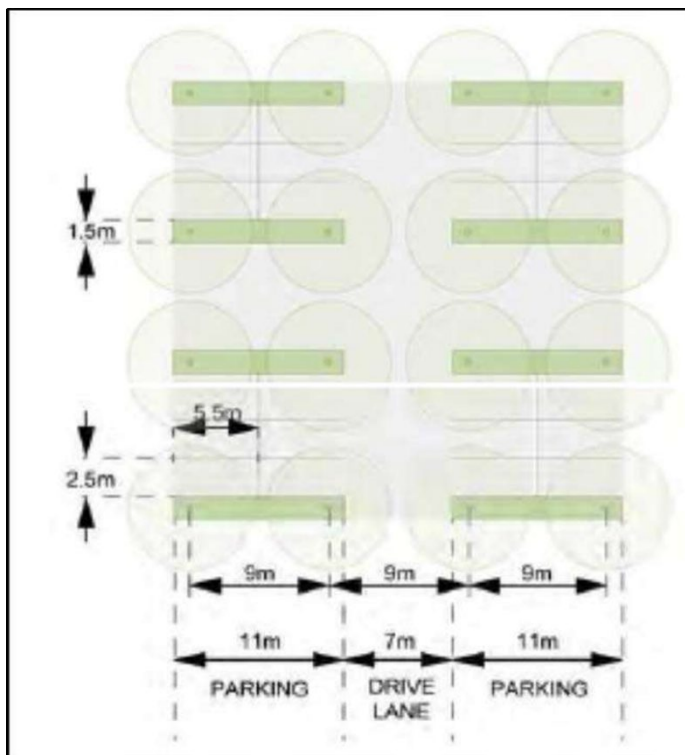
or razor wire or an angled top. Fence posts and wire mesh are to be black coloured.

~~(76) All side boundaries of sites in the Business—Light Industry Zone and all side and rear boundaries of sites in the Business—Heavy Industry Zone must be planted with a row of either Leyland Cypress, Casuarina (sheoak) or Macrocarpa at 3 metre centres—located 1.5 metres in from the side or rear boundary and buildings must be setback from the relevant boundary by a minimum of 3.5 metres. This requirement must not apply to sites within sub-precincts B, C or D. Where sites with side or rear boundaries abut State Highway 1 within Sub-precinct B, all such boundaries must be planted with a double row of Leyland Cypress with 2 metres between rows and trees within each row planted at 3 metre centres. Tree rows are to be staggered and the first row is to be located 1.5 metres in from the side or rear boundary and buildings must be setback from the relevant boundary by a minimum of 5.5 metres accordingly. Any noise attenuation wall or fence designed to deflect noise arising from State Highway 1 must be fully screened by planting in views from the motorway.~~

(7) Where any new building is proposed, the reflectivity value of the roof or roofs must not exceed 30 per cent.

(8) Within Sub-precinct B no less than 30 per cent of the net site area of each site is to be in permeable landscape area (including any on site stormwater treatment). Where on site car parking adopts a layout fully conforming with the fully planted permeable carpark design layout detailed in Figure I410.6.2.1 below, the permeable landscape area may be reduced to no less than 20 per cent of the site area.

Figure I410.6.2.1 Carpark design



(9) Within the Sub-precinct C the ground floor of all buildings must have a minimum floor to ceiling height of 4.5 metres to allow long term adaptive reuse of light industrial buildings for commercial services activities.

(409) Any land modification to form the 1% AEP modified flood plain must:

- (a) not reduce flood storage capacity in the precinct; and
- (b) not change the flood characteristics upstream or downstream of the precinct for all flood events from the 50% and up to the 1% AEP flood event in ways that result in an increase in peak flood levels.

I410.6.3. Subdivision or development preceding subdivision in Sub-precincts A– E

- (1) Proposed roads (including pedestrian and bicycle routes) identified on the Precinct Plan 1 and Precinct Plan 2, must be ~~constructed and vested in council upon subdivision or development of the relevant area at no cost to the council. Proposed roads must be~~ located generally in the position indicated on Precinct plan 1 and Precinct Plan 2, but the precise location will be subject to detailed engineering and subdivision design. An alternative roading layout may be proposed provided that an integrated approach to land use and transport can be achieved throughout the Drury South Industrial and Drury South Residential precincts.
- (2) The land identified as part of Sub-precinct D on ~~the Precinct plan 1 and Precinct Plan 2~~ must be developed and vested in council upon subdivision or development of the relevant area ~~at no cost to the council~~. Proposed reserves and stormwater management areas must be located generally in the position indicated on Precinct Plan 1, and must be offered to the Council, the structure plan but precise location will be subject to detailed engineering and subdivision design. Vegetated buffers not less than 40 metres in total width are to be provided along stream corridors within stormwater management areas and must include a minimum of 10 metres of native riparian planting either side of the stream edge. Off-site stormwater management services including wetlands and the primary and secondary stormwater conveyance system is to be vested at no cost to the council in accordance with a network discharge consent or other relevant discharge consent or a stormwater management plan approved by the Council. All stormwater management areas and wetlands must be designed to serve a dual function to treat stormwater and provide ecological benefits.
- (3) Reticulated water services must be supplied to the precinct and all new water infrastructure must be fully funded (including consenting costs) by the developer(s) of the land within the precinct. Such services must be provided to the relevant part of the precinct in advance of or concurrent with a resource consent for subdivision and development provided that any necessary resource consents or designations for the reticulated water services have been granted.
- (4) Wastewater services are to be provided to the precinct either by (in no particular order):
 - (a) the construction of a connection to Watercare's existing wastewater network and any necessary upgrading of that network that is required to service the Precinct; and/or
 - (b) the construction of a Wastewater Treatment Plant to service the Precinct, or a larger catchment if required.

In either case wastewater services are to be provided in a manner approved by Watercare and constructed to Watercare's design and operational standards. The developer(s) must fully fund (including consenting costs) all new wastewater infrastructure required to service the Precinct. Wastewater services must be provided to the relevant part of the Precinct in advance of or concurrent with a resource consent for subdivision and development provided that any necessary resource consents or designations for the reticulated water services have been granted. In the event that a new regional wastewater treatment plant becomes available to service the precinct, and subject to approval from Watercare, the precinct could be connected to that plant.

Note: that for the purposes of the Standards I410.6.3(1)-(4) above, references to "Watercare" means Watercare Services Limited and references to "development" means the carrying out of any work on the land including any earthworks or site preparation activities and the construction or alteration of any building.

I410.6.4 Sub-Precinct C (Noise and Ventilation)

- (1) Any building containing a noise sensitive space within Sub-Precinct C must be located and/or designed and/or insulated, or screened by suitable barriers, so that the design internal noise levels in these rooms do not exceed:
 - (a) 40 dB $L_{Aeq(24\text{ hours})}$ inside any noise sensitive space; and
 - (b) 70 dB $L_{Aeq(24\text{ hour})}$. In addition, the assessed incident noise level on any to a façade of any building facing Maketu Road that encloses a noise sensitive space that accommodates a noise sensitive space must not exceed 70 dB $L_{Aeq(24\text{ hour})}$.
- (2) Compliance with Standard I410.6.4(1) must be determined For the purpose of this rule, based on a road traffic noise level 10m from the nearest traffic lane of Maketu Road shall be based on a road traffic noise level 10m from the nearest traffic lane of 75 dB $L_{Aeq(24\text{ hour})}$, 83 dB $L_{eq(24\text{ hour})}$ at 63 Hz and 79 dB $L_{eq(24\text{ hour})}$ at 125 Hz.
- (3) For residential dwellings, where the internal noise levels in Standard 1 can only be complied with when doors or windows to those rooms are closed, those rooms must be mechanically ventilated and/or cooled to achieve: adopt the relevant mechanical ventilation and/or cooling requirements of E25.6.10(3)(b) or (c).
 - (a) an internal temperature no greater than 25 degrees Celsius based on external design conditions of dry bulb conditions 25.1 degrees celsius and wet bulb 20.1 degrees celsius or;
 - (b) a high volume of outdoor air supply to all habitable rooms with an outdoor air supply rate of no less than:
 - (i) six air changes per hour (ACH) for rooms with less than 30 percent of the façade area glazed; or
 - (ii) fifteen air changes per hour (ACH) for rooms with greater than 30 percent of the façade area glazed; or

- (iii) three air changes per hour for rooms with façades only facing south (between 120 degrees and 240 degrees) or where the glazing in the façade is not subject to any direct sunlight
- (4) For all other noise sensitive spaces, where the internal noise levels in Standard I451.6.4.1 above can only be complied with when doors or windows to those rooms are closed, those rooms must be mechanically ventilated and/or cooled to achieve an internal temperature of no greater than 25 degrees celsius based on external design conditions of dry bulb conditions 25.1 degrees celsius and wet bulb 20.1 degrees Celsius; and
- (a) provide relief for equivalent volumes of spill air; and
- (b) be individually controllable across the range of airflows and temperatures by the building occupants in the case of each system; and
- (c) have a mechanical ventilation and/or cooling system that generates a noise level of no greater than L_{Aeq} 35dB when measured 1m from the diffuser at the minimum air flows required to achieve the design temperatures and air flows.
- (5) For the avoidance of doubt, this rule the noise insulation requirements set out in Standard I410.6.4(1)-(3) applies in addition to any other noise insulation requirements set out in the relevant provisions of Chapter E25 – Noise and Vibration.

I410.6.5 Sub-Precinct C (Restrictive non-complaint covenant)

- (1) Residential activities in Sub-precinct C shall be subject to a restrictive non-complaint covenant* in favour of the operator of Drury Quarry.

**For the purposes of the Drury South Industrial and Mixed Use precinct and of this rule a 'restrictive non-complaint covenant' is defined as a restrictive covenant registered on the Title to the property or a binding agreement to covenant, in favour of the operator of Drury Quarry, by the landowner (and binding any successors in title) not to complain as to effects generated by the lawful operation of the quarry, including heavy vehicle movement noise. The restrictive non-complaint covenant is limited to the effects that could be lawfully generated by the quarry activities at the time the agreement to covenant is entered into. This does not require the covenantor to forego any right to lodge submissions in respect of resource consent applications or plan changes in relation to quarry activities (although an individual restrictive non-complaint covenant may do so.) Details of the existence of covenant documents may be obtained from the Quarry Operator, its solicitors, or in the case of registered covenants by searching the Title to the property.*

1410.7. Assessment – controlled activities

1410.7.1. Matters of control

The Council will reserve its control to all of the following matters when assessing a controlled activity resource consent application:

- (1) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct B:

- (a) retention of existing vegetation;
 - (b) planting;
 - (c) building design and appearance;
 - (d) parking area design;
 - (e) storage and waste management location and design; and
 - (f) vehicular access;
- (2) ~~new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:~~
- ~~(a) building design;~~
 - ~~(b) parking area design;~~
 - ~~(c) signs;~~
 - ~~(d) service area location;~~
 - ~~(e) vehicular access; and~~
 - ~~(f) mitigation of traffic noise.~~

I410.7.2. Assessment criteria

The Council will consider the relevant assessment criteria below for controlled activities:

(1) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct B:

(a) retention of existing vegetation:

(i) the extent to which layouts retain and protect existing mature trees, particularly those of indigenous species, where these contribute to the site character and amenity.

(b) planting:

(i) the extent to which planting is designed to have a large scale landscape effect and combine native as well as appropriate exotic species to provide seasonal change and quality amenity; or

(ii) where public open space land adjoins the motorway, the extent to which boundary planting that creates a continuous visual barrier to eastward views from the State Highway 1 corridor is avoided and whether landscape design emphasises the current sequence of intermittent views to the Hunua Ranges from the State Highway 1 corridor and the pattern of variable depth of such views;

(iii) **the extent to which the integrated site layout, building and landscape design provides a high quality and visually attractive frontage to State Highway 1, while ensuring any landscaping, including the use of large tree and shrub species, does not restrict access to the electricity infrastructure for maintenance and does not compromise the safe and reliable operation of the electricity network.**

Advice note: In considering whether this criterion is met, the Council may take into account whether a review has been undertaken by or on behalf of Counties Power which confirms that the proposed planting will not affect the safe and reliable operation and maintenance of the electricity network.

(c) building design and appearance:

(i) the extent to which buildings are located with design consideration for their visibility and reduced visual impact as viewed from the State Highway 1 corridor and the desirability of maintaining a sense of openness as seen from the motorway; or

(ii) the extent to which the visual mass of larger buildings is minimised by employing the following methods:

- utilising subdued, recessive colours;
- providing variation in materials and finish for facades viewed from the motorway;

- creating variation of roof profiles with consideration given to the overall roofscape viewed from the motorway;
- all rooftop servicing and plant should be designed as an integral part of the roofscape with particular consideration given to the view from the motorway;

(d) parking area design:

- (i) the extent to which parking areas are designed to incorporate trees to break up the scale of hard surface areas; or
- (ii) the extent to which the fully planted permeable carpark design layout (refer Figure I410.6.2.1 above) style of parking is adopted within Sub-precinct B;

(e) storage and waste management location and design:

- (i) the extent to which storage and waste management activities are located and/or designed to be screened from view of State Highway 1;

(f) vehicular access:

- (i) the extent to which proposed vehicle access to sites adjoining the Spine ~~Maketu~~ Road and New Quarry Access Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;

(2) ~~new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:~~

~~(a) building design:~~

- ~~(i) the extent to which buildings on corner lots are designed to provide for a quality architectural response to the corner. Appropriate design responses would be provision of additional height at the corner, windows and activities addressing both street frontages and avoiding blank walls to one or both sides of the corner; or~~
- ~~(ii) the extent to which built development fronts the street with a quality recognisable pedestrian entry to the street;~~

~~(b) parking area design:~~

- ~~(i) the extent to which parking is provided on the road network adjacent to sub-precinct C areas and on-site parking layouts are designed in accordance with the typical layout identified in Appendix I410.11.1.~~

~~(c) signs:~~

- ~~(i) the extent to which signs for each sub-precinct C development are coordinated including the physical location of signs, their type-face, style and content;~~

~~(d) service area location:~~

- ~~(i) the extent to which service areas are located so as to avoid~~

~~observation from a public road with access either from a service lane, incorporation within the main building or full screening of service/storage and dock areas;~~

~~(e) vehicular access:~~

~~(i) the extent to which proposed vehicle access to sites adjoining the Spine Road and New Quarry Access Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;~~

~~(f) mitigation of traffic noise:~~

~~(i) the extent to which premises offering food and beverages, health professional rooms and childcare centres (being permitted activities which may be sensitive to heavy commercial vehicle traffic noise) are designed to mitigate traffic noise effects. Mitigation measures may include acoustic treatment of buildings and arranging site layout so noise sensitive activities are screened from the heavy traffic noise.~~

I410.8. Assessment – restricted discretionary activities

I410.8.1. Matters of discretion

The Council will consider the relevant assessment criteria below for restricted discretionary activities, in addition to the assessment criteria specified for the relevant restricted discretionary activities in the overlay, Auckland wide or zone provisions:

- (1) subdivision or any development of land which precedes a subdivision being undertaken which complies with Standard I410.6.3:
 - (a) the relevant council and Auckland Transport development code or codes of practice;
 - (b) geotechnical and seismic;
 - (c) servicing and development sequencing;
 - (d) design and layout;
 - (e) earthworks;
 - (f) transportation network development requirements;
 - (g) ecology;
 - (h) Counties Power 110 Kv sub-transmission lines; and
 - (i) stormwater management;
- (2) the creation of vehicle access to any site with frontage to or from the Spine, Maketu Road shown on Precinct Plan 2 which also has frontage to another road shown on that plan:
 - (a) effect of the location and design of the access on the safe and efficient operation of the adjacent transport network; and

(b) adequacy of access arrangements.

(3) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:

(a) building design;

(b) parking area design;

(c) signs;

(d) service area location;

(e) vehicular access; and

(f) mitigation of traffic noise.

(4) A single supermarket greater than 2000m², supermarkets exceeding 450m² and up to 2000m² gross floor area per tenancy, offices between 501m² – 1000m² per tenancy and retail greater than 1000m² and up to and including 4,500m² in Sub-Precinct C

(a) the compatibility of the effects of intensity and scale of the development arising from the numbers of people and/or vehicles using the site, with the existing and expected future amenity values of the surrounding area and any practicable mitigation measures that would be appropriate to manage those effects;

(b) the effects of the design and location of parking areas and vehicle access and servicing arrangements on visual amenity of the streetscape and on pedestrian safety;

(c) the effects of the size, composition, characteristics, and concentration of retail or office activities proposed in Sub-precinct C on the existing and expected future function, role and amenity of other Metropolitan or Town Centres that are zoned or are identified in a Council approved Structure Plan for Drury, having regard to the need to enable convenient access of communities to commercial and community services while disregarding any effects ordinarily associated with trade effects on trade competitors;

(d) In determining (c) above, whether the activity is coordinated with the rate of residential and commercial development in the local area to ensure that the activity individually, or in combination with other consented or permitted activities, meets the needs of the local catchment;

(e) whether the retail or office proposal, individually, or in combination with other consented or permitted activities, meets the needs of the local residential and employment catchment;

(f) the assessment of the above matters having regard to the need to provide for the functional requirements of the activity.

(5) Trade Suppliers in Sub-Precincts A and C greater than 11,000m² gross floor area

(a) Effects of the activity on the safe and efficient operation of the

surrounding transport network.

(6) Infringement I410.6.4 – Sub-Precinct C (Noise and Ventilation)

(a) the effects of land transport noise of the noise sensitive activity;

(b) the potential reverse sensitivity effects of the infringement.

I410.8.2. Assessment criteria

The Council will restrict its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application, in addition to the matters specified for the relevant restricted discretionary activities in the overlay, Auckland-wide or zone provisions:

- (1) subdivision₁ or any development of land which precedes a subdivision being undertaken₁ which complies with Standard I410.6.3:
 - (a) the extent to which the subdivision or development is in accordance with the relevant codes or codes of practice or engineering standards, **and whether the road network is consistent with its intended function as set out within those codes or codes of practice and the subdivision design assessment criteria set out in Appendix I410.11.**
 - (b) the extent to which the subdivided lots or the land on which the development is to be undertaken are geotechnically suitable for the development of a permitted activity or an activity for which resource consent has been obtained. This may include an assessment of the following:
 - (i) any proposed fill materials;
 - (ii) stability in areas of deep cut particularly adjacent to the boundaries of the Precinct;
 - (iii) settlement and stability issues associated with the Hingaia and Maketu streams;
 - (iv) time dependent settlement;
 - (v) ground seismicity and buffer zone; or
 - (vi) liquefaction;
 - (c) the extent to which subdivision and development occurs in a logical and sequential manner in relation to:
 - (i) the implementation of improvements and/or upgrades to the roading network;
 - (ii) the implementation of a potential pedestrian and cycling connection shown on Precinct Plan 1 between the Drury South Residential Precinct and Sub-Precinct C and the integration of this with proposed built development in Sub-Precinct C;
 - (iii) the establishment of the stormwater management areas within sub-

precinct D identified on Precinct Plan 1 and catchment wide stormwater management devices as identified in the relevant discharge consent and/or stormwater management plan required by the special information requirements below;

- (iv) the provision for overland flowpaths identified in an approved discharge consent and/or stormwater management plan required by the special information requirements below; or
 - (v) the provision of wastewater facilities, water supply, electricity, gas and telecommunications, including the protection and /or relocation of any existing local electricity, gas and communications assets;
- (d) the extent to which subdivision design and layout gives effect to the objectives and policies identified for the Drury South Industrial and Mixed Use Precinct and the subdivision design assessment criteria set out in Appendix I410.11.1.
- (e) the extent to which the earthworks required by the subdivision or development:
- (i) avoid or mitigate adverse effects on land stability, existing underground infrastructure facilities (such as the Vector gas pipeline and Telecom telecommunications cables), and groundwater quantity and quality;
 - (ii) avoid or mitigate adverse effects on the visual quality of the landscape or natural landforms, watercourses, habitats or vegetation;
 - (iii) avoid or mitigate adverse effects on traffic management within the area or create damage, danger, or nuisance to surrounding residents or the Ramarama School;
 - (iv) consider opportunities to recharge the aquifer using treated stormwater where permeable soils are available;
 - (v) ensure that the creation of level development platforms are contoured to integrate with the surrounding street environment and open space corridors;
 - (vi) screen retaining walls from public view;
 - (vii) provide and maintain continuity of overland flow paths both within the site, as well as upstream and downstream; and where overland flow paths are diverted and/or altered show how:
 - potential effects on other properties from the diversion or alteration is avoided or mitigated;
 - effects from scouring and erosion are mitigated;
 - further changes to the overland flow path will be limited, when appropriate through an easement in favour of Council;
 - (viii) if located in the 1% AEP modified flood plain, including earthworks for

the formation of stormwater management devices such as wetlands and/or for necessary infrastructure (including associated landscaping and accessways), whether:

- the design of the device, including associated earthworks, landscaping and accessways avoids impeding flood flows or otherwise exacerbating flood risk upstream or downstream of the site and how such effects can be avoided;
- the design of the device or mitigation works is resilient to damage from the full range of flood events;
- access to the device for maintenance is provided and maintenance plans address potential effects that may result from the proposed access route;

(f) the extent to which the following transportation network requirements are met:

- (i) whether subdivision or development will result in the central 'Spine Maketu Road' being progressively constructed on an alignment consistent with that indicated in Precinct plan 2;
- (ii) whether the following road projects indicatively shown on Precinct plan 2 will be completed before any buildings within the precinct are occupied:
 - the realignment of existing Quarry Road onto the alignment of the 'Spine Maketu Road' from the State Highway 1 over-bridge to the southern extent of the first stage of subdivision;
 - the upgrading of the existing Quarry Road/Great South Road intersection;
 - the provision of traffic signals or an alternative upgrade which achieves equivalent transport performance at the existing Great South Road/State Highway 22 (Karaka Road) intersection;
 - under the scenario where development of the Precinct proceeds in advance of the Mill Road Corridor Project, the upgrading of the right turn bay on Waihoehoe Road at the Waihoehoe Road/Fitzgerald Road intersection;
- (iii) whether a new dedicated pedestrian path and cycleway has been constructed between the existing Drury township and the precinct before development and occupation of more than 25 hectares of Industrial zoned land within the precinct occurs;
- (iv) whether Ramarama Road, at the northern boundary of the precinct remains open ~~is closed to all vehicular traffic by the time 58 hectares of the developable area in the Ramarama Road Transport Area as defined on Precinct Plan 2~~ has been subdivided or developed;

- (v) whether the Link Road from the Spine Maketu Road to Fitzgerald Road shown on Precinct Plan 2 is provided and shoulder widening, intersection treatments and localised widening works within the existing road reserve on Fitzgerald Road between the Link Road and Waihoehoe Road is undertaken before Ramarama Road is closed at the northern boundary of the Precinct;
- (vi) whether the 'Avenue' Road and the portion of the Spine Maketu Road shown on Precinct Plan 2 is provided as the adjacent Sub-precinct C is developed, and whether the 'Avenue' Road is connected with Maketu Road at the northern and southern ends of Sub-precinct C, and is extended to, but not connected with, Maketu Road at the northern end of Sub-Precinct C. An alternative location for vehicle access through a portion of Sub-precinct C (the 'Avenue Road') may be appropriate where it is safe and efficient, and provided that a continuous and high amenity pedestrian and cycle connection is located along the western edge.
- (vii) whether Ramarama Road, at the southern boundary of the precinct is closed to all vehicular traffic by the time 89 hectares of Industrial zoned land within the precinct has been subdivided or developed;
- (viii) whether the southern portion of the Spine Maketu Road that connects to Ararimu Road is constructed before:
- Ramarama Road is closed at the southern boundary of the Precinct; or
 - any development of the precinct south of the New Quarry Access Road shown on Precinct Plan 2 occurs;
- (ix) whether State Highway 1 Ramarama Interchange is capable of accommodating the traffic from the subdivided and developed portion of the precinct including the predicted traffic from the land which is the subject of the application. To enable assessment of this criterion, applications for subdivision or development must include a traffic assessment of the effects of the subdivision or development on the interchange prepared by a qualified and experienced traffic engineer.

Note: This criterion will be considered to be met where such an assessment includes a review undertaken by or on behalf of NZTA which confirms that there is sufficient capacity or planned capacity at this interchange to accommodate the predicted increase in traffic;

- (g) in respect of those new areas of planting in stormwater management and wetland areas in Sub-precinct D the extent to which:
- (i) plants should be eco-sourced as close as possible to the developed area;
 - (ii) the mechanisms proposed ensure the weed and pest management programme and the herpetofaunal mitigation/rehabilitation plan are implemented;
 - (iii) The public open space area that adjoins the southern boundary of the

Precinct will provide the basis of an ecological corridor linkage of 30 metres in width between the southern buffer in the Precinct and bush areas in the Special Purpose – Quarry Zone when planted with suitable tree species at the time of subdivision of the adjoining industrial zoned land;

- (h) whether the existing 110kV Counties Power electricity lines are provided for in the existing positions in any subdivision or whether the existing lines can be relocated in agreement with Counties Power;
- (i) whether the stormwater management plan and works proposed as part of the subdivision or development:
 - (i) comply with any approved discharge consent;
 - (ii) are effective in avoiding, remedying or mitigating the potential adverse effects of stormwater discharge on water quality and flood hazards. In the case of stormwater management facilities within private land this assessment will include how the operation and maintenance of such facilities is to be secured by way of appropriate covenants or consent notices;
 - (iii) can effectively contain all the natural and diverted streams and their margins, wetlands, and other off-site stormwater management devices;
 - (iv) provide for overland flowpaths;
 - (v) require a bond or other security to be provided to ensure that the stormwater management works will be completed, with such bond to be released when the works are completed and the stormwater management areas and their devices are vested in council;
 - (vi) ensure that subdivision and development does not result in increased flood risk to habitable rooms for all flood events from the 50% and up to 1% AEP flood event downstream and upstream of the precinct;
- (2) the creation of vehicle access to any site with frontage to or from the ~~Spine~~ Maketu Road shown on Precinct plan 2 which also has frontage to another road shown on that plan:
 - (a) any adverse effect from the location and design of the access on the safe and efficient operation of the adjacent transport network, including public transport, cyclists and general traffic, having regard to:
 - (i) the number of other access points to or from the ~~Spine~~ Maketu Road in the vicinity of the proposed access;
 - (ii) whether conflicts will be reduced by the presence of a raised central median which prevents right turning in the vicinity of the site;
 - (iii) visibility and safe sight distances particularly the extent to which vehicles entering/exiting the site can see, and be seen by, pedestrians, cyclists and other vehicles on the footpath and road carriageway;

- (iv) existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring in all weathers;
 - (v) existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in the this Plan; and
 - (vi) existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleways.
- (b) whether the access arrangements are practicable and adequate having regard to site limitations and layout, and arrangement of buildings and activities, users and operational requirements, and having regard to whether the site can reasonably be served by shared or amalgamated access with another site or sites on the Spine Maketu Road where the sites in question are held in the same ownership.
- (3) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:
- (a) building design:
- (i) the extent to which buildings on corner lots are designed to provide for a quality architectural response to the corner. Appropriate design responses include the provision of additional height at the corner, windows and activities addressing both street frontages and avoiding blank walls to one or both sides of the corner;
 - (ii) the extent to which built development fronts the street and open space with a quality recognisable pedestrian entry or entries to the street.
 - (iii) Where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road;
 - (iv) the extent to which developments for trade suppliers, garden centres, marine retail, motor vehicle sales or supermarkets provide a quality frontage to the street and provide appropriate treatments to side and rear boundaries, including quality fencing and landscaping, to recognise the broader range of activities enabled in sub-precinct C and the higher standard of amenity expected in the Mixed Use zone, while also taking into account the functional requirements of the activity.
- (b) parking area design:
- (i) the extent to which parking is provided on the road network adjacent to sub-precinct C areas and on-site parking layouts are designed in accordance with the typical layout identified in Appendix I410.11.1.

(c) signs:

- (i) the extent to which signs for each sub-precinct C development are coordinated including the physical location of signs, their type-face, style and content;

(d) service area location:

- (i) the extent to which service areas are located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service/storage and dock areas;

(e) vehicular access:

- (i) the extent to which proposed vehicle access to sites adjoining the Maketu Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;

(f) mitigation of traffic noise:

- (i) the extent to which premises offering food and beverages, health professional rooms and childcare centres (being permitted activities which may be sensitive to heavy commercial vehicle traffic noise) are designed to mitigate traffic noise effects. Mitigation measures may include acoustic treatment of buildings and arranging site layout so noise sensitive activities are screened from the heavy traffic noise.

(g) Drury South Industrial and Mixed Use precinct Appendix

- (i) The extent to which buildings and development in Sub-Precinct C are consistent with the criteria in Appendix I410,11.2.

(4) A single supermarket greater than 2000m², supermarkets exceeding 450m² and up to 2000m² gross floor area per tenancy, offices between 501m² – 1000m² per tenancy and retail greater than 1000m² and up to and including 4,500m² in Sub-Precinct C

- (a) The extent to which the effects of the size, composition, characteristics and concentration of retail or office activities in Sub-precinct C will be complementary to the existing and expected future function, role and amenity of other Metropolitan or Town Centres that are zoned or are identified in a Council approved Structure Plan, having regard to the need to enable convenient access of communities to commercial and community services while disregarding any effects ordinarily associated

with trade effects on trade competitors;

- (b) The extent to which retail that meets local convenience needs is located at the southern part of sub-precinct C, where it would be most accessible to the Drury South Residential precinct and would support a local community focal point.
 - (c) The extent to which the activity is coordinated with the rate of residential and commercial development in the wider area to ensure that the activity individually, or in combination with other consented or permitted activities, meets the needs of the local catchment;
 - (d) The extent to which the size, composition and characteristics of any office activity would serve a local function and support adjoining businesses in Drury South.
- (5) Trade Suppliers in Sub-Precincts A and C greater than 11,000m² gross floor area
- (a) the extent to which the activity affects the safe and efficient operation of the adjacent transport network including pedestrian and cycling movement, particularly at peak traffic times;
 - (b) the extent to which the proposal incorporates mitigation measures to address adverse effects.
- (6) Infringement I410.6.4 – Sub-Precinct C (Noise and Ventilation)
- (a) the extent to which the type of activity proposed is likely to be adversely affected by the expected levels of transport noise;
 - (b) the extent to which any characteristics of the proposed use or area make compliance with of New Zealand Standard NZS6806:2010 "Acoustics – Road Traffic Noise – New and Altered Roads" unnecessary;
 - (c) whether the building and any outdoor living areas are appropriately located, and/or setback an appropriate distance from the Spine Road and/or State Highway 1 to minimise the potential for adverse effects from land transport noise.

I410.9. Special information requirements

I410.9.1. Earthworks plans

- (1) Any application for subdivision or development must be accompanied by detailed earthworks plans. Such plans must:
 - (a) describe the nature and scale of the proposed earthworks, such as the extent of cut and/or fill, sources of fill and how the cut and fill is to be transported;
 - (b) describe the construction management and communication methods to be followed to minimise nuisances and disruption to surrounding residents and Ramarama School (in particular, dust, traffic and noise impacts) during the construction period; and

- (c) provide detailed design of the modified flood plain.

I410.9.2. Ecological management plans

- (1) In respect of any new areas of planting in Sub-precinct D the following must be provided:
 - (a) a weed and pest management programme for any new areas of planting within the stormwater management areas and wetland areas and remaining indigenous forest fragments in Sub-precinct D; and
 - (b) a herpetofaunal mitigation/rehabilitation plan which targets only potentially suitable lizard habitat for relocation searches.

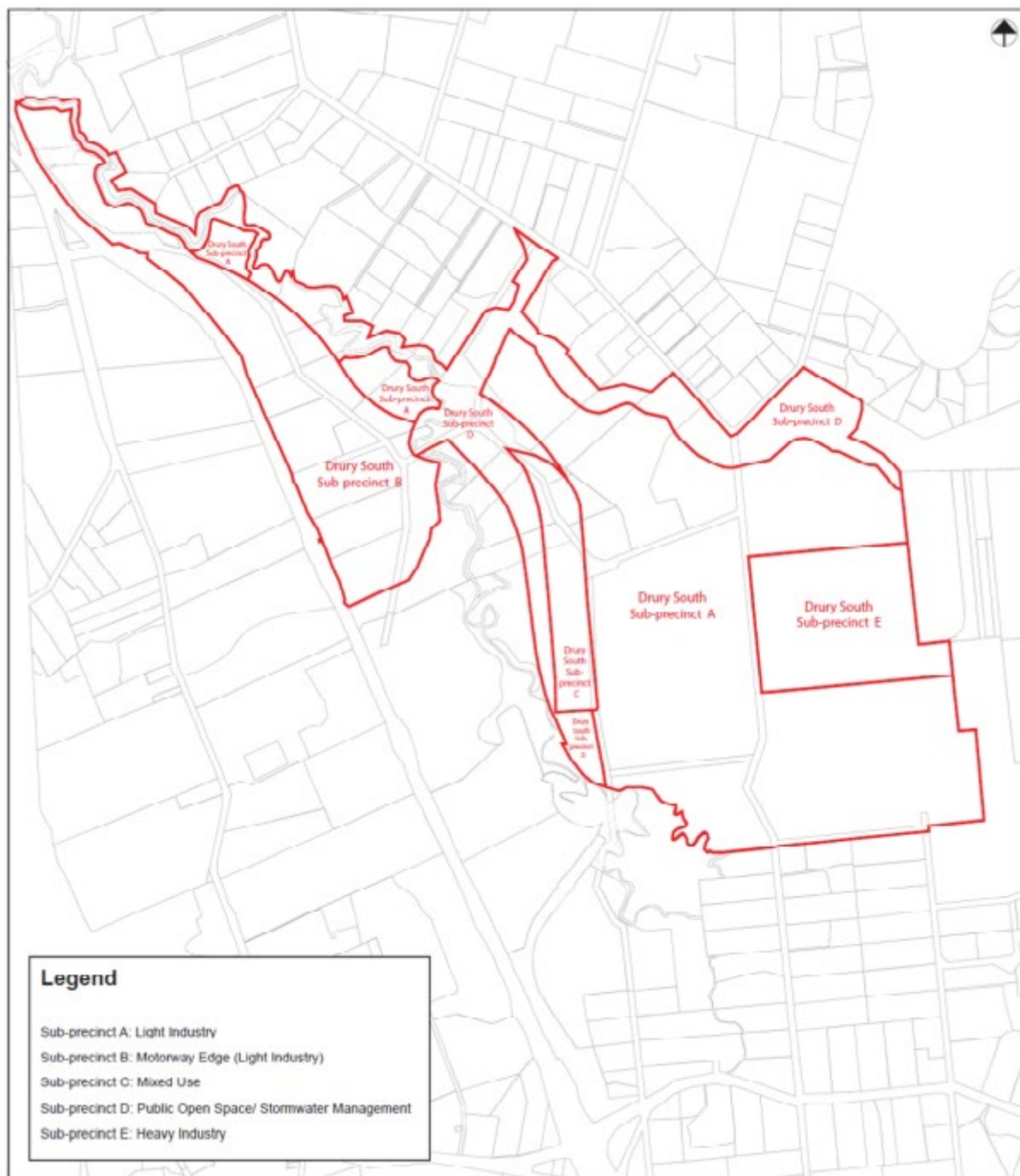
I410.9.3. Stormwater management report and plans

- (1) Any application for subdivision or development preceding subdivision must be accompanied by detailed stormwater management report and plans. Such report and plans must:
 - (a) describe how the plans comply with the conditions of any relevant discharge consent;
 - (b) identify overland flow paths;
 - (c) describe the nature and extent of any off-site stormwater management devices and how these devices are to be delivered if they are on land outside the application site;
 - (d) if stormwater management devices are to be located within the modified 1% AEP floodplain, describe how these devices are to be designed to be resilient to flood-related damage while not exacerbating flood risks for upstream or downstream activities;
 - (e) where streams are to be diverted and/or recreated as identified on the precinct plan, describe how this is to be achieved in a way that ensures that they function in a manner similar to natural stream systems. Detailed landscape treatment plans will be required to demonstrate:
 - (i) the proposed long section and cross sections;
 - (ii) how the new stream banks are to be stabilised;
 - (iii) how pool – riffles - run sequences are to be formed; and
 - (iv) how stormwater outlets are controlled.
- (2) A subdivision application for vacant lot subdivision or a land use application for a new building or buildings in Sub-precinct C must be accompanied by an indicative 'integration plan' showing how the proposed development integrates with potential future development in the remainder of Sub-precinct C, including existing or potential transport connections and activities.

To avoid doubt, this plan is not subject to any approval from the Council and is for information only. Its purpose is to inform how a particular stage of development will positively contribute to the visual quality and interest of

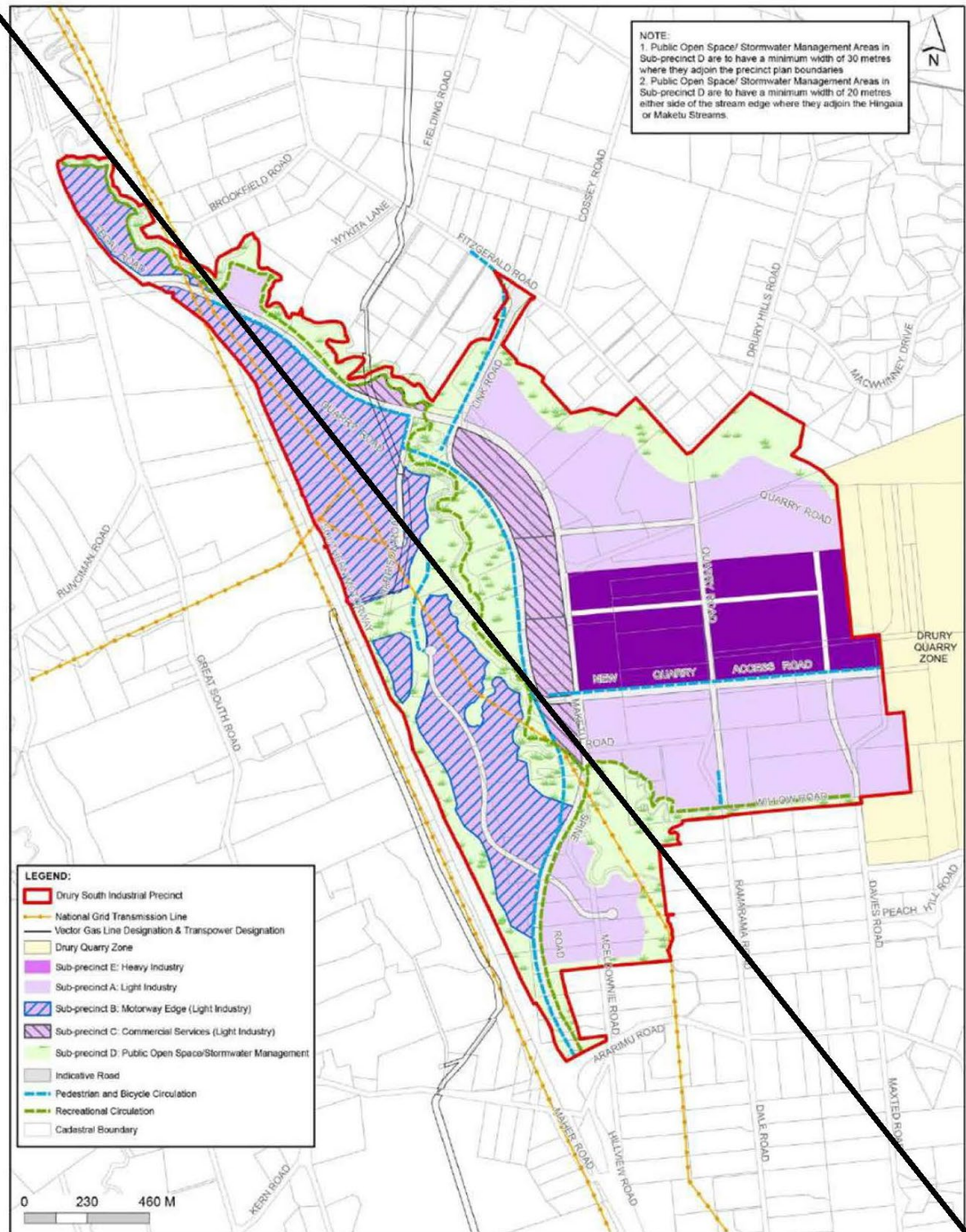
streets, public open spaces and pedestrian amenity, movement and safety (Policy H13.3(3)), in an integrated manner across Sub-precinct C.

Amend the sub-precinct boundaries and naming in the GIS Viewer as follows:

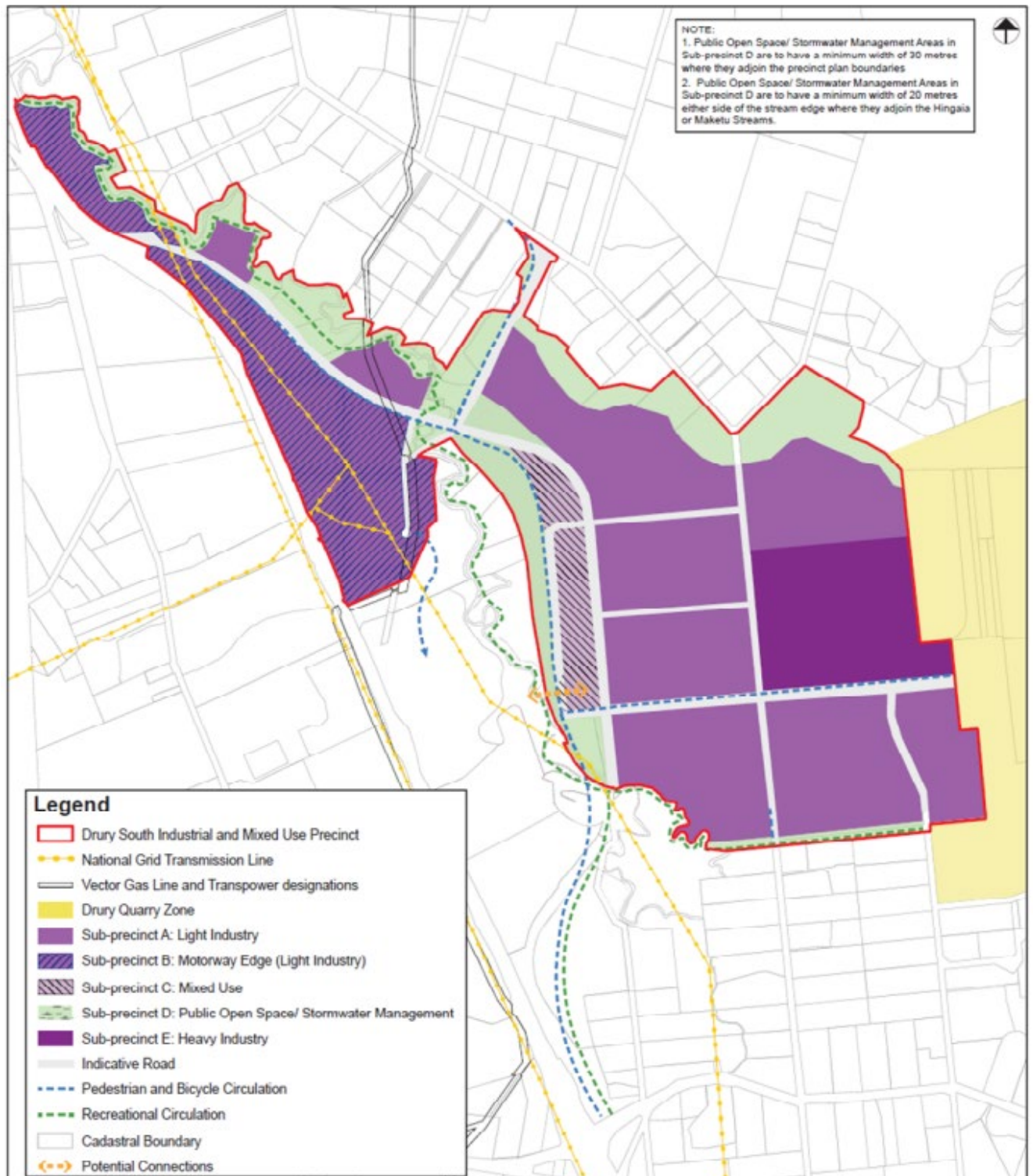


I410.10. Precinct plans

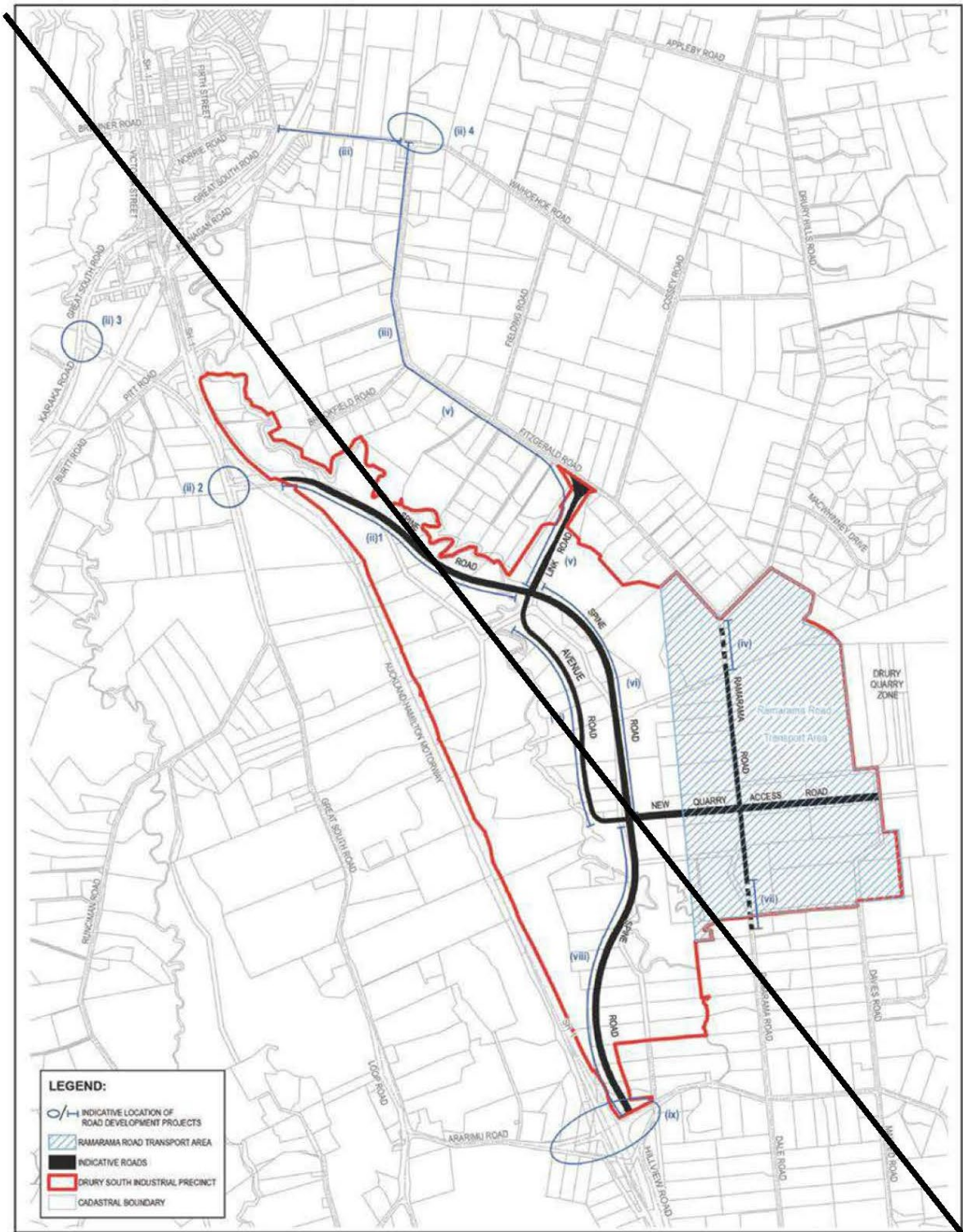
I410.10.1 Drury South Industrial and Mixed Use: Precinct plan 1



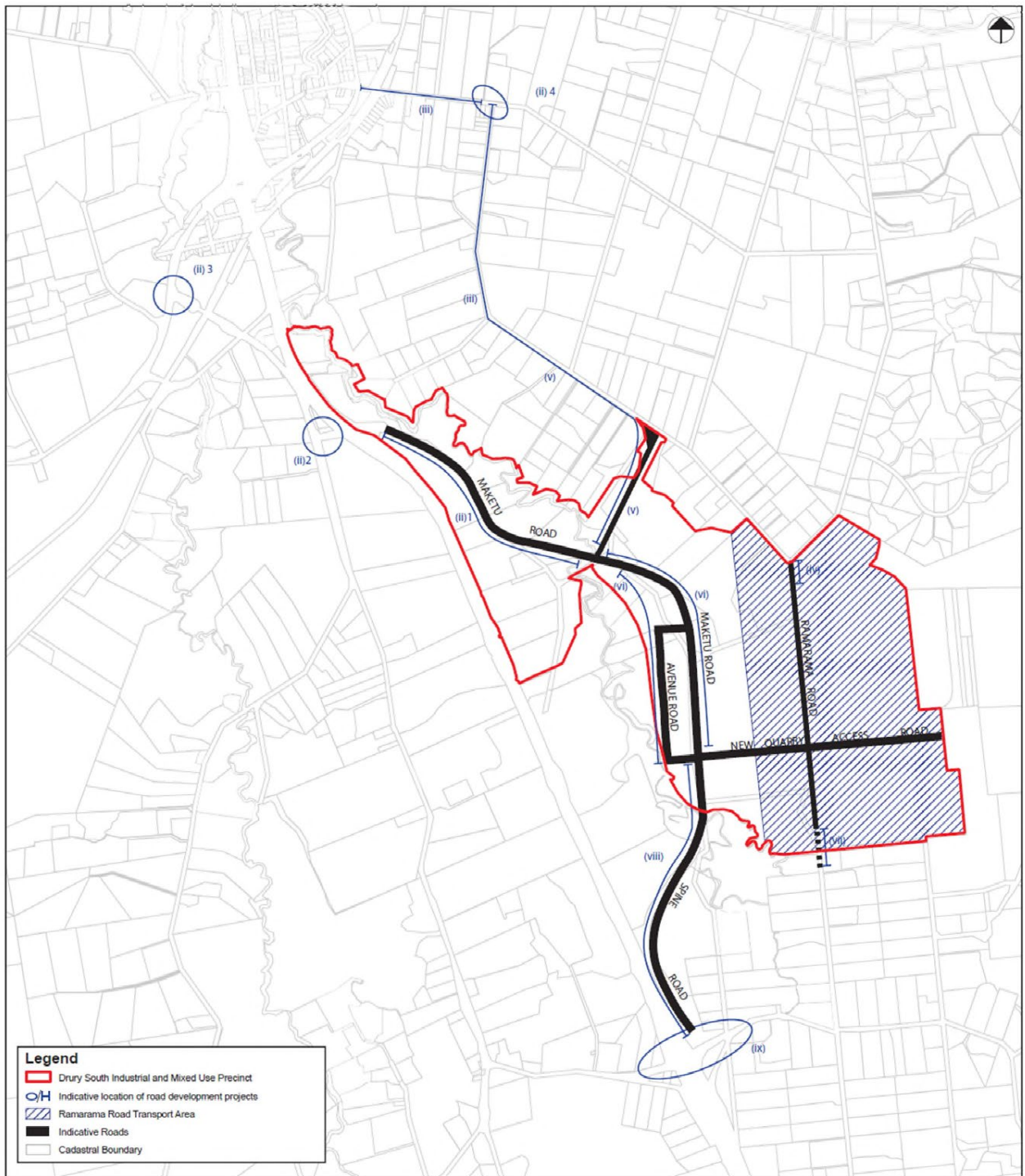
Insert new Precinct Plan 1 as follows:



1410.10.2 Drury South Industrial and Mixed Use: Precinct plan 2



Insert new Precinct Plan 2 as follows:



I410.11. Appendices

Drury South Industrial Appendix 1

APPENDIX 5B.4.A: DRURY SOUTH INDUSTRIAL PRECINCT STRUCTURE PLAN AREA – SUBDIVISION DESIGN ASSESSMENT CRITERIA

PURPOSE OF APPENDIX ~~I410.11.15B.4.A~~

Within the Drury South ~~Structure Plan area~~ Industrial Precinct, applications for restricted discretionary activity subdivision consent will be assessed in terms of a series of matters to which the Council will restrict the exercise of its discretion. One of the matters which the Council will have regard to as set out in ~~standard Rule I410.8.2(1)(d)6.15.2.5~~ is:

~~The extent to which the subdivision design and layout complies with and gives effect to the objectives and policies identified for on the Drury South Industrial Precinct Structure Plan in Part 5B.4 Section 1 of the District Plan and the subdivision design assessment criteria set out in Appendix I410.11.15B.4.A~~

In addition, the criteria will also be used in the consideration of discretionary applications for subdivision, as appropriate.

This appendix sets out assessment criteria under a number of “Design Elements”. Accompanying illustrations are intended to support the text and represent good design solutions, but are not intended to represent the only design solution. All illustrations are indicative only.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged.

It is recognised that certain proposals will not achieve absolute accord with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- Whether site constraints inhibit the ability to address the criterion, and/or;
- How the intention of the criterion is met by the proposal, and/or;
- Whether the proposal represents a better design solution than that suggested by the criterion.

Planting plans and maintenance plans for recreation and esplanade reserves and stormwater management areas will need to be submitted with applications for subdivision consent and approved by the Council.

Design Element 1 – Road, Reserve and Access Networks:

1. Earthworks should be undertaken principally at the initial subdivision stage, and where appropriate the creation of reasonably flat sites should occur at the bulk earthworks stage (in order to avoid creating retaining walls at site development stage).
2. Road patterns should maximise convenient / direct access to the ~~spine road~~ Maketu Road and limit connection to existing rural roads (such as Ararimu Road) except where this relates to the wider essential network.
3. The road pattern should facilitate access to and accessibility within Sub-precinct C Mixed Use commercial service precincts.
4. Road patterns should be logical and contribute to the legibility of and ease of wayfinding within the area (refer Diagrams 1 and 2 for generic legibility and proposed street hierarchy).
5. Subdivision layout design should achieve protection and enhancement of all significant streams / tributaries to be retained and their riparian corridors (20m minimum either side from edge of stream) and concentrate open space as part of the riparian network (refer Diagram 3).
6. Subdivision layout design should achieve an interconnected open space and movement network.
7. Safe pedestrian and cycle routes through the structure plan area should be integrated with the riparian, reserve and road design.
8. Equestrian bridle trails should be integrated with riparian reserve development and provide access to the large centrally located public open space / stormwater management area.
9. Layouts should retain mature trees within the riparian corridors, particularly those of indigenous species.
10. In Motorway Edge Sub-precinct areas layouts should seek to retain as many existing established trees, particularly those of indigenous species, as possible.
11. In Motorway Edge Sub-precinct areas access to sites off the ~~spine road~~ Maketu Road should be combined wherever practicable.

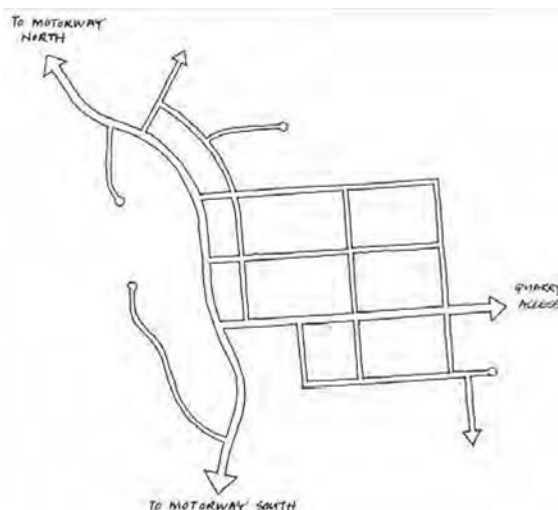


Diagram 1: Legible road hierarchy to assist wayfinding

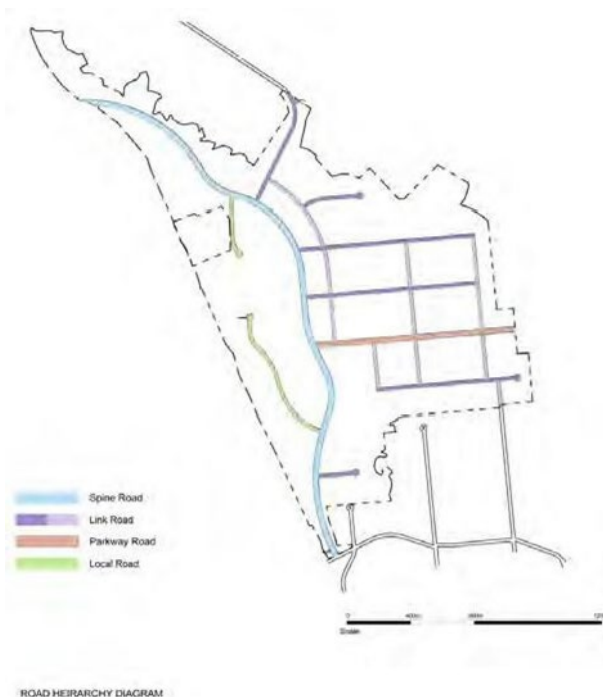


Diagram 2: Road hierarchy

Explanation:

Design Element 1 pertains to the overall site topography and the general layout of the networks of roads, reserves and other access linkages that make up the public space of the Drury South Industrial Precinct industrial business zone. These should be considered in an integrated fashion together with the development blocks that they create.

The existing site topography within the proposed zone area is relatively flat although bulk earthworks including cut and fill will be required to establish levels for future development above the flood plain and appropriate falls across the land

The riparian corridors of the Hingaia and Maketu Streams and their significant tributaries will remain an important feature of the site topography once the zone is established. Vegetation associated with these corridors is also important to the structuring, screening and ecology of the area and its proposed activities.

The riparian corridors also provide a focus for future recreation and open space development and form part of the enhancement framework for the zone.



Diagram 3: Open space concentrated along Hingaia Maketu, Roslyn and Northern Diversion Stream corridors

The road network and hierarchy (refer Diagrams 1 and 2), as illustrated in the Drury South Structure Plan has been designed to efficiently direct traffic into and out of the Precinctzone connecting to the Southern Motorway (SH1) at both the Ramarama (south) and Drury (north) interchanges. The Ramarama interchange and Quarry Road / Great South Road through to the Drury Interchange will be upgraded to improve vehicle access and safety. The proposed Spine Road link is important to the legibility and traffic efficiency of the proposed zone area Precinct; this route will provide the primary connection into and out of the Precinctzone with other streets connected to the spine road Maketu Road through corridor.

The proposed street network has also been designed to limit the impact of vehicles destined for the Precinctnew zoned area on existing rural residential and community roads such as the road accessing and adjacent to the Ramarama School. Implementation of the street network to achieve the beneficial improvements to heavy vehicle (including quarry trucks) and other Precinctzone related traffic movement is imperative as a part of delivery of the zone.

By ~~their~~ its nature the Commercial Services Sub-precinct C Mixed Use Precinct area will require a finer grain street network with smaller street blocks, greater walkability, good service access and parking.

A legible road pattern (refer Diagram 1) is one that is easily understandable for the people that use it and that provides cues for first time users as well as those habitual users. Consistent road design and landscape themes can further emphasise the position of each street in the road hierarchy and in the pattern of streets in the wider area. Road patterns that are logical and easy to comprehend and navigate make an area feel more comfortable and help to provide a sense of identity.

Design Element 2 – Block Size, Lot Type and Orientation:

1. Blocks should be of a scale and shape to achieve a permeable street layout suited to the industrial functional requirements of the proposed land use.
2. All lots should front onto and be accessed directly from a legal road. Rear lots are to be avoided (*refer Diagram 4*).
3. Through lots (with dual road frontage) are permissible (*refer Diagram 4*).

Explanation:

Design Element 2 describes the principles for consideration in the layout of blocks and lots within the proposed business zone area Precinct.

Blocks within an industrial area ~~can~~ are typically be larger than those within finer grain residential or Commercial Services or Mixed Use areas. A good permeable and well-connected street network is however still required in Light and Heavy Industry Sub-precincts A, B and E to facilitate access, provide an appropriate street address and reduce traffic volumes on side streets. Within the Sub-precinct C Mixed Use, area (Sub-Precinct C) Design Element 1 also provides opportunities for views through to the open space corridor to the west of the Sub-precinct from Maketu Road.

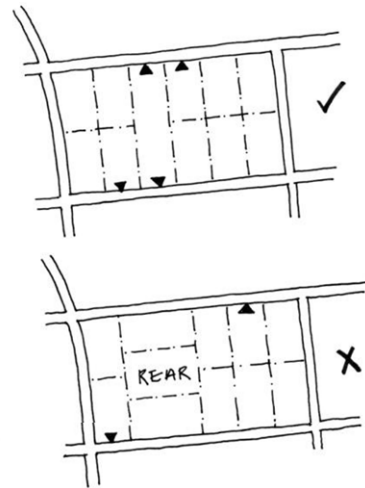


Diagram 4: All lots should front onto a legal road; through lots are permissible

Lots need to be of a size and shape to accommodate large scale, land extensive land uses and flexible to enable reasonable long term growth. At the same time rear lots are considered undesirable with a preference for development to address the street.

Design Element 3 – Roads and Accessways:

1. In addition to transport engineering and Council's Code of Practice requirements, minimum road and design elements should be appropriate to the nature of the function that they provide and also reflect urban design legibility considerations – i.e. wayfinding, as set out in Table 1 below. road cross sections should be appropriate to the nature of the function that they provide and also reflect urban design legibility considerations – i.e. wayfinding. Refer typical cross-sections (Appendix 1) for road hierarchy comprising: Arterial (e.g. Spine Road extension); Link Road, New Quarry Access Road (Parkway Road) (refer also Diagram 2 for street hierarchy).
2. Cyclists should be accommodated on the street carriageway or on a shared footpath/cycle route with wider dimension to accommodate both functions.
3. A consistent palette of traffic management tools should be used across the Drury South business zoned land Precinct. Traffic management devices such as chicanes, speed humps and other such restrictive management devices are not expected, however the use of thematic planting and measures such as localised narrowing to create thresholds or define changes in the street environment could be used.
4. All streets are required to accommodate strong avenue specimen tree planting. Refer Cross Sections Appendix 1. This planting is required to achieve the breaking up of the overall scale of the development particularly as seen from elevated locations, as well as to establish the expected enhanced amenity and character of the zone Precinct.
5. In addition to the street avenue planting a planted central median is (with and without specimen trees) also required on the roads identified as 'Arterial' (Spine and Link Roads) and 'Parkway' refer Appendix 1 Cross Sections.

Explanation:

Design Element 3 pertains to principles for the design of roads and other access routes within the zone Precinct. Road design should be appropriate to function and provide practical widths for vehicular access, including for emergency vehicles, parking, planting and services. Useful minimum dimensions are:

• Four traffic lanes on arterial road	15.2m
• Two traffic lanes on local road	8.2m
• Cycle lane	1.5m
• Parallel parking lane	2.5m
• Service/utilities strip	3.0m
• Footpath	1.5m to 3.0m

The use of parallel kerbside parking is efficient in using the road as circulation area and reducing the need for onsite visitor parking. Kerbside parking lanes may be defined and delineated with planting bays if desired as illustrated in the road Cross Sections Attachment 1.

Pedestrian and cycle paths should generally be integrated with road and reserve design. Paths which are separated from vehicle routes should be designed for safety.

I410 Drury South Industrial Precinct Appendix

Table 1 below sets out the indicative function and design elements of the collector roads within the Drury South Industrial and Mixed Use precinct.

Table 1 – Indicative Road Function and Required Design Elements

Road Name	Proposed Role and Function of Road in Precinct Area	Freight or Heavy Vehicle Route	Minimum Road Reserve ²	Total Number of Lanes	Design Speed (kph)	Access Restriction	Bus Provison ⁴	Median	Cycle Provision ⁵	Pedestrian Provision
Maketu Road ¹ (South of Link Road)	Arterial	Yes	33.45m	4	60	Yes ³	Yes	No	Yes – separated	Both Sides
Maketu Road (North of Link Road)	Collector	Yes	27.65m	2	60	Yes ³	Yes	Yes (Flushed)	Yes	Both Sides
New Quarry Access Road ¹	Collector	Yes	27.65m	2	50	No	Yes	Yes (Flushed)	Yes – shared path	Both Sides
Link Road	Collector	Yes	27.65m	2	60	No	Yes	Yes (Flushed)	Yes	Both Sides
Ramarama Road (Fitzgerald Road Connection)	Collector	Yes	21m	2	50	No	Yes	Yes (Flushed)	Yes	Both Sides

Note 1: Already have Engineering Plan Approval and are under construction.

Note 2: Typical minimum cross section which may need to be varied in specific locations where required to accommodate batters, structures, intersection design, significant constraints or other localised design requirements.

Note 3: Refer to Assessment Criteria I410.8.1(2)

Note 4: Carriageway lanes and geometry of intersections capable of accommodating buses.

Note 5: Type of cycle provision, i.e. separated or shared path, to be confirmed at the Engineering Plan Approval stage, based on nature and character of the Local Road.

Design Element 4 – Reserves, Stormwater Management Areas and Riparian Planting:

1. Stormwater detention and treatment reserves should be located in general accordance with the locations shown in the Drury South Structure Plan and in accordance with the adopted Catchment Management Plan, the Council's code of practice and relevant regional technical publications. The Cross Sections (Attachment 2) illustrate the Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections.
2. Stormwater ponds should be designed to fit in with the surrounding landscape and appear as an integrally designed infrastructural component of the overall setting.
3. Vegetated buffers, not less than 40m in total width for any retained ~~permenant~~ permanent or diverted stream, should be provided on the margins of streams, ponds and wetlands and should:
 - Include native species as identified in Attachment 3
 - Include native trees on the lower and upper banks of ponds predominantly to the north and west to provide shade.
 - Provide a minimum of 10m of native planting either side of the stream corridor including shallow water rushes and sedges.
 - Avoid vegetation that will exacerbate flooding and the blockage of water flood flows along the immediate riparian corridor.

The only exception to these requirements is the retained permanent stream in the northwest of the ~~structure plan area~~ Precinct (adjacent to the Transpower site) which will be subject to a minimum requirement of 10m of native planting either side of the stream corridor only.

Note: Attachment 5 sets out 'Stream and Wetland Rehabilitation Guidelines (June 2013) for the DSSP area.

4. Walkways / cycleways along riparian corridors and through buffer planting should be designed to minimise any impacts on ecological function and give due consideration to personal safety and CPTED principles (refer Attachment2).
5. Edge buffer reserves should be located in accordance with the Drury South Structure Plan, be a minimum of 30m in width and be planted in generally accordance with Diagram 5 below.

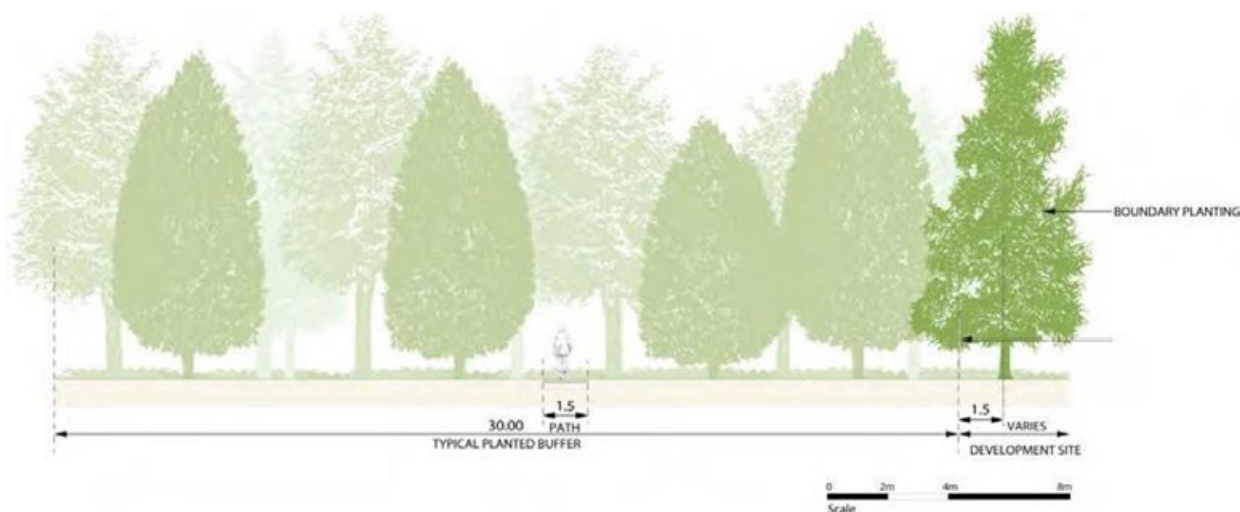


Diagram 5: Typical landscape buffer cross section

6. Suitable mechanisms to ensure the establishment and ongoing maintenance of landscaping of reserves and stormwater management areas until those areas are vested in the Council will be required to ensure the long term success of any landscaping.

Explanation:

Design Element 4 pertains to matters for consideration for locating, sizing and designing reserves stormwater management areas and riparian planting. These areas will be generally located in accordance with the locations shown in the Drury South Structure Plan; regard should also be given to Design Element 5 when designing reserves within the zone area.

The principal reserve network within the zone Precinct, as illustrated in the Drury South Structure Plan, is structured around riparian protection and enhancement as well as stormwater management including detention and treatment. The reserve network is however designed for multiple functions and values including passive and active recreation, pedestrian / cycle commuter access, ecological values, visual screening / separation and aesthetic amenity.

The zone Precinct also includes buffer reserves, adjoining the Light Industry zoned Sub-precincts A and B. The main purpose of these reserves which is to physically and visually screen and separate adjacent existing land uses and residents from these areas zone. These reserves are planted to maintain a robust rural character with a woodlot/ shelter belt form of land management. Whilst providing multiple functions including walking / cycling, biodiversity and aesthetic values, their primary function will remain as that of a buffer to land uses outside of the Precinct zone.

Design Element 5 – Reserve Interface Design:

1. Reserves intended for public recreation and use should be designed to be bounded by public roads as much as possible given topographical and natural feature constraints. (Note proposed buffer reserves are not intended to be bounded by public roads).
2. Where reserves or riparian buffer areas adjoin lots, the boundary should be securely delineated and fenced to avoid encroachment (refer Diagram 5).

Explanation:

Reserves intended for public use that are well fronted by public roads are more secure because of the informal surveillance from the road and activities that interface with the road across the carriageway. Ideally not less than half the total length of legal boundary of any reserve should adjoin a legal road.

Design Element 5a – Earthworks and Retaining Walls

1. Changes of level adjoining streets and open space corridors should be achieved by gently battering and contouring land.
2. Where retaining walls are required, they should be screened from public view. This may be achieved by planting and breaking up the vertical extent of walls through physical stepping.

Additional Overlay Precinct Criteria

In the case of subdivision within ~~the Sub-precinct B Motorway Edge Precincts and Sub-precinct C Mixed Use the Commercial Service Precincts~~ the following criteria shall also apply and take precedence over the general assessment criteria for subdivision stated above, where this is inconsistency or conflict.

Additional Design Element 6: Subdivision within Sub-precinct B Motorway Edge Precinct

1. Earthworks should be designed to retain a more natural, undulating topography and character outside of building platforms and other areas required through function to retain a flat topography.
2. Intersections between public roads serving the Sub-precinct and the north south primary road (~~spine road~~ Maketu Road corridor) should be minimised.

Additional Design Element 7: Subdivision within ~~Commercial Services~~ Sub-precinct C Mixed Use Precinct

1. Where through lots with dual street frontage are created, these should provide frontages to both street edges (i.e. no rear elevations to the street). ~~The primary frontage should be to the spine road.~~ However, where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road.

APPENDIX 5B.4B I410.11.2: DRURY SOUTH STRUCTURE PLAN AREA INDUSTRIAL PRECINCT – SUB-PRECINCT B MOTORWAY EDGE PRECINCT AND SUB-PRECINCT C COMMERCIAL SERVICES MIXED USE PRECINCT ASSESSMENT CRITERIA

PURPOSE OF APPENDIX I410.11.2 5B.4.B

In the Sub-precinct B Motorway Edge Precinct and Commercial Services Precinct within the Drury South Structure Plan area building design and appearance, landscape design and internal site layout are listed as New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities' are controlled activities and in Sub-precinct C Mixed Use, 'New buildings' and 'Additions and alterations not otherwise provided for' are restricted discretionary activities if they also comply with the standards and terms specified in 6.11.7.2.

Rule 6.15.1 sets out controlled activity assessment criteria for all controlled restricted discretionary activities in the industrial zones and contains the following clause:

"In the case of the Motorway Edge Precinct and the Commercial Service Precinct within the Drury South Structure Plan Area (Part 5B.4 in Section One of the District Plan) the Council will, in addition to the criteria set out in (a) to (f) above, assess the application against the criteria set out for those precincts in Appendix 5B.4.B in Section One of the District Plan."

In addition, these criteria will also be used as appropriate in the consideration of restricted discretionary and discretionary activity applications involving the construction or alteration of buildings.

This Appendix sets out assessment criteria under a number of "Design Elements" for both the Sub-precinct B Motorway Edge Precinct and the Commercial Services Sub-precinct C Mixed Use Precinct.

The criteria listed under each Design Element are intended to give flexibility, enabling site responsive designs, while ensuring that development provides a positive contribution to the amenity of the Drury South Structure Plan Area Precinct.

The criteria are intended to guide development rather than prescribe exact design and layout. Most criteria are illustrated. The illustrations are intended to support the text and are representative of good design solutions, but are not necessarily intended to represent the only design solution.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged. It is recognised that certain proposals will not achieve absolute accord with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or;
- whether the proposal represents a better design solution than that suggested by the criterion.

Applicants will also be required to provide a Landscape Concept Plan with sufficient detail to ensure that the relevant assessment criteria are able to be considered, identifying hard and soft landscaping treatment, large grade specimen trees (species and planting size), groupings of ground covers and shrubs with species schedule.

SUB-PRECINCT B MOTORWAY EDGE PRECINCT DESIGN ASSESSMENT CRITERIA

The following criteria shall apply to 'New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities' ~~building design and appearance, landscape design and internal site layout~~ within Sub-precinct B the Motorway Edge Precinct ~~where activities are listed as controlled activities.~~

Design Element – Internal Private Access Roads:

1. Specimen tree planting should be provided on all public and internal private access roads within the Sub-precinct B Motorway Edge Precinct.

Design Element – Existing Vegetation:

1. Where ever possible layouts should retain and protect existing mature trees, particularly those of indigenous species, where these contribute to the site character and amenity.

Design Element – Planting:

1. Planting should be designed to have a large scale landscape effect and combine native as well as appropriate exotic species to provide seasonal change and quality amenity.
2. Where reserve land adjoins the motorway, boundary planting that creates a continuous visual barrier to eastward views from the SH1 (Southern Motorway) corridor should be avoided, however landscape design should emphasise the current sequence of intermittent views to the Hunua Ranges from the SH1 corridor and the pattern of variable depth of such views.
3. Where industrial sites adjoin the motorway boundary, a detailed rule applies requiring a double row of Leyland Cypress to create the appearance of a rural shelterbelt providing a continuous visual barrier defining the curve in the motorway alignment.

Design Element – Buildings:

1. Buildings should be located with design consideration for their visibility and reduced visual impact as viewed from the SH1, (Southern Motorway) corridor and the desirability of maintaining a sense of openness as seen from the motorway.
2. The visual mass of larger buildings should be minimised by employing the following methods:
 - Utilising subdued, recessive colours;
 - Providing variation in materials and finish for facades viewed from the motorway;
 - Creating variation of roof profiles with consideration given to the overall roofscape viewed from the motorway;
 - All rooftop servicing and plant should be designed as an integral part of the roofscape with particular consideration given to the view from the motorway.

Design Element – Parking Areas:

1. Parking areas should be designed to incorporate trees to break up the scale of hard surface areas.
2. Adoption of the Fully Planted Permeable Carpark Design Layout (refer Diagram 6) style of parking is advocated within the Sub-precinct B Motorway Edge Precinct.

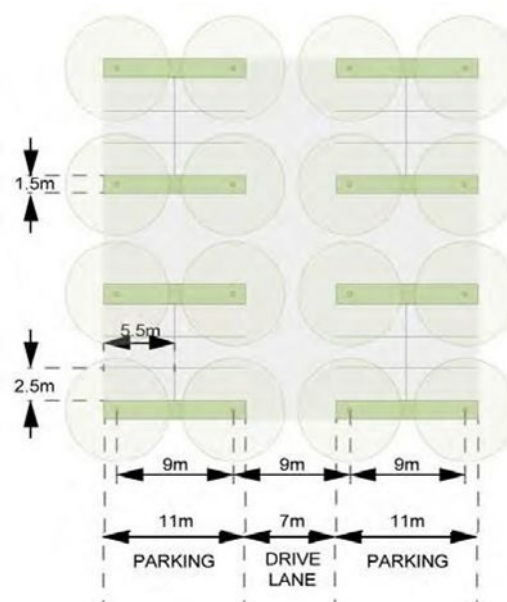


Diagram 6: Fully planted permeable carpark design layout - detail

Design Element – Internal Site layout:

1. Storage and waste management activities should be located and / or designed to be screened from view of the State Highway.

COMMERCIAL SERVICES SUB-PRECINCT C MIXED USE PRECINCT DESIGN ASSESSMENT CRITERIA

The following criteria shall apply to 'New buildings' and 'Additions and alterations not otherwise provided for' building design and appearance, landscape design and internal site layout within Sub-precinct C the Commercial Services Mixed Use Precinct where activities are listed as controlled restricted discretionary activities.

Design Element – Block Size, Lot Type and Orientation:

1. Buildings on corner lots should be designed to provide for a quality architectural response to the corner. Appropriate design responses would include be provision of additional height at the corner and windows and activities addressing both street frontages (avoidance of blank walls to one or both sides of the corner). Service activities such as loading docks or storage yards should not be located on corners or any site frontage, however, where this is required to support the functional and operational requirements of the activity, the service area visible from the street should be minimised as much as practicable and attractively screened from public view with landscaping.

Design Element – Street Interface Design:

1. Built development should front the street with a quality, recognisable pedestrian entry to the street.
2. Parking should be provided on the road network adjacent to Commercial Service Precinct - areas with onAt-grade parking should be located and designed in such a manner as to avoid or mitigate adverse effects on pedestrian amenity and the streetscape. This includes through positioning carparking away from street frontages, to the sides or rear of buildings and the use of extensive landscaping within the carpark, including tree planting. Refer to Attachment 4 for an example of a layout and design consistent with this guideline. site parking layouts designed in accordance with the typical layout identified (refer Attachment 4).

Design Element – Signage:

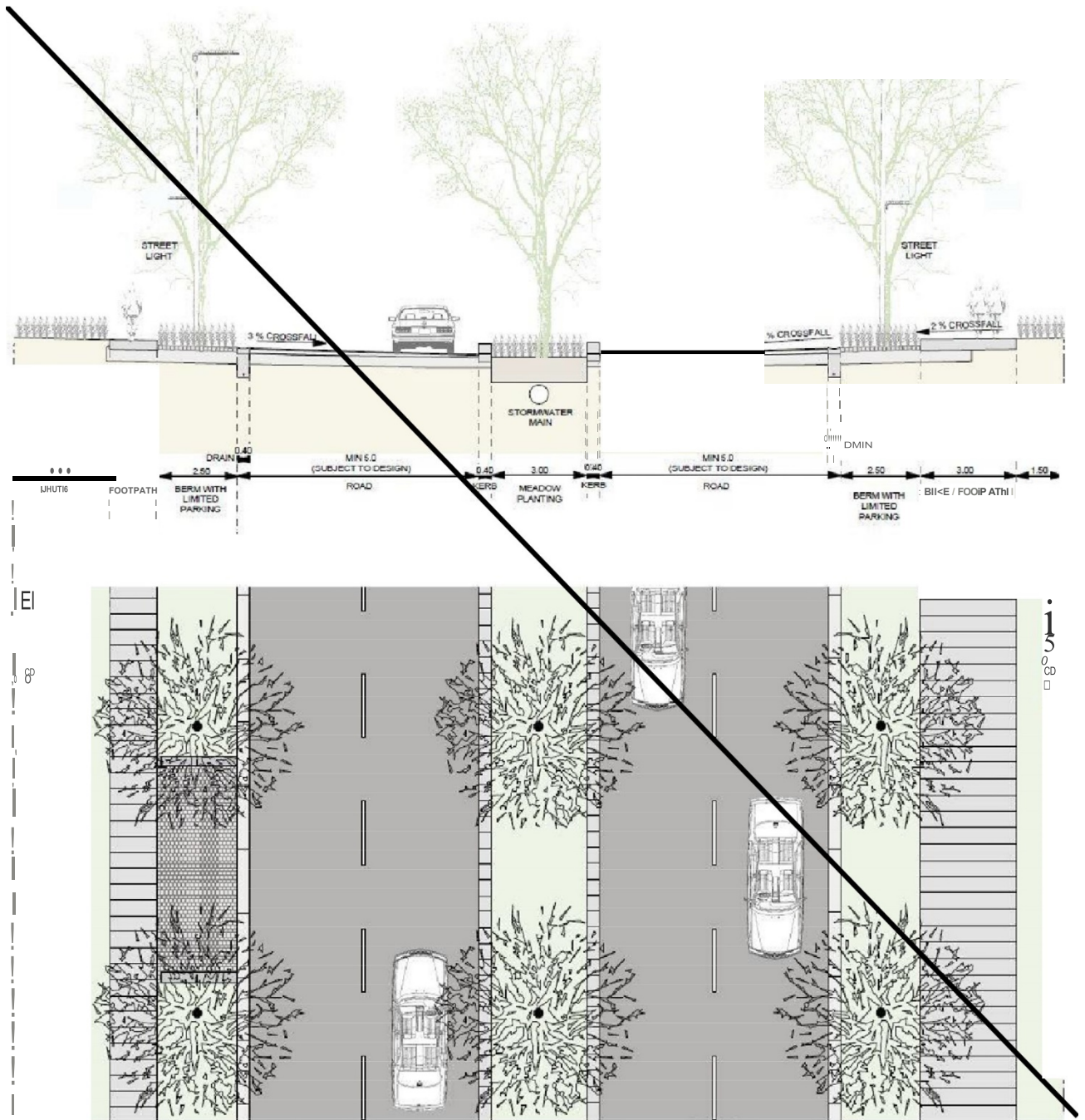
1. Signage for each Commercial Services Sub-precinct C Mixed Use Precinct development

should be coordinated including the physical location of signs, their type face, style and content with a maximum of two signs per business, one located to address the street frontage and one to identify the building entry (a third sign is permissible where the service access is separate from building entry or there are multiple entries).

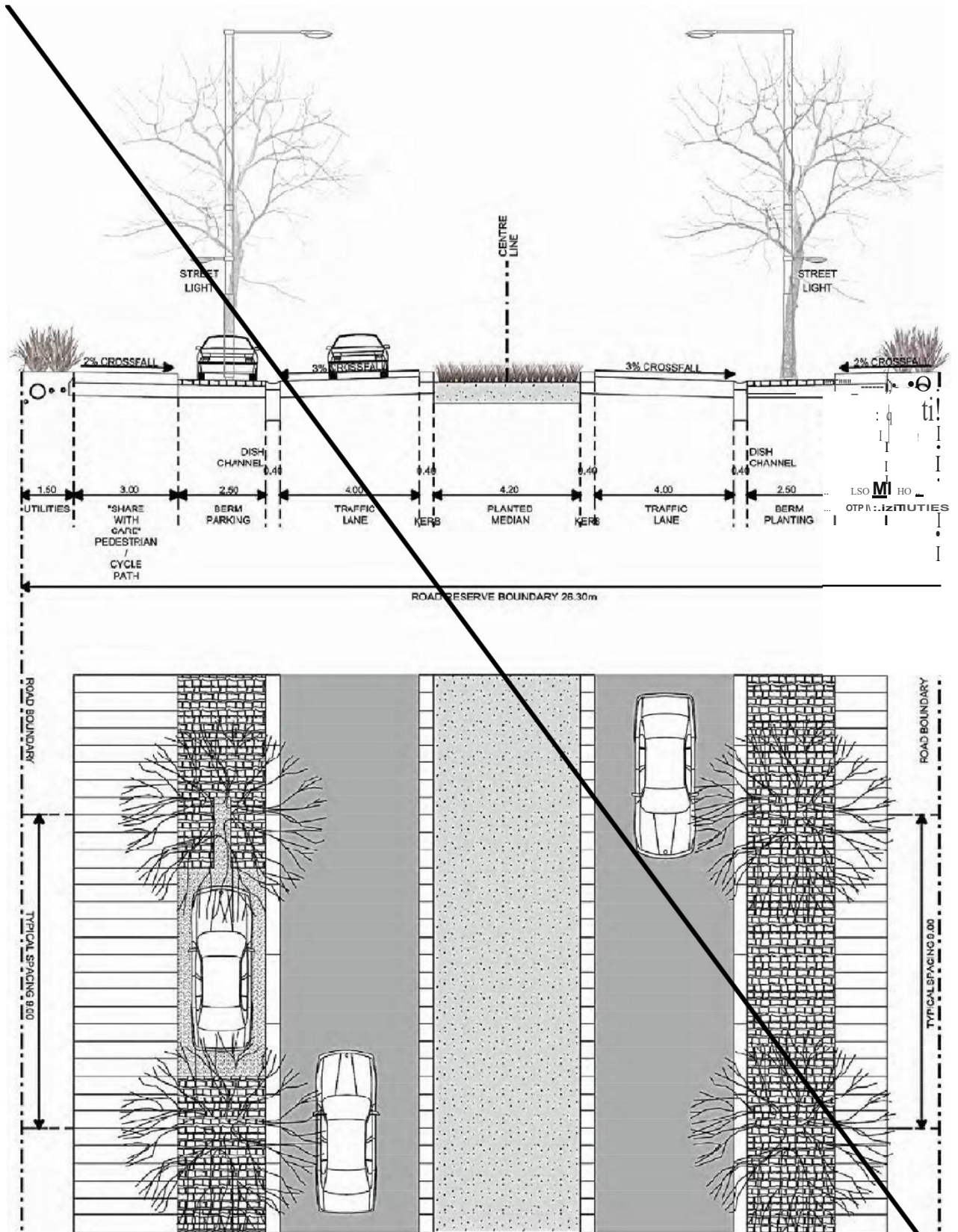
Design Element – Service Areas:

1. Service areas should be located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service / storage and dock areas. However, where this is required to support the functional and operational requirements of the activity, the service area visible from the street should be minimised as much as practicable and attractively screened from public view with landscaping.

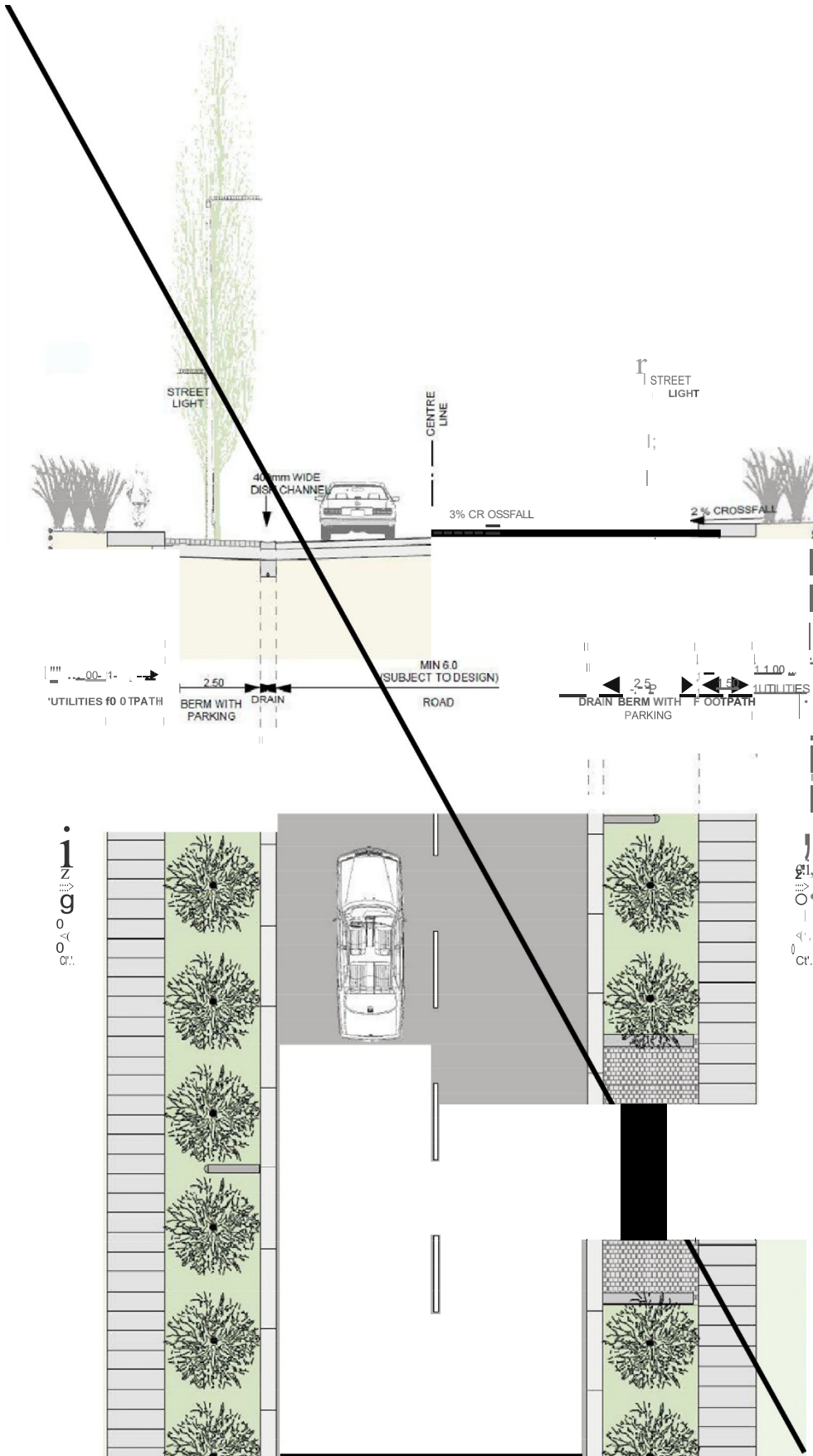
Attachment 1
Typical Road Cross Sections



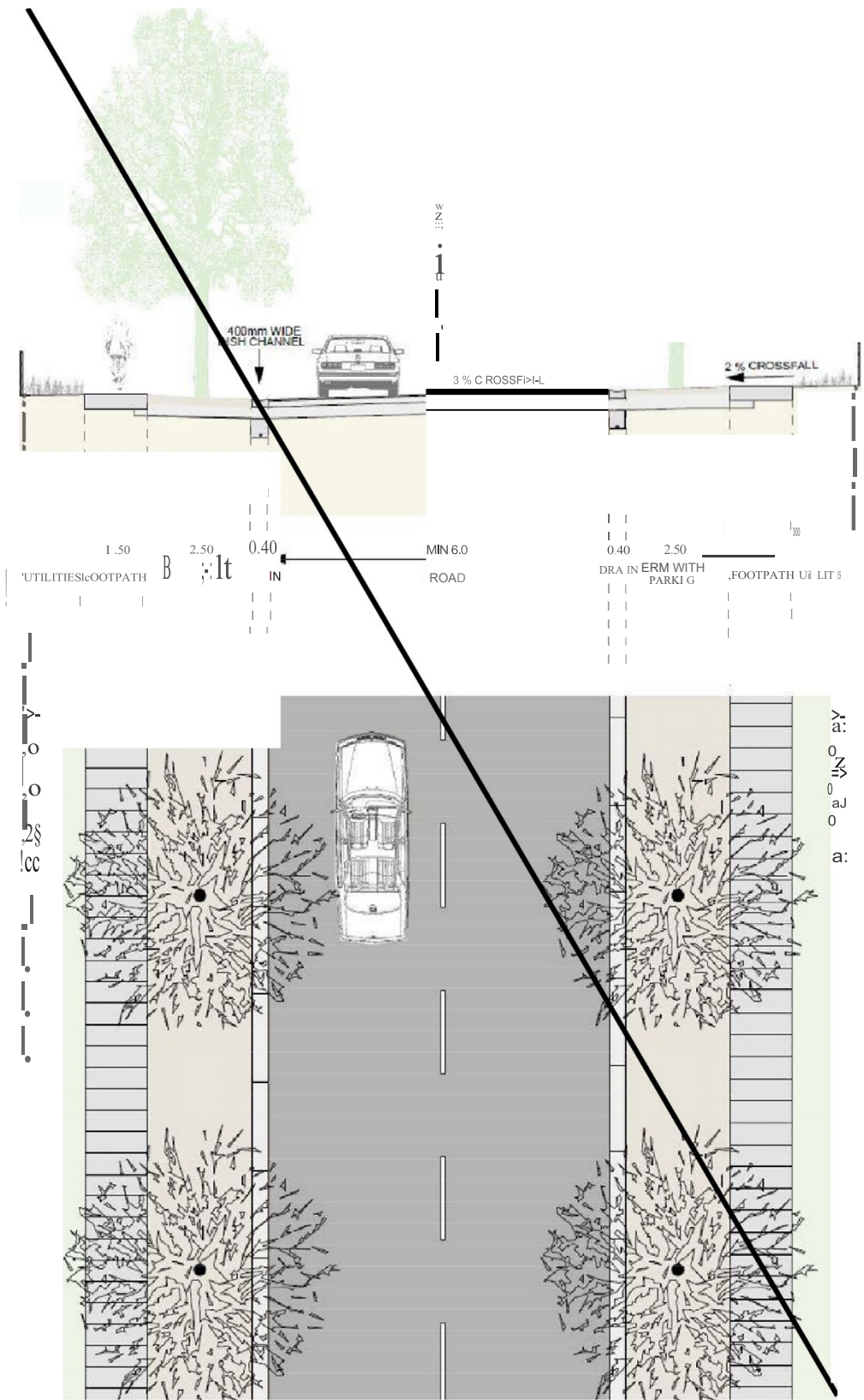
INDICATIVE ARTERIAL CROSS SECTION
(Spine Road)



INDICATIVE PARKWAY CROSS SECTION
(New Quarry Access Road)



INDICATIVE ROAD CROSS SECTION

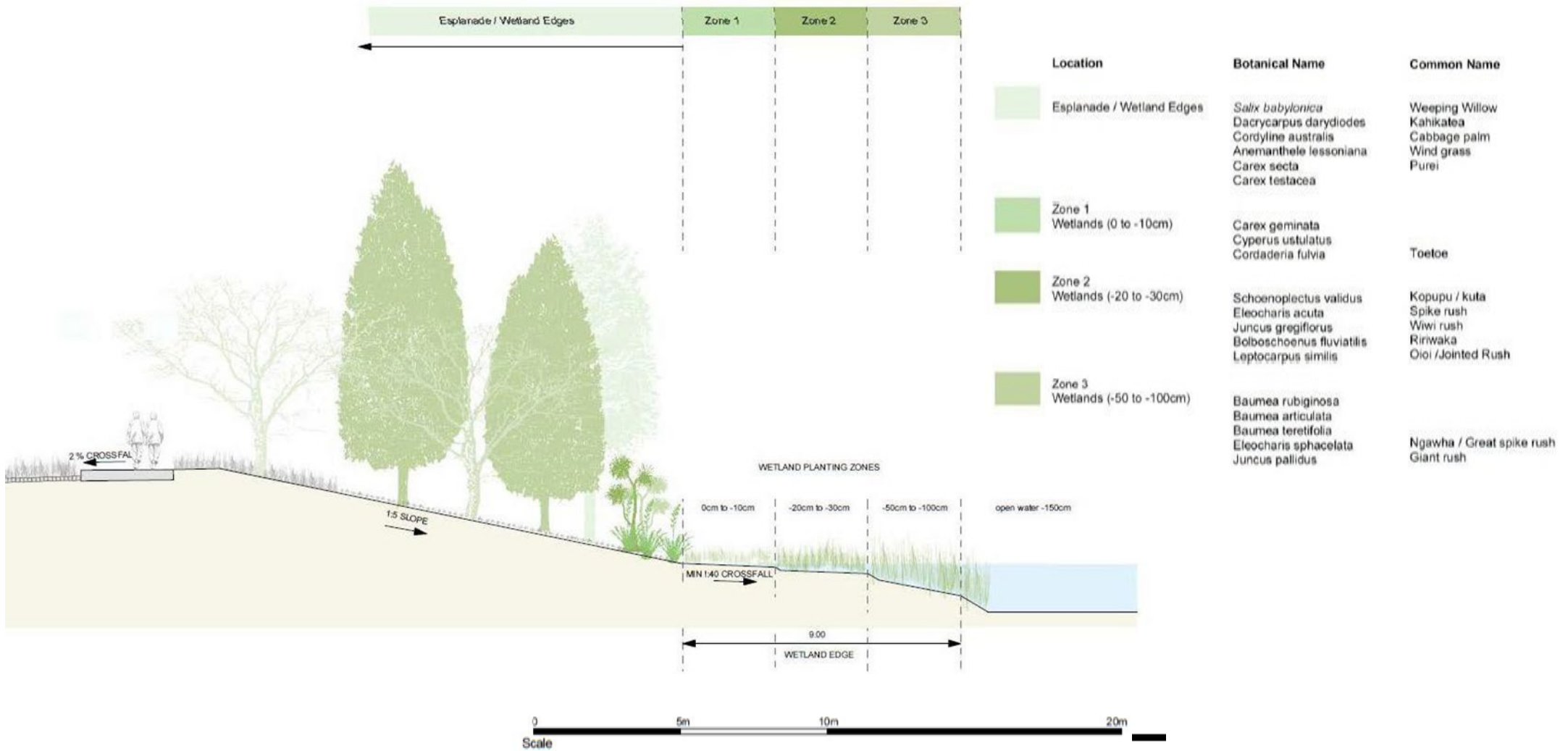


INDICATIVE MOTORWAY EDGE PRECINCT ROAD CROSS SECTION

Attachment 2

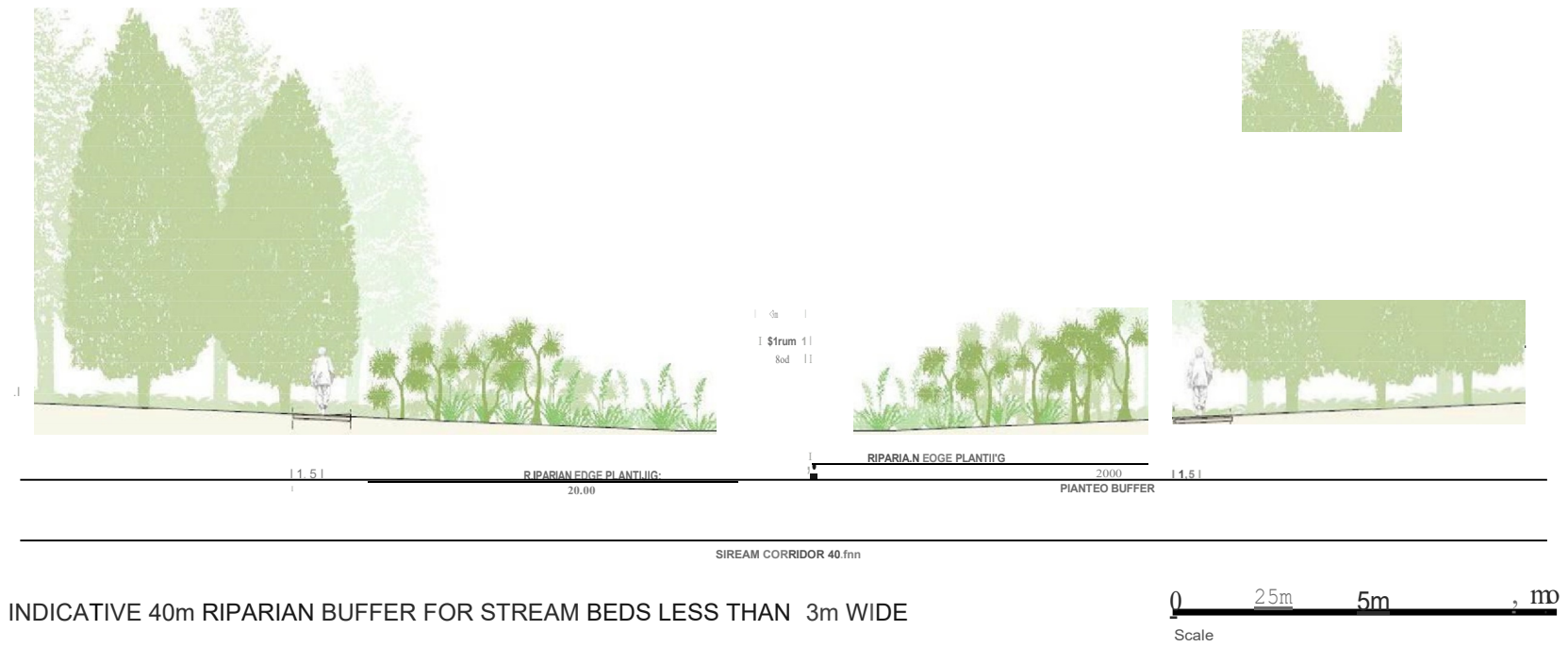
Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections

I410 Drury South Industrial Precinct Appendix



INDICATIVE WETLAND EDGE DETAIL

I410 Drury South Industrial Precinct Appendix

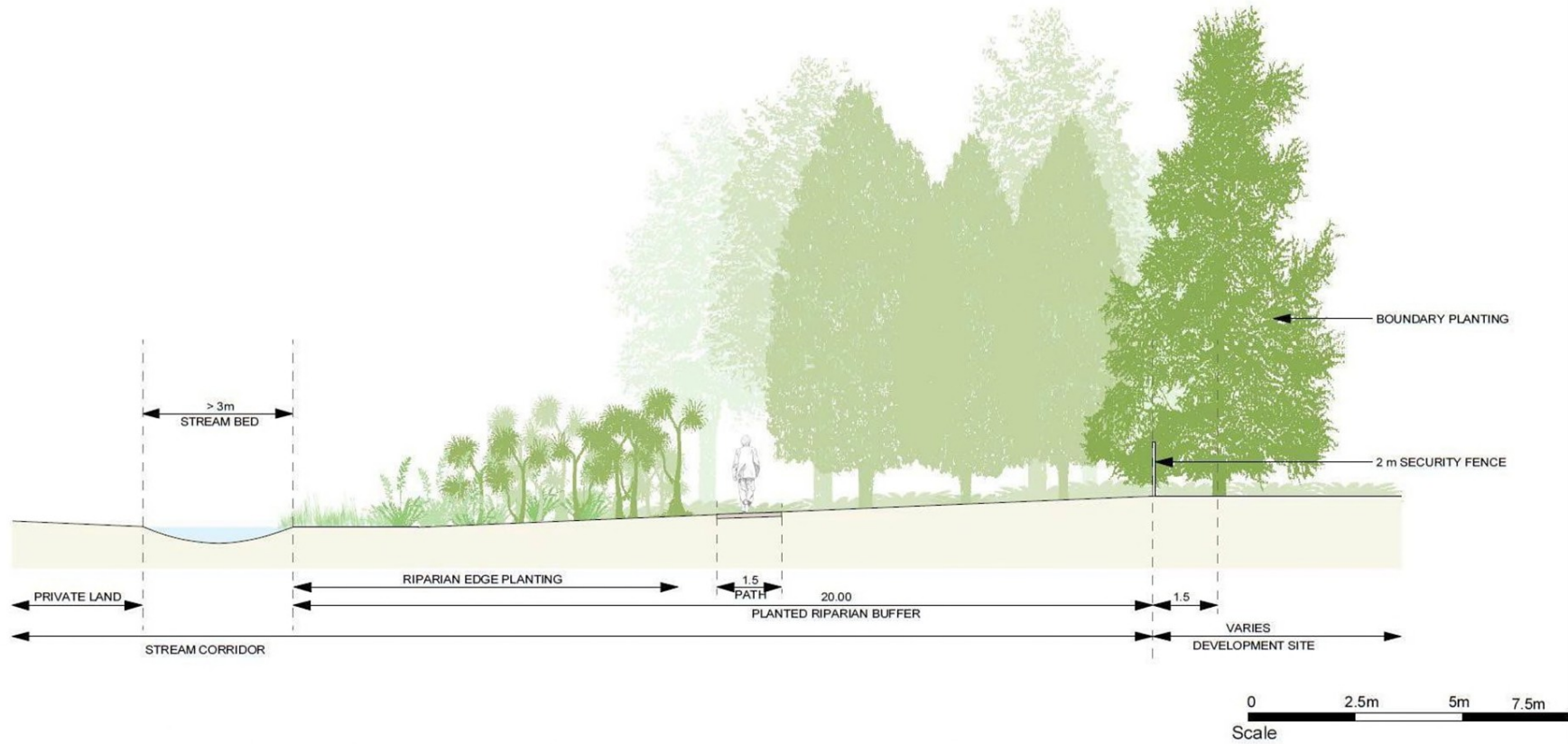


I410 Drury South Industrial Precinct Appendix



TYPICAL ONE SIDED RIPARIAN BUFFER FOR STREAM BEDS LESS THAN 3m WIDE

I410 Drury South Industrial Precinct Appendix



INDICATIVE ONE SIDED RIPARIAN BUFFER FOR STREAM BEDS 3m AND GREATER

Attachment 3

Drury South Structure Plan

Indigenous Species Plant List

Note: The species underlined are recognised as being rare/uncommon in the Auckland region.

Wetland Species	
Schoenoplectus tabernaemontani also Eleocharis sphacelata	Multiple Māori names include kukuta and kutakuta.
Carex virgata and Carex secta	Pukio
Baumea articulata	Jointed twig-rush
Typha orientalis	Raupo
<u>Myriophyllum robustum</u>	Stout water milfoil
Baumea tenax	
Isachne glabosa	Swamp grass
Phormium tenax	Particularly the variety known to Maori as 'Muka" - soft for weaving

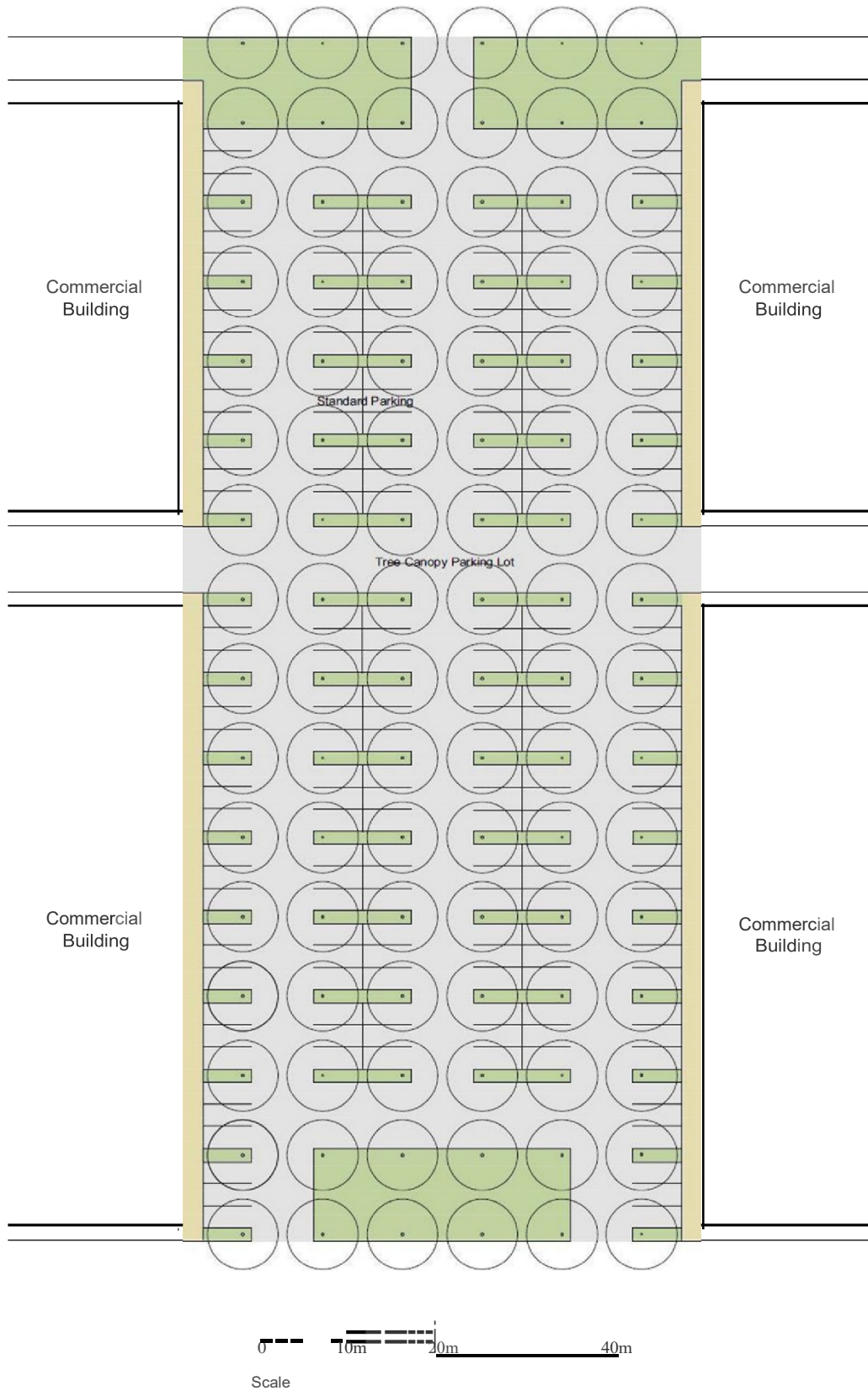
Riparian Marginal Species	
Freycinetia baueriana	Kie kei
Alectryon excelsa	Titoki
Vitex lucens	Puriri
Prumnopitys taxifolia	Matai
Sophora microphlla	Kowhai
Rhopalostylis sapida	Nikau
Hoheria populnea	Lacebark
Corynocarpus laevigatus	Karaka
<u>Plagianthus betulinus</u>	Manatu
Pennantia corymbosa	Kaikomako
Hedycarya arborea	Pigeonwood
Aristotelia serrata	Makomako

Kunzea ericoides	Kanuka
Cordyline australis	Ti whanake
Dysoxylum spectabile	Kohekohe
Coprosma grandifolia	Kanono
<u>Streblus banksii</u>	Towai
Streblus microphylla	Turepo
<u>Myrsine divaricata</u>	Weeping matipo
<u>Marrattia salicina</u>	King fern

Swamp Forest Species	
<u>Syzygium maire</u>	Maire, tawake
Laurelia novae-zelandiae	Pukatea
Carpodetus serratus	Putaputaweta
Phormium tenax	Harakeke
Coprosma tenuicaulis	Hukihuki
Dacrycarpus dacrydioides	Kahikatea
Blechnum novae-zelandiae	Swamp kiokio
Cortaderia fulvida	Toetoe
<u>Astelia grandis</u>	Swamp astelia
Schefflera digitata	Pate
Podocarpus totara	Totara

Attachment 4

Typical ~~Commercial Services~~ Sub-precinct C Mixed Use Precinct Access and Car Park Layout



TYPICAL COMMERCIAL LAYOUT

PC 46 - Decision Erratum Vesting of Roads

Decision following the hearing of a Private Plan Change under the Resource Management Act 1991 – Erratum



Proposed Private Plan Change 46 –to the Auckland Unitary Plan

Erratum – Overview

1. This decision report addresses an error made by the Hearing Panel in relation to its decision on Plan Change 46¹ (PC 46) in relation to submission 5.7 from Auckland Transport (AT). The error is that paragraph 90 of the Decision states that submission 5.7 from AT be “accepted” when it should have stated “rejected”.
2. AT’s submission sought the reinstatement of a proposed Drury South precinct provision requiring the vesting in the Council of proposed roads identified on the relevant precinct plans. The amended PC 46 precinct provisions attached in Appendix One of the Decision did not require the vesting of roads in the Council. While this is the correct decision, an error was made inadvertently stating that AT’s submission had been accepted, when it should have been rejected.
3. The reasons for rejecting the submission and the correct reference to rejecting it are set out below. This erratum report needs to be read in conjunction with the Hearing Panel’s decision on Plan Change 46.

Proposal - in summary.

4. To rezone land within the Drury South Industrial Precinct (DSIP) at Maketu Road, Quarry Road and Fitzgerald Road from Business – Light Industry to Business – Mixed Use, and from Business – Heavy Industry to Business – Light Industry, and amend the precinct provisions.

This plan modification is **APPROVED** with additional modifications to that notified. The reasons are set out below.

Plan modification number:	46
Site address:	Maketu Road, Quarry Road and Fitzgerald Road
Applicant:	Drury South Limited (DSL)
Hearing	Thursday, 3 December 2020

¹ Dated 8 March 2021

Hearing panel:	Greg Hill (Chairperson) Mark Farnsworth Gavin Lister
Appearances:	<p><u>For the Applicant:</u></p> <p>Daniel Minhinnick (Counsel) Stephen Hughes (Corporate) Gregory Akehurst (Economics) Matthew Riley (Urban Design) Bridget Gilbert (Landscape and Visual) Curt Robinson (Acoustic) Rachel Morgan (Planning)</p> <p><u>For the Submitters:</u></p> <p>Counties Power Limited represented by Rachel Bilbe and Jo Michalakakis</p> <p><u>For the Council:</u></p> <p>Marc Dendale (Team Leader) Sanjay Bangs (Planning) Tracey Ogden Cork (Urban Design) Rob Pryor (Landscape and Visual) Jon Styles (Noise) Tim Heath (Economics) Bevan Donovan (Hearings Advisor)</p> <p><u>Tabled Statements</u></p> <p>Waka Kotahi New Zealand Transport Agency Auckland Transport Lomai Properties Limited Kainga Ora – Homes and Communities</p>

FINDINGS ON THE PLAN CHANGE AND ON SUBMISSIONS AND FURTHER SUBMISSIONS

5. The Hearing Panel’s decision specifically addressed the submissions under the heading set out above. The following table includes AT’s submission 5.7 (see **bolded** below).

Internal transport network

Submissions and further submissions

Sub. No	Submitter Name	Summary	Further subs
2.5	The New Zealand Transport Agency	Retain Objective I140.2(7) as notified.	-
2.18	The New Zealand Transport Agency	Retain Standard I410.6.3(1) Subdivision or development preceding subdivision in Sub-precincts A– E as notified.	-
2.21	The New Zealand Transport Agency	Retain I410.7.2.1(f)(i) Matters of control as notified.	-
2.22	The New Zealand Transport Agency	Retain I410.8.1.2 Matters of discretion as notified.	-
2.24	The New Zealand Transport Agency	Retain I410.8.2.1(f)(vi) Assessment criteria as notified.	-
5.1	Auckland Transport	Approve the re-zoning to Business – Mixed Use and the creation of Sub-Precinct C – Mixed Use, subject to amended precinct provisions to manage transport effects and achieve land use transport integration.	-
5.4	Auckland Transport	Delete the proposed addition to Policy I410.3(140): <u>“adequate”</u> . Add to the end of policy (I410.3(140) on transport and infrastructure: <u>“This shall include the collector roads Maketu Road, Link Road, New Quarry Access Road and Ramarama Road through to Fitzgerald Road providing good public transport, walking and cycling connections through the precinct and between the two future rail stations in Drury.</u>	Counties Power – Support
5.7	Auckland Transport	Re-instate the I410.6.3(1) provision that proposed roads (including pedestrian and cycle routes) identified on Precinct Plan 1 and Precinct Plan 2 must be vested in Council and at no cost to the Council upon subdivision or development.	Counties Power – Support
5.9	Auckland Transport	Amend Restricted Discretionary Assessment Criteria I410.8.2(1)(f) by adding (f)(x) as follows: <u>(f)(x) whether the new collector roads are designed to</u>	Counties Power – Support

		<u>perform their required transport network functions, including public transport route capability, walking and cycling, heavy commercial vehicles where appropriate (freight route), connectivity, streetscape and landscaping, service berms, and any required stormwater management</u>	
		Or alternative wording that achieves sufficient width of roads to perform their required functions	
5.10	Auckland Transport	If appropriate assessment criteria are not included in I410.8.2(1)(f), then amend the plan change to include high-level designs of the proposed collector roads.	-

6. The decision on submission 5.7 in the Hearing Panel's Decision set out:

Decision on Submissions

That submissions 2.5, 2.21, 2.22, 2.24, 5.1 from NZTA and 5.7 from AT be accepted.
(underlining added).

7. The correct decision in relation to submission 5.7 is:

Decision on Submissions

That submission 5.7 from AT and the further submission from Counties Power Limited be **rejected**.

Reasons

8. AT did not make an appearance at the hearing and had advised that they accepted the majority of changes made [in the section 42A report]. However, AT sought the reinstatement of road vesting provisions.
9. Mr Bangs set out in the section 42A report that²:

I have reviewed several AUP(OP) precincts that contain indicative or proposed roading/transport networks. The vesting of indicative roads in council is not commonly required by precincts. However, there are some precincts that do contain subdivision standards requiring roads to be vested, such as the Orewa 2 and Orewa 3 precincts and the Drury 1 Precinct.

In my view there is not a significant risk that indicative roads shown on Precinct Plans 1 and 2 are not vested, given that they are primarily collector roads unlikely to be developed as private roads.

However, on balance, I consider it would be beneficial to reinstate the part of Standard I140.6.2(1) that requires roads to be vested. A standard would signal

² Paragraphs 283 – 285 of the section 42A report

the intention for the indicative roading network to be vested, and thus reduce the risk of roads being constructed to a private standard, rather than AT's Traffic Design Manual

10. However, we ultimately agreed with the planners for the Applicant and the Council, both of whom set out in their Joint Witness Statement³ (dated 22 December 2020) that "Deletion of requirement to vest roads" was agreed. On this basis we deleted the vesting requirement as we agreed with Mr Bangs that there was not a significant risk that indicative roads shown on Precinct Plans 1 and 2 would not be vested, given that they are primarily collector roads and unlikely to be developed as private roads.



Greg Hill - Chairperson

- for Commissioners Gavin Lister and Mark Farnsworth

27 April 2021

³ ITEM 1: Matters agreed between experts.

**Attachment 2: Planning Committee resolution to make
operative PC46**

12 Auckland Unitary Plan Schedule 10 Notable Tree Schedule - Correction of Error (8 Eglinton Avenue, Mt Eden)

Cr D Simpson returned to the meeting at 5.29pm.

Resolution number PLA/2021/55

MOVED by Cr C Casey, seconded by Cr C Fletcher:

That the Planning Committee:

- a) **agree to prepare and notify a plan change to add the pōhutukawa at 8 Eglinton Avenue, Mt Eden to Schedule 10 Notable Tree Schedule of the Auckland Unitary Plan (Operative in Part) to ensure it is protected as originally intended.**

CARRIED

13 Auckland Unitary Plan (Operative in Part) - Making Plan Change 46: Drury South operative

Resolution number PLA/2021/56

MOVED by Cr S Henderson, seconded by Cr A Dalton:

That the Planning Committee:

- a) **approve the proposed amendments to the Auckland Unitary Plan (Operative in Part) under Plan Change 46: Drury South as set out in Attachment A to the agenda report.**
- b) **request staff to undertake the steps in Schedule 1 of the Resource Management Act 1991 to make operative Plan Change 46 in the Auckland Unitary Plan (Operative in Part).**

CARRIED

14 Auckland Unitary Plan (Operative in Part) - Making Plan Change 35: Foster Crescent, Snells Beach operative

Resolution number PLA/2021/57

MOVED by Cr T Mulholland, seconded by Cr E Collins:

That the Planning Committee:

- a) **approve the proposed amendments to the Auckland Unitary Plan (Operative in Part) in Plan Change 35 under clause 17(2) of Schedule 1 of the Resource Management Act 1991, as shown in Attachment A of the agenda report**
- b) **request staff to undertake the steps in Schedule 1 of the Resource Management Act 1991 to make operative Plan Change 35 in the Auckland Unitary Plan (Operative in Part).**

CARRIED

**Attachment 3: Environment Court application and
dispensation**

**IN THE ENVIRONMENT COURT
AT AUCKLAND**

**I TE KŌTI TAIAO O AOTEAROA
KI TĀMAKI MAKĀURAU**

Decision No. [2021] NZEnvC 160

IN THE MATTER OF

an application under s 314(1)(f) of the
Resource Management Act 1991

BY

AUCKLAND COUNCIL

(ENV-2021-AKL-000123)

Applicant

Court: Environment Judge MJL Dickey sitting alone under s 309 of the
Act

Hearing: On the papers in Auckland

Last case event: Memorandum from s 274 party dated 12 October 2021

Date of Decision: 14 October 2021

Date of Issue: 14 October 2021

DECISION OF THE ENVIRONMENT COURT

A: Application granted.

REASONS

Introduction

[1] Auckland Council applied for an order under s 314(1)(f) Resource Management Act 1991 (**RMA**) to:¹

Application dated 9 September 2021 at [1].

FOR THE AUCKLAND COUNCIL



Grant a dispensation from the need to comply with 1 or more of the requirements of Schedule 1 of the RMA that have not been observed in respect of Proposed Plan Change 46 (Private) Drury South (**PC46**) to the Auckland Unitary Plan Operative in part (**AUP**).

[2] The Council sought the order on the following terms:²

4 Granting a dispensation from the need to comply with:

4.1 The requirements relating to clause 25(2)(b) and clause 26(1) of Schedule 1 of the RMA to notify PC46 overlaid on the operative version of the I410 Drury South Industrial Precinct and Appendix I410.11.1 Drury South Industrial Precinct Appendix AUP provisions.

5 A consequential order that the text of Appendix I410.11.1 Drury South Industrial Precinct Appendix of the AUP be amended as set out in the version of the text of Appendix I410.11.1 attached to this application as Appendix 1.

[3] The Council provided an affidavit of Sanjay William Bangs (Senior Policy Planner in the Central and South Planning Unit within the Council's Plans and Places Department) and a memorandum of counsel.

[4] The history of this matter can be explained with reference to counsel's memorandum and Mr Bangs' affidavit:³

(a) Proposed Plan Change 46 (Private) Drury South (**PC46**) is a private plan change requested by Drury South Ltd;⁴

(b) PC46 seeks to rezone land and amend precinct provisions within the I410 Drury South Industrial Precinct, and Appendix I410.11.1 Drury South Industrial Precinct Appendix (**Appendix I410.11.1**);⁵

(c) PC46 was received by the Council on 12 December 2019, was accepted by the Council, and was publicly notified on 30 July 2020;⁶

² Application dated 9 September 2021 at [4] and [5].

³ Memorandum dated 9 September 2021 at [3].

⁴ Affidavit of S Bangs at [21].

⁵ Affidavit of S Bangs at [21].

⁶ Affidavit of S Bangs at [24].

- (d) Between PC46 being received and notified, the Council initiated Plan Change 4: Corrections to technical errors and anomalies in the Auckland Unitary Plan (**PC4**). As part of a suite of amendments to precincts PC4 as notified proposed minor amendments to the I410 Drury South Industrial Precinct and Appendix I410.11.1. One submission in support as it related to those provisions was received from Drury South Limited. While appeals were received on the PC4 decision no appeals related to the Precinct or the Appendix. PC4 was made operative on 14 February 2020.⁷
- (e) The issue in terms of compliance with the requirements of cl 25(2)(b) and cl 26(1) of Schedule 1 of the RMA in the context of PC46 has arisen as a result of PC46 being notified on 30 July 2020 showing the proposed private plan change amendments in track changes over an outdated “base” version of the I410 Drury South Industrial Precinct and Appendix I410.11.1, which did not incorporate those changes made by PC4.⁸
- (f) Given that PC46 was accepted by the Council under cl 25(2)(b) of Schedule 1, it needed to be notified in accordance with cl 26(1) of that Schedule. The consequence of using for notification the version of Appendix I410.11.1 (prior to PC4 being made operative) is that the “change” that was notified in July 2020 was not technically to the operative plan, as required by cl 26 of Schedule 1 to the RMA.
- (g) Following notification of PC46, seven submissions were received. No submissions specifically sought to amend the Appendix I410.11.1 text or diagrams. One amendment to the text of the Appendix arose as a consequential amendment from a submission filed by Auckland Transport, relating to the function and design of indicative roads. The PC 46 decision was issued on 8 March 2021.⁹ No appeals were received. PC 46 is not yet operative.¹⁰

⁷ Affidavit of S Bangs at [13] – [20].

⁸ Affidavit of S Bangs at [37].

⁹ An erratum was issued on 27 April 2021.

¹⁰ Affidavit of S Bangs at [25] – [33].

[5] Mr Bangs provided a complete timeline of events relating to PC4 and PC46. He explained that the only overlap between the provisions that PC4 and PC46 amended are in relation to Appendix I410.11.1.¹¹ The Appendix contains the subdivision design assessment criteria for the Drury South Industrial Precinct.

[6] Mr Bangs explained the overlaps as follows:

47 Within Appendix I410.11.1, there are 34 instances where changes sought by PC46 overlap with amendments made by PC4. In relation to these overlaps:

47.1 In most instances, PC46 seeks to make changes that are identical to what PC4 has already achieved. For example, PC4 at various points replaced the term 'zone' with 'Precinct'. Independently of this, PC46 has sought to make the same change. In these instances, there is no conflict between the provisions.

47.2 In some instances, PC46 proposes changes to particular provisions that were amended differently by PC4. However, I consider these to be administrative differences only. For example where PC4 has replaced the term 'proposed zone area' to simply 'area', PC46 seeks to amend this to 'Precinct'. In my opinion these changes have the same effect and intent and do not materially change the meaning of the provisions.

48 The only changes of substance to Appendix I410.11.1 sought through PC46 were:

48.1 Design element 3 – clause 1, to delete the sentence referencing road cross-sections;

48.2 Design element 3 – Explanation, to delete references to road corridor widths and guidance text on kerbside carparking;

48.3 Introduction of Table 1: Indicative Road Function and Required Design Elements;

48.4 Deletion of Attachment 1: Typical Road Cross Sections.

¹¹ Affidavit of S Bangs at [44].

49. PC4 did not amend the base Appendix I410.11.1 provisions referred to above which PC46 proposes to make substantive amendments to. In this regard there is no conflict between the changes requested by PC46 and PC4.

[7] Mr Bangs described the differences between the operative text of the Appendix (as amended by PC4), and the PC46 Council decision text as “administrative” rather than “substantive” in nature.¹² There is no conflict between the substantive changes that the Council decision on submissions to PC46 makes to the text of Appendix I410.11.1 and the Appendix I410.11.1 operative text, as amended by PC4.¹³

Statutory framework and legal issues

[8] Section 314(1)(f) RMA provides:

314 Scope of enforcement order

- (1) An enforcement order is an order made under section 319 by the Environment Court that may do any 1 or more of the following:
- (f) where the court determines that any 1 or more of the requirements of Schedule 1 have not been observed in respect of a policy statement or a plan, do any 1 or more of the following:
- (i) grant a dispensation from the need to comply with those requirements:
 - (ii) direct compliance with any of those requirements:
 - (iii) suspend the whole or any part of the policy statement or plan from a particular date (which may be on or after the date of the order, but no such suspension shall affect any court order made before the date of the suspension order).

[9] The Council identified two potential issues: whether s 314(1)(f) RMA applies to proposed (rather than operative) plans; and whether s 314(1)(f) applies to private plan changes. The Court identified a further issue – whether s 314(1)(f) provides jurisdiction to order a change to a plan (as a consequence of an order that Schedule 1 requirements can be dispensed with).

¹² Affidavit of S Bangs at [50].

¹³ Affidavit of S Bangs at [50].

Can s 314(1)(f) RMA be used in relation to a proposed plan?

[10] In this case, the Council submitted that there is an issue as to the interpretation of the term “plan” as used in s 314(1)(f).¹⁴ The Act defines plan in s 43AA as meaning an operative plan. PC46 is not yet operative. The Council submitted that it may be arguable, based on that definition, that the Environment Court only has jurisdiction in the context of operative plans.¹⁵ The Council relied on *Re Selwyn District Council*, where the Environment Court accepted it could exercise its jurisdiction under s 314(1)(f) in the context of a proposed plan.¹⁶

Can s 314(1)(f) RMA be used in relation to a private plan change?

[11] The Council advised that there is also an issue as to whether the Court has jurisdiction under s 314(1)(f) to make an enforcement order in the context of a private plan change.¹⁷ It was unable to identify a situation in which the Environment Court has exercised its jurisdiction under s 314(1)(f) RMA in the context of a private plan change.¹⁸

[12] The Council submitted that the Court in *Re Selwyn District Council* found:¹⁹

- (a) breaches of Schedule 1 of the RMA should be dealt with where they are discovered;
- (b) to insist that granting a dispensation or ordering compliance under s 314(1)(f) must await a plan becoming operative makes little sense; and
- (c) restricting the operation of s 314(1)(f) to operative plans reduces the utility and logical purpose of that section.

¹⁴ Memorandum dated 9 September 2021 at [15].

¹⁵ Memorandum dated 9 September 2021 at [18].

¹⁶ Memorandum dated 9 September 2021 at [19], *Re Selwyn District Council* NZEnvC Christchurch C27/2004, 17 March 2004.

¹⁷ Memorandum dated 9 September 2021 at [15].

¹⁸ Memorandum dated 9 September 2021 at [20].

¹⁹ Memorandum dated 9 September 2021 at [20], *Re Selwyn District Council* NZEnvC Christchurch C27/2004, 17 March 2004 at [28].

[13] It submitted that the same rationale for extending the application of s 314(1)(f) RMA to proposed plans applies equally to private plan changes.²⁰ It submitted that the reference to “plan” in s 314(1)(f) RMA should therefore be treated as encompassing a private plan change that has been the subject of a decision of the Council but not yet made operative under cl 20 of Schedule 1 of the RMA, as well as an operative plan (and a proposed plan, as per *Re Selwyn District Council*).

Can s 314(1)(f) RMA be used to order a change to a plan?

[14] The Court issued a minute on 15 September 2021 raising the issue of the Court’s power to amend Appendix I410.11.1 on an application under s 314(1)(f) RMA. The Court said:²¹

Having considered the application, it is not clear what power the Court has to order a change to the plan as a consequence of an application under s 314(1)(f) RMA.

[15] The Council replied by memorandum dated 17 September 2021. The Council referred to three cases:

- (a) In *Re Northland Regional Council*²² the Court considered an application by Northland Regional Council seeking a declaration about correction of errors it had made in decisions on submissions. The application sought declarations, but the Court acknowledged that “in substance” it was for orders under s 314(1)(f) RMA. It ordered various amendments to provisions to comply with the requirements of Schedule 1.
- (b) In *Re Christchurch City Council*²³ the Court considered an application for a declaration under s 310 of the RMA and an enforcement order under s 314(1)(f)(ii) RMA with respect to a proposed district plan. The Christchurch City Council made a submission that the amendments made to the rule (by the Council) did not achieve the result intended by the

²⁰ Memorandum dated 9 September 2021 at [21].

²¹ Minute dated 15 September 2021 at [3].

²² *Re Northland Regional Council* NZEnvC Auckland A12/99, 10 February 1999.

²³ *Re Christchurch City Council* NZEnvC Christchurch C158/2001, 14 September 2001.

Commissioner who made decisions on submissions and that the amendments were outside the City Council's power to make. The Court considered it was appropriate to amend the particular rule, such amendment being required to achieve compliance with cl 10 of Schedule 1 to the RMA.²⁴

- (c) In *Clutha District Council v Wylie*²⁵ the Court found it had jurisdiction to direct alteration of planning maps to accord with the jurisdiction of the Council in determining submissions. It had the effect of constituting a minor alteration to the Plan to achieve the jurisdictional limits imposed.²⁶

[16] The Council submitted, relying on those cases, that s 314(1)(f) of the RMA provides scope to make the consequential order that is sought.²⁷ It also considered that there may be more appropriate wording for the consequential order, which should relate to the text in the Council's decision on PC46.²⁸ It proposed amending its application to read:²⁹

A consequential order that the text of Appendix I410.11.1 Drury South Industrial Precinct Appendix of the AUP be amended as set out in Auckland Council's decision on PC46 be replaced with the version of the text of Appendix I410.11.1 attached to this application as Appendix 1.

[17] The Court considered the Council's memorandum, and issued a minute dated 22 September 2021. It accepted it had power to order amendments to the plan, in reliance on Council's 17 September 2021 memorandum and the cases attached.³⁰ The Court granted the Council leave to amend its application as sought. The Council lodged its amended application on 5 October 2021. The only change is to amend the

²⁴ *Re Christchurch City Council* NZEnvC Christchurch C158/2001, 14 September 2001 at [12(1)].

²⁵ *Clutha District Council v Wylie* NZEnvC Christchurch C76/2006, 16 June 2006.

²⁶ *Clutha District Council v Wylie* NZEnvC Christchurch C76/2006, 16 June 2006 at [13].

²⁷ Memorandum dated 17 September 2021 at [15].

²⁸ Memorandum dated 17 September 2021 at [18].

²⁹ Memorandum dated 17 September 2021 at [20].

³⁰ Minute dated 22 September 2021 at [3].

wording of the consequential order sought to that set out in paragraph [16] above.³¹

Matters to be considered under s 314(1)(f) RMA

[18] The Council submitted there is no indication given in s 314(1)(f)(i) as to the matters which are relevant to the exercise of the Court's discretion.³² It referred to *Re Ashburton District Council*³³, and noted that the Environment Court considered the following factors to be relevant:³⁴

- (a) the meaning of the text in light of its purpose (the more important it is to other people the less accepting of any breach the court is likely to be);
- (b) the context of the provision in the scheme of the Act;
- (c) the extent of the breach;
- (d) the actual effect of the breach on other persons;
- (e) when making an overall assessment in light of the answers to (a) - (d), whether the purpose of section 5 of the Act, and of the particular provisions, sufficiently met to excuse the breach.

Consideration

Factors

[19] The Council submitted that, in terms of the *Re Ashburton District Council* factors, while the notification of private plan change requests should be carefully undertaken, the discrepancies that have been identified between the Appendix I410.11.1 text that PC46 was overlaid on and the operative text of the Appendix as amended by PC4 are minor and administrative in nature.³⁵

[20] In terms of the actual effect of the non-compliances, the Council submitted in this case it is negligible. That is because of the nature of the changes PC4 made to

³¹ Amended application dated 5 October 2021 at [5].

³² Memorandum dated 9 September 2021 at [26].

³³ *Re Ashburton District Council* [2012] NZEnvC 188 at [11].

³⁴ Memorandum dated 9 September 2021 at [27].

³⁵ Memorandum dated 9 September 2021 at [27].

Appendix I410.11.1 and because there has been a public process (the Schedule 1 process) with respect to PC46, which allowed persons interested in PC46 to participate.³⁶

[21] In terms of making an overall assessment, the Council considers that this is an appropriate situation where a dispensation of the requirements to fully comply with cl 25(2)(b) and cl 26(1) of Schedule 1 should be granted. In the absence of orders, the Council considers there is potential for significant prejudice to the requestor (Drury South Ltd) and to other parties interested in PC46.³⁷

Alternatives

[22] The Council noted that in the *Re Selwyn District Council* decision, the Court said that even where the Court has jurisdiction to grant an order under s 314(1)(f) RMA, it will not necessarily be the preferable approach where other alternatives exist.³⁸ The Council submitted that the current application involves an issue that is more of a procedural issue than a substantive issue.³⁹ It referred to Mr Bangs' opinion that there is no conflict between the substantive changes made by PC46 and the operative version of Appendix I410.11.1.⁴⁰ Where there is overlap, the changes are administrative in nature.⁴¹ For example, PC4 made various formatting and updating changes, including replacing the term "zone" or "structure plan area" with "Precinct".

[23] The Council submitted that there are limited options available. Initiating a variation to PC46 or withdrawing PC46 are not available as the Council has issued its decision on PC46. Clause 16 of Schedule 1 covers slips and omissions of minor effect and does not assist (it submitted) where there is procedural error.⁴²

Submitters and responses to application

³⁶ Memorandum dated 9 September 2021 at [28].

³⁷ Memorandum dated 9 September 2021 at [30].

³⁸ Memorandum dated 9 September 2021 at [22].

³⁹ Memorandum dated 9 September 2021 at [24].

⁴⁰ Memorandum dated 9 September 2021 at [24].

⁴¹ Memorandum dated 9 September 2021 at [24].

⁴² Memorandum dated 9 September 2021 at [25].

[24] The Council advised that the only submitter on PC4 as it related to Appendix I410.11.1 was Drury South Ltd – the requestor of PC46.⁴³ The Council understands from discussions with Drury South Ltd that it had consulted with the six submitters to PC46 and the six submitters take no issue with the general approach proposed.⁴⁴

[25] The Court issued a minute on 10 September 2021 noting that the Council intended to serve PC46 submitters and that the s 274 notice period ended on 30 September 2021. The Council confirmed on 15 September 2021 that all submitters had been served with the application.

[26] Drury South Ltd lodged a s 274 notice on 21 September 2021. It said:⁴⁵

DSL supports the Application in its entirety and respectfully requests that the Court makes the orders as requested by the Council to enable Plan Change 46 to be made operative as soon as practicable.

[27] No other s 274 notices were lodged.

Discussion

[28] The Council's preference is for this matter to be dealt with by the Court on the papers.⁴⁶ I consider that approach is appropriate in this case, given the limited involvement of other parties and the urgency attached to the application.

[29] I acknowledge that s 314(1)(f) refers to a “plan”; that the Act defines plan as an operative plan and on the face of it therefore, orders can only be made in respect of operative plans. Relying on *Re Selwyn District Council* the Council submitted that s 314(1)(f) RMA can also be used to make orders in the context of a proposed plan and a privately initiated plan change. In that case, the Court considered Schedule 1 non-compliances should be dealt with “where they are discovered”.

⁴³ Memorandum dated 9 September 2021 at [28].

⁴⁴ Memorandum dated 9 September 2021 at [29].

⁴⁵ Section 274 notice dated 21 September 2021 at [4].

⁴⁶ Email from counsel for the Council dated 5 October 2021.

[30] In reaching its decision the Court in *Selwyn* referred to two High Court decisions, *Nanden v Wellington City Council*⁴⁷ and *Countdown Properties (Northlands) Ltd v Dunedin City Council*⁴⁸ which discussed the meaning of plan in ss 292 and 293 of the Act. In *Nanden* the Court observed having read the section and the definition of plan that s 292 does not apply in relation to a proposed plan. In *Countdown* the Court held that a plan in s 293 includes a proposed plan.⁴⁹ The Environment Court noted that in *Countdown* the basis for the departure from the defined meaning of the plan was that the context required the departure. It applied that context approach to s 314(1)(f).

[31] I am aware of a later decision of the Court, *James v Waikato Regional Council*⁵⁰ where the Court found with reference to *Nanden* that s 292 only applied to operative plans.

[32] Having regard to the differing case law I consider that a context approach to the interpretation of s 314(1)(f) is required. I note that the definition of plan in the Act is preceded by the words “...unless the context requires another meaning...”. There is good reason here to extend the section’s operation to proposed plans and changes. As the Court noted in *Selwyn*, breaches of Schedule 1 should be dealt with when discovered; to insist that granting a dispensation or ordering compliance must wait until a plan becomes operative makes little sense. Restricting the section to operative plans “reduces the utility and logical purpose of that section”.⁵¹

[33] I concur with the Court’s approach in *Selwyn* and consider that the pragmatic approach should be extended to a private plan change request.

[34] I accept that alternatives to this s 314(1)(f) application are limited in the context of a proposed plan. The Council is, appropriately, seeking to correct a procedural error before PC46 is made operative.

[35] I also accept that the Court has the power to amend a plan when making an

⁴⁷ *Nanden v Wellington City Council* [2000] NZRMA 562 (HC) at para [39].

⁴⁸ *Countdown Properties (Northlands) Ltd v Dunedin City Council* [1994] NZRMA 145 (HC) at 181.

⁴⁹ I note that s 293 has since been amended to refer to a proposed policy statement and plan.

⁵⁰ *James v Waikato Regional Council* NZEnvC Auckland A 117/04, 3 September 2004.

⁵¹ At [28].

order under s 314(1)(f) RMA. Again, I consider that is consistent with a pragmatic approach to what is, in this case, a minor non-compliance.

[36] I accept that the non-compliances with Schedule 1 requirements were minor and technical in nature. They arose out of genuine error. Notification is a crucial step in the Schedule 1 process. It allows the public to determine whether they are interested in planning provisions proposed by the Council. However, the effect of the non-compliance is negligible. The alternatives set out in s 314(1)(f) (in this case to require notification of the corrected version of Appendix I410.11.1, or to suspend Appendix I410.11.1) are out of proportion to the non-compliances.

[37] I accept Mr Bangs' opinion that no persons will be prejudiced by the correction of Appendix 1410.11.1, given the predominantly administrative nature of the changes.

[38] The only s 274 notice lodged was lodged by the requestor of PC46, and it supported the application. It has recently advised that it supports the application being dealt with on the papers. The six other submitters were served with this application and did not lodge s 274 notices.

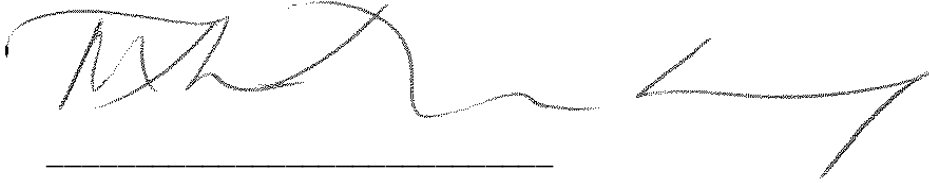
[39] In all the circumstances and being satisfied that no persons will be adversely affected I determine that making the requested orders is appropriate; they will enable a timely and cost-effective resolution to this matter.

Outcome

[40] The application under s 314(1)(f) RMA is granted. The Court:

- (a) grants a dispensation from the need to comply with the requirements relating to cl 25(2)(b) and cl 26(1) of Schedule 1 of the RMA to notify PC46 overlaid on the operative version of the I410 Drury South Industrial Precinct and Appendix I410.11.1 Drury South Industrial Precinct Appendix Auckland Unitary Plan Operative in part provisions; and
- (b) makes a consequential order that the text of Appendix I410.11.1 Drury

South Industrial Precinct Appendix as set out in Auckland Council's decision on PC46 be replaced with the version of the text of Appendix I410.11.1 attached to this decision as Appendix 1.



MJL Dickey

Environment Judge



Appendix 1

Notes:

The Auckland Unitary Plan Operative in Part text, as amended by PC4, has been used as the base text

Amendments to text from the PC46 decision are shown in ~~strike through~~ and underline

Attachment One

I410.11.1: Attachment 5 (Drury South Industrial Appendix)

APPENDIX I410.11.1: DRURY SOUTH INDUSTRIAL PRECINCT – SUBDIVISION DESIGN ASSESSMENT CRITERIA

PURPOSE OF APPENDIX I410.11.1

Within the I440 Drury South Industrial Precinct, applications for any subdivision or any development of land which precedes a subdivision being undertaken which complies with Standard I410.6.3 as a restricted discretionary activity will be assessed in terms of a series of matters to which the Council will restrict the exercise of its discretion. One of the matters which the Council will have regard to as set out in standard I410.8.2(1)(d) is:

the extent to which subdivision design and layout gives effect to the objectives and policies identified for the Drury South Industrial Precinct and the subdivision design assessment criteria set out in Appendix I410.11.1.

In addition, the criteria will also be used in the consideration of discretionary applications for subdivision, as appropriate.

This appendix sets out assessment criteria under a number of “Design Elements”. Accompanying illustrations are intended to support the text and represent good design solutions, but are not intended to represent the only design solution. All illustrations are indicative only.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged.

It is recognised that certain proposals will not achieve absolute accord with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or;
- whether the proposal represents a better design solution than that suggested by the criterion.

Planting plans and maintenance plans for recreation and esplanade reserves and stormwater management areas will need to be submitted with applications for subdivision consent and approved by the Council.

Design Element 1: Road, Reserve and Access Networks:

1. Earthworks should be undertaken principally at the initial subdivision stage, and where appropriate the creation of reasonably flat sites should occur at the bulk earthworks stage (in order to avoid creating retaining walls at site development stage).
2. Road patterns should maximise convenient / direct access to the ~~spine road~~ Maketu Road and limit connection to existing rural roads (such as Ararimu Road) except where this relates to the wider essential network.
3. The road pattern should facilitate access to and accessibility within Sub-precinct C Mixed Use 'commercial service precincts'.
4. Road patterns should be logical and contribute to the legibility of and ease of wayfinding within the area (refer Diagrams 1 and 2 for generic legibility and proposed street hierarchy).
5. Subdivision layout design should achieve protection and enhancement of all significant streams / tributaries to be retained and their riparian corridors (20m minimum either side from edge of stream) and concentrate open space as part of the riparian network (refer Diagram 3).
6. Subdivision layout design should achieve an interconnected open space and movement network.
7. Safe pedestrian and cycle routes through the structure plan area should be integrated with the riparian, reserve and road design.
8. Equestrian bridle trails should be integrated with riparian reserve development and provide access to the large centrally located public open space/stormwater management area.
9. Layouts should retain mature trees within the riparian corridors, particularly those of indigenous species.
10. In Motorway Edge Sub-precinct areas ~~access to sites off the spine road should be combined wherever practicable~~ layouts should seek to retain as many existing established trees, particularly those of indigenous species, as possible.
11. In Motorway Edge Sub-precinct, areas access to sites off the ~~spine road~~ Maketu Road should be combined wherever practicable.

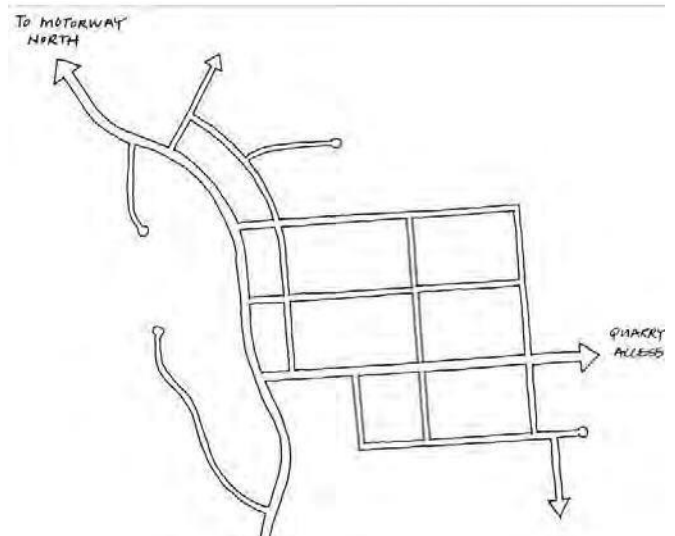


Diagram 1: Legible road hierarchy to assist wayfinding

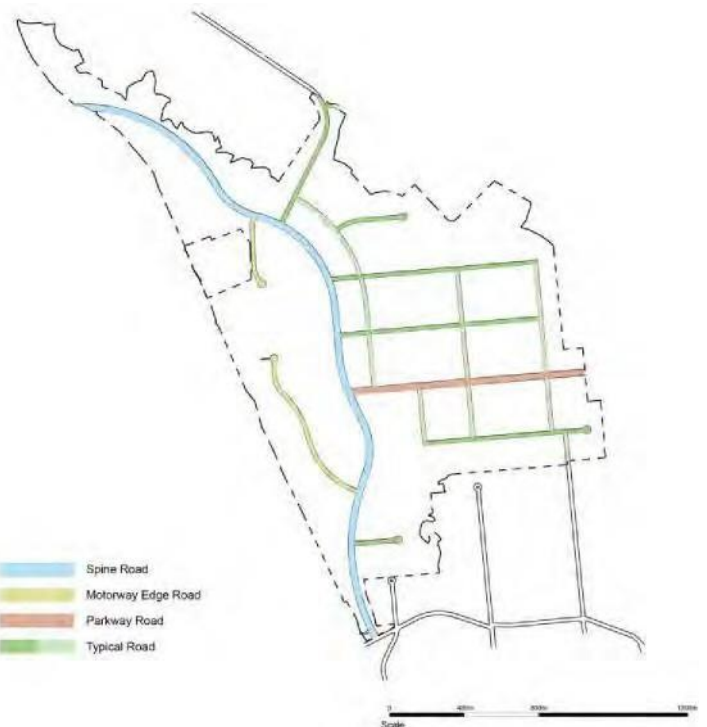


Diagram 2: Road hierarchy

Explanation:

Design Element 1 pertains to the overall site topography and the general layout of the networks of roads, reserves and other access linkages that make up the public space of the Drury South Industrial Precinct. These should be considered in an integrated fashion together with the development blocks that they create.

The existing site topography within the proposed Industrial Precinct is relatively flat although bulk earthworks including cut and fill will be required to establish levels for future development above the flood plain and appropriate falls across the land.

The riparian corridors of the Hingaia and Maketu Streams and their significant tributaries will remain an important feature of the site topography once the Precinct is established. Vegetation associated with these corridors is also important to the structuring, screening and ecology of the area and its proposed activities.

The riparian corridors also provide a focus for future recreation and open space development and form part of the enhancement framework for the Precinct.

The road network and hierarchy (refer Diagrams 1 and 2), as illustrated in the ~~Drury South Industrial Precinct Plan~~ has been designed to efficiently direct traffic into and out of the Precinct connecting to the Southern Motorway (SH1) at both the Ramarama (south) and Drury (north) interchanges. The proposed Spine Road link is important to the legibility and traffic efficiency of the Precinct; this route will provide the primary connection into and out of the ~~area~~ Precinct with other streets connected to the ~~spine road~~ Maketu Road through corridor.

The proposed street network has also been designed to limit the impact of vehicles destined for the Precinct on existing rural residential and community roads such as the road accessing and adjacent to the Ramarama School. Implementation of the street network to achieve the beneficial improvements to heavy vehicle (including quarry trucks) and other Precinct related traffic movement is imperative as a part of delivery of the area.

By its nature the ~~Commercial Services Sub-Precinct~~ C Mixed Use will require a finer grain street network with smaller street blocks, greater walkability, good service access and parking.

A legible road pattern (refer Diagram 1) is one that is easily understandable for the people that use it and that provides cues for first time users as well as those habitual users. Consistent road design and landscape themes can further emphasise the position of each street in the road hierarchy and in the pattern of streets in the wider area. Road patterns that are logical and easy to comprehend and navigate make an area feel more comfortable and help to provide a sense of identity.

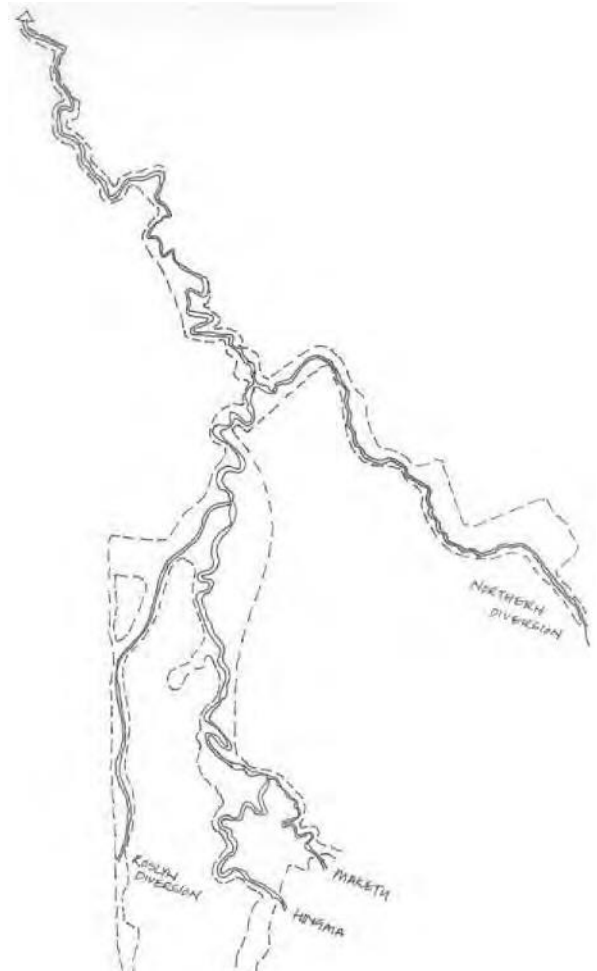


Diagram 3: Open space concentrated along Hingaia, Maketu, Roslyn and Northern Diversion Stream corridors

Design Element 2: – Block Size, Lot Type and Orientation:

1. Blocks should be of a scale and shape to achieve a permeable street layout suited to the industrial functional requirements of the proposed land use.
2. All lots should front onto and be accessed directly from a legal road. Rear lots are to be avoided (refer Diagram 4).
3. Through lots (with dual road frontage) are permissible (refer Diagram 4).

Explanation:

Design Element 2 describes the principles for consideration in the layout of blocks and lots within the proposed business zone area Precinct.

Blocks within an industrial area can be are typically larger than those within finer grain residential or Commercial Services Mixed Use areas. A good permeable and well connected street network is however still required in Light and Heavy Industry Sub-precincts A, B and E to facilitate access, provide an appropriate street address and reduce traffic volumes on side streets. Within Sub-precinct C Mixed Use, Design Element 1 also provides opportunities for views through to the open space corridor to the west of the Sub-precinct from Maketu Road.

Lots need to be of a size and shape to accommodate large scale, land extensive land uses and flexible to enable reasonable long term growth. At the same time rear lots are considered undesirable with a preference for development to address the street.

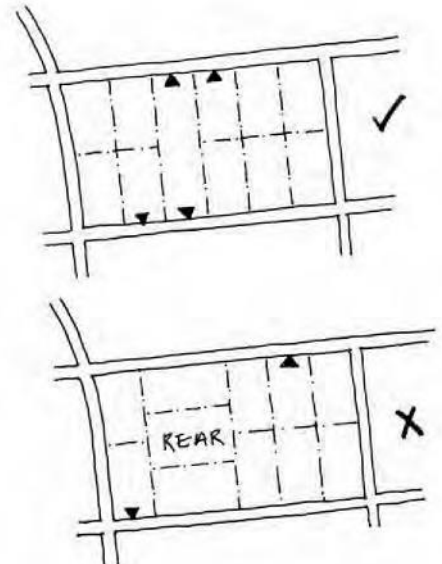


Diagram 4: All lots should front onto a legal road; through lots are permissible

Design Element 3: – Roads and Accessways:

1. In addition to Auckland Transport Code of Practice and Council's Development Code requirements, minimum road and design elements should be appropriate to the nature of the function that they provide and also reflect urban design legibility considerations – i.e. wayfinding, as set out in Table 1 below. road cross sections should be appropriate to the nature of the function that they provide and also reflect urban design legibility considerations – i.e. wayfinding. Refer typical cross sections (Attachment 1) for road hierarchy comprising; Arterial (i.e. Spine Road) Parkway Road (i.e. New Quarry Access Road); Motorway Edge Precinct Road; and Typical (Indicative) Road typologies (refer also Diagram 2 for street hierarchy).
2. Cyclists should be accommodated on the street carriageway.
3. A consistent palette of traffic management tools should be used across the ~~Drury South Industrial~~ Precinct. Traffic management devices such as chicanes, speed humps and other such restrictive management devices are not expected, however the use of thematic planting and measures such as localised narrowing to create thresholds or define changes in the street environment could be used.
4. All streets are required to accommodate strong avenue specimen tree planting. Refer Cross Sections Attachment 1. This planting is required to achieve the breaking up of the overall scale of the development particularly as seen from elevated locations, as well as to establish the enhanced expected amenity and character of the Precinct.
5. In addition to the street avenue planting a planted central median is also required on the roads identified as 'Arterial' and 'Parkway' ~~refer Attachment 1 Cross Sections.~~

Explanation:

Design Element 3 pertains to principles for the design of roads and other access routes within the ~~zone~~ Precinct. Road design should be appropriate to function and provide practical widths for vehicular access, including for emergency vehicles, parking, planting and services. ~~Useful minimum dimensions are:~~

• Four traffic lanes on arterial road	15.2m
• Two traffic lanes on local road	8.2m
• Cycle lane	1.5m
• Parallel parking lane	2.5m
• Service/utilities strip	3.0m
• Footpath	1.5m to 3.0m

~~The use of parallel kerbside parking is efficient in using the road as circulation area and reducing the need for onsite visitor parking. Kerbside parking lanes may be defined and delineated with planting bays if desired as illustrated in the road Cross Sections in Attachment 1.~~

Pedestrian and cycle paths should generally be integrated with road and reserve design. Paths which are separated from vehicle routes should be designed for safety.

Table 1 below sets out the indicative function and design elements of the collector roads within the Drury South Industrial and Mixed Use precinct.

Table 1 – Indicative Road Function and Required Design Elements

Road Name	Proposed Role and Function of Road in Precinct Area	Freight or Heavy Vehicle Route	Minimum Road Reserve²	Total Number of Lanes	Design Speed (kph)	Access Restriction	Bus Provision⁴	Median	Cycle Provision⁵	Pedestrian Provision
<u>Maketu Road¹ South of Link Road</u>	<u>Arterial</u>	<u>Yes</u>	<u>33.45m</u>	<u>4</u>	<u>60</u>	<u>Yes³</u>	<u>Yes</u>	<u>No</u>	<u>Yes – separated</u>	<u>Both Sides</u>
<u>Maketu Road (North of Link Road)</u>	<u>Collector</u>	<u>Yes</u>	<u>27.65m</u>	<u>2</u>	<u>60</u>	<u>Yes³</u>	<u>Yes</u>	<u>Yes (Flushed)</u>	<u>Yes</u>	<u>Both Sides</u>
<u>New Quarry Access Road¹</u>	<u>Collector</u>	<u>Yes</u>	<u>27.65m</u>	<u>2</u>	<u>50</u>	<u>No</u>	<u>Yes</u>	<u>Yes (Flushed)</u>	<u>Yes – shared path</u>	<u>Both Sides</u>
<u>Link Road</u>	<u>Collector</u>	<u>Yes</u>	<u>27.65m</u>	<u>2</u>	<u>60</u>	<u>No</u>	<u>Yes</u>	<u>Yes (Flushed)</u>	<u>Yes</u>	<u>Both Sides</u>
<u>Ramarama Road (Fitzgerald Road Connection)</u>	<u>Collector</u>	<u>Yes</u>	<u>21m</u>	<u>2</u>	<u>50</u>	<u>No</u>	<u>Yes</u>	<u>Yes (Flushed)</u>	<u>Yes</u>	<u>Both Sides</u>

Note 1: Already have Engineering Plan Approval and are under construction

Note 2: Typical minimum cross section which may need to be varied in specific locations where required to accommodate batters, structures, intersection design, significant constraints or other localised design requirements.

Note 3: Refer to Assessment Criteria I410.8.1(2)

Note 4: Carriageway lanes and geometry of intersections capable of accommodating buses.

Note 5: Type of cycle provision, i.e. separated or shared path, to be confirmed at the Engineering Plan Approval stage, based on nature and character of the Local Road.

Design Element 4: Reserves, Stormwater Management Areas and Riparian Planting:

1. Stormwater detention and treatment reserves should be located in general accordance with the locations shown in the Drury South Industrial Precinct Plan and in accordance with the relevant stormwater discharge consents, the Council's Development Code and relevant technical publications. The Cross Sections (Attachment 2) illustrate the Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections.
2. Stormwater ponds should be designed to fit in with the surrounding landscape and appears an integrally designed infrastructural component of the overall setting.
3. Vegetated buffers, not less than 40m in total width for any retained permanent or diverted stream, should be provided on the margins of streams, ponds and wetlands and should:
 - Include native species as identified in Attachment 3;
 - Include native trees on the lower and upper banks of ponds predominantly to the north and west to provide shade;
 - Provide a minimum of 10m of native planting either side of the stream corridor including shallow water rushes and sedges;
 - Avoid vegetation that will exacerbate flooding and the blockage of water flood flows along the immediate riparian corridor.

The only exception to these requirements is the retained permanent stream in the northwest of the ~~structure plan area~~ Precinct (adjacent to the Transpower site) which will be subject to a minimum requirement of 10m of native planting either side of the stream corridor only.

Note: Attachment 5 sets out 'Stream and Wetland Rehabilitation Guidelines (June 2013) for the DSSP area.

4. Walkways / cycleways along riparian corridors and through buffer planting should be designed to minimise any impacts on ecological function and give due consideration to personal safety and Crime Prevention Through Environmental Design (CPTED) principles.
5. Edge buffer reserves should be located in accordance with the Drury South Industrial Precinct Plan, be a minimum of 30m in width and be planted in generally accordance with Diagram 5 below. Planting should be fast growing rural shelter belt species capable of attaining a minimum height of 6 metres at maturity.



Diagram 5: Typical landscape buffer cross section

6. Suitable mechanisms to ensure the establishment and ongoing maintenance of landscaping of reserves and stormwater management areas until those areas are vested in the Council will be required to ensure the long term success of any landscaping.

Explanation:

Design Element 4 pertains to matters for consideration for locating, sizing and designing reserves stormwater management areas and riparian planting. These areas will be generally located in accordance with the locations shown in the Drury South Industrial Precinct Plan; regard should also be given to Design Element 5 when designing reserves within the Precinct.

The principal reserve network within the Precinct, as illustrated in the Drury South Industrial Precinct Plan, is structured around riparian protection and enhancement as well as stormwater management including detention and treatment. The reserve network is however designed for multiple functions and values including passive and active recreation, pedestrian / cycle commuter access, ecological values, visual screening / separation and aesthetic amenity.

The Precinct Plan also includes buffer reserves, adjoining the Light Industry zoned Sub-precincts A and B. The main purpose of which these reserve is to physically and visually screen and separate adjacent existing land uses and residents from these areas Precinct. These reserves are planted to maintain a robust rural character with a woodlot/ shelter belt form of land management. Whilst providing multiple functions including biodiversity and aesthetic values, their primary function will remain as that of a buffer to land uses outside of the Precinct.

Design Element 5: Reserve Interface Design:

1. Reserves intended for public recreation and use should be designed to be bounded by public roads as much as possible given topographical and natural feature constraints. (Note proposed buffer reserves are not intended to be bounded by public roads)
2. Where reserves or riparian buffer areas adjoin lots, the boundary should be securely delineated and fenced to avoid encroachment (refer Diagram 5).

Explanation:

Reserves intended for public use that are well fronted by public roads are more secure because of the informal surveillance from the road and activities that interface with the road across the carriageway. Ideally not less than half the total length of legal boundary of any reserve should adjoin a legal road.

Design Element 5a: Earthworks and Retaining Walls

1. Changes of level adjoining streets and open space corridors should be achieved by gently battering and contouring land.
2. Where retaining walls are required, they should be screened from public view. This may be achieved by planting and breaking up the vertical extent of walls through physical stepping.

Additional Sub-Precinct Criteria

In the case of subdivision within ~~the Sub-precinct B Motorway Edge Sub-Precinct and the Sub-precinct C Mixed Use Commercial Service Sub-Precinct~~, the following criteria shall also apply and take precedence over the general assessment criteria for subdivision stated above, where this is inconsistency or conflict.

Additional Design Element 6: Subdivision within Sub-precinct B Motorway Edge Sub-Precinct

1. Earthworks should be designed to retain a more natural, undulating topography and character outside of building platforms and other areas required through function to retain a flat topography.
2. Intersections between public roads serving the ~~s~~Sub-precinct and the north south primary road Arterial Road (Spine Road) (Maketu Road corridor) should be minimised.
3. Specimen tree planting should be provided on all public and internal private access roads within the Motorway Edge Sub-Precinct. Refer Attachment 1 Typical Road Cross Section for Motorway Edge Sub-Precinct.

Additional Design Element 7: Subdivision within Sub-precinct C Mixed Use Commercial Services Sub-Precinct

1. Where through lots with dual street frontage are created, these should provide frontage to both street edges (i.e. no rear elevations to the street). ~~The primary frontage should be to the Spine Road.~~ However, where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road.

**Attachment 4: PC46 text changes shown in
strikethrough and underline**

Amendments made by Plan Change 46 Decision are recorded in red underlined and ~~strikethrough~~.

Amendments made by Plan Change 46 Environment Court Decision are recorded in purple underlined and ~~strikethrough~~.

I410. Drury South Industrial and Mixed Use Precinct

I410.1. Precinct description

The Drury South Industrial and Mixed Use Precinct applies to approximately ~~364~~ 257ha of land, bounded by State Highway 1 in the west, the Drury Quarry and the Hunua foothills in the east, the rural areas of Fitzgerald Road in the north and Ararimu Road in the south, as shown on Precinct Plan 1. The transportation network development requirements of the precinct are shown on Precinct plan 2. The precinct is characterised by a flat to subdued contour and is traversed by the Hingaia Stream and its tributaries including the Maketu Streams. Land which surrounds and defines the precinct has more pronounced topographical contours. The precinct lies between the Drury and Ramarama interchanges on State Highway 1 and local traffic patterns are dominated by truck traffic accessing the Drury Quarry.

The zones within the precinct are Business – Light Industry Zone, Business – Heavy Industry Zone, Business – Mixed Use, and Open Space – Conservation Zone. The purpose of the precinct is to provide for land extensive industrial activity ~~and~~ employment opportunities, and a mix of residential and supporting commercial in identified areas, as well as provide for areas of stormwater management, existing and proposed network utility infrastructure, public open space and proposed roads, while recognising the ecological, cultural, landscape and other environmental constraints of the locality.

The precinct is divided into the following sub-precincts:

- Sub-precinct A Light Industry (approximately ~~445~~130ha)
- Sub-precinct B Motorway Edge (Light Industry) (approximately ~~804~~5ha)
- Sub-precinct C Commercial Services Mixed Use (Light Industry) (approximately ~~241~~0ha)
- Sub-precinct D Open Space / Stormwater Management (approximately ~~404~~41ha)
- Sub-precinct E: Heavy Industry (approximately ~~462~~4ha).

Sub-precinct A is zoned Business – Light Industry Zone. Activities within the sub-precinct are subject to additional standards.

Sub-precinct B is zoned Business – Light Industry Zone. The Transpower switchyard is located within this sub-precinct. Activities in the sub-precinct are subject to additional landscaping and building layout design standards.

Sub-precinct C is zoned Business - Mixed Use. Activities within this sub-precinct are subject to additional standards. The sub-precinct also provides for certain commercial activities to enable a mix of residential and supporting commercial uses. ~~Business—Light Industry Zone. The sub-precinct provides for offices, commercial services and~~

~~small-scale retail activities (such as food) and activities to support the industrial activities in the majority of the precinct.~~

Sub-precinct D is zoned Business – Light Industry Zone but provides for recreational uses and will be rezoned to an appropriate zone (e.g. Open Space - Informal Recreation Zone) once the Public Open Space / Stormwater Management Areas shown on Precinct Plan 1 are developed and vested.

Sub-precinct E has an underlying zoning of Business – Heavy Industry Zone. Activities within the sub-precinct are subject to additional standards.

I410.2. Objectives [rp/dp]

The objectives of the underlying Business – Light Industry Zone apply in sub-precincts A-~~CB~~, the objectives of the underlying Mixed Use zone apply in sub-Precinct C, the objectives of the Open Space – Informal Recreation Zone apply in sub-precinct D, the objectives of the underlying Business – Heavy Industry Zone apply in sub-precinct E and the Auckland-wide objectives as well as the precinct objectives below apply throughout in this the precinct, unless there is a conflict between the precinct objectives and the Auckland-wide objectives or underlying zone objectives, in which case the precinct objectives prevail.

- (1) Development maintains and enhances the stream ecology and the natural vegetation and habitat values of the Hingaia and Maketu streams.
- (2) The cultural heritage values of the precinct are maintained and enhanced.
- (3) Landscape and visual amenity values within the precinct are maintained and enhanced (particularly when viewed from State Highway 1).
- (4) The air quality, acoustic and other amenity values of surrounding areas are protected.
- (5) The establishment of a convenient and well-designed industrial area with good quality streetscapes and a ~~commercial-service~~ mixed use precinct is facilitated.
- (6) The timely and co-ordinated provision of robust and sustainable transport road, stormwater, water, wastewater, energy and communications infrastructure networks are provided.
- (7) A transport network to facilitate the safe and efficient movement of people, goods and services and manage effects on the safe and efficient operation of the surrounding transport network.
- (8) ~~Development and subsequent land use within the precinct avoids reverse sensitivity effects on the operations of t~~The Drury Quarry, activities within the Business – Heavy Industry Zone or the adjoining rural area operate efficiently and are not unreasonably constrained by other activities.

- (9) Development and land use within the precinct avoids or minimises adverse effects on significant existing high voltage electricity, natural gas and communications infrastructure.
- (10) Subdivision and development in the precinct area avoids or mitigates the adverse effects of stormwater runoff on surface and groundwater quality and avoids increased flood risks to habitable buildings upstream and downstream of the precinct.
- (11) Visual and physical links to the surrounding area are protected.
- (12) Landscaping themes are complementary, consistent and coherent throughout the precinct.
- (13) Activities sensitive to ~~traffic~~ noise ~~are controlled on~~ adjacent to the strategic freight network (~~Spine-Maketu~~ Road and New Quarry Access Road) serving the Drury Quarry are protected from unreasonable levels of transport noise.
- ~~(14) Activities sensitive to noise in Sub-Precinct C are protected from unreasonable levels of land transport noise.~~
- ~~(15) Activities in sub-precinct C do not compromise the function, role and amenity of the City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone and Business – Local Centre Zone (either zoned or identified in the Council approved Structure Plan for Drury).~~

I410.3. Policies [rp/dp]

The policies of the underlying Light Industry zone apply in sub-precincts A-~~BG~~, the policies of the underlying Mixed Use zone apply in sub-Precinct C, the policies of the Open Space – Informal Recreation Zone apply in Sub-precinct D, the policies of the Business – Heavy Industry Zone apply in sub-precinct E and the Auckland-wide policies as well as the precinct policies below apply throughout the precinct unless there is a conflict between the precinct policies or underlying zone policies and the Auckland-wide policies, in which case the precinct policies prevail.

- (1) Protect and enhance the significant streams and vegetation within Sub-precinct D.
- (2) Enhance the biodiversity of ecological resources and linkages and restore degraded ecosystems while reducing stream bank erosion through riparian planting along retained watercourses in sub-precincts B and D.
- (3) Reflect the cultural heritage values of the Hingaia and Maketu streams as cultural linkages between historical hill top pa and coastal areas in the development of sub-precinct D.
- (4) Maintain a sense of openness and naturalness on land adjacent to State Highway 1.
- (5) Maintain visual and physical links to the surrounding area within the precinct.

- (6) Utilise complementary, consistent and coherent landscaping themes throughout the precinct.
- (7) Design and construct attractive wetland areas for stormwater treatment and detention that also provide reserve and visual amenity opportunities.
- (8) Provide public open space buffer areas between the land to be developed for business activities and surrounding rural land.
- (9) Ensure buildings in Sub-precinct C address and engage the street and public realm and exhibit a high standard of amenity and pedestrian safety and convenience.
- ~~(10) Locate higher employee-generating activities in Sub-precinct C close to potential public transport routes.~~
- (140) Provide for transport infrastructure and connections including the spine Maketu Road, Link Road, New Quarry Access Road and Ramarama Road through to Fitzgerald Road, to support safe and efficient movement for all modes within and through the precinct and to and from the surrounding transport network.
- (121) Provide high quality public open spaces in Sub-precinct D that result in opportunities for passive surveillance.
- (132) Provide adequate stormwater, water, wastewater, communications and energy networks in a timely and co-ordinated manner to service ~~industrial activity~~ development within the precinct.
- (143) Co-ordinate ~~road transport~~ network (including the state highway) improvements both within and outside the precinct with development within the precinct to manage adverse effects on the safe and efficient operation of the surrounding road transport network.
- (154) Make adequate provision within Sub-precinct D to detain the 100 year Average Recurrence Interval (ARI) event without adverse effects on the extent of flooding of upstream and downstream areas.
- (165) Provide sufficient floodplain storage within Sub-precinct D to avoid increasing flood risk upstream and downstream, and manage increased flood risk within the precinct, to habitable rooms for all flood events from the 50% and up to the 1% AEP.
- (176) Undertake earthworks to form the modified floodplain in a manner which ensures flood effects on downstream or upstream areas are not exacerbated.
- (187) Avoid locating buildings within the 100 year ARI modified floodplain.
- (198) Avoid locating infrastructure within the 100 year modified ARI floodplain unless it can be designed to be resilient to flood related damage and does not exacerbate flood risks for upstream or downstream activities.

- (2019) Identify overland flowpaths in a stormwater management plan or discharge consent and ensure that they remain unobstructed and able to convey surface water runoff safely into the reticulated stormwater network.
- (240) Avoid or mitigate adverse effects on surface or groundwater quality from stormwater runoff within the precinct through on-site stormwater management and containment and the provision of catchment based stormwater treatment ponds.
- (221) Mitigate any diversion or piping of existing degraded or modified watercourses by the ecological enhancement and landscape planting of existing natural and diverted watercourses within and immediately adjacent to the precinct.
- (232) ~~In Sub-precinct A, B, D and E, A~~ avoid the establishment of sensitive residential land uses ~~within the precinct~~.
- ~~(24) Avoid locating potentially sensitive commercial services within 500 metres of the Quarry zone boundary or within 100 metres of the Business – Heavy Industry Zone or any rural zone boundary.~~
- (253) Control activities ~~potentially~~ sensitive to ~~traffic~~ noise ~~adjacent to~~ ~~on~~ the strategic freight network (~~Spine Maketu~~ Road and New Quarry Access Road) serving the Drury Quarry. so that occupants are not exposed to unreasonable levels of transport noise.
- (264) Manage development and subsequent land use to minimise adverse effects on the efficient and safe operation of existing high voltage electrical transmission and distribution lines, fibre optic cables and the Vector natural gas pipeline.
- (25) Encourage a mix of residential and commercial uses within Sub-precinct C close to potential public transport routes and open space amenity, which provides opportunities to integrate with the Drury South Residential Precinct and the balance of the Drury South Industrial and Mixed Use Precinct.
- (26) Provide for a range of commercial activities in Sub-Precinct C that will not compromise the role and amenity of the Business – Metropolitan Centre zone, Business – Town Centre zone (either zoned or identified in the Council approved Structure Plan for Drury) beyond those effects ordinarily associated with trade effects on trade competitors. In particular:
- (a) Discourage the concentration of retail activity in one part of sub-precinct C, having regard to the effects of the scale and type of retail activity proposed;
- (b) Appropriately stage the provision of retail (including supermarkets) in Sub-Precinct C over time as development in the surrounding area occurs;
- (c) Enable appropriately scaled office activities to establish in sub-precinct C that support surrounding land uses in the Drury South precinct.

(27) Encourage a complementary mix of convenience activities to locate in the southern part of sub-precinct C, where it would be most accessible to the Drury South Residential precinct and would support a local community focal point.

I410.4. Activity table

The provisions in any relevant overlays, zone and the Auckland-wide apply in this precinct unless otherwise specified below.

In the event of a conflict between the zone or Auckland-wide rules and the precinct rules, the precinct rules prevail.

Table I410.4.1 specifies the activity status of development and subdivision activities in the sub-precincts A-C and E pursuant to sections 9(3) and 11 of the Resource Management Act 1991.

Table I410.4.1 Activity table 1 – Sub-precincts A to E

Activity		Activity status
Development		
(A1)	Subdivision, or any development of land which precedes a subdivision, being undertaken which complies with Standard I410.6.3 below. (Note that for the purposes of this rule "development" means the carrying out of any work on the land including any earthworks or site preparation activities and the construction or alteration of any building)	RD
(A2)	Subdivision, or any development of land which precedes a subdivision, being undertaken which does not comply with Standard I410.6.3 below, or results in increased flood risk to habitable rooms for all flood events from the 50% and up to 1% AEP flood event downstream and upstream of the Structure Plan area.	NC
(A3)	The creation of vehicle access to any site with frontage to or from the Spine <u>Maketu</u> Road shown on Precinct Plan 2 which also has frontage to another road shown on that Plan	RD
<u>(A4)</u>	<u>Residential activities in sub-precinct C which do not comply with Standard I410.6.5 (no-complaints covenant)</u>	<u>NC</u>

Table I410.4.2 specifies the activity status of land use activities in Sub-precinct A pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.2 Activity table 2 – Sub-precinct A (Light Industry)

Activity		Activity status
Use		
Commerce		
<u>(A45)</u>	Commercial services	NC
<u>(A56)</u>	Dairies	NC
<u>(A67)</u>	Drive-through restaurants	NC

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(A78)	Entertainment facilities	NC
(A89)	Food and beverage	NC
(A910)	Retail over 450m ² <u>except for Trade Suppliers</u>	Pr
(A11)	<u>Trade Suppliers</u>	<u>P</u>
(A10)	Activities that do not comply with standards in I410.6.2(9)	D

Table I410.4.3 specifies the activity status of land use and development activities in Sub-precinct B pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.3 Activity table 3 – Sub-precinct B (Light Industry - Motorway Edge)

Activity		Activity status
Use		
Commerce		
(A112)	Commercial services	NC
(A123)	Dairies	NC
(A134)	Drive-through restaurants	NC
(A145)	Entertainment facilities	NC
(A156)	Food and beverage	NC
(A167)	Retail over 450m ²	Pr
Development		
(A178)	New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities	C
(A189)	Additions to buildings that are less than: <ul style="list-style-type: none"> • 10 per cent of the existing gross floor area of the building; or • 250m² whichever is the lesser	P
(A1920)	Internal alterations to buildings	P
(A20)	Activities that do not comply with the standards in I410.6.2(9)	D

Table I410.4.4 specifies the activity status of land use and development activities in Sub-precinct C pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.4 Activity table 4 – Sub-precinct C (~~Light Industry – Commercial Services~~Business - Mixed Use)

<u>Activity</u>		<u>Activity status</u>
<u>Use</u>		

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<u>Commerce</u>		
<u>(A21)</u>	<u>Trade Suppliers</u>	<u>P</u>
<u>(A22)</u>	<u>Garden Centres</u>	<u>P</u>
<u>(A23)</u>	<u>Motor Vehicle Sales</u>	<u>P</u>
<u>(A24)</u>	<u>Marine Retail</u>	<u>P</u>
<u>(A25)</u>	<u>Department Stores</u>	<u>NC</u>
<u>(A26)</u>	<u>A single supermarket greater than 2000m² gross floor area</u>	<u>RD</u>
<u>(A27)</u>	<u>Retail not otherwise permitted up to 200m² gross floor area per tenancy</u>	<u>P</u>
<u>(A28)</u>	<u>Retail not otherwise permitted greater than 200m² gross floor area per tenancy</u>	<u>D</u>
<u>(A29)</u>	<u>Offices up to 500m² per tenancy</u>	<u>P</u>
<u>(A30)</u>	<u>Offices between 501m² – 1000m² per tenancy</u>	<u>RD</u>
<u>(A31)</u>	<u>Offices greater than 1000m² per tenancy</u>	<u>D</u>
<u>(A32)</u>	<u>Activities that do not comply with the standards in I410.6.2(9)</u>	<u>D</u>

Activity		Activity status
Use		
<u>Commerce</u>		
<u>(A33)</u>	<u>Commercial services</u>	<u>P</u>
<u>(A34)</u>	<u>Dairies up to 200m² gross floor area</u>	<u>P</u>
<u>(A35)</u>	<u>Drive-through restaurants</u>	<u>P</u>
<u>(A36)</u>	<u>Retail over 450m²</u>	<u>Pf</u>
<u>(A37)</u>	<u>Offices</u>	<u>P</u>
<u>Community</u>		
<u>(A38)</u>	<u>Childcare centres</u>	<u>P</u>
<u>(A39)</u>	<u>Tertiary Education facilities for industrial training purposes only</u>	<u>P</u>
<u>(A40)</u>	<u>Healthcare facilities</u>	<u>P</u>
Development		
<u>(A41)</u>	<u>New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities</u>	<u>G</u>
<u>(A42)</u>	<u>Additions to buildings that are less than:</u> <ul style="list-style-type: none"> • 10 per cent of the existing GFA of the building; or • 250m² <u>whichever is the lesser</u>	<u>P</u>

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(A43)	Internal alterations to buildings	P
(A44)	Activities that do not comply with Standards I410.6.1.1–I410.6.1.4	NC
(A45)	Activities that do not comply with the standards in I410.6.2	D

Table I410.4.5 specifies the activity status of land use activities in Sub-precinct D pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.5 Activity table 5 – Sub-Precinct D (Open Space – Informal Recreation Zone / Stormwater Management)

Activity		Activity status
Use		
Community		
(A46 2)	Any activity listed as a permitted activity in the Open Space – Informal Recreation Zone	P
(A47 3)	Stormwater management devices	P
(A48 4)	Activities that do not comply with the standards in I410.6.2	D

Table I410.4.6 specifies the activity status of land use activities in Sub-precinct E pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.6 Activity table 6 – Sub-precinct E (Heavy Industry)

Activity		Activity status
Use		
Commerce		
(A49 5)	Dairies	NC
(A50 6)	Food and beverage	NC
(A51 7)	Activities that do not comply with the standards in I410.6.2	D

I410.5. Notification

- (1) An application for resource consent for a controlled activity listed in Tables I410.4.1 - I410.4.6 above will be considered without public or limited notification or the need to obtain written approval from affected parties unless the Council decides that special circumstances exist under section 95A(4) of the Resource Management Act 1991.
- (2) Any application for resource consent for an activity listed in Tables I410.4.1 - I410.4.6 and which is not listed in I410.5(1) will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.
- (3) When deciding who is an affected person in relation to any activity for the purposes of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in [Rule C1.13\(4\)](#).

I410.6. Standards

The overlay, Auckland-wide and zone standards apply in this precinct, unless otherwise specified below.

For the purposes of Rule E27.6.1(2)(b), the following activities have been assessed as part of an Integrated Transport Assessment on which the Drury South Industrial and Mixed Use Precinct provisions for Sub-precinct A and C are based:

<u>Activity</u>	<u>GFA (m²)</u>
<u>Supermarket</u>	<u>4,500</u>
<u>Retail</u>	<u>4,400</u>
<u>Offices</u>	<u>15,000</u>
<u>Trade suppliers</u>	<u>11,000</u>
<u>Supporting commercial services</u>	<u>3,300</u>
<u>Residential – apartments</u>	<u>12,300</u>
<u>Activity</u>	<u>GFA (m²)</u>
<u>Residential – Retirement Villages</u>	<u>22,000</u>

I410.6.1. Sub-precinct C

All activities listed as permitted in Table I410.4.4 must comply with the following standards

I410.6.1.1. Retail and Office Gross Floor Area

- (1) Retail must not exceed a total of 1000m² gross floor area in Sub-Precinct C. This excludes one supermarket greater than 2000m², service stations, trade suppliers, garden centres, motor vehicle sales, marine retail and food and beverage.

- (2) Retail activities specified in (1) above, greater than 1000m² and up to and including 4,500m² in Sub-Precinct C will be assessed as a restricted discretionary activity on a non-notified basis.
- (3) Retail activities specified in (1) above, greater than 4,500m² in Sub-Precinct C will be assessed as a discretionary activity.
- (4) Offices must not exceed 15,000m² in total in Sub-Precinct C. Offices greater than 15,000m² will be assessed as a discretionary activity.
- (5) Trade suppliers within Sub-Precincts A and C must not exceed a total of 11,000m² gross floor area. Trade suppliers that are greater than 11,000m² gross floor area will be assessed as a restricted discretionary activity on a non-notified basis.

I410.6.1.1. Dairies

- ~~(1) Dairies must not exceed 200m² gross floor area.~~
- ~~(2) Dairies must be located more than 100 metres from the nearest rural zone boundary.~~

I410.6.1.2. Food and beverage

- ~~(1) Food and beverage must not exceed 200m² gross floor area.~~
- ~~(2) Food and beverage must be located more than 100 metres from the nearest rural zone boundary.~~

I410.6.1.3. Childcare centres

- ~~(1) Childcare centres must be located more than 500 metres from the nearest Business – Heavy Industry Zone boundary.~~
- ~~(2) Childcare centres must be located more than 100 metres from the nearest rural zone boundary.~~

I410.6.1.4. Healthcare facilities

- ~~(1) Healthcare facilities must be located more than 500 metres from the nearest Business – Heavy Industry Zone boundary.~~
- ~~(2) Healthcare facilities must be located more than 100 metres from the nearest rural zone boundary.~~

I410.6.2. Sub-precincts A-E

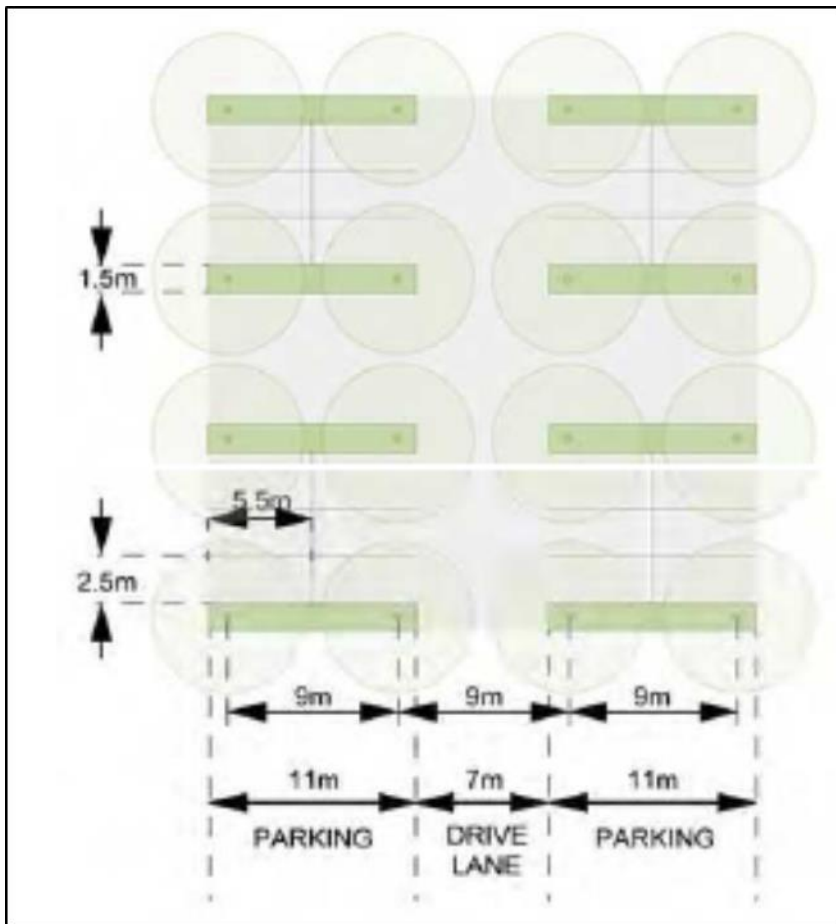
The standards are those listed in the Auckland-wide rules (in respect of sub-precincts A-E), Business – Light Industry Zone (in respect of sub-precincts A-~~BG~~), Business – Mixed Use Zone (in respect of sub-precinct C), the Open Space – Informal Recreation Zone (in respect of sub-precinct D) and the Business – Heavy Industry Zone (in respect of Sub-precinct E) except as follows:

- ~~(1) A minimum parking rate of 1 space per 40m² gross floor area applies to commercial services in Sub-precinct C~~
- (21) Buildings must not exceed 25m in height in Sub-precinct E and Sub-Precinct C.
- (32) Within the Drury South Industrial and Mixed Use Precinct the industrial zone height in relation to boundary control will not apply, and instead, buildings must not project beyond a 45 degree recession plane measured from a point 2 metres vertically above ground level along the residential or public open space boundary.
- (43) All new roads must be designed and constructed to comply with the provisions of New Zealand Standard NZS6806:2010 "Acoustics – Road Traffic Noise – New and Altered Roads".
- (54) The upward waste light ratio from any luminaire must not be more than 3 per cent. The upward waste light ratio is defined as: "The ratio of the light flux emitted above the horizontal by a luminaire to the total light flux emitted, expressed as a percentage, evaluated for the upcast angle".
- ~~(65) The front yard landscaping of sites used for an industrial purpose must comprise a 3 metre wide continuous (except for those areas used for vehicle and pedestrian access) planting of multi-row Phormium tenax (flax) planted at 1.5 metre centres in staggered rows on a grid. This planting requirement must not apply to sites within sub-precincts B or C.~~ Any required security fence must be setback a minimum of 3 metres from the front boundary and such fencing (whether in front yards or on rear or side boundaries) must be 2 metre maximum height and must not incorporate barbed or razor wire or an angled top. Fence posts and wire mesh are to be black coloured.
- ~~(76) All side boundaries of sites in the Business – Light Industry Zone and all side and rear boundaries of sites in the Business – Heavy Industry Zone must be planted with a row of either Leyland Cypress, Casuarina (sheoak) or Macrocarpa at 3 metre centres located 1.5 metres in from the side or rear boundary and buildings must be setback from the relevant boundary by a minimum of 3.5 metres. This requirement must not apply to sites within sub-precincts B, C or D. Where sites with side or rear boundaries abut State Highway 1 within Sub-precinct B, all such boundaries must be planted with a double row of Leyland Cypress with 2 metres between rows and trees within each row planted at 3 metre centres. Tree rows are to be staggered and the first row is to be located 1.5 metres in from the side or rear boundary and buildings must be setback from the relevant boundary by a minimum of 5.5 metres accordingly. Any noise attenuation wall or fence designed to deflect noise arising from State Highway 1 must be fully screened by planting in views from the motorway.~~

(7) Where any new building is proposed, the reflectivity value of the roof or roofs must not exceed 30 per cent.

(8) Within Sub-precinct B no less than 30 per cent of the net site area of each site is to be in permeable landscape area (including any on site stormwater treatment). Where on site car parking adopts a layout fully conforming with the fully planted permeable carpark design layout detailed in Figure I410.6.2.1 below, the permeable landscape area may be reduced to no less than 20 per cent of the site area.

Figure I410.6.2.1 Carpark design



(9) Within the Sub-precinct C the ground floor of all buildings must have a minimum floor to ceiling height of 4.5 metres to allow long term adaptive reuse of light industrial buildings for commercial services activities.

(409) Any land modification to form the 1% AEP modified flood plain must:

- (a) not reduce flood storage capacity in the precinct; and
- (b) not change the flood characteristics upstream or downstream of the precinct for all flood events from the 50% and up to the 1% AEP flood event in ways that result in an increase in peak flood levels.

I410.6.3. Subdivision or development preceding subdivision in Sub-precincts A – E

- (1) Proposed roads (including pedestrian and bicycle routes) identified on the Precinct Plan 1 and Precinct Plan 2, must be ~~constructed and vested in council upon subdivision or development of the relevant area at no cost to the council. Proposed roads must be~~ located generally in the position indicated on Precinct plan 1 and Precinct Plan 2, but the precise location will be subject to detailed engineering and subdivision design. An alternative roading layout may be proposed provided that an integrated approach to land use and transport can be achieved throughout the Drury South Industrial and Drury South Residential precincts.
- (2) The land identified as part of Sub-precinct D on ~~the~~ Precinct plan 1 ~~and Precinct Plan 2~~ must be developed ~~and vested in council~~ upon subdivision or development of the relevant area ~~at no cost to the council~~. Proposed ~~reserves and~~ stormwater management areas must be located generally in the position indicated on Precinct Plan 1, and must be offered to the Council, the structure plan but precise location will be subject to detailed engineering and subdivision design. Vegetated buffers not less than 40 metres in total width are to be provided along stream corridors within stormwater management areas and must include a minimum of 10 metres of native riparian planting either side of the stream edge. Off-site stormwater management services including wetlands and the primary and secondary stormwater conveyance system is to be vested at no cost to the council in accordance with a network discharge consent or other relevant discharge consent or a stormwater management plan approved by the Council. All stormwater management areas and wetlands must be designed to serve a dual function to treat stormwater and provide ecological benefits.
- (3) Reticulated water services must be supplied to the precinct and all new water infrastructure must be fully funded (including consenting costs) by the developer(s) of the land within the precinct. Such services must be provided to the relevant part of the precinct in advance of or concurrent with a resource consent for subdivision and development provided that any necessary resource consents or designations for the reticulated water services have been granted.
- (4) Wastewater services are to be provided to the precinct either by (in no particular order):
 - (a) the construction of a connection to Watercare's existing wastewater network and any necessary upgrading of that network that is required to service the Precinct; and/or
 - (b) the construction of a Wastewater Treatment Plant to service the Precinct, or a larger catchment if required.

In either case wastewater services are to be provided in a manner approved by Watercare and constructed to Watercare's design and operational standards. The developer(s) must fully fund (including consenting costs) all new wastewater infrastructure required to service the Precinct. Wastewater services must be provided to the relevant part of the Precinct in advance of or concurrent with a resource consent for subdivision and development provided that any necessary resource consents or designations for the reticulated water services have been granted. In the event that a new regional wastewater treatment plant becomes available to service the precinct, and subject to approval from Watercare, the precinct could be connected to that plant.

Note: that for the purposes of the Standards I410.6.3(1)-(4) above, references to "Watercare" means Watercare Services Limited and references to "development" means the carrying out of any work on the land including any earthworks or site preparation activities and the construction or alteration of any building.

I410.6.4. Sub-Precinct C (Noise and Ventilation)

- (1) Any building containing a noise sensitive space within Sub-Precinct C must be located and/or designed and/or insulated, or screened by suitable barriers, so that the design noise levels do not exceed:
 - (a) 40 dB $L_{Aeq(24 h)}$ inside any noise sensitive space; and
 - (b) 70 dB $L_{Aeq(24 h)}$ incident on any façade facing Maketu Road that encloses a noise sensitive space.
- (2) Compliance with Standard I410.6.4(1) must be determined based on a road traffic noise level 10m from the nearest traffic lane of Maketu Road of 75 dB $L_{Aeq(24 h)}$, 83 dB $L_{eq(24 h)}$ at 63 Hz and 79 dB $L_{eq(24 h)}$ at 125 Hz.
- (3) For residential dwellings, where the internal noise levels in Standard 1 can only be complied with when doors or windows to those rooms are closed, those rooms adopt the relevant mechanical ventilation and/or cooling requirements of E25.6.10(3)(b) or (c).
- (4) For the avoidance of doubt, the noise insulation requirements set out in Standard I410.6.4(1)-(3) apply in addition to any other noise insulation requirements set out in Chapter E25 – Noise and Vibration.

I410.6.5. Sub-Precinct C (Restrictive non-complaint covenant)

- (1) Residential activities in Sub-precinct C shall be subject to a restrictive non-complaint covenant* in favour of the operator of Drury Quarry.

*For the purposes of the Drury South Industrial and Mixed Use precinct and of this rule a 'restrictive non-complaint covenant' is defined as a restrictive covenant registered on the Title to the property or a binding agreement to covenant, in favour of the operator of Drury Quarry, by the landowner (and binding any successors in title) not to complain as to effects generated by the lawful operation

of the quarry, including heavy vehicle movement noise. The restrictive non-complaint covenant is limited to the effects that could be lawfully generated by the quarry activities at the time the agreement to covenant is entered into. This does not require the covenantor to forego any right to lodge submissions in respect of resource consent applications or plan changes in relation to quarry activities (although an individual restrictive non-complaint covenant may do so.) Details of the existence of covenant documents may be obtained from the Quarry Operator, its solicitors, or in the case of registered covenants by searching the Title to the property.

I410.7. Assessment – controlled activities

I410.7.1. Matters of control

The Council will reserve its control to all of the following matters when assessing a controlled activity resource consent application:

- (1) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct B:
 - (a) retention of existing vegetation;
 - (b) planting;
 - (c) building design and appearance;
 - (d) parking area design;
 - (e) storage and waste management location and design; and
 - (f) vehicular access;
- ~~(2) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:~~
 - ~~(a) building design;~~
 - ~~(b) parking area design;~~
 - ~~(c) signs;~~
 - ~~(d) service area location;~~
 - ~~(e) vehicular access; and~~
 - ~~(f) mitigation of traffic noise.~~

I410.7.2. Assessment criteria

The Council will consider the relevant assessment criteria below for controlled activities:

- (1) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct B:

(a) retention of existing vegetation:

- (i) the extent to which layouts retain and protect existing mature trees, particularly those of indigenous species, where these contribute to the site character and amenity.

(b) planting:

- (i) the extent to which planting is designed to have a large scale landscape effect and combine native as well as appropriate exotic species to provide seasonal change and quality amenity; or
- (ii) where public open space land adjoins the motorway, the extent to which boundary planting that creates a continuous visual barrier to eastward views from the State Highway 1 corridor is avoided and whether landscape design emphasises the current sequence of intermittent views to the Hunua Ranges from the State Highway 1 corridor and the pattern of variable depth of such views;

- (iii) the extent to which the integrated site layout, building and landscape design provides a high quality and visually attractive frontage to State Highway 1, while ensuring any landscaping, including the use of large tree and shrub species, does not restrict access to the electricity infrastructure for maintenance and does not compromise the safe and reliable operation of the electricity network.

Advice note: In considering whether this criterion is met, the Council may take into account whether a review has been undertaken by or on behalf of Counties Power which confirms that the proposed planting will not affect the safe and reliable operation and maintenance of the electricity network.

(c) building design and appearance:

- (i) the extent to which buildings are located with design consideration for their visibility and reduced visual impact as viewed from the State Highway 1 corridor and the desirability of maintaining a sense of openness as seen from the motorway; or
- (ii) the extent to which the visual mass of larger buildings is minimised by employing the following methods:
 - utilising subdued, recessive colours;
 - providing variation in materials and finish for facades viewed from the motorway;
 - creating variation of roof profiles with consideration given to the overall roofscape viewed from the motorway;
 - all rooftop servicing and plant should be designed as an integral part of the roofscape with particular consideration given to the view from the motorway;

(d) parking area design:

- (i) the extent to which parking areas are designed to incorporate trees to break up the scale of hard surface areas; or
- (ii) the extent to which the fully planted permeable carpark design layout (refer Figure I410.6.2.1 above) style of parking is adopted within Sub-precinct B;

(e) storage and waste management location and design:

- (i) the extent to which storage and waste management activities are located and/or designed to be screened from view of State Highway 1;

(f) vehicular access:

- (i) the extent to which proposed vehicle access to sites adjoining the Spine Maketu Road and New Quarry Access Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;

~~(2) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:~~

~~(a) building design:~~

- ~~(i) the extent to which buildings on corner lots are designed to provide for a quality architectural response to the corner. Appropriate design responses would be provision of additional height at the corner, windows and activities addressing both street frontages and avoiding blank walls to one or both sides of the corner; or~~
- ~~(ii) the extent to which built development fronts the street with a quality recognisable pedestrian entry to the street;~~

~~(b) parking area design:~~

- ~~(i) the extent to which parking is provided on the road network adjacent to sub-precinct C areas and on-site parking layouts are designed in accordance with the typical layout identified in Appendix I410.11.1.~~

~~(c) signs:~~

- ~~(i) the extent to which signs for each sub-precinct C development are coordinated including the physical location of signs, their type-face, style and content;~~

~~(d) service area location:~~

- ~~(i) the extent to which service areas are located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service/storage and dock areas;~~

~~(e) vehicular access:~~

- ~~(i) the extent to which proposed vehicle access to sites adjoining the Spine Road and New Quarry Access Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;~~

~~(f) mitigation of traffic noise:~~

- ~~(i) the extent to which premises offering food and beverages, health professional rooms and childcare centres (being permitted activities which may be sensitive to heavy commercial vehicle traffic noise) are designed to mitigate traffic noise effects. Mitigation measures may include acoustic treatment of buildings and arranging site layout so noise sensitive activities are screened from the heavy traffic noise.~~

I410.8. Assessment – restricted discretionary activities

I410.8.1. Matters of discretion

The Council will consider the relevant assessment criteria below for restricted discretionary activities, in addition to the assessment criteria specified for the relevant restricted discretionary activities in the overlay, Auckland wide or zone provisions:

- (1) subdivision or any development of land which precedes a subdivision being undertaken which complies with Standard I410.6.3:
 - (a) the relevant council and Auckland Transport development code or codes of practice;
 - (b) geotechnical and seismic;
 - (c) servicing and development sequencing;
 - (d) design and layout;
 - (e) earthworks;
 - (f) transportation network development requirements;
 - (g) ecology;
 - (h) Counties Power 110 Kv sub-transmission lines; and
 - (i) stormwater management;
- (2) the creation of vehicle access to any site with frontage to or from the **Spine Maketu** Road shown on Precinct Plan 2 which also has frontage to another road shown on that plan:
 - (a) effect of the location and design of the access on the safe and efficient operation of the adjacent transport network; and
 - (b) adequacy of access arrangements.
- (3) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:
 - (a) building design;
 - (b) parking area design;
 - (c) signs;
 - (d) service area location;
 - (e) vehicular access; and
 - (f) mitigation of traffic noise.

- (4) A single supermarket greater than 2000m², supermarkets exceeding 450m² and up to 2000m² gross floor area per tenancy, offices between 501m² – 1000m² per tenancy and retail greater than 1000m² and up to and including 4,500m² in Sub-Precinct C
- (a) the compatibility of the effects of intensity and scale of the development arising from the numbers of people and/or vehicles using the site, with the existing and expected future amenity values of the surrounding area and any practicable mitigation measures that would be appropriate to manage those effects;
 - (b) the effects of the design and location of parking areas and vehicle access and servicing arrangements on visual amenity of the streetscape and on pedestrian safety;
 - (c) the effects of the size, composition, characteristics, and concentration of retail or office activities proposed in Sub-precinct C on the existing and expected future function, role and amenity of other Metropolitan or Town Centres that are zoned or are identified in a Council approved Structure Plan for Drury, having regard to the need to enable convenient access of communities to commercial and community services while disregarding any effects ordinarily associated with trade effects on trade competitors;
 - (d) In determining (c) above, whether the activity is coordinated with the rate of residential and commercial development in the local area to ensure that the activity individually, or in combination with other consented or permitted activities, meets the needs of the local catchment;
 - (e) whether the retail or office proposal, individually, or in combination with other consented or permitted activities, meets the needs of the local residential and employment catchment;
 - (f) the assessment of the above matters having regard to the need to provide for the functional requirements of the activity.
- (5) Trade Suppliers in Sub-Precincts A and C greater than 11,000m² gross floor area
- (a) Effects of the activity on the safe and efficient operation of the surrounding transport network.
- (6) Infringement I410.6.4 – Sub-Precinct C (Noise and Ventilation)
- (a) the effects of land transport noise of the noise sensitive activity;
 - (b) the potential reverse sensitivity effects of the infringement.

I410.8.2. Assessment criteria

The Council will restrict its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application, in addition to the

matters specified for the relevant restricted discretionary activities in the overlay, Auckland-wide or zone provisions:

- (1) subdivision, or any development of land which precedes a subdivision being undertaken, which complies with Standard I410.6.3:
 - (a) the extent to which the subdivision or development is in accordance with the relevant codes or codes of practice or engineering standards; and whether the road network is consistent with its intended function as set out within those codes or codes of practice and the subdivision design assessment criteria set out in Appendix I410.11.
 - (b) the extent to which the subdivided lots or the land on which the development is to be undertaken are geotechnically suitable for the development of a permitted activity or an activity for which resource consent has been obtained. This may include an assessment of the following:
 - (i) any proposed fill materials;
 - (ii) stability in areas of deep cut particularly adjacent to the boundaries of the Precinct;
 - (iii) settlement and stability issues associated with the Hingaia and Maketu streams;
 - (iv) time dependent settlement;
 - (v) ground seismicity and buffer zone; or
 - (vi) liquefaction;
 - (c) the extent to which subdivision and development occurs in a logical and sequential manner in relation to:
 - (i) the implementation of improvements and/or upgrades to the roading network;
 - (ii) the implementation of a potential pedestrian and cycling connection shown on Precinct Plan 1 between the Drury South Residential Precinct and Sub-Precinct C and the integration of this with proposed built development in Sub-Precinct C;
 - (iii) the establishment of the stormwater management areas within sub-precinct D identified on Precinct Plan 1 and catchment wide stormwater management devices as identified in the relevant discharge consent and/or stormwater management plan required by the special information requirements below;
 - (iii) the provision for overland flowpaths identified in an approved discharge consent and/or stormwater management plan required by the special information requirements below; or

- (iv) the provision of wastewater facilities, water supply, electricity, gas and telecommunications, including the protection and /or relocation of any existing local electricity, gas and communications assets;
- (d) the extent to which subdivision design and layout gives effect to the objectives and policies identified for the Drury South Industrial and Mixed Use Precinct and the subdivision design assessment criteria set out in Appendix I410.11.1.
- (e) the extent to which the earthworks required by the subdivision or development:
- (i) avoid or mitigate adverse effects on land stability, existing underground infrastructure facilities (such as the Vector gas pipeline and Telecom telecommunications cables), and groundwater quantity and quality;
 - (ii) avoid or mitigate adverse effects on the visual quality of the landscape or natural landforms, watercourses, habitats or vegetation;
 - (iii) avoid or mitigate adverse effects on traffic management within the area or create damage, danger, or nuisance to surrounding residents or the Ramarama School;
 - (iv) consider opportunities to recharge the aquifer using treated stormwater where permeable soils are available;
 - (v) ensure that the creation of level development platforms are contoured to integrate with the surrounding street environment and open space corridors;
 - (vi) screen retaining walls from public view;
 - (vii) provide and maintain continuity of overland flow paths both within the site, as well as upstream and downstream; and where overland flow paths are diverted and/or altered show how:
 - potential effects on other properties from the diversion or alteration is avoided or mitigated;
 - effects from scouring and erosion are mitigated;
 - further changes to the overland flow path will be limited, when appropriate through an easement in favour of Council;
 - (viii) if located in the 1% AEP modified flood plain, including earthworks for the formation of stormwater management devices such as wetlands and/or for necessary infrastructure (including associated landscaping and accessways), whether:
 - the design of the device, including associated earthworks, landscaping and accessways avoids impeding flood flows or

otherwise exacerbating flood risk upstream or downstream of the site and how such effects can be avoided;

- the design of the device or mitigation works is resilient to damage from the full range of flood events;
- access to the device for maintenance is provided and maintenance plans address potential effects that may result from the proposed access route;

(f) the extent to which the following transportation network requirements are met:

- (i) whether subdivision or development will result in the central 'Spine Maketu Road' being progressively constructed on an alignment consistent with that indicated in Precinct plan 2;
- (ii) whether the following road projects indicatively shown on Precinct plan 2 will be completed before any buildings within the precinct are occupied:
 - the realignment of existing Quarry Road onto the alignment of the 'Spine Maketu Road' from the State Highway 1 over-bridge to the southern extent of the first stage of subdivision;
 - the upgrading of the existing Quarry Road/Great South Road intersection;
 - the provision of traffic signals or an alternative upgrade which achieves equivalent transport performance at the existing Great South Road/State Highway 22 (Karaka Road) intersection;
 - under the scenario where development of the Precinct proceeds in advance of the Mill Road Corridor Project, the upgrading of the right turn bay on Waihoehoe Road at the Waihoehoe Road/Fitzgerald Road intersection;
- (iii) whether a new dedicated pedestrian path and cycleway has been constructed between the existing Drury township and the precinct before development and occupation of more than 25 hectares of Industrial zoned land within the precinct occurs;
- (iv) whether Ramarama Road, at the northern boundary of the precinct ~~remains open, is closed to all vehicular traffic by the time 58 hectares of the developable area in the Ramarama Road Transport Area as defined on Precinct Plan 2 has been subdivided or developed;~~
- (v) whether the Link Road from the Spine Maketu Road to Fitzgerald Road shown on Precinct Plan 2 is provided and shoulder widening, intersection treatments and localised widening works within the existing road reserve on Fitzgerald Road between the Link Road and

Waihoehoe Road is undertaken before Ramarama Road is closed at the northern boundary of the Precinct;

(vi) whether the 'Avenue' Road and the portion of the Spine Maketu Road shown on Precinct Plan 2 is provided as the adjacent Sub-precinct C is developed, and whether the 'Avenue' Road is connected with Maketu Road at the southern end of Sub-precinct C, and is extended to, but not connected with, Maketu Road at the northern end of Sub-Precinct C. An alternative location for vehicle access through a portion of Sub-precinct C (the 'Avenue Road') may be appropriate where it is safe and efficient, and provided that a continuous and high amenity pedestrian and cycle connection is located along the western edge.;

(vii) whether Ramarama Road, at the southern boundary of the precinct, is closed to all vehicular traffic by the time 89 hectares of Industrial zoned land within the precinct has been subdivided or developed;

(viii) whether the southern portion of the Spine Maketu Road that connects to Ararimu Road is constructed before:

- Ramarama Road is closed at the southern boundary of the Precinct; or
- any development of the precinct south of the New Quarry Access Road shown on Precinct Plan 2 occurs;

(ix) whether State Highway 1 Ramarama Interchange is capable of accommodating the traffic from the subdivided and developed portion of the precinct including the predicted traffic from the land which is the subject of the application. To enable assessment of this criterion, applications for subdivision or development must include a traffic assessment of the effects of the subdivision or development on the interchange prepared by a qualified and experienced traffic engineer.

Note: This criterion will be considered to be met where such an assessment includes a review undertaken by or on behalf of NZTA which confirms that there is sufficient capacity or planned capacity at this interchange to accommodate the predicted increase in traffic;

(g) in respect of those new areas of planting in stormwater management and wetland areas in Sub-precinct D the extent to which:

- (i) plants should be eco-sourced as close as possible to the developed area;
- (ii) the mechanisms proposed ensure the weed and pest management programme and the herpetofaunal mitigation/rehabilitation plan are implemented;
- (iii) The public open space area that adjoins the southern boundary of the Precinct will provide the basis of an ecological corridor linkage of 30 metres in width between the southern buffer in the Precinct and bush

areas in the Special Purpose – Quarry Zone when planted with suitable tree species at the time of subdivision of the adjoining industrial zoned land;

- (h) whether the existing 110kV Counties Power electricity lines are provided for in the existing positions in any subdivision or whether the existing lines can be relocated in agreement with Counties Power;
- (i) whether the stormwater management plan and works proposed as part of the subdivision or development:
 - (i) comply with any approved discharge consent;
 - (ii) are effective in avoiding, remedying or mitigating the potential adverse effects of stormwater discharge on water quality and flood hazards. In the case of stormwater management facilities within private land this assessment will include how the operation and maintenance of such facilities is to be secured by way of appropriate covenants or consent notices;
 - (iii) can effectively contain all the natural and diverted streams and their margins, wetlands, and other off-site stormwater management devices;
 - (iv) provide for overland flowpaths;
 - (v) require a bond or other security to be provided to ensure that the stormwater management works will be completed, with such bond to be released when the works are completed and the stormwater management areas and their devices are vested in council;
 - (vi) ensure that subdivision and development does not result in increased flood risk to habitable rooms for all flood events from the 50% and up to 1% AEP flood event downstream and upstream of the precinct;
- (2) the creation of vehicle access to any site with frontage to or from the [Spine Maketu](#) Road shown on Precinct plan 2 which also has frontage to another road shown on that plan:
 - (a) any adverse effect from the location and design of the access on the safe and efficient operation of the adjacent transport network, including public transport, cyclists and general traffic, having regard to:
 - (i) the number of other access points to or from the [Spine Maketu](#) Road in the vicinity of the proposed access;
 - (ii) whether conflicts will be reduced by the presence of a raised central median which prevents right turning in the vicinity of the site;
 - (iii) visibility and safe sight distances particularly the extent to which vehicles entering/exiting the site can see, and be seen by, pedestrians, cyclists and other vehicles on the footpath and road carriageway;

- (iv) existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring in all weathers;
 - (v) existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in the this Plan; and
 - (vi) existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleways.
- (b) whether the access arrangements are practicable and adequate having regard to site limitations and layout, and arrangement of buildings and activities, users and operational requirements, and having regard to whether the site can reasonably be served by shared or amalgamated access with another site or sites on the Spine Maketu Road where the sites in question are held in the same ownership.
- (3) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:
- (a) building design:
- (i) the extent to which buildings on corner lots are designed to provide for a quality architectural response to the corner. Appropriate design responses include the provision of additional height at the corner, windows and activities addressing both street frontages and avoiding blank walls to one or both sides of the corner;
 - (ii) the extent to which built development fronts the street and open space with a quality recognisable pedestrian entry or entries to the street.
 - (iii) Where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road;
 - (iv) the extent to which developments for trade suppliers, garden centres, marine retail, motor vehicle sales or supermarkets provide a quality frontage to the street and provide appropriate treatments to side and rear boundaries, including quality fencing and landscaping, to recognise the broader range of activities enabled in sub-precinct C and the higher standard of amenity expected in the Mixed Use zone, while also taking into account the functional requirements of the activity.
- (b) parking area design:
- (i) the extent to which parking is provided on the road network adjacent to sub-precinct C areas and on-site parking layouts are designed in accordance with the typical layout identified in Appendix I410.11.1.

(c) signs:

- (i) the extent to which signs for each sub-precinct C development are coordinated including the physical location of signs, their type-face, style and content;

(d) service area location:

- (i) the extent to which service areas are located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service/storage and dock areas;

(e) vehicular access:

- (i) the extent to which proposed vehicle access to sites adjoining the Maketu Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;

(f) mitigation of traffic noise:

- (i) the extent to which premises offering food and beverages, health professional rooms and childcare centres (being permitted activities which may be sensitive to heavy commercial vehicle traffic noise) are designed to mitigate traffic noise effects. Mitigation measures may include acoustic treatment of buildings and arranging site layout so noise sensitive activities are screened from the heavy traffic noise.

(g) Drury South Industrial and Mixed Use precinct Appendix

- (i) The extent to which buildings and development in Sub-Precinct C are consistent with the criteria in Appendix I410.11.2.

(4) A single supermarket greater than 2000m², supermarkets exceeding 450m² and up to 2000m² gross floor area per tenancy, offices between 501m² – 1000m² per tenancy and retail greater than 1000m² and up to and including 4,500m² in Sub-Precinct C

- (a) The extent to which the effects of the size, composition, characteristics and concentration of retail or office activities in Sub-precinct C will be complementary to the existing and expected future function, role and amenity of other Metropolitan or Town Centres that are zoned or are identified in a Council approved Structure Plan, having regard to the need to enable convenient access of communities to commercial and community services while disregarding any effects ordinarily associated with trade effects on trade competitors;

- (b) The extent to which retail that meets local convenience needs is located at the southern part of sub-precinct C, where it would be most accessible to

the Drury South Residential precinct and would support a local community focal point.

- (c) The extent to which the activity is coordinated with the rate of residential and commercial development in the wider area to ensure that the activity individually, or in combination with other consented or permitted activities, meets the needs of the local catchment;
- (d) The extent to which the size, composition and characteristics of any office activity would serve a local function and support adjoining businesses in Drury South.
- (5) Trade Suppliers in Sub-Precincts A and C greater than 11,000m² gross floor area
 - (a) the extent to which the activity affects the safe and efficient operation of the adjacent transport network including pedestrian and cycling movement, particularly at peak traffic times;
 - (b) the extent to which the proposal incorporates mitigation measures to address adverse effects.
- (6) Infringement I410.6.4 – Sub-Precinct C (Noise and Ventilation)
 - (a) the extent to which the type of activity proposed is likely to be adversely affected by the expected levels of transport noise;
 - (b) the extent to which any characteristics of the proposed use or area make compliance with of New Zealand Standard NZS6806:2010 "Acoustics – Road Traffic Noise – New and Altered Roads" unnecessary;
 - (c) whether the building and any outdoor living areas are appropriately located, and/or setback an appropriate distance from the Spine Road and/or State Highway 1 to minimise the potential for adverse effects from land transport noise.

I410.9. Special information requirements

I410.9.1. Earthworks plans

- (1) Any application for subdivision or development must be accompanied by detailed earthworks plans. Such plans must:
 - (a) describe the nature and scale of the proposed earthworks, such as the extent of cut and/or fill, sources of fill and how the cut and fill is to be transported;
 - (b) describe the construction management and communication methods to be followed to minimise nuisances and disruption to surrounding residents and Ramarama School (in particular, dust, traffic and noise impacts) during the construction period; and

- (c) provide detailed design of the modified flood plain.

I410.9.2. Ecological management plans

- (1) In respect of any new areas of planting in Sub-precinct D the following must be provided:
 - (a) a weed and pest management programme for any new areas of planting within the stormwater management areas and wetland areas and remaining indigenous forest fragments in Sub-precinct D; and
 - (b) a herpetofaunal mitigation/rehabilitation plan which targets only potentially suitable lizard habitat for relocation searches.

I410.9.3. Stormwater management report and plans

- (1) Any application for subdivision or development preceding subdivision must be accompanied by detailed stormwater management report and plans. Such report and plans must:
 - (a) describe how the plans comply with the conditions of any relevant discharge consent;
 - (b) identify overland flow paths;
 - (c) describe the nature and extent of any off-site stormwater management devices and how these devices are to be delivered if they are on land outside the application site;
 - (d) if stormwater management devices are to be located within the modified 1% AEP floodplain, describe how these devices are to be designed to be resilient to flood-related damage while not exacerbating flood risks for upstream or downstream activities;
 - (e) where streams are to be diverted and/or recreated as identified on the precinct plan, describe how this is to be achieved in a way that ensures that they function in a manner similar to natural stream systems. Detailed landscape treatment plans will be required to demonstrate:
 - (i) the proposed long section and cross sections;
 - (ii) how the new stream banks are to be stabilised;
 - (iii) how pool – riffles - run sequences are to be formed; and
 - (iv) how stormwater outlets are controlled.

- (2) A subdivision application for vacant lot subdivision or a land use application for a new building or buildings in Sub-precinct C must be accompanied by an indicative 'integration plan' showing how the proposed development integrates with potential future development in the remainder of Sub-precinct C, including existing or potential transport connections and activities.

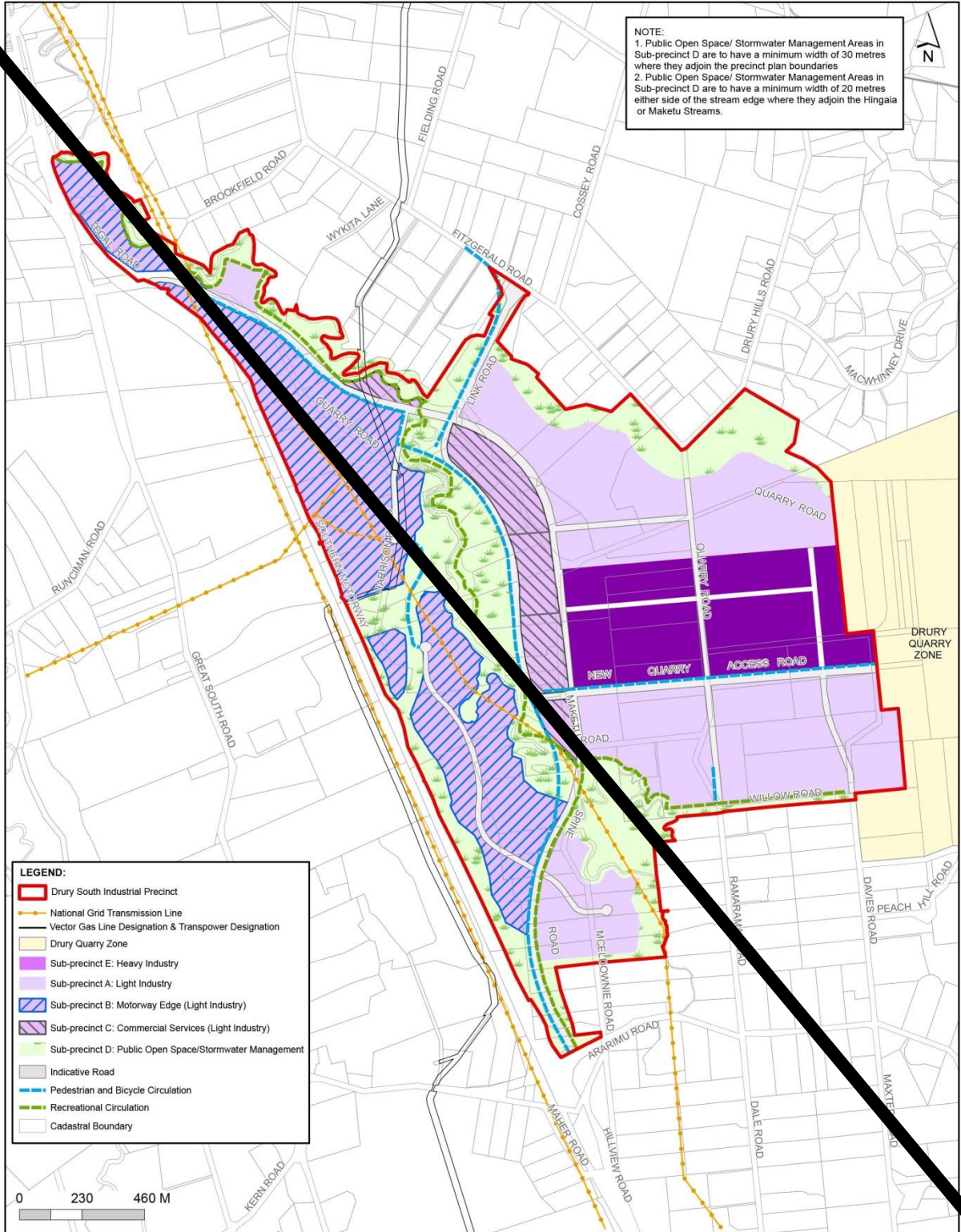
I410 Drury South Industrial Precinct

To avoid doubt, this plan is not subject to any approval from the Council and is for information only. Its purpose is to inform how a particular stage of development will positively contribute to the visual quality and interest of streets, public open spaces and pedestrian amenity, movement and safety (Policy H13.3(3)), in an integrated manner across Sub-precinct C.

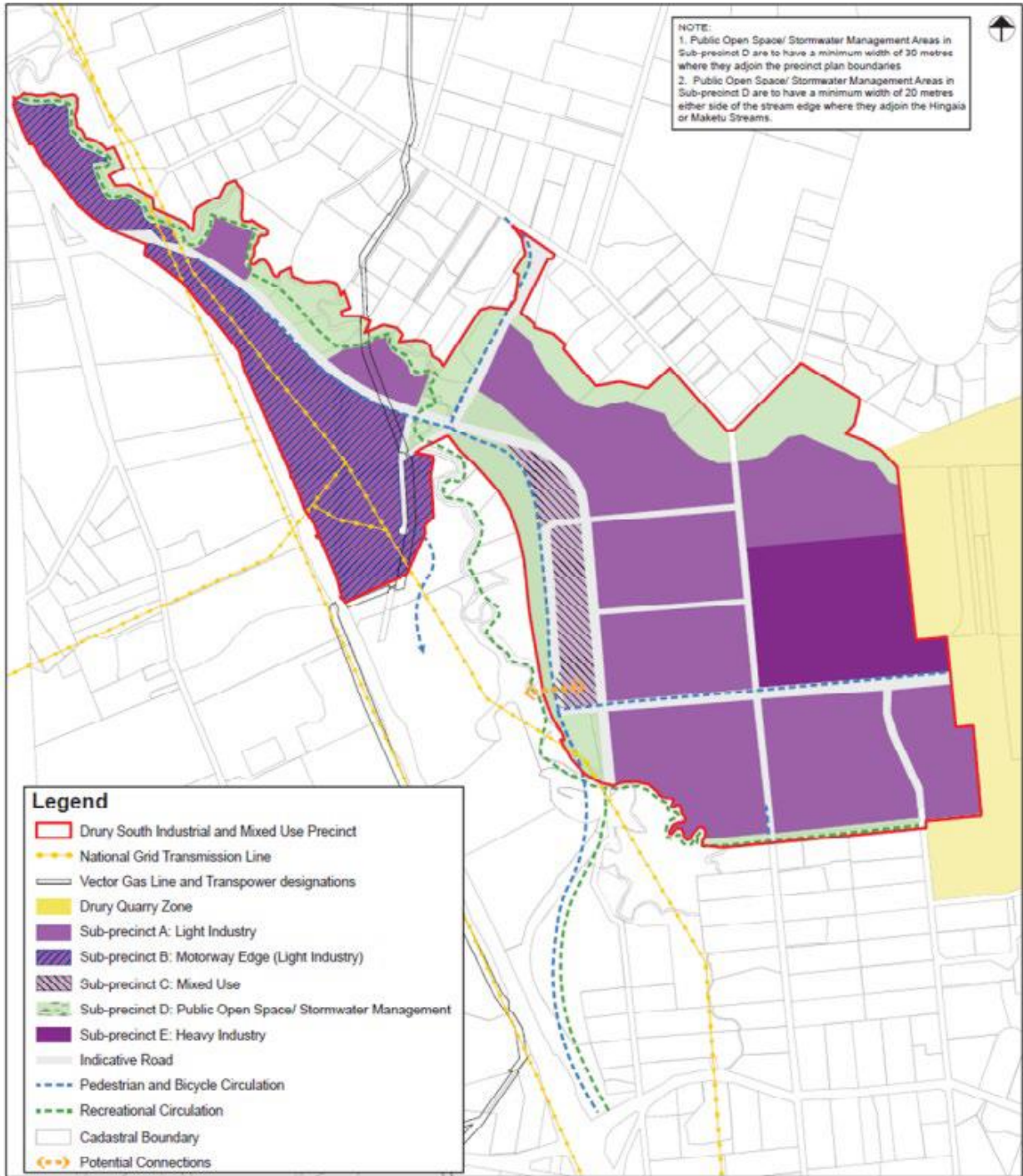
I410.10. Precinct plans

I410.10.1 Drury South Industrial and Mixed Use: Precinct plan 1

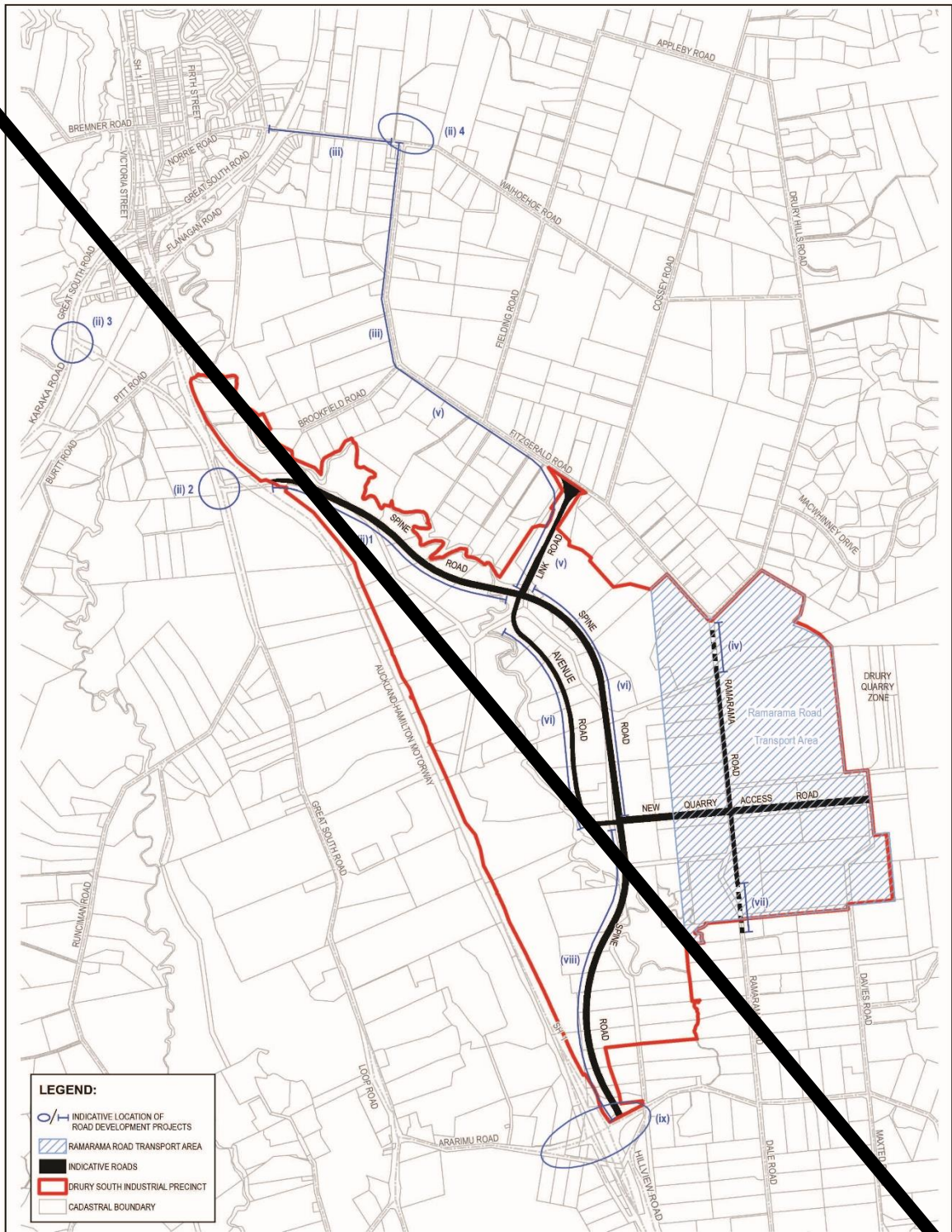
1410 Drury South Industrial Precinct



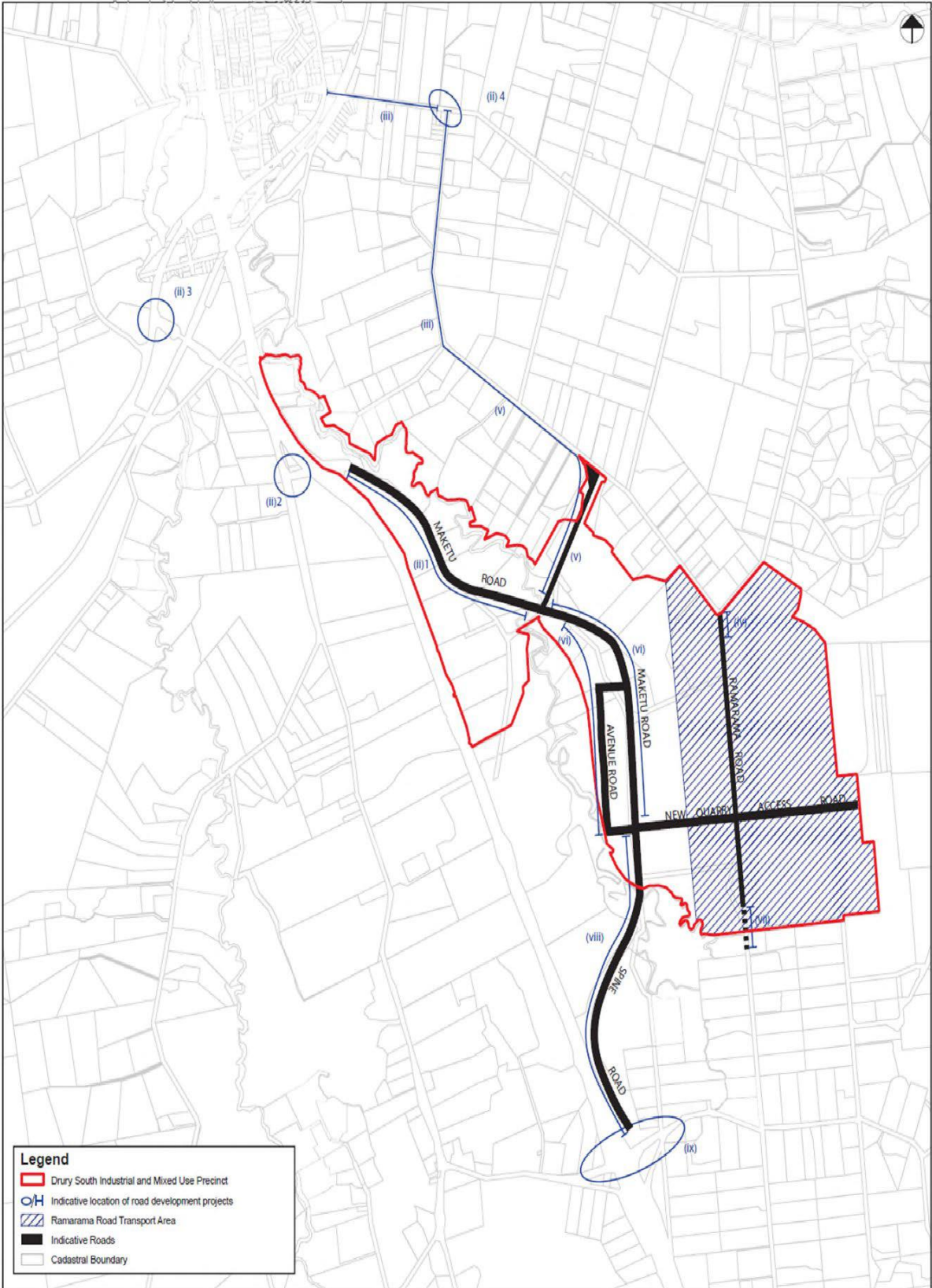
I410 Drury South Industrial Precinct



I410.10.2 Drury South Industrial and Mixed Use: Precinct plan 2



I410 Drury South Industrial Precinct



I410.11. Appendices

Amendments made by Plan Change 46 Decision are recorded in *red underlined and ~~strikethrough~~*.

Amendments made by Plan Change 46 Environment Court Decision are recorded in *purple underlined and ~~strikethrough~~*.

Attachment One

I410.11.1: Attachment 5 (Drury South Industrial Appendix)

APPENDIX I410.11.1: DRURY SOUTH INDUSTRIAL PRECINCT _SUBDIVISION DESIGN ASSESSMENT CRITERIA

PURPOSE OF APPENDIX I410.11.1

Within the I410 Drury South Industrial Precinct, applications for any subdivision or any development of land which precedes a subdivision being undertaken which complies with Standard I410.6.3 as a restricted discretionary activity will be assessed in terms of a series of matters to which the Council will restrict the exercise of its discretion. One of the matters which the Council will have regard to as set out in standard I410.8.2(1)(d) is:

the extent to which subdivision design and layout gives effect to the objectives and policies identified for the Drury South Industrial Precinct and the subdivision design assessment criteria set out in Appendix I410.11.1.

In addition, the criteria will also be used in the consideration of discretionary applications for subdivision, as appropriate.

This appendix sets out assessment criteria under a number of “Design Elements”. Accompanying illustrations are intended to support the text and represent good design solutions, but are not intended to represent the only design solution. All illustrations are indicative only.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged.

It is recognised that certain proposals will not achieve absolute accord with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or ;
- whether the proposal represents a better design solution than that suggested by the criterion.

Planting plans and maintenance plans for recreation and esplanade reserves and stormwater management areas will need to be submitted with applications for subdivision consent and approved by the Council.

Design Element 1: Road, Reserve and Access Networks:

1. Earthworks should be undertaken principally at the initial subdivision stage, and where appropriate the creation of reasonably flat sites should occur at the bulk earthworks stage (in order to avoid creating retaining walls at site development stage).
2. Road patterns should maximise convenient / direct access to the ~~spine road~~ Maketu Road and limit connection to existing rural roads (such as Ararimu Road) except where this relates to the wider essential network.
3. The road pattern should facilitate access to and accessibility within Sub-precinct C Mixed Use 'commercial service precincts'.
4. Road patterns should be logical and contribute to the legibility of and ease of wayfinding within the area (refer Diagrams 1 and 2 for generic legibility and proposed street hierarchy).
5. Subdivision layout design should achieve protection and enhancement of all significant streams / tributaries to be retained and their riparian corridors (20m minimum either side from edge of stream) and concentrate open space as part of the riparian network (refer Diagram 3).
6. Subdivision layout design should achieve an interconnected open space and movement network.
7. Safe pedestrian and cycle routes through the structure plan area should be integrated with the riparian, reserve and road design.
8. Equestrian bridle trails should be integrated with riparian reserve development and provide access to the large centrally located public open space / stormwater management area.

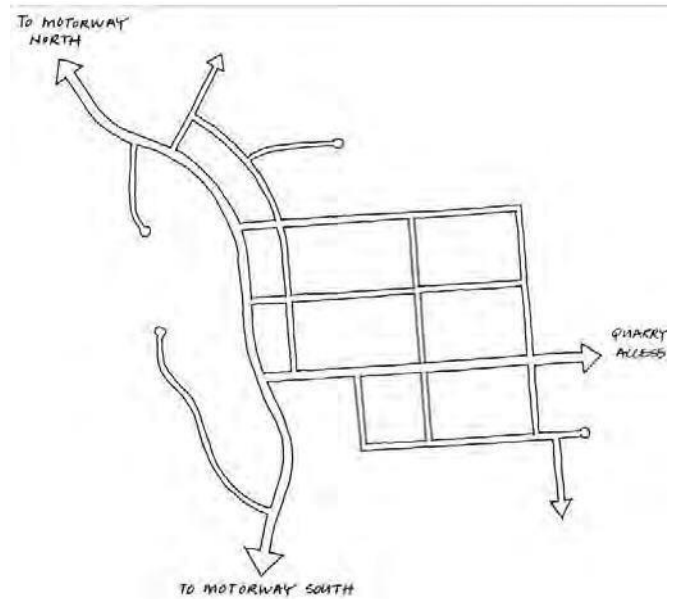
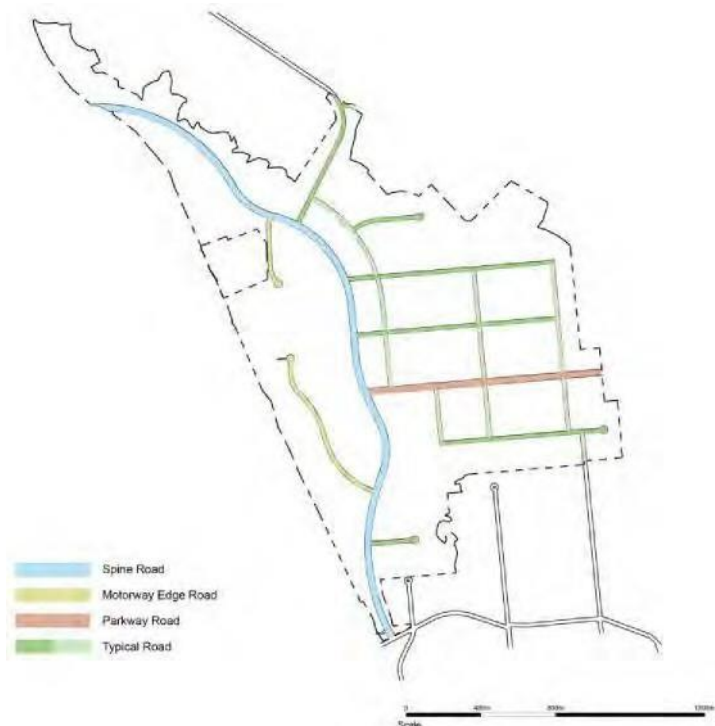


Diagram 1: Legible road hierarchy to assist wayfinding



ROAD HIERARCHY DIAGRAM

Diagram 2: Road hierarchy

9. Layouts should retain mature trees within the riparian corridors, particularly those of indigenous species.
10. In Motorway Edge Sub-precinct areas access to sites off the spine road should be combined wherever practicable—layouts should seek to retain as many existing established trees, particularly those of indigenous species, as possible.
11. In Motorway Edge Sub-precinct, areas access to sites off the spine road Maketu Road should be combined wherever practicable.

Explanation:

Design Element 1 pertains to the overall site topography and the general layout of the networks of roads, reserves and other access linkages that make up the public space of the Drury South Industrial Precinct. These should be considered in an integrated fashion together with the development blocks that they create.

The existing site topography within the proposed Industrial Precinct is relatively flat although bulk earthworks including cut and fill will be required to establish levels for future development above the flood plain and appropriate falls across the land.

The riparian corridors of the Hingaia and Maketu Streams and their significant tributaries will remain an important feature of the site topography once the Precinct is established. Vegetation associated with these corridors is also important to the structuring, screening and ecology of the area and its proposed activities.

The riparian corridors also provide a focus for future recreation and open space development and form part of the enhancement framework for the Precinct.

The road network and hierarchy (refer Diagrams 1 and 2), as illustrated in the Drury South Industrial Precinct Plan has been designed to efficiently direct traffic into and out of the Precinct connecting to the Southern Motorway (SH1) at both the Ramarama (south) and Drury (north) interchanges. The proposed Spine Road link is important to the legibility and traffic efficiency of the Precinct; this route will provide the primary connection into and out of the area Precinct with other streets connected to the spine road Maketu Road through corridor.

The proposed street network has also been designed to limit the impact of vehicles destined for the Precinct on existing rural residential and community roads such as the road accessing and adjacent to the Ramarama School. Implementation of the street network to achieve the beneficial improvements to heavy vehicle (including quarry truck) and other Precinct related traffic movement is imperative as a part of delivery of the zone.



Diagram 3: Open space concentrated along Hingaia, Maketu, Roslyn and Northern Diversion Stream corridors

By its nature the [Commercial Services Sub-Precinct C Mixed Use](#) will require a finer grain street network with smaller street blocks, greater walkability, good service access and parking.

A legible road pattern (refer Diagram 1) is one that is easily understandable for the people that use it and that provides cues for first time users as well as those habitual users. Consistent road design and landscape themes can further emphasise the position of each street in the road hierarchy and in the pattern of streets in the wider area. Road patterns that are logical and easy to comprehend and navigate make an area feel more comfortable and help to provide a sense of identity.

Design Element 2: - Block Size, Lot Type and Orientation:

1. Blocks should be of a scale and shape to achieve a permeable street layout suited to the [industrial functional requirements of the proposed](#) land use.
2. All lots should front onto and be accessed directly from a legal road. Rear lots are to be avoided (refer Diagram 4).
3. Through lots (with dual road frontage) are permissible (refer Diagram 4).

Explanation:

Design Element 2 describes the principles for consideration in the layout of blocks and lots within the [proposed business zone area Precinct](#).

Blocks within an industrial area ~~can be~~ are typically larger than those within finer grain residential or [Commercial Services Mixed Use](#) areas. A good permeable and well connected- street network is however still required [in Light and Heavy Industry Sub-precincts A, B and E](#) to facilitate access, provide an appropriate street address and reduce traffic volumes on side streets. [Within Sub-precinct C Mixed Use, Design Element 1 also provides opportunities for views through to the open space corridor to the west of the Sub-precinct from Maketu Road.](#)



Diagram 4: All lots should front onto a legal road; through lots are permissible

Lots need to be of a size and shape to accommodate large scale, land extensive land uses and flexible to enable reasonable long term growth. At the same time rear lots are considered undesirable with a preference for development to address the street.

Design Element 3: - Roads and Accessways:

1. In addition to Auckland Transport Code of Practice and Council's Development Code requirements, [minimum road and design elements should be appropriate to the nature of the function that they provide and also reflect urban design legibility considerations – i.e. wayfinding, as set out in Table 1 below. road cross sections should be appropriate to the nature of the function that they provide and also reflect urban design legibility considerations – i.e. wayfinding. — Refer typical cross sections \(Attachment 1\) for road hierarchy comprising: Arterial \(i.e. Spine Road\); Parkway Road \(i.e. New Quarry Access Road\); Motorway Edge Precinct Road; and Typical \(Indicative\) Road typologies \(refer also Diagram 2 for street hierarchy\).](#)
2. Cyclists should be accommodated on the street carriageway.
3. A consistent palette of traffic management tools should be used across the [Drury South Industrial Precinct](#). Traffic management devices such as chicanes, speed humps and other such restrictive management devices are not expected, however the use of thematic planting and measures such as localised narrowing to create thresholds or define changes in the street environment could be used.

4. All streets are required to accommodate strong avenue specimen tree planting. Refer Cross Sections Attachment 1. This planting is required to achieve the breaking up of the overall scale of the development particularly as seen from elevated locations, as well as to establish the enhanced expected amenity and character of the Precinct.
5. In addition to the street avenue planting a planted central median is also required on the roads identified as 'Arterial' and 'Parkway' ~~refer Attachment 1 Cross Sections.~~

Explanation:

Design Element 3 pertains to principles for the design of roads and other access routes within the ~~zone~~ Precinct. Road design should be appropriate to function and provide practical widths for vehicular access, including for emergency vehicles, parking, planting and services. Useful minimum dimensions are:

• Four traffic lanes on arterial road	15.2m
• Two traffic lanes on local road	8.2m
• Cycle lane	1.5m
• Parallel parking lane	2.5m
• Service/utilities strip	3.0m
• Footpath	1.5m to 3.0m

~~The use of parallel kerbside parking is efficient in using the road as circulation area and reducing the need for onsite visitor parking. Kerbside parking lanes may be defined and delineated with planting bays if desired as illustrated in the road Cross Sections in Attachment 1.~~

Pedestrian and cycle paths should generally be integrated with road and reserve design. Paths which are separated from vehicle routes should be designed for safety.

Table 1 below sets out the indicative function and design elements of the collector roads within the Drury South Industrial and Mixed Use precinct.

Table 1 – Indicative Road Function and Required Design Elements

<u>Road Name</u>	<u>Proposed Role and Function of Road in Precinct Area</u>	<u>Freight or Heavy Vehicle Route</u>	<u>Minimum Road Reserve²</u>	<u>Total Number of Lanes</u>	<u>Design Speed (kph)</u>	<u>Access Restriction</u>	<u>Bus Provision⁴</u>	<u>Median</u>	<u>Cycle Provision⁵</u>	<u>Pedestrian Provision</u>
<u>Maketu Road¹ South of Link Road</u>	<u>Arterial</u>	<u>Yes</u>	<u>33.45m</u>	<u>4</u>	<u>60</u>	<u>Yes³</u>	<u>Yes</u>	<u>No</u>	<u>Yes – separated</u>	<u>Both Sides</u>
<u>Maketu Road (North of Link Road)</u>	<u>Collector</u>	<u>Yes</u>	<u>27.65m</u>	<u>2</u>	<u>60</u>	<u>Yes³</u>	<u>Yes</u>	<u>Yes (Flushed)</u>	<u>Yes</u>	<u>Both Sides</u>
<u>New Quarry Access Road¹</u>	<u>Collector</u>	<u>Yes</u>	<u>27.65m</u>	<u>2</u>	<u>50</u>	<u>No</u>	<u>Yes</u>	<u>Yes (Flushed)</u>	<u>Yes – shared path</u>	<u>Both Sides</u>
<u>Link Road</u>	<u>Collector</u>	<u>Yes</u>	<u>27.65m</u>	<u>2</u>	<u>60</u>	<u>No</u>	<u>Yes</u>	<u>Yes (Flushed)</u>	<u>Yes</u>	<u>Both Sides</u>
<u>Ramarama Road (Fitzgerald Road Connection)</u>	<u>Collector</u>	<u>Yes</u>	<u>21m</u>	<u>2</u>	<u>50</u>	<u>No</u>	<u>Yes</u>	<u>Yes (Flushed)</u>	<u>Yes</u>	<u>Both Sides</u>

Note 1: Already have Engineering Plan Approval and are under construction

Note 2: Typical minimum cross section which may need to be varied in specific locations where required to accommodate batters, structures, intersection design, significant constraints or other localised design requirements.

Note 3: Refer to Assessment Criteria I410.8.1(2)

Note 4: Carriageway lanes and geometry of intersections capable of accommodating buses.

Note 5: Type of cycle provision, i.e. separated or shared path, to be confirmed at the Engineering Plan Approval stage, based on nature and character of the Local Road.

Design Element 4: Reserves, Stormwater Management Areas and Riparian Planting:

1. Stormwater detention and treatment reserves should be located in general accordance with the locations shown in the Drury South Industrial Precinct Plan and in accordance with the relevant stormwater discharge consents, the Council's Development Code and relevant technical publications. The Cross Sections (Attachment 2) illustrate the Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections.
2. Stormwater ponds should be designed to fit in with the surrounding landscape and appear as an integrally designed infrastructural component of the overall setting.
3. Vegetated buffers, not less than 40m in total width for any retained permanent or diverted stream, should be provided on the margins of streams, ponds and wetlands and should:
 - Include native species as identified in Attachment 3;
 - Include native trees on the lower and upper banks of ponds predominantly to the north and west to provide shade;
 - Provide a minimum of 10m of native planting either side of the stream corridor including shallow water rushes and sedges;
 - Avoid vegetation that will exacerbate flooding and the blockage of water flow along the immediate riparian corridor.

The only exception to these requirements is the retained permanent stream in the northwest of the [structure plan area Precinct](#) (adjacent to the Transpower site) which will be subject to a minimum requirement of 10m of native planting either side of the stream corridor only.

Note: Attachment 5 sets out 'Stream and Wetland Rehabilitation Guidelines (June 2013) for the DSSP area.

4. Walkways / cycleways along riparian corridors and through buffer planting should be designed to minimise any impacts on ecological function and give due consideration to personal safety and Crime Prevention Through Environmental Design (CPTED) principles.
5. Edge buffer reserves should be located in accordance with the Drury South Industrial Precinct Plan, be a minimum of 30m in width and be planted in generally accordance with Diagram 5 below. Planting should be fast growing rural shelter belt species capable of attaining a minimum height of 6 metres at maturity.



Diagram 5: Typical landscape buffer cross section

6. Suitable mechanisms to ensure the establishment and ongoing maintenance of landscaping of reserves and stormwater management areas until those areas are vested in the Council will be required to ensure the long term success of any landscaping.

Explanation:

Design Element 4 pertains to matters for consideration for locating, sizing and designing reserves stormwater management areas and riparian planting. These areas will be generally located in accordance with the locations shown in the Drury South Industrial Precinct Plan; regard should also be given to Design Element 5 when designing reserves within the Precinct.

The principal reserve network within the Precinct, as illustrated in the Drury South Industrial Precinct Plan, is structured around riparian protection and enhancement as well as stormwater management including detention and treatment. The reserve network is however designed for multiple functions and values including passive and active recreation, pedestrian / cycle commuter access, ecological values, visual screening / separation and aesthetic amenity.

The Precinct Plan also includes buffer reserves, [adjoining the Light Industry zoned Sub-precincts A and B](#). The main purpose of [which these reserve](#) is to physically and visually screen and separate adjacent existing land uses and residents from [these areas](#) Precinct. These reserves are planted to maintain a robust rural character with a woodlot/ shelter belt form of land management. Whilst providing multiple functions including biodiversity and aesthetic values, their primary function will remain as that of a buffer to land uses outside of the Precinct.

Design Element 5: Reserve Interface Design:

1. Reserves intended for public recreation and use should be designed to be bounded by public roads as much as possible given topographical and natural feature constraints. (Note proposed buffer reserves are not intended to be bounded by public roads)
2. Where reserves or riparian buffer areas adjoin lots, the boundary should be securely delineated and fenced to avoid encroachment (refer Diagram 5).

Explanation:

Reserves intended for public use that are well fronted by public roads are more secure because of the informal surveillance from the road and activities that interface with the road across the carriageway. Ideally not less than half the total length of legal boundary of any reserve should adjoin a legal road.

Design Element 5a: Earthworks and Retaining Walls

1. Changes of level adjoining streets and open space corridors should be achieved by gently battering and contouring land.
2. Where retaining walls are required, they should be screened from public view. This may be achieved by planting and breaking up the vertical extent of walls through physical stepping.

Additional Sub-Precinct Criteria

In the case of subdivision within ~~the Sub-precinct B Motorway Edge Sub-Precinct~~ and ~~the Sub-precinct C Mixed Use Commercial Service Sub-Precinct~~, the following criteria shall also apply and take precedence over the general assessment criteria for subdivision stated above, where this is inconsistency or conflict.

Additional Design Element 6: Subdivision within Sub-precinct B Motorway Edge Sub-Precinct

1. Earthworks should be designed to retain a more natural, undulating topography and character outside of building platforms and other areas required through function to retain a flat topography.
2. Intersections between public roads serving the sub-precinct and the north south primary road Arterial Road (Spine Road) (Maketu Road corridor) should be minimised.
3. Specimen tree planting should be provided on all public and internal private access roads within the Motorway Edge Sub-Precinct. Refer Attachment 1 Typical Road CrossSection for Motorway Edge Sub-Precinct.

Additional Design Element 7: Subdivision within Sub-precinct C Mixed Use Commercial Services Sub-Precinct

1. Where through lots with dual street frontage are created, these should provide frontage to both street edges (i.e. no rear elevations to the street). ~~The primary frontage should be to the Spine Road. However, where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road.~~

APPENDIX 5B.4B 410.11.2: DRURY SOUTH STRUCTURE PLAN AREA INDUSTRIAL PRECINCT – SUB-PRECINCT B MOTORWAY EDGE PRECINCT AND SUB-PRECINCT C COMMERCIAL SERVICES MIXED USE PRECINCT ASSESSMENT CRITERIA

PURPOSE OF APPENDIX 410.11.2 5B.4.B

In ~~the Sub-precinct B Motorway Edge Precinct and Commercial Services Precinct within the Drury South Structure Plan area building design and appearance, landscape design and internal site layout are listed as~~ New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities' are controlled activities and in Sub-precinct C Mixed Use, 'New buildings' and 'Additions and alterations not otherwise provided for' are restricted discretionary activities ~~if they also comply with the standards and terms specified in 6.11.7.2.~~

Rule 6.15.1 sets out controlled activity assessment criteria for all ~~controlled~~ restricted discretionary activities in the industrial zones and contains the following clause:

"In the case of the Motorway Edge Precinct and the Commercial Service Precinct within the Drury South Structure Plan Area (Part 5B.4 in Section One of the District Plan) the Council will, in addition to the criteria set out in (a) to (f) above, assess the application against the criteria set out for those precincts in Appendix 5B.4.B in Section One of the District Plan."

~~In addition, these criteria will also be used as appropriate in the consideration of restricted discretionary and discretionary activity applications involving the construction or alteration of buildings.~~

This Appendix sets out assessment criteria under a number of "Design Elements" for both ~~the Sub-precinct B Motorway Edge Precinct~~ and the Commercial Services Sub-precinct C Mixed Use Precinct.

The criteria listed under each Design Element are intended to give flexibility, enabling site responsive designs, while ensuring that development provides a positive contribution to the amenity of the ~~Drury South Structure Plan Area~~ Precinct.

The criteria are intended to guide development rather than prescribe exact design and layout. Most criteria are illustrated. The illustrations are intended to support the text and are representative of good design solutions, but are not necessarily intended to represent the only design solution.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged. It is recognised that certain proposals will not achieve absolute accord with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or ;
- whether the proposal represents a better design solution than that suggested by the criterion.

Applicants will also be required to provide a Landscape Concept Plan with sufficient detail to ensure that the relevant assessment criteria are able to be considered, identifying hard and soft landscaping treatment, large grade specimen trees (species and planting size), groupings of ground covers and shrubs with species schedule.

SUB-PRECINCT B MOTORWAY EDGE ~~PRECINCT~~ DESIGN ASSESSMENT CRITERIA

The following criteria shall apply to 'New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities ~~'building design and appearance, landscape design and internal site layout~~ within Sub-precinct B the Motorway Edge Precinct ~~where activities are listed as controlled activities.~~

Design Element – Internal Private Access Roads:

1. Specimen tree planting should be provided on all public and internal private access roads within the Sub-precinct B Motorway Edge ~~Precinct.~~

Design Element – Existing Vegetation:

1. Where ever possible layouts should retain and protect existing mature trees, particularly those of indigenous species, where these contribute to the site character and amenity.

Design Element – Planting:

1. Planting should be designed to have a large scale landscape effect and combine native as well as appropriate exotic species to provide seasonal change and quality amenity.
2. Where reserve land adjoins the motorway, boundary planting that creates a continuous visual barrier to eastward views from the SH1 (Southern Motorway) corridor should be avoided, however landscape design should emphasise the current sequence of intermittent views to the Hunua Ranges from the SH1 corridor and the pattern of variable depth of such views.
3. Where industrial sites adjoin the motorway boundary, a detailed rule applies requiring a double row of Leyland Cypress to create the appearance of a rural shelterbelt providing a continuous visual barrier defining the curve in the motorway alignment.

Design Element – Buildings:

1. Buildings should be located with design consideration for their visibility and reduced visual impact as viewed from the SH1, (Southern Motorway) corridor and the desirability of maintaining a sense of openness as seen from the motorway.
2. The visual mass of larger buildings should be minimised by employing the following methods:
 - Utilising subdued, recessive colours;
 - Providing variation in materials and finish for facades viewed from the motorway;
 - Creating variation of roof profiles with consideration given to the overall roofscape viewed from the motorway;
 - All rooftop servicing and plant should be designed as an integral part of the roofscape with particular consideration given to the view from the motorway.

Design Element – Parking Areas:

1. Parking areas should be designed to incorporate trees to break up the scale of hard surface areas.
2. Adoption of the Fully Planted Permeable Carpark Design Layout (refer Diagram 6) style of parking is advocated within ~~the Sub-precinct B Motorway Edge Precinct.~~

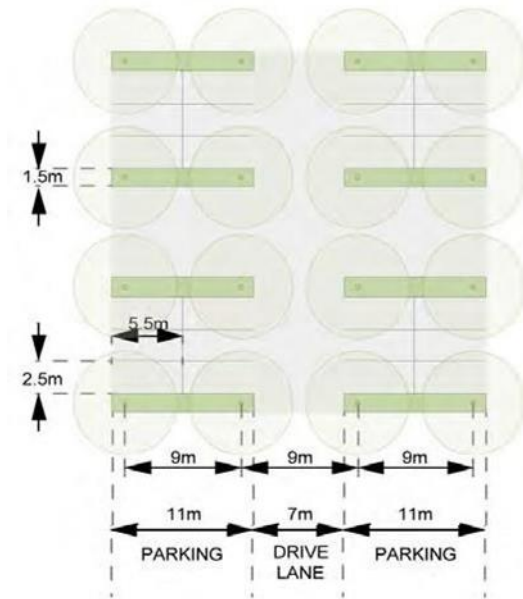


Diagram 6: Fully planted permeable carpark design layout - detail

Design Element – Internal Site layout:

1. Storage and waste management activities should be located and / or designed to be screened from view of the State Highway.

~~COMMERCIAL SERVICES SUB-PRECINCT C MIXED USE PRECINCT DESIGN ASSESSMENT CRITERIA~~

The following criteria shall apply to 'New buildings' and 'Additions and alterations not otherwise provided for' ~~building design and appearance, landscape design and internal site layout within Sub-precinct C the Commercial Services Mixed Use Precinct where activities are listed as controlled activities.~~

Design Element – Block Size, Lot Type and Orientation:

1. Buildings on corner lots should be designed to provide for a quality architectural response to the corner. Appropriate design responses ~~would include~~ be provision of additional height at the corner and windows and activities addressing both street frontages ~~(avoidance of blank walls to one or both sides of the corner).~~ Service activities such as loading docks or storage yards should not be located on corners or any site frontage, however, where this is required to support the functional and operational requirements of the activity, the service area visible from the street should be minimised as much as practicable and attractively screened from public view with landscaping.

Design Element – Street Interface Design:

1. Built development should front the street with a quality, recognisable pedestrian entry to the street.
2. ~~Parking should be provided on the road network adjacent to Commercial Service Precinct areas with on-at-grade parking should be located and designed in such a manner as to avoid or mitigate adverse effects on pedestrian amenity and the streetscape. This includes through positioning carparking away from street frontages, to the sides or rear of buildings and the use of extensive landscaping within the carpark, including tree planting. Refer to Attachment 4 for an example of a layout and design consistent with this guideline.~~ site parking layouts designed in accordance with the typical layout identified (refer Attachment 4).

Design Element – Signage:

1. Signage for each ~~Commercial Services Sub-precinct C Mixed Use Precinct~~ development

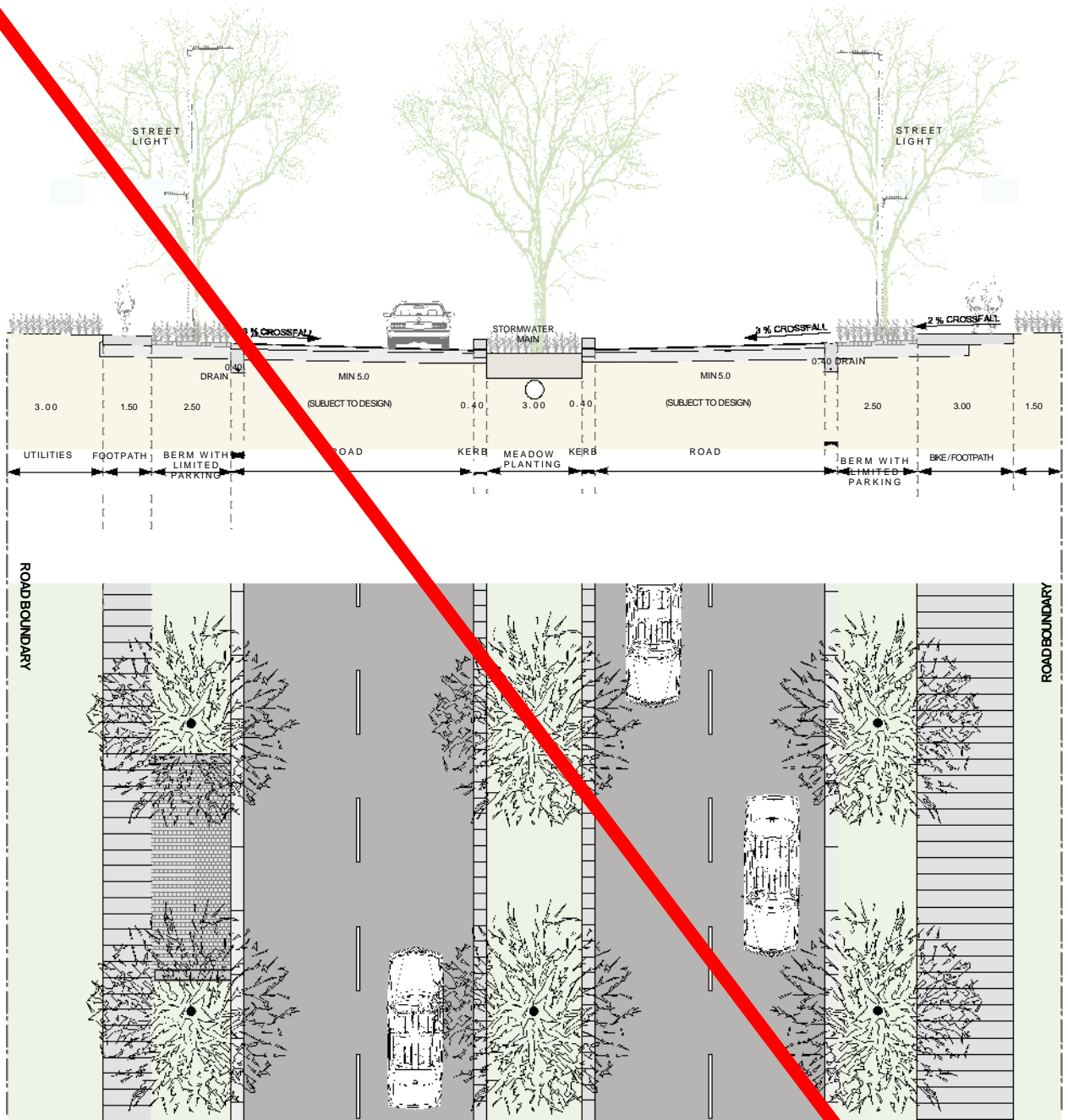
should be coordinated including the physical location of signs, their type face, style and content with a maximum of two signs per business, one located to address the street frontage and one to identify the building entry (a third sign is permissible where the service access is separate from building entry or there are multiple entries).

Design Element – Service Areas:

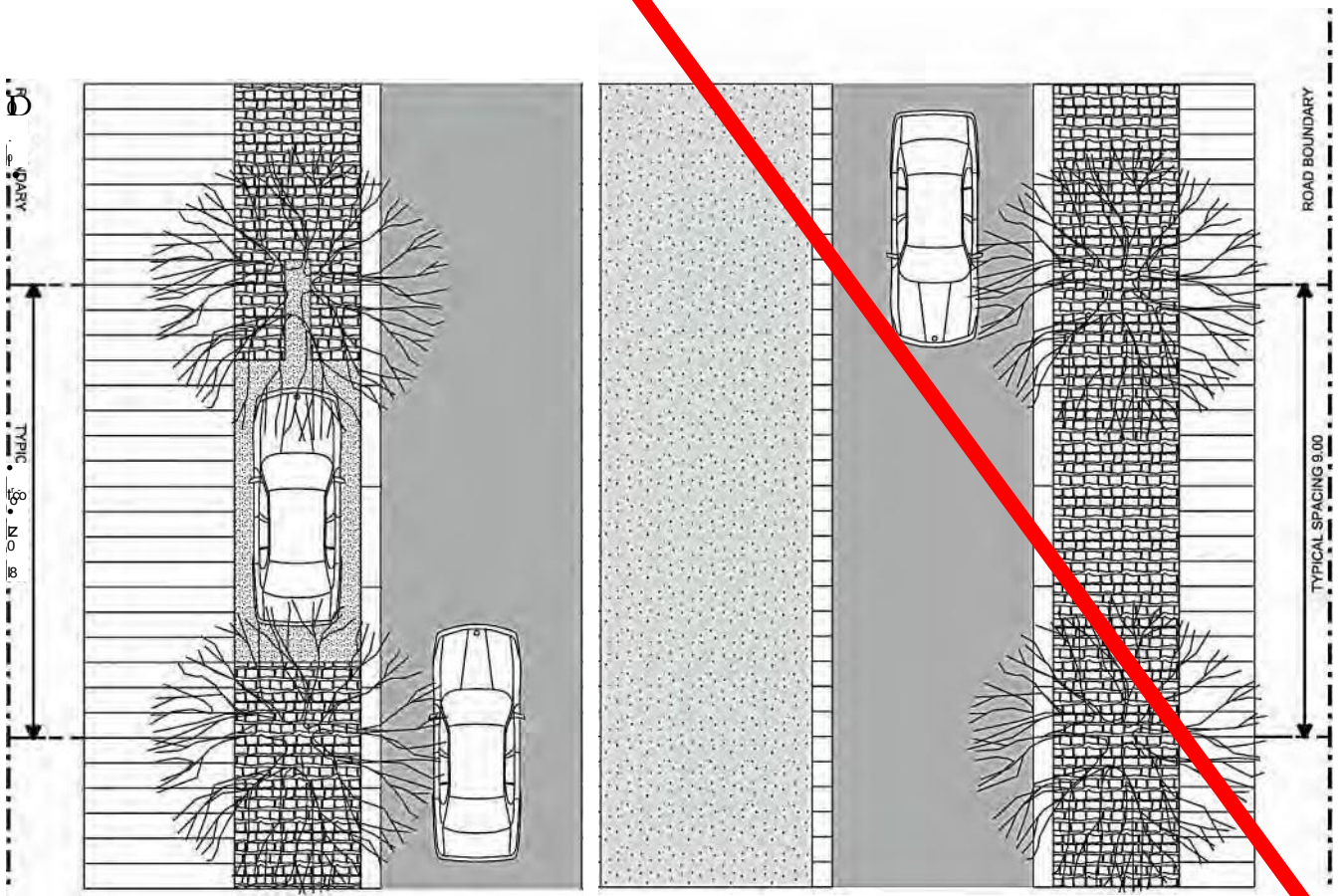
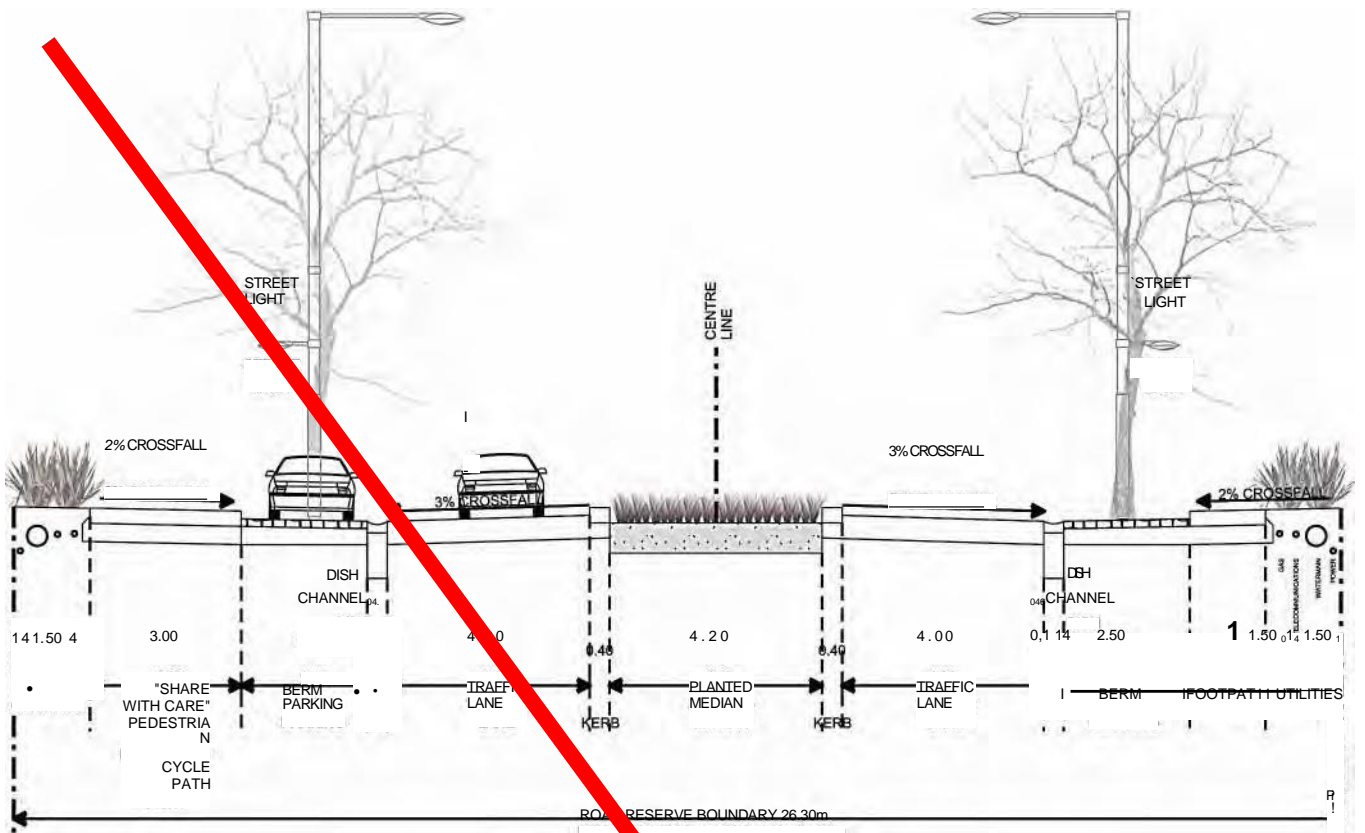
1. Service areas should be located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service / storage and dock areas. However, where this is required to support the functional and operational requirements of the activity, the service area visible from the street should be minimised as much as practicable and attractively screened from public view with landscaping.

Attachment 4

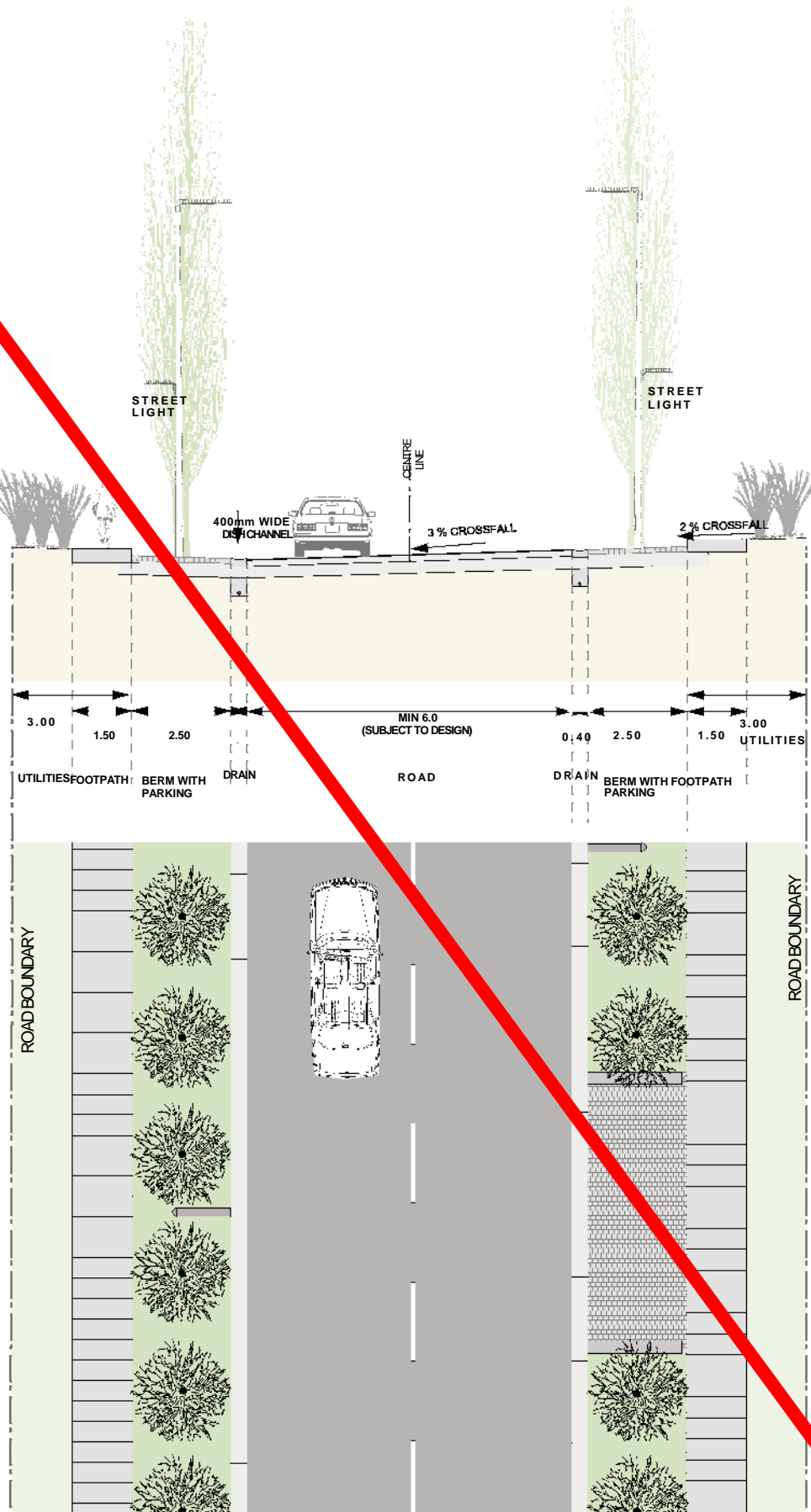
Typical Road Cross Sections



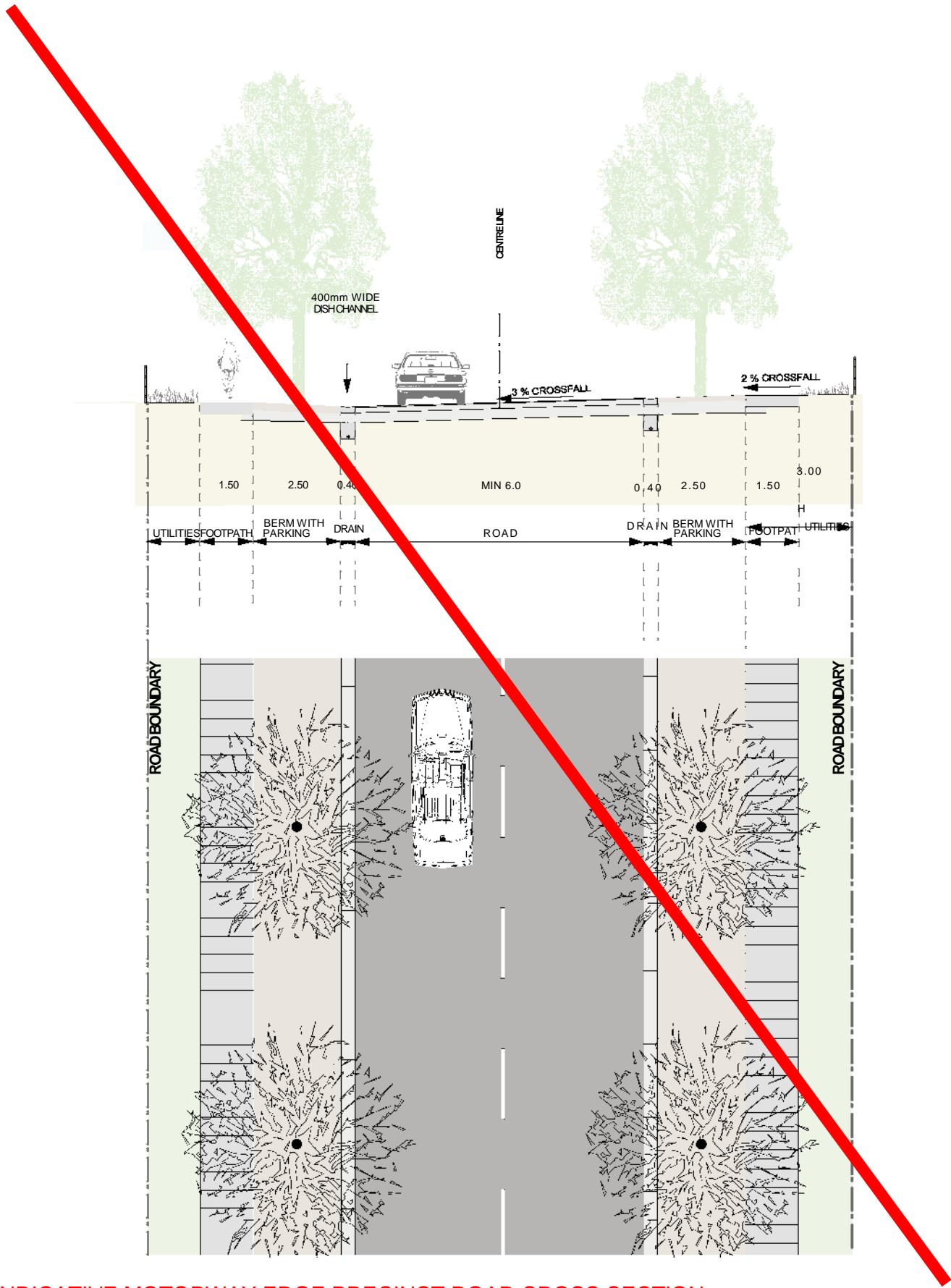
INDICATIVE ARTERIAL CROSS SECTION
 (Spine Road)



**INDICATIVE PARKWAY CROSS SECTION
(New Quarry Access Road)**



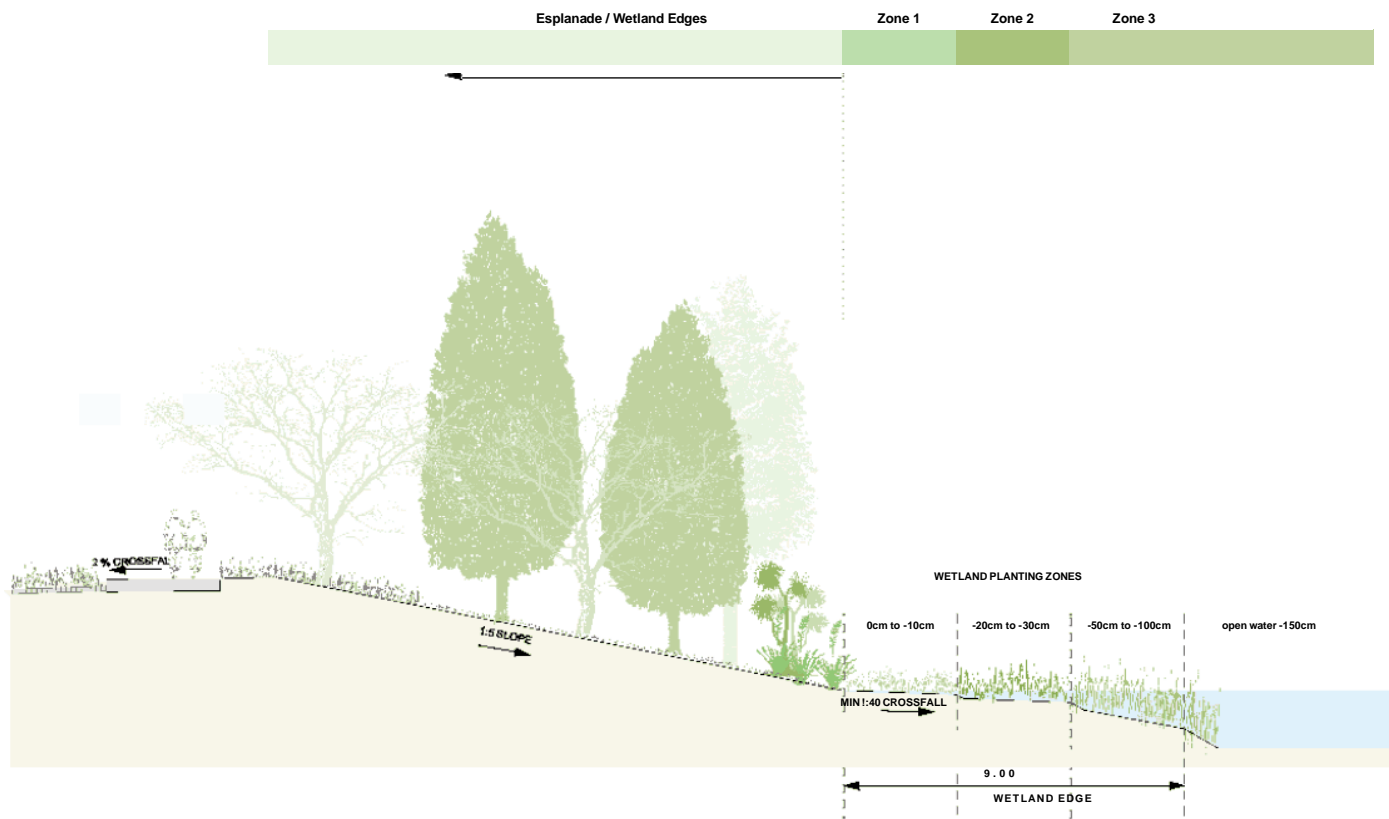
INDICATIVE ROAD CROSS SECTION



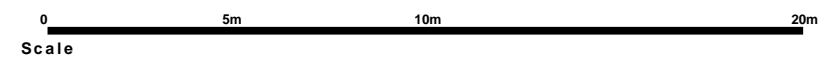
INDICATIVE MOTORWAY EDGE PRECINCT ROAD CROSS SECTION

Attachment 2

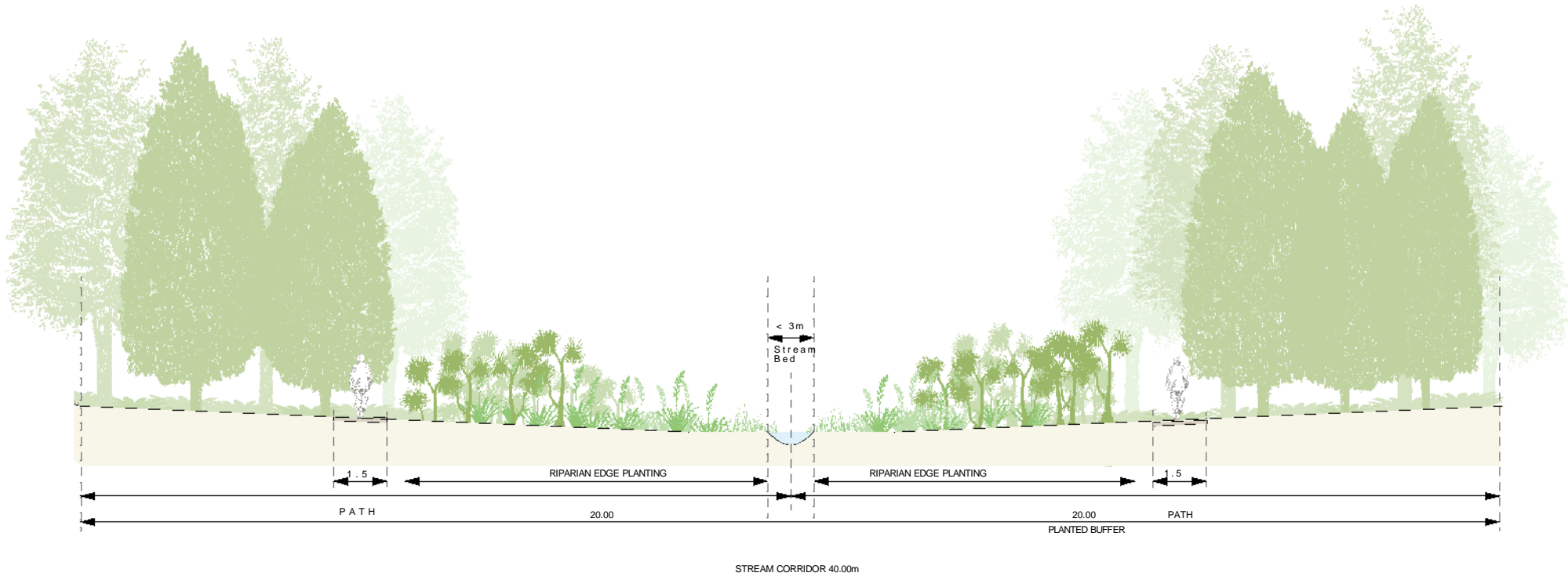
Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections



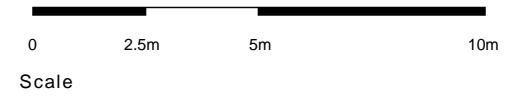
Location	Botanical Name	Common Name
Esplanade / Wetland Edges	<i>Salix babylonica</i>	Weeping Willow
	<i>Dacrycarpus darydiodes</i>	Kahikatea
	<i>Cordyline australis</i>	Cabbage palm
	<i>Anemathele lessoniana</i>	Wind grass
	<i>Carex secta</i> <i>Carex testacea</i>	Purei
Zone 1 Wetlands (0 to -10cm)	<i>Carex geminata</i> <i>Cyperus ustulatus</i> <i>Cordaderia fulvia</i>	Toetoe
Zone 2 Wetlands (-20 to -30cm)	<i>Schoenoplectus validus</i> <i>Eleocharis acuta</i> <i>Juncus gregiflorus</i> <i>Bolboschoenus fluviatilis</i> <i>Leptocarpus similis</i>	Kopupu / kuta Spike rush Wiwi rush Ririwaka Oioi /Jointed Rush
Zone 3 Wetlands (-50 to -100cm)	<i>Baumea rubiginosa</i> <i>Baumea articulata</i> <i>Baumea teretifolia</i> <i>Eleocharis sphacelata</i> <i>Juncus pallidus</i>	Ngawha / Great spike rush Giant rush



INDICATIVE WETLAND EDGE DETAIL



INDICATIVE 40m RIPARIAN BUFFER FOR STREAM BEDS LESS THAN 3m WIDE





TYPICAL ONE SIDED RIPARIAN BUFFER FOR STREAM BEDS LESS THAN 3m WIDE



INDICATIVE ONE SIDED RIPARIAN BUFFER FOR STREAM BEDS 3m AND GREATER

Attachment 3

Drury South Industrial Precinct

Indigenous Species Plant List

Note: The species underlined are recognised as being rare / uncommon in the Auckland region.

Wetland Species

Schoenoplectus tabernaemontani also Eleocharis sphacelata	Multiple Māori names include kukuta and kutakuta.
Carex virgata and Carex secta	pukio
Baumea articulata	jointed twig-rush
Typha orientalis	raupo
Myriophyllum robustum	stout water milfoil
Baumea tenax	
Isachne glabosa	swamp grass
Phormium tenax	particularly the variety known to Maori as 'Muka' - soft for weaving

Riparian Marginal Species

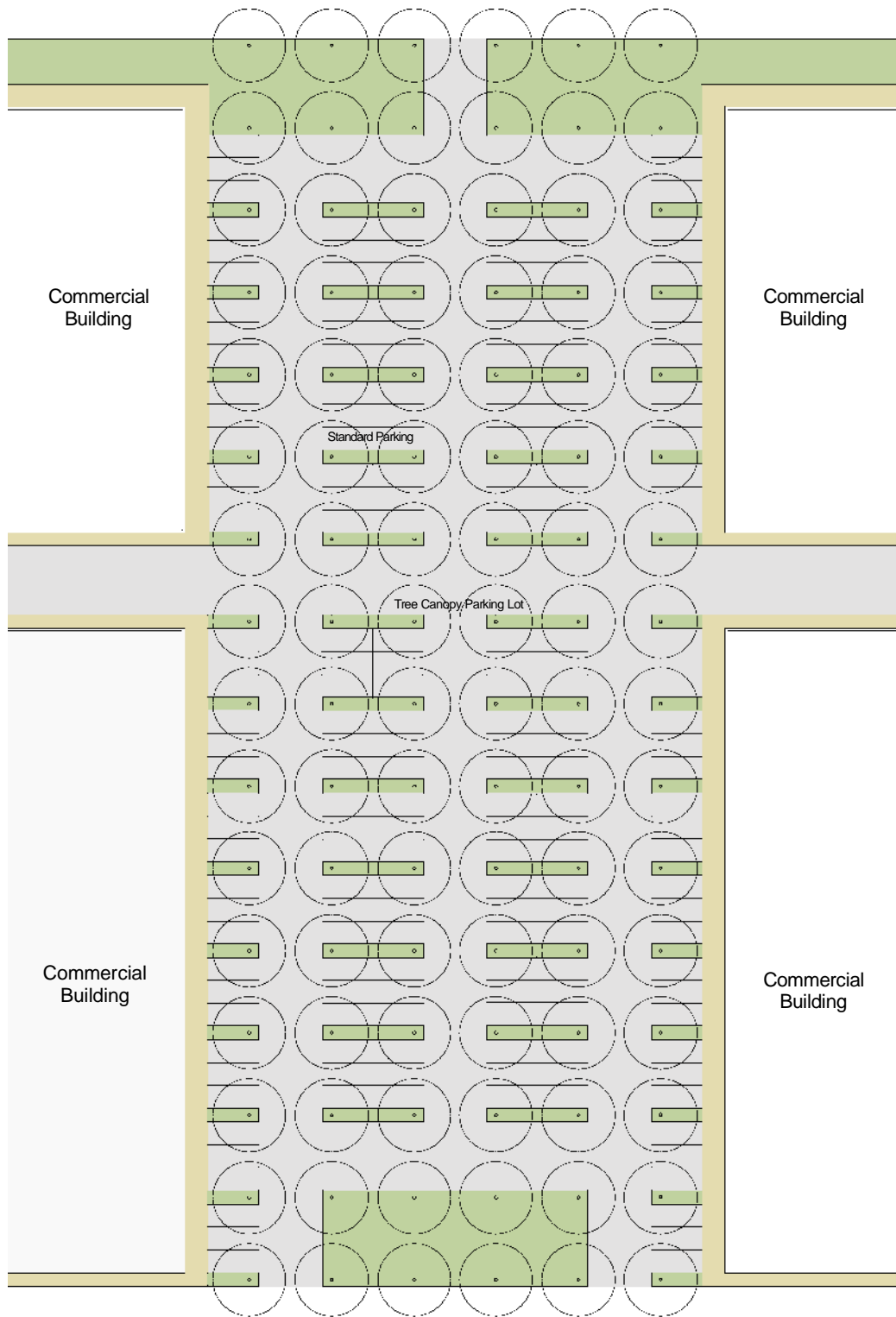
Freycinetia baueriana	kie kei
Alectryon excelsa	titoki
Vitex lucens	puriri
Prumnopitys taxifolia	matai
Sophora microphlla	kowhai
Rhopalostylis sapida	nikau
Hoheria populnea	lacebark
Corynocarpus laevigatus	karaka
Plagianthus betulinus	manatu
Pennantia corymbosa	kaikomako
Hedycarya arborea	pigeonwood
Aristolelia serrata	makomako
Kunzea ericoides	kanuka
Cordyline australis	ti whanake
Dysoxylum spectabile	kohekohe
Coprosma grandifolia	kanono
Streblus banksii	towai
Streblus microphylla	turepo
Myrsine divaricata	weeping matipo
Marrattia salicina	king fern

Swamp Forest Species

<i>Syzygium maire</i>	maire, tawake
<i>Laurelia novae-zelandiae</i>	pukatea
<i>Carpodetus serratus</i>	putaputaweta
<i>Phormium tenax</i>	harakeke
<i>Coprosma tenuicaulis</i>	hukihuki
<i>Dacrycarpus dacrydioides</i>	kahikatea
<i>Blechnum novae-zelandiae</i>	swamp kiokio
<i>Cortaderia fulvida</i>	toetoe
<i>Astelia grandis</i>	swamp astelia
<i>Schefflera digitata</i>	pate
<i>Podocarpus totara</i>	totara

Attachment 4

Typical ~~Commercial Services~~ Sub-Precinct C Mixed Use Precinct Access and Car Park Layout



Scale

TYPICAL COMMERCIAL LAYOUT

Attachment 5

**Drury South Industrial Precinct: Stream and Wetland Rehabilitation Guidelines
(June 2013)**

Drury South Industrial Precinct

Stream and Wetland Rehabilitation Guidelines

June2013



Boffa Miskell



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Drury South Industrial Precinct
Stream and Wetland Rehabilitation Guidelines



1.0 Introduction

1.1 Purpose of this Document

The Drury South Industrial Precinct (DSIP) Stream and Wetland Rehabilitation Guidelines provide a summary of proposed stream and wetland works associated with the DSIP project. This includes all stream corridors to be removed, realigned, or restored, and wetlands created associated with stormwater management. The purpose of this document is to achieve the following:

1. To provide technical input to the planning process (to be read in conjunction with the Ecological and Landscape Assessments, Assessment of Environmental Effects (AEE) and Infrastructure Assessment report (IAR).
2. To provide the project team with a set of principles for treatment of riparian (stream and wetland) areas within the DSIP area.

1.2 Proposed Stream and Wetland Rehabilitation Works

In line with the proposed Drury South Industrial Precinct, the existing Hingaia and Maketu streams will be protected and enhanced by corridors of riparian restoration 40 metres in width (20m on each bank). Dense riparian planting will also occur along SH1 in association with the Roslyn Stream realignment and along the northern boundary of the site in association with a newly formed northern stream realignment.

Some streams and farm drains within the DSIP area will be filled. Piped infrastructure or vegetated swales will direct these modified catchments to the Hingaia Stream. These systems, as well as stormwater runoff from business activities will be treated for water quality in extensive wetland areas associated with the Hingaia stream corridor. These wetland areas will function for stormwater quality and quantity, ecosystem function and values, landscape amenity, natural character, and recreation.

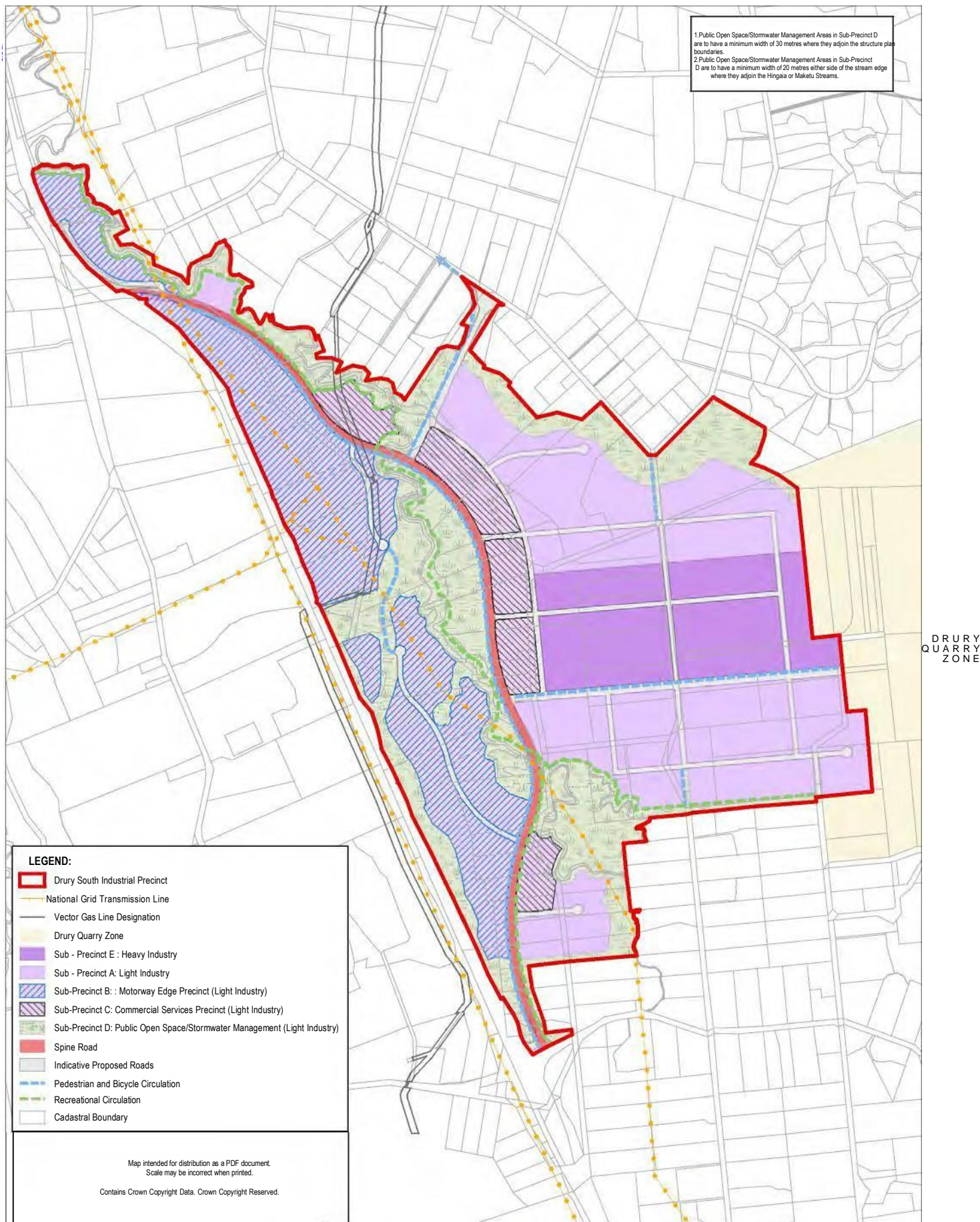


FIGURE1:DSIP Concept Plan - December 2010 (Source: BECA Ltd)

Drury South Industrial Precinct Stream and Wetland Rehabilitation Guidelines

2.0 Streams of the Project Area

2.1 Existing Streams and Proposed Mitigation

The Hingaia Stream flows through the DSIP area from south to north before continuing through the Drury Township to discharge to Drury Creek and eventually the Pahurehure Inlet to the Manukau Harbour. The Maketu Stream flows into the site at the south eastern corner of the DSIP area, and joins with the Hingaia Stream. The Roslyn Stream flows from the west under the State Highway and joins a further tributary to the Hingaia Stream. The remainder of streams traversing the site do not have officially recorded names, are smaller, highly modified, and in some cases have been piped.

An assessment of the existing surface water network and receiving environment has been carried out as part of the Hingaia Stream ICMP. This included a stream ecology study, "The Hingaia Catchment Environmental Assessment, Golder Associates, August 2009". This study included field survey of streams within the DSIP area with respect to water quality, and aquatic flora and fauna. Each stream potentially affected by the DSIP has been evaluated by the 'stream ecological valuation' method (SEV) in accordance with the technical publication ARC TP302:2008.

Existing watercourses and modified farm drains between Stevensons Quarry and SH1 will need to be filled or re-aligned to accommodate the DSIP earthworks footprint. This includes intermittent and permanent streams (refer Figure 2). Many of the existing overland flowpaths are farm drains, constructed for active drainage. All streams to be affected by the proposed DSIP have been heavily modified by farming or roading operations, including dredging, spraying, straightening, and ongoing impact by stock. In general all of these streams have low to moderate functional values for stream ecology.

Proposed mitigation for stream loss includes the restoration of riparian zones along the length of the Hingaia and Maketu Streams within the DSIP Area. This includes a 40m wide planted riparian buffer along all streams. In addition, streams to be re-aligned will have an appropriate stream profile and riparian planting to provide for sustainable stream function.



One of many existing intermittent farm drains showing evidence of earthworks, spraying and access by stock



LOCATION A (FIGURE 2) - The northern stream is directed along Quarry Road in a highly constrained and modified environment, with low ecological values



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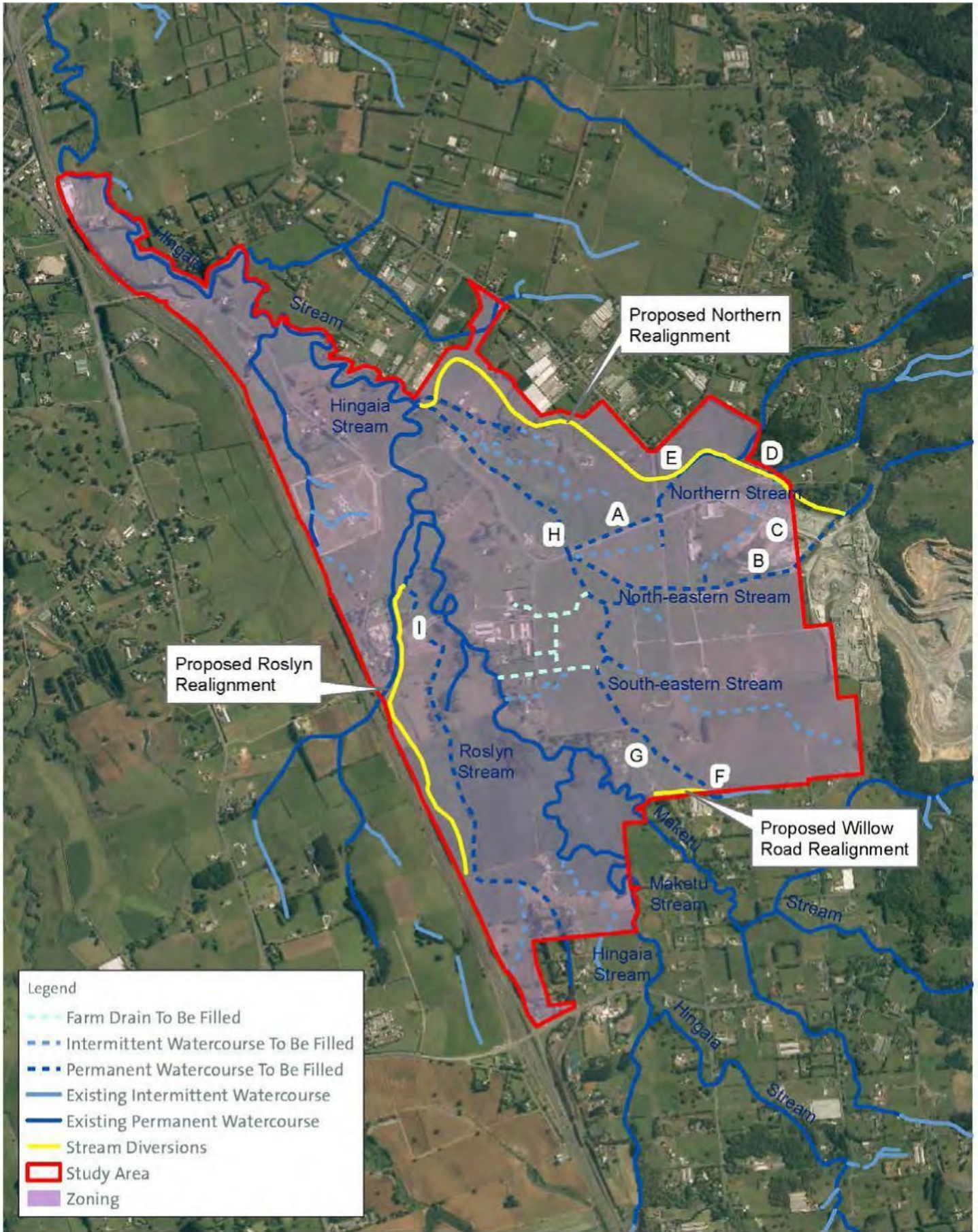


FIGURE2: DSIP Existing and Proposed Water Courses (Source: BECA Ltd)

**Drury South Industrial Precinct
Stream and Wetland Rehabilitation Guidelines**

2.1.1 Northern Streams

A tributary to the northeast of Stevenson Quarry is currently dammed in its headwaters for quarry operations before being reticulated to a channel (refer Figure 2, Location B below). The northeastern stream also receives stormwater from the quarry via adjacent treatment facilities (Location C). As part of the works to accommodate the DSIP, the upper catchment of this stream will be directed to the existing northern stream corridor (Location D).

This northern stream will be rehabilitated with an enhanced stream profile, and restored streambank and floodplain vegetation. The northern re-alignment will be 1,800m in length, comprising 1,500m of new channel and 300m of rehabilitated channel.



LOCATION B (FIG 2) - The north-eastern channel flowing through mixed exotic vegetation



LOCATION C (FIG 2) - The north-eastern channel directed alongside the quarry settlement ponds



LOCATION D (FIG 2) - The existing northern stream channel will be enhanced to receive there – aligned north-eastern tributary



LOCATION E (FIG 2) - The northern stream at the base of the northern escarpment will be rehabilitated as part of the proposed works

2.1.2 Southern Streams

The streams to be filled between the quarry and the Hingaia Stream are relatively small, with low gradient catchments that do not extend beyond the project area. A stream from the southeast of the site (refer Figure 2 and Photos Location F and G) conveys a number of intermittent stream tributaries from the centre of the project area, before joining with the existing northern stream and northeastern tributary previously mentioned (Location H). The southeastern stream and its tributaries have no vegetation cover beyond aquatic macrophytes and pasture species. These watercourses have been heavily modified by pastoral land use.



LOCATION F (FIG2)-The southeastern stream ponding behind a road culvert, 50 metres downstream of the proposed Willow Road Re-alignment



LOCATION G (FIG2)-The southeastern stream wends through the middle of the project area before combining with the northern stream

At least 230 metres of the headwaters of the southeastern stream will be retained, enhanced, and linked westward to the Maketu Stream via an 180m section of new channel (the Willow Road Realignment). This realignment will be planted with a riparian buffer. The remaining watercourses between the Hingaia Stream and quarry will be filled.

2.1.3 3 Eastern Streams

The Roslyn Stream (Location I) to the west of the Hingaia Stream will be re-aligned toward the SH1 corridor. The current stream is an open farm channel with low summer flows and dense growth of the exotic reed sweet grass (*Glyceria maxima*). The re-alignment will include filling of 450m of the upper reach of this stream, and formation of 1,600m of newly aligned channel. The realigned channel will be formed with an appropriate profile and rehabilitated for enhanced ecological function, with a 20 metre wide riparian corridor on both sides.



LOCATION H (FIG2)-The channel flowing to the Hingaia, containing the combined flows of the south-eastern, northern, and north-eastern streams following a rain event



LOCATION I (FIG2) – The Roslyn Stream (mid-ground), a farm channel with low flows, is to be realigned and rehabilitated

2.2 Existing Streambank Erosion

Streambank erosion has been identified in the ICMP studies as an existing issue at a number of locations. The Hingaia Stream is subject to extensive bank erosion, identified near the Quarry Road bridge on the Hingaia Stream and near Davies Road Bridge on the Maketu Stream.

Stormwater wetlands prior to the Hingaia channel are proposed for the DSIP in order to detain any additional flows that may adversely impact stream erosion (refer Section 3.5). Riparian vegetation is proposed along the Maketu and Hingaia and for all re-aligned stream channels to stabilise banks in the short term and reach a sustainable stream equilibrium in the long term.



A lack of riparian vegetation and active erosion along the Hingaia channel



The Maketu channel with erosion scour at the outside bank

2.3 Existing Aquatic Ecology

As part of the Hingaia Stream ICMP, Golder and Associates undertook SEV surveys of representative stream reaches (Golder 2009). Most of the stream environments in the project area had poor functional values due to extensive modification by agriculture.

The Hingaia ICMP surveyed thirteen sites within the DSIP Area. The best quality site was on the Maketu Stream, with higher scores across all functional categories. Another site, located on the lower Hingaia Stream, also scored relatively high. The best value site for the tributaries was located on the northeastern quarry stream. Full descriptions of functional ecology values can be found in the DSIP Assessment of Ecological Effects (Boffa Miskell 2010).

A total of 6 species of fish were recorded across the project area. Shortfin eels were the most common species, with occurrences of longfin eel, common bully, inanga and cran's bully. Five of the seven tributary sites had no fish, or mosquito fish only. The mosquito fish is an exotic pest fish classified as 'Unwanted' under Biosecurity legislation. These sites had very low fish community values.

Macroinvertebrate communities indicated low environmental quality at most sites. Except for the northeastern stream, tributary sites were characterised by worms, dipteran flies, leaches, and flatworms, suggesting nutrient enrichment and fine sediment. The Maketu site had a notable portion of mayflies (*Zephlebia* spp.), possibly due to better water quality (e.g. lower water temperature).

3.0: Stream and Wetland Rehabilitation

3.1 Rehabilitation Principles

The following rehabilitation principles are intended to inform the rehabilitation of streams and wetlands in the DSIP area. The principles have been prepared by an inter-disciplinary project team, including landscape architects, planners, ecologists, and engineers. Principles seek to enhance the landscape and ecology values of the riparian systems, while providing appropriate design responses for hydraulic flow and stormwater management.

3.1.1 Landscape Values

There is significant opportunity to improve the natural character values within the DSIP area. Stream and wetland environments will also be integrated within a wider open space network, providing opportunities for enhanced recreation and landscape buffers. The following landscape principles apply to proposed stream and wetland rehabilitation:

- Contribute to landscape amenity values
- Provide vegetated buffers to specific land use activities as appropriate
- Integrate stream and wetland rehabilitation with streetscape and open space planning
- Provide for visual and physical access to rehabilitated natural areas
- Optimise natural character values through the planting of representative native communities
- Provide a diversity of natural habitats and plant communities to achieve a variety of landscape and spatial character, and to demonstrate a legible sequence of habitat types.
- Structure riparian vegetation to screen/define undesirable views, offer broad views to wetland environments, and frame distant views to eastern Hunua hills from SH1
- Apply appropriate standards for CPTED and IPTED for public or maintenance access
- Place pedestrian bridges as necessary to ensure landscape connections, and investigate opportunities to use existing stream spans (infrastructure) for this function
- Identify opportunities to involve the community in stream restoration planting
- Liaise with relevant representatives and apply appropriate protocols for any archaeological sites or heritage elements associated with rehabilitation works
- Enhance Cultural Value through the re-establishment of indigenous species and investigating cultural harvest opportunities

3.1.2 Ecological Functions

Enhancing ecological functions within the DSIP area will require a combined response to aquatic and terrestrial environments, in order to restore target species, representative habitats, and ecological processes. The following ecology principles apply to stream and wetland rehabilitation:

- Plant stream margins, banks and floodplain areas to achieve not less than 40m total width (10m min width either side of stream corridor)
- Utilise species sourced from the Manukau Ecological District that are representative of natural vegetation communities as predicted by LENZ
- Restore representative in-stream heterogeneity, providing for pool, riffle, run and cascade sequences as appropriate.
- Provide fish passage to the extent possible, including bullies and inanga to within their natural range
- Preserve groundwater influence and inundation regimes for existing floodplain forest in proposed stream corridors
- Provide appropriate transitional edge vegetation to remnant mature vegetation
- Optimise site coalescence between remnant vegetation areas along the Hingaia Stream
- Provide for breeding populations of water and wetland birds species
- Provide for appropriate staging and construction techniques to avoid potential impacts to downstream environments and in-stream aquatic habitat.

3.1.3 Hydrology and Hydraulics (H&H)

Stream and wetland rehabilitation will provide opportunities for water quality treatment for the DSIP, and appropriate hydraulic flows, and hydrologic capacity for the catchment. The following H&H principles apply to the rehabilitation areas:

- Use biotechnical stream stabilisation to restore a sustainable streambank morphology
- Apply a cross sectional profile that resembles a natural staged channel, including a permanent flow channel, a stream channel based on a bankfull (approximate two year average recurrence interval (ARI)), and associated floodplains and berms to hold the one hundred year ARI.
- Provide for an appropriate stream meander patterns for the floodplain extent, longitudinal stream profile, flow velocities, and expected bankfull event.
- Provide for hydraulic connections and fish passage to stormwater wetlands wherever extended detention is not required
- Place all forebay devices for stormwater wetlands outside of the 5 year ARI flood extent.



FIGURE 3: DSIP Concept Planting plan. (Source Boffa Miskell and Source Design)

3.2 Open Space Network

The stream and wetland rehabilitation concepts (refer Figure 3) integrate with a broader open space network to optimize specific requirements for public use and access, to ensure diverse representative habitats, and to enhance environmental services for the DSIP.

The open space network reinforces existing features and patterns of the project area. The Hingaia Stream corridor will be reinforced by wide riparian margins of representative planting of early successional forest, as well as kahikatea floodplain forest. In the north a substantial open space buffer is set aside to reinforce the natural escarpment separating the DSIP basin from the Fitzgerald Road ridgeline. This occurs in conjunction with the northern stream realignment and associated riparian rehabilitation works. In the south west of the project area, riparian planting along there – aligned Roslyn stream will form a landscape buffer to SH1.

Larger remnants of existing vegetation will be coalesced along the Hingaia Stream. Planting in association with stormwater wetland areas will further buffer and augment the conservation values of these remnants.

3.3 Stream Rehabilitation

The land use change associated with the DSIP provides a significant opportunity to restore the Hingaia Stream, a low gradient moderate order stream, which retains remnant kahikatea floodplain forest. The project also provides the opportunity to coalesce modified drainage channels across the site into a larger order stream channel and floodplain, with supporting streambank and floodplain vegetation. Stream rehabilitation proposals are the result of an iterative design process between ecologists, landscape architects, and engineers to optimise the principles of these guidelines.

3.3.1 Hingaia Stream

The Hingaia Stream is a significant watercourse, with a wide, actively meandering channel across the floodplain. The stream currently runs through pastoral and agricultural land uses, and receives runoff from existing farm drains in the project area. The rehabilitation of the Hingaia stream is a key objective of the DSIP, with a 40 metre vegetated buffer proposed along the corridor where it corresponds with the project area. The width of the riparian buffer would extend to accommodate a stormwater treatment swale proposed along a northern reach, and stormwater wetlands proposed within the Hingaia Stream's extended floodplain.

The rehabilitation of the Hingaia Stream will include:

1. The coalescence of the floodplain forest remnants (including significant natural areas) already occurring within Hingaia floodplain
2. The restoration planting of streambanks along the length of the stream within the Project Area, with the potential for specific interventions to restore the stream profile at erosion hot spots
3. The planting of banks and proposed riparian buffers with simple lowland plant communities with the expectation that these communities will secede with time to include more diverse species
4. Planting of feature areas of flax-cabbage tree and broadleaf species on extended floodplains
5. Hydrological connections and fish passage to stormwater wetlands where practical

3.3.2 Stream Realignments

A number of farm drains and watercourses will be replaced with overland flow paths and reticulated networks associated with the proposed development. In addition, some headwaters will be realigned to newly formed watercourses along the boundaries of the DSIP area. The Hingaia and the Maketu Streams will not be altered beyond restoration activities.

A detailed description of the potential effects on stream ecology and the proposed mitigation measures is presented in Boffa Miskell, 2010, "Drury South Business Project Assessment of Ecological Effects Associated with the Proposed Plan Change". These guidelines inform the potential design response to optimise the flood management function of the rehabilitated streams, and their landscape and ecology values.

3.3.2.1 Design Parameters

The profile of each re-aligned stream channel is based on the cross-sectional area to accommodate a 1.5 to 2 year average recurrence interval (ARI). This flow is traditionally associated with a 'bank-full' event with active stream erosion and re-deposition.

The morphology of realigned streams is also based on their substrate, longitudinal gradient, and association with their floodplain. These functions can be used to prescribe channel sinuosity and width to depth ratio (Rosgen 1994). The bankfull width is used as a function to predict the stream meander wavelength and the radius of curvature for bends (Leopold 2003 and Thorne et al 2003). Refer to Figure 4 below.

Proposed stream morphology is intended to minimise friction within the channel to prevent active erosion, and also to provide a floodplain width that can accommodate the stream in equilibrium.

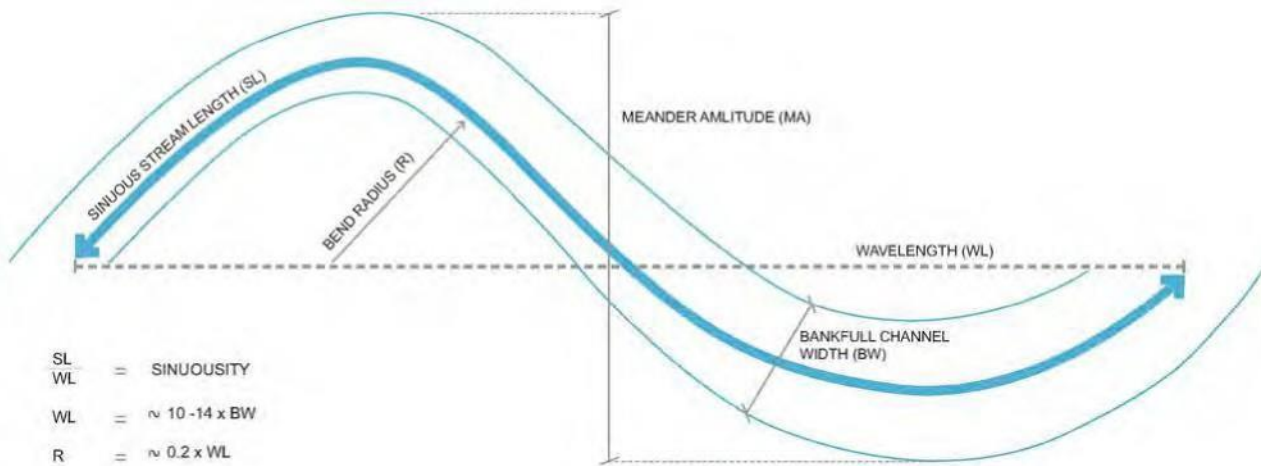


FIGURE 4: (above) The indicative relationship between channel width, and meander pattern

BELOW: A natural meander occurring as an overland flow event during flood conditions in the project area



3.3.2.2 Construction

Construction of the realigned channels is intended to occur off-line where possible, or to be staged to avoid potential impacts to downstream environments and in-stream aquatic habitat. Material selection is expected to be inert and where possible to be the equivalent of materials expected in these stream environments in their natural state.

It will be possible to utilize 'natural' materials through the application of biotechnical construction, which utilises a combination of persistent and biodegradable materials to retain channel shape until plants can establish. In general biotechnical responses for stream stabilisation can include:

- Stream profiling to respond to specific flow events
- Floodplains to dissipate flood velocities
- Stabilised bank toe and outside bends with hard materials such as rock, root vanes etc
- Directing flows and forming riffles through rock vanes
- Reinforcement of stream banks through planting established in erosion control blankets
- Stabilising the crown of banks with appropriate vegetation
- Provision of appropriate pool-riffle-run sequences.
- Grade control structures that accommodate fish passage
- Specific biotechnical treatments to accommodate 'nick' erosion points and stormwater outlets

3.3.2.3 Planting

Plant species selection will provide ecological functional values and representative plant communities. Stream planting objectives may include:

- Shade for temperature moderation
- Weed suppression
- Slope stabilization
- Tolerance to inundation
- Growth form to accommodate/obstruct views
- Stature to accommodate hydraulic flow rates
- Inherent aesthetic or spatial qualities of single plants or grouping of vegetation.

Based on LENZ predicted natural vegetation layers, representative plant communities for the DSIP area include lowland alluvial floodplain species, generally consisting of kahikatea forest. Other communities include tawa and pukatea, while matai, rimu and totara are generally restricted to better-drained soils. Titoki and puriri are locally abundant, with the potential for other broadleaf such as taraire, occurrence of kauri on the flanks of the basin, and occasional rimu and pukatea.

The project area extending into the flanks of the project basin and the hills beyond would be expected to support kauri, kahikatea, rimu and/or totara emergent over a diverse canopy dominated by varying mixtures of taraire and kohekohe. Other widespread tree species might include hinau, pukatea, rewarewa, and miro. Puriri is locally abundant at lower elevations, particularly on alluvial surfaces and tanekaha would be locally abundant, particularly on disturbed sites.

Where basalt occurs at the surface of the project area there may occur unique basalt forest environments, with an expected predominance of mahoe, karaka, kohekohe, totara, puriri, and titoki.

Until climax communities establish, it is expected that large areas of the riparian corridors will be planted with early succession and hardy species, such as riparian shrubs, kanuka, and totara to rapidly establish cover and to act as a nurse crop for later succession species. It is expected that certain low vegetation types will be applicable in places along the riparian corridors to accommodate hydraulic flows, to preserve viewshafts, and provide useable open space areas. Such planting may involve mown grass areas, sedge-rushlands, and flax-cabbage tree communities.

3.3.3 Northern Stream

A stream is proposed along the northern boundary of the DSIP area at the base of the northern escarpment. An existing section of this northern stream receives flows from three tributaries. A fourth tributary, previously described as the 'northeastern stream' (refer Section 2.1.1 and Figure 2) will also be directed to this channel from the quarry zone. The northern stream will accommodate the flow from these four tributaries, as well as localised catchments before discharging to the Hingaia Stream west of the proposed Link Road.

A typical northern stream cross section is shown in Figure 5, where a 'bankfull' channel represents the 1.5 year ARI event, and the associated floodplain conveys a 100 year ARI event with 500mm freeboard to the proposed development. Detailed design will provide pool-riffle and run sequences with adapted profiles. Biotechnical construction techniques will form narrower riffle sections, shallower point bars, and steeper outside bends.

The proposed sinuosity of the northern stream is relatively high, close to 1.5 times the wavelength (refer Figure 7). This is appropriate, based on the cross section of the bank full channel (with a low width to depth ratio) the longitudinal profile of the floodplain (a relatively flat lowland environment), and the general character of the bed materials and banks (being generally resistant but somewhat erodible).

The sinuosity is expected to reduce the longitudinal profile of the channel, reduce erosion of stream banks, provide strong connections to floodplain environments, and increase the overall length and diversity of stream habitat. Some stream reaches have constrained floodplains, where riffle sequences with local rock may be appropriate.

The northern re-alignment follows the northern boundary to combine stream environments with adjacent open space and to form a buffer to adjacent land use. The stream corridor and floodplain will be densely vegetated as indicated in figure 7. Planting will be dominated by early succession kanuka-totara forest. Kahikatea forest planting is proposed beside the Link Road entrance to act as a natural threshold at the DSIP entrance. Pockets of broadleaf forest are proposed to add diversity to the northern riparian corridor. Low areas of sedge-rushlands, grass areas, and flax-cabbage tree associations could provide views into the stream corridor from select locations.

3.3.4 Roslyn Stream Realignment

There is an existing water course running south to north through Roslyn Farm at the south west corner of the project area, which picks up flow from two culverts. Site assessment also revealed an existing spring feeding the stream. This stream will be realigned for part of its length whilst retaining links to existing spring and culvert in flows, the realigned corridor will provide a stronger vegetated element to adjacent to SH1 (refer Section 2.1.3 and Figure 2).

A typical Roslyn Stream diversion cross section is shown in Figure 6, where a dedicated 'bankfull' channel contains the 1.5 year ARI event, and the associated floodplain conveys a 100 year ARI event with 500mm freeboard to the proposed development. The Roslyn channel has a wide stream base with a lower depth to create a combined wetland/overland-flow-path appropriate for the small catchment, the low longitudinal gradient, and a strong groundwater influence.

Because the Roslyn channel is a lower energy environment than the northern re-alignment, with less likelihood of erosion, it is reasonable to expect a less sinuous character. Therefore a low sinuosity of 1.1 times the wavelength has been applied.

Planting along the Roslyn stream is proposed to be a combination of sedge-rushland planting and large swathes of flax-cabbage tree associations to create a wide wetland environment. Kanuka-totara forest may occur in existing knoll areas beside SH1 to frame views to the eastern Hunva foothills. Kanuka forest may continue along mid reaches of the stream and groups of kahikatea may occur alongside of a stormwater wetland to frame views from boardwalk locations and to shade permanent water features.

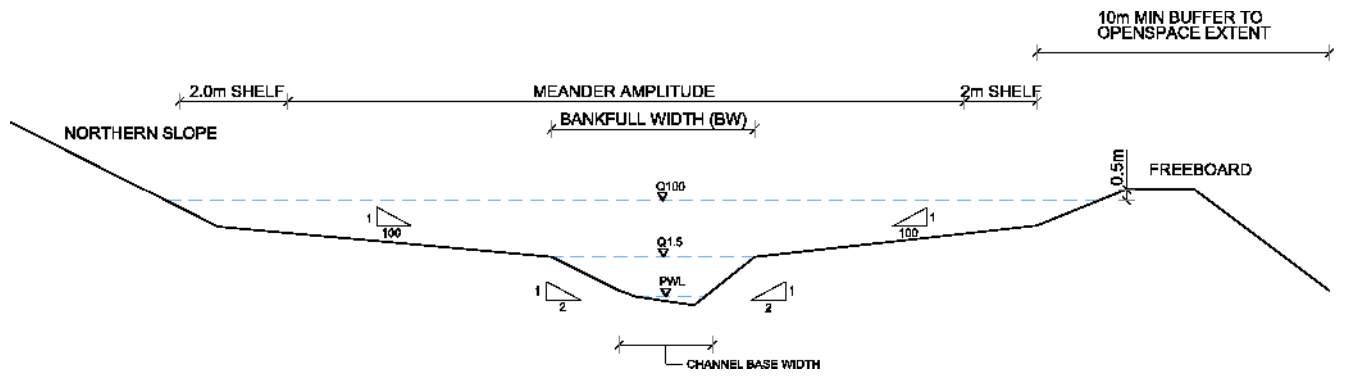


FIGURE 5: Typical section of the northern realignment in terms of flooding profiles

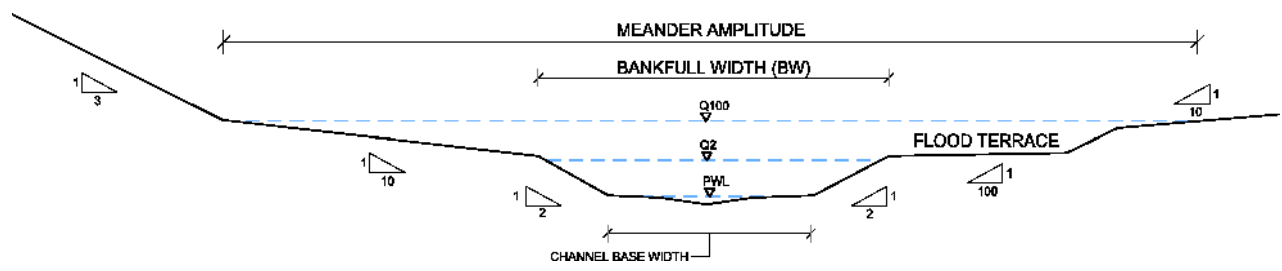


FIGURE6: Typical section of the Roslyn Stream realignment in terms of flooding profiles

3.3.5 Willow Road Realignment

There is a small roadside drain running east to west along Willow Road. The stream currently crosses Willow Road through a culvert near the intersection with Ramarama Road and continues north through the proposed DSIP area, eventually joining the Hingaia Stream. As discussed previously, this stream is heavily modified by pastoral land use and is largely unvegetated. It is proposed to divert this roadside drain directly west to the Maketu Stream along a vegetated riparian corridor that provides for a 1.5 year stream profile and accommodates a 100 year ARI event.

Drury South Industrial Precinct Stream and Wetland Rehabilitation Guidelines

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FIGURE 7: Proposed DRAFT planting plan for the Northern Re-alignment



FIGURE 8: Proposed DRAFT planting plan for the Roslyn Realignment

3.4 Riparian Revegetation Guidelines

3.4.1 Introduction

Riparian revegetation is proposed for the main stems of the Hingaia and Maketu Streams. In addition the Northern and Roslyn realignments will also be restored with riparian vegetation (as depicted in Figures 7 – 8). The progressive planting of these realignments as well as the present grasslands alongside the Hingaia and Maketu Streams will ultimately provide a greater extent of riparian bush, increasing the habitat opportunities and potential carrying capacity of the DSIP area as well as providing vegetated riparian corridors within the local landscape.

The following revegetation guidelines outline an accepted industry-wide approach to large scale revegetation programmes that should inform the development of the final detailed planting plans for the DSIP riparian margins.

3.4.2 General Procedure

The general procedure for the proposed revegetation plantings should be as set out below.

- Slope stabilization
- Seed should be sourced as is available from the Manukau Ecological District. However, notwithstanding the desire to use only genetic material sourced from this specific area in the revegetation programme, additional source material from the wider Auckland Ecological Region may be used.
- Planting of species into existing pasture should require pre-planting repeat herbicide applications to reduce the potential for grasses to compete with the seedlings planted.
- Blanket spraying in close proximity to the existing native bush areas needs to be avoided or very carefully managed so as to avoid by-kill. Herbicide should be carefully applied at least 2 weeks before planting.
- Where the earth has been previously compacted the areas to be revegetated should have a single treatment of earth tilling, in order to loosen the sub-soil and encourage successful rooting.
- Planting should be undertaken in favourable conditions, at the earliest opportunity during the planting season, preferably over the autumn months.
- The revegetation plantings should be supplemented with weed and browsing pest control to allow good establishment of the planted material. Ongoing weed control should be carried out until canopy closure is sufficient to suppress weed growth. Browsing pest control may be required over the longer term in order to allow these vegetated areas to progress in good health. However, once pest numbers are reduced to a minimal level, continued control should require a reduced effort.
- All planting and maintenance operations should be carried out by an approved contractor, experienced in native revegetation planting programmes.

3.4.3 Plant Material

- The plant material needs to be of the specified size and condition. All plants will have well developed root systems and a well-shaped stem and head free of disfigurements or injury, pests and disease.
- The plant material should have been sufficiently “hardened off” at the nursery prior to being passed on to the planting contractors.

3.4.3 Planting Methods

- Planting should follow an approved planting plan, indicating set-out, species, size, density and spacing.
- A dual system of planting is proposed, involving the establishment of a nurse crop of hardy pioneer species such as kanuka. These will be enriched with appropriate native tree species when the nurse crop has sufficiently established, which should be at approximately 3 years age.
- Nurse plant stock should be set out at appropriate spacing and percentages, and according to each species niche preferences.
- Once a good cover of the nurse plantings is established, enrichment plantings should be implemented. Enrichment species trees should be distributed (at wider centres) amongst nurse planting and according to site preferences in copses/groves spread further apart in subsequent seasons.
- The enrichment plantings may include the pruning or removal of modest numbers of nurse shrubs in order to create the necessary light wells.
- Plants should be set out and appropriately spaced in an informal manner avoiding straightlines and regular geometric patterns, while ensuring an even cover across the planting area. Species should be distributed at appropriate percentages and according to each species niche preferences, microclimate and ground conditions.
- Planting holes should be dug out to spade depth and seedlings located next to pre-dug holes in the correct species mix. Actual planting should be by hand only. The base of the planting hole should be filled evenly without compaction to a level where the top of the plant root ball is level with surrounding ground. The plant should be plumb and orientated so that the weathered face of the main stem faces north. When the backfilling is complete the plant should be gently firmed in. All plants should be encouraged to grow to maturity as naturally as possible to achieve their desired character and form, through sound management practices including weeding, and other accepted horticultural practises.
- Slow release fertiliser should be used within the proposed planting operation, with at least one tablet of 20-4-4(N-P-K) that is designed to last at least 12 months (preferably 24 months). The controlled release fertilizer tablets need to be inserted into each planting hole approximately half way up the back fill material, ensuring placement of the fertilizer on the upper slope side of each plant
- Approved chipped tree mulch or post-peeling bark mulch could be spread around the base of individual plants used in the mass revegetation plantings, but only in areas outside of the floodplain (to avoid mulch being washed away in floods).

3.5 Stormwater Management

Stormwater design is discussed in greater detail in the DSIP Infrastructure Assessment Report (BECA 2010). The general approach is to utilize the large floodplains associated with the Hingaia Stream to accommodate stormwater wetlands. Each wetland would include a forebay and accommodate the water quality volume. There is also allowance for extended detention to limit potential effects of stormwater volumes on downstream erosion.

Wetlands have been placed above the stream invert to not unduly effect ground water levels, and forebays have been placed above the 5 year flooding event to prevent re-suspension of contaminants stored in these areas.

Safety considerations have allowed for benching around the perimeter of each wetland and a reverse bench along each embankment. Appropriate maintenance access will be provided to forebays and to the base of wetlands for restorative maintenance if required.

Biotechnical approaches similar to those described for stream realignment works will be considered during detailed design, with specific consideration for the formation of access and outlets to the Hingaia, with fish passage possible to wetlands that are not required to detain extended detention volumes.

Planting would be exclusively sedges, rushes, and small riparian shrubs around wetlands for water quality treatment, to stabilize the wetland profile, and to allow ease of maintenance. Trees and taller shrubs would be expected at the edges of wetlands, at their interface with stream environments, and around the northern edges of forebays for shade.

3.5.1 Stormwater Wetland One

Stormwater Wetland One has been designed as a landscape amenity feature through an iterative design process between landscape architects, engineers, and ecologists. This has driven the design of forebays, the shape and extent of the permanent pools and wetland planting, the integration of multiple public access structures, and a pedestrian circulation path that crosses the Hingaia stream corridor (refer figure 9). Wetland One has been tiered to suit the local topography and the bathymetric design directs flows along three separate treatment paths.

3.5.2 Northern Swale

A swale is proposed for stormwater management along the western edge of the lower Hingaia Stream. The total width of the swale and vegetated buffer contributes an additional 25m of vegetation to the riparian buffer. The length of swale is significantly longer than required for water quality and is expected to exceed regulatory expectations at the entry point to the Hingaia.

Planting will be selected with the ability to sustain temporary ponding and saturated soils, and will allow appropriate hydraulic flows and residence time.



FIGURE 9: Proposed Planting Plan for Stormwater Wetland One

4.0: Summary

The DSIP area is traversed by the main stems of the Hingaia and Markeu Streams and several other permanent and intermittent streams and farm drains. Watercourses other than the Hingaia and Maketu Streams will be modified or re-aligned in order to facilitate the proposed land use. Stormwater management will also lead to the creation of additional naturalised wetland areas in association with the Hingaia Stream corridor.

All streams affected by the proposed DSIP have been previously modified by farming or roading operations, including dredging, spraying, straightening, and ongoing impact by stock. Stream bank erosion has been identified in the Hingaia ICMF as an existing issue at a number of locations. In general all of these streams have low to moderate functional values for stream ecology. Five of the seven tributaries to the Hingaia were observed as having very low to absent fish community values.

The DSIP Stream and Wetland Rehabilitation Guidelines establish a set of principles to enhance the landscape and ecology values of riparian systems in the DSIP area. The document is intended to provide technical input to the planning process and to provide guidance to ongoing more detailed design and implementation. The guidelines apply an inter-disciplinary approach to riparian rehabilitation.

Stream rehabilitation is proposed for the length of the Hingaia and Maketu Streams within the DSIP Area, including a 40m wide planted riparian buffer along the streams. In addition, streams to be realigned will have appropriate stream profiles and riparian planting to provide for sustainable stream function. Riparian rehabilitation will contribute to a wider open space network and enhanced natural character.

5.0: References

ARC (2008a). Proposed Auckland Regional Plan; Air, Land and Water. Auckland Regional Council, Auckland. May 2008.

ARC (2008b). State of the Environment Monitoring. Freshwater Invertebrate Monitoring: 2003-2007. Analysis and Evaluation. October 2008. Auckland Regional Council Technical Report 2008/010.

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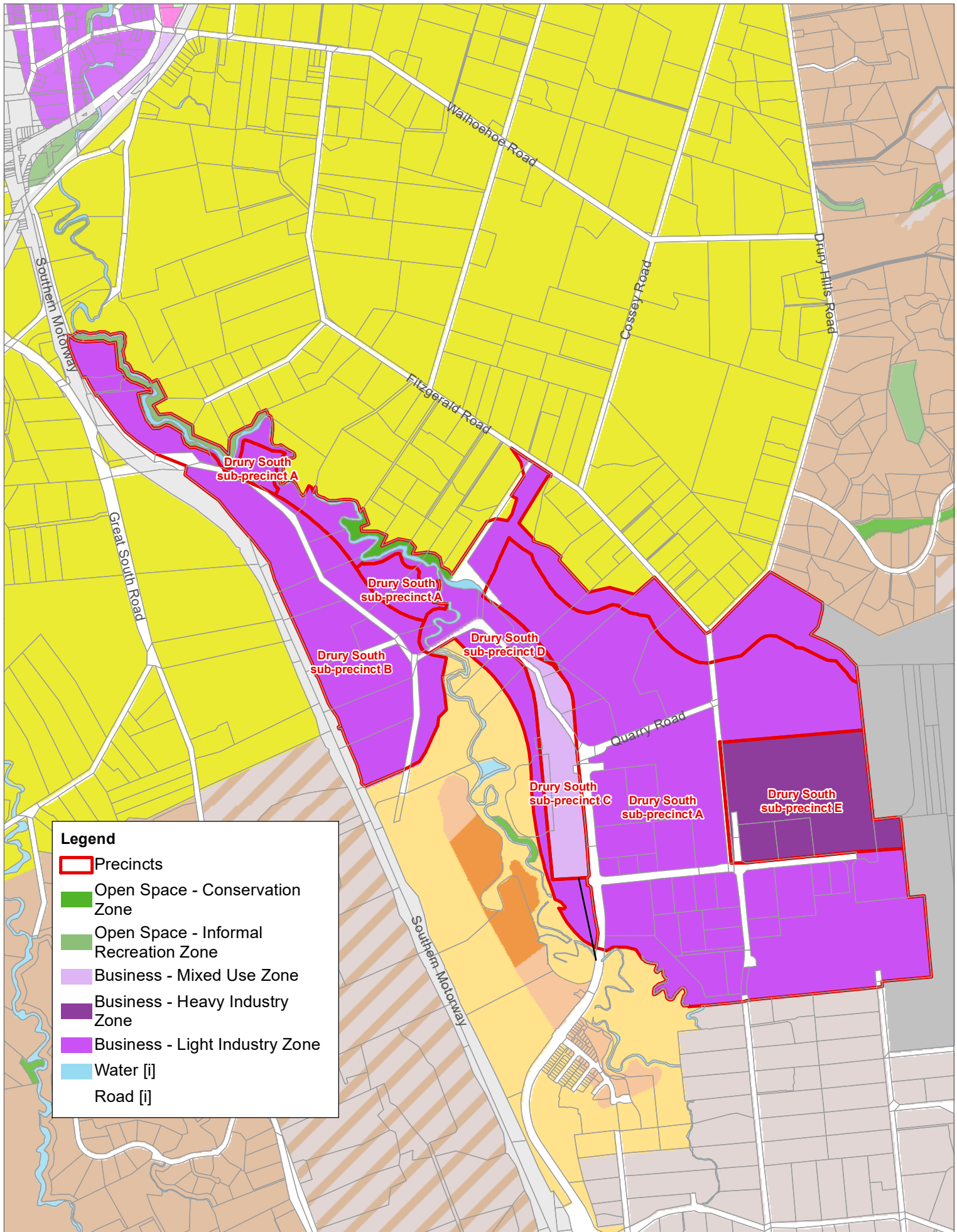
Hitchmough, R.; Bull, L.; Cromarty, P. (2007). New Zealand Threat Classification System list 2005. Department of Conservation, Wellington.

Leopold, L. A View of the River (2003). Harvard Press, USA 2003

Rosgen, David L. A classification of natural rivers. Catena 22 (1994): Wildland Hydrology

Thorne, C.; Hey, R.; and Newson, M. Applied Fluvial Geomorphology for River Engineering and Management. John Wiley and Sons, England 2003.

Attachment 5: PC46 spatial changes



Legend

- Precincts
- Open Space - Conservation Zone
- Open Space - Informal Recreation Zone
- Business - Mixed Use Zone
- Business - Heavy Industry Zone
- Business - Light Industry Zone
- Water [i]
- Road [i]

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Whilst due care has been taken, Auckland Council gives no warranty as to the accuracy and completeness of any information on this map/plan and accepts no liability for any error, omission or use of the information.

Date: 27/10/2021

Private Plan Change 46 Drury South Precinct

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Plans and Places

**Attachment 6: Further Clause 20A changes to text – Reinsert
Appendix 2**

Memo

Date: 19 October 2021

To: Celia Davison – Manager Planning - Central/South
 From: Sanjay Bangs – Senior Policy Planner - Central/South

Subject: Plan Modification: Clause 20A modification to Auckland Unitary Plan





Corrections are required to the Auckland Unitary Plan (Operative in Part) 2016 (the AUP).

I seek your approval of this plan modification pursuant to clause 20A, first schedule, Resource Management Act 1991.

You have delegated authority, as a tier four manager, to make a decision to correct an error to an operative plan under clause 20A. Schedule 2A of the Auckland Council Combined Chief Executives Delegation Register authorises all powers, functions, and duties under RMA's first schedule (except clause 17 which cannot be delegated) to tier four positions.

Rule or Section of Unitary Plan	Chapter I Precincts: I410.11.1 Drury South Industrial Precinct Appendix 1
Subject Site (if applicable)	Multiple sites within the Drury South Industrial and Mixed Use Precinct at Quarry Road, Fitzgerald Road and Ramarama Road, Drury
Legal Description (if applicable)	-
Nature of change	<p>Plan Change 4 (PC4) amended Chapter I140.11.1 Drury South Industrial Precinct Appendix 1 of the AUP, in order to address technical errors and update references. However, when the AUP was updated to reflect PC4, Appendix 2 from Chapter I140.11.1 was omitted in error. This was not proposed to be deleted by PC4.</p> <p>Therefore, Chapter I140.11.1 needs to be amended to reinsert the Appendix 2 text deleted in error.</p> <p>Note: This is the first of three changes to the Chapters I140 and I410.11.1 in this AUP update.</p>
Effect of change	The changes have no effect, as the text being reinserted was never deleted by PC4. The effect of the changes are both neutral and less than minor. No person would benefit or be prejudiced by these changes.
Changes required to be made (text/in-text diagrams)	Refer to markups shown in red in Attachment 1 .
Changes required to be made (maps)	N/A
Attachments	Attachment 1: Text changes

¹ updated February 2021 and available on Kotahi at [Delegation Register](#)

<p>Prepared by: Sanjay Bangs Senior Policy Planner</p>	<p>Text Entered by: Sarah El Karamany Planning Technician</p>
<p>Signature:</p> 	<p>Signature:</p> 
<p>Maps prepared by: N/A Geospatial Analyst</p>	<p>Reviewed by: Craig Cairncross Team Leader - Central/South</p>
<p>Signature:</p>	<p>Signature:</p> 
<p>Decision: I agree/disagree to authorise the Clause 20A modification using my delegated authority</p> <p>Celia Davison Manager Planning - Central/South Date: 27 October 2021</p>	
<p>Signature:</p> 	

Attachment 1: Text changes

Attachment One

I410.11.1: Attachment 5 (Drury South Industrial Appendix)

APPENDIX: DRURY SOUTH INDUSTRIAL PRECINCT _SUBDIVISION DESIGN ASSESSMENT CRITERIA

PURPOSE OF APPENDIX I410.11.1

Within the Drury South Industrial Precinct, applications for any subdivision or any development of land which precedes a subdivision being undertaken which complies with Standard I410.6.3 as a restricted discretionary activity will be assessed in terms of a series of matters to which the Council will restrict the exercise of its discretion. One of the matters which the Council will have regard to as set out in standard I410.8.2(1)(d) is:

the extent to which subdivision design and layout gives effect to the objectives and policies identified for the Drury South Industrial Precinct and the subdivision design assessment criteria set out in Appendix I410.11.1.

In addition, the criteria will also be used in the consideration of discretionary applications for subdivision, as appropriate.

This appendix sets out assessment criteria under a number of "Design Elements". Accompanying illustrations are intended to support the text and represent good design solutions, but are not intended to represent the only design solution. All illustrations are indicative only.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged.

It is recognised that certain proposals will not achieve absolute accord with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or ;
- whether the proposal represents a better design solution than that suggested by the criterion.

Planting plans and maintenance plans for recreation and esplanade reserves and stormwater management areas will need to be submitted with applications for subdivision consent and approved by the Council.

Design Element 1: Road, Reserve and Access Networks:

1. Earthworks should be undertaken principally at the initial subdivision stage, and where appropriate the creation of reasonably flat sites should occur at the bulk earthworks stage (in order to avoid creating retaining walls at site development stage).
2. Road patterns should maximise convenient / direct access to the Maketu Road and limit connection to existing rural roads (such as Ararimu Road) except where this relates to the wider essential network.
3. The road pattern should facilitate access to and accessibility within Sub-precinct C Mixed Use.
4. Road patterns should be logical and contribute to the legibility of and ease of wayfinding within the area (refer Diagrams 1 and 2 for generic legibility and proposed street hierarchy).
5. Subdivision layout design should achieve protection and enhancement of all significant streams / tributaries to be retained and their riparian corridors (20m minimum either side from edge of stream) and concentrate open space as part of the riparian network (refer Diagram 3).
6. Subdivision layout design should achieve an interconnected open space and movement network.
7. Safe pedestrian and cycle routes through the structure plan area should be integrated with the riparian, reserve and road design.
8. Equestrian bridle trails should be integrated with riparian reserve development and provide access to the large centrally located public open space / stormwater management area.

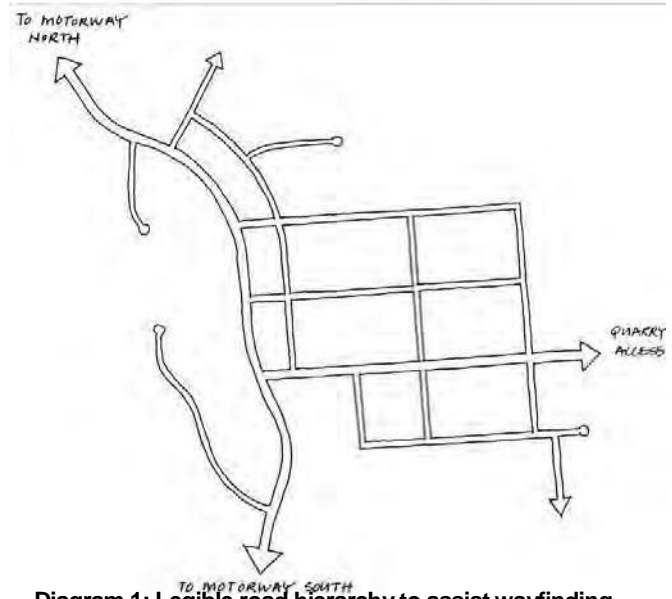


Diagram 1: Legible road hierarchy to assist wayfinding

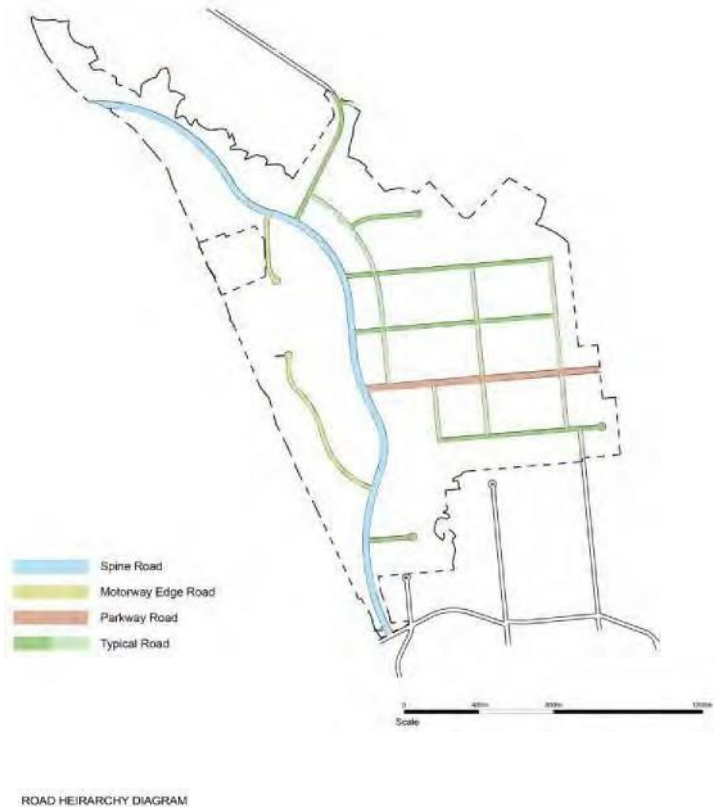


Diagram 2: Road hierarchy

9. Layouts should retain mature trees within the riparian corridors, particularly those of indigenous species.
10. In Motorway Edge Sub-precinct areas layouts should seek to retain as many existing established trees, particularly those of indigenous species, as possible.
11. In Motorway Edge Sub-precinct, areas access to sites off the Maketu Road should be combined wherever practicable.

Explanation:

Design Element 1 pertains to the overall site topography and the general layout of the networks of roads, reserves and other access linkages that make up the public space of the Drury South Industrial Precinct. These should be considered in an integrated fashion together with the development blocks that they create.

The existing site topography within the proposed Industrial Precinct is relatively flat although bulk earthworks including cut and fill will be required to establish levels for future development above the flood plain and appropriate falls across the land.

The riparian corridors of the Hingaia and Maketu Streams and their significant tributaries will remain an important feature of the site topography once the Precinct is established. Vegetation associated with these corridors is also important to the structuring, screening and ecology of the area and its proposed activities.

The riparian corridors also provide a focus for future recreation and open space development and form part of the enhancement framework for the Precinct.

The road network and hierarchy (refer Diagrams 1 and 2), has been designed to efficiently direct traffic into and out of the Precinct connecting to the Southern Motorway (SH1) at both the Ramarama (south) and Drury (north) interchanges. The proposed Spine Road is important to the legibility and traffic efficiency of the Precinct; this route will provide the primary connection into and out of the Precinct with other streets connected to the Maketu Road through corridor.

The proposed street network has also been designed to limit the impact of vehicles destined for the Precinct on existing rural residential and community roads such as the road accessing and adjacent to the Ramarama School. Implementation of the street network to achieve the beneficial improvements to heavy vehicle (including quarry truck) and other Precinct related traffic movement is imperative as a part of delivery of the zone.

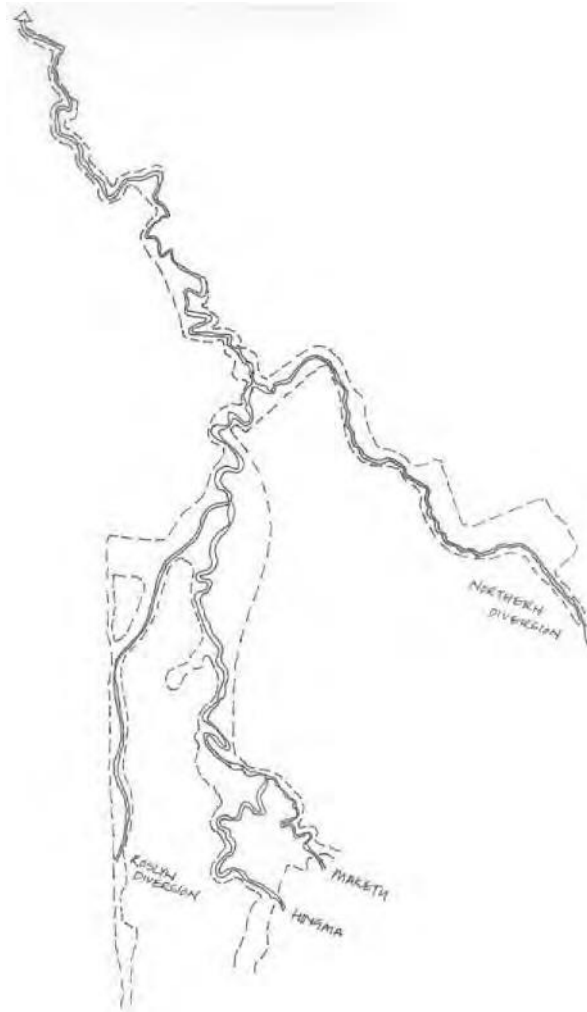


Diagram 3: Open space concentrated along Hingaia, Roslyn and Northern Diversion Stream corridors

By its nature the Sub-precinct C Mixed Use will require a finer grain street network with smaller street blocks, greater walkability, good service access and parking.

A legible road pattern (refer Diagram 1) is one that is easily understandable for the people that use it and that provides cues for first time users as well as those habitual users. Consistent road design and landscape themes can further emphasise the position of each street in the road hierarchy and in the pattern of streets in the wider area. Road patterns that are logical and easy to comprehend and navigate make an area feel more comfortable and help to provide a sense of identity.

Design Element 2 - Block Size, Lot Type and Orientation:

1. Blocks should be of a scale and shape to achieve a permeable street layout suited to the functional requirements of the proposed land use.
2. All lots should front onto and be accessed directly from a legal road. Rear lots are to be avoided (refer Diagram 4).
3. Through lots (with dual road frontage) are permissible (refer Diagram 4).

Explanation:

Design Element 2 describes the principles for consideration in the layout of blocks and lots within the Precinct.

Blocks within an industrial area are typically larger than those within finer grain residential or Mixed Use areas. A good permeable and well connected-street network is however still required in Light and Heavy Industry Sub-precincts A, B and E to facilitate access, provide an appropriate street address and reduce traffic volumes on side streets. Within Sub-precinct C Mixed Use, Design Element 1 also provides opportunities for views through to the open space corridor to the west of the Sub-precinct from Maketu Road.

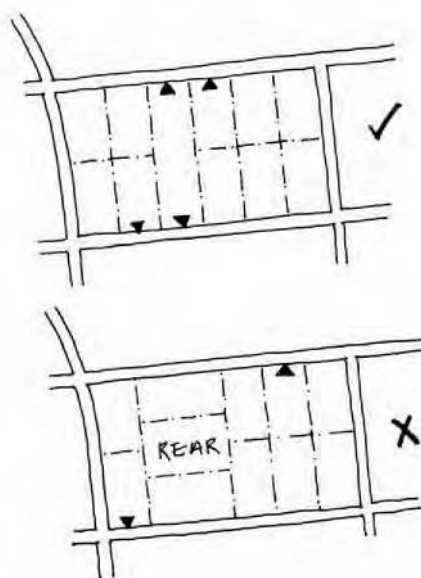


Diagram 4: All lots should front onto a legal road; through lots are permissible

Lots need to be of a size and shape to accommodate large scale, land extensive land uses and flexible to enable reasonable long term growth. At the same time rear lots are considered undesirable with a preference for development to address the street.

Design Element 3: - Roads and Accessways:

1. In addition to Auckland Transport Code of Practice and Council's Development Code requirements, minimum road and design elements should be appropriate to the nature of the function that they provide and also reflect urban design legibility considerations – i.e. wayfinding, as set out in Table 1 below.
2. Cyclists should be accommodated on the street carriageway.
3. A consistent palette of traffic management tools should be used across the Precinct. Traffic management devices such as chicanes, speed humps and other such restrictive management devices are not expected, however the use of thematic planting and measures such as localised narrowing to create thresholds or define changes in the street environment could be used.

4. All streets are required to accommodate strong avenue specimen tree planting. Refer Cross Sections Attachment 1. This planting is required to achieve the breaking up of the overall scale of the development particularly as seen from elevated locations, as well as to establish the enhanced expected amenity and character of the Precinct.
5. In addition to the street avenue planting a planted central median is also required on the roads identified as 'Arterial' and 'Parkway'.

Explanation:

Design Element 3 pertains to principles for the design of roads and other access routes within the Precinct. Road design should be appropriate to function and provide practical widths for vehicular access, including for emergency vehicles, parking, planting and services.

Pedestrian and cycle paths should generally be integrated with road and reserve design. Paths which are separated from vehicle routes should be designed for safety.

Table 1 below sets out the indicative function and design elements of the collector roads within the Drury South Industrial and Mixed Use precinct.

Table 1 – Indicative Road Function and Required Design Elements

Road Name	Proposed Role and Function of Road in Precinct Area	Freight or Heavy Vehicle Route	Minimum Road Reserve ²	Total Number of Lanes	Design Speed (kph)	Access Restriction	Bus Provision ⁴	Median	Cycle Provision ⁵	Pedestrian Provision
Maketu Road ¹ South of Link Road	Arterial	Yes	33.45m	4	60	Yes ³	Yes	No	Yes – separated	Both Sides
Maketu Road (North of Link Road)	Collector	Yes	27.65m	2	60	Yes ³	Yes	Yes (Flushed)	Yes	Both Sides
New Quarry Access Road ¹	Collector	Yes	27.65m	2	50	No	Yes	Yes (Flushed)	Yes – shared path	Both Sides
Link Road	Collector	Yes	27.65m	2	60	No	Yes	Yes (Flushed)	Yes	Both Sides
Ramarama Road (Fitzgerald Road Connection)	Collector	Yes	21m	2	50	No	Yes	Yes (Flushed)	Yes	Both Sides

Note 1: Already have Engineering Plan Approval and are under construction

Note 2: Typical minimum cross section which may need to be varied in specific locations where required to accommodate batters, structures, intersection design, significant constraints or other localised design requirements.

Note 3: Refer to Assessment Criteria I410.8.1(2)

Note 4: Carriageway lanes and geometry of intersections capable of accommodating buses.

Note 5: Type of cycle provision, i.e. separated or shared path, to be confirmed at the Engineering Plan Approval stage, based on nature and character of the Local Road.

Design Element 4: Reserves, Stormwater Management Areas and Riparian Planting:

1. Stormwater detention and treatment reserves should be located in general accordance with the locations shown in the Drury South Industrial Precinct Plan and in accordance with the relevant stormwater discharge consents, the Council's Development Code and relevant technical publications. The Cross Sections (Attachment 2) illustrate the Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections.
2. Stormwater ponds should be designed to fit in with the surrounding landscape and appear as an integrally designed infrastructural component of the overall setting.
3. Vegetated buffers, not less than 40m in total width for any retained permanent or diverted stream, should be provided on the margins of streams, ponds and wetlands and should:
 - Include native species as identified in Attachment 3;
 - Include native trees on the lower and upper banks of ponds predominantly to the north and west to provide shade;
 - Provide a minimum of 10m of native planting either side of the stream corridor including shallow water rushes and sedges;
 - Avoid vegetation that will exacerbate flooding and the blockage of water flow along the immediate riparian corridor.

The only exception to these requirements is the retained permanent stream in the northwest of the Precinct (adjacent to the Transpower site) which will be subject to a minimum requirement of 10m of native planting either side of the stream corridor only.

Note: Attachment 5 sets out 'Stream and Wetland Rehabilitation Guidelines (June 2013) for the DSSP area.

4. Walkways / cycleways along riparian corridors and through buffer planting should be designed to minimise any impacts on ecological function and give due consideration to personal safety and Crime Prevention Through Environmental Design (CPTED) principles.
5. Edge buffer reserves should be located in accordance with the Drury South Industrial Precinct Plan, be a minimum of 30m in width and be planted in generally accordance with Diagram 5 below. Planting should be fast growing rural shelter belt species capable of attaining a minimum height of 6 metres at maturity.



Diagram 5: Typical landscape buffer cross section

6. Suitable mechanisms to ensure the establishment and ongoing maintenance of landscaping of reserves and stormwater management areas until those areas are vested in the Council will be required to ensure the long term success of any landscaping.

Explanation:

Design Element 4 pertains to matters for consideration for locating, sizing and designing reserves stormwater management areas and riparian planting. These areas will be generally located in accordance with the locations shown in the Drury South Industrial Precinct Plan; regard should also be given to Design Element 5 when designing reserves within the Precinct.

The principal reserve network within the Precinct, as illustrated in the Drury South Industrial Precinct Plan, is structured around riparian protection and enhancement as well as stormwater management including detention and treatment. The reserve network is however designed for multiple functions and values including passive and active recreation, pedestrian / cycle commuter access, ecological values, visual screening / separation and aesthetic amenity.

The Precinct Plan also includes buffer reserves, adjoining the Light Industry zoned Sub-precincts A and B. The main purpose of these reserve is to physically and visually screen and separate adjacent existing land uses and residents from these areas. These reserves are planted to maintain a robust rural character with a woodlot/ shelter belt form of land management. Whilst providing multiple functions including biodiversity and aesthetic values, their primary function will remain as that of a buffer to land uses outside of the Precinct.

Design Element 5: Reserve Interface Design:

1. Reserves intended for public recreation and use should be designed to be bounded by public roads as much as possible given topographical and natural feature constraints. (Note proposed buffer reserves are not intended to be bounded by public roads)
2. Where reserves or riparian buffer areas adjoin lots, the boundary should be securely delineated and fenced to avoid encroachment (refer Diagram 5).

Explanation:

Reserves intended for public use that are well fronted by public roads are more secure because of the informal surveillance from the road and activities that interface with the road across the carriageway. Ideally not less than half the total length of legal boundary of any reserve should adjoin a legal road.

Design Element 5a: Earthworks and Retaining Walls

1. Changes of level adjoining streets and open space corridors should be achieved by gently battering and contouring land.
2. Where retaining walls are required, they should be screened from public view. This may be achieved by planting and breaking up the vertical extent of walls through physical stepping.

Additional Sub-Precinct Criteria

In the case of subdivision within Sub-precinct B Motorway Edge and Sub-precinct C Mixed Use, the following criteria shall also apply and take precedence over the general assessment criteria for subdivision stated above, where this is inconsistency or conflict.

Additional Design Element 6: Subdivision within Sub-precinct B Motorway Edge

1. Earthworks should be designed to retain a more natural, undulating topography and character outside of building platforms and other areas required through function to retain a flat topography.
2. Intersections between public roads serving the sub-precinct and the north south primary road (Maketu Road corridor) should be minimised.
3. Specimen tree planting should be provided on all public and internal private access roads within the Motorway Edge Sub-Precinct. Refer Attachment 1 Typical Road CrossSection for Motorway Edge Sub-Precinct.

Additional Design Element 7: Subdivision within Sub-precinct C Mixed Use

1. Where through lots with dual street frontage are created, these should provide frontage to both street edges (i.e. no rear elevations to the street). However, where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road.

APPENDIX 5B.4B: DRURY SOUTH STRUCTURE PLAN AREA – MOTORWAY EDGE PRECINCT AND COMMERCIAL SERVICES PRECINCT ASSESSMENT CRITERIA

PURPOSE OF APPENDIX 5B.4.B

In the Motorway Edge Precinct and Commercial Services Precinct within the Drury South Structure Plan area building design and appearance, landscape design and internal site layout are listed as controlled activities if they also comply with the standards and terms specified in 6.11.7.2.

Rule 6.15.1 sets out controlled activity assessment criteria for all controlled activities in the industrial zones and contains the following clause:

“In the case of the Motorway Edge Precinct and the Commercial Service Precinct within the Drury South Structure Plan Area (Part 5B.4 in Section One of the District Plan) the Council will, in addition to the criteria set out in (a) to (f) above, assess the application against the criteria set out for those precincts in Appendix 5B.4.B in Section One of the District Plan.”

In addition, these criteria will also be used as appropriate in the consideration of restricted discretionary and discretionary activity applications involving the construction or alteration of buildings.

This Appendix sets out assessment criteria under a number of “Design Elements” for both the Motorway Edge Precinct and the Commercial Services Precinct.

The criteria listed under each Design Element are intended to give flexibility, enabling site responsive designs, while ensuring that development provides a positive contribution to the amenity of the Drury South Structure Plan Area.

The criteria are intended to guide development rather than prescribe exact design and layout. Most criteria are illustrated. The illustrations are intended to support the text and are representative of good design solutions, but are not necessarily intended to represent the only design solution.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged. It is recognised that certain proposals will not achieve absolute accord with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or ;
- whether the proposal represents a better design solution than that suggested by the criterion.

Applicants will also be required to provide a Landscape Concept Plan with sufficient detail to ensure that the relevant assessment criteria are able to be considered, identifying hard and soft landscaping treatment, large grade specimen trees (species and planting size), groupings of ground covers and shrubs with species schedule.

MOTORWAY EDGE PRECINCT DESIGN ASSESSMENT CRITERIA

The following criteria shall apply to building design and appearance, landscape design and internal site layout within the Motorway Edge Precinct where activities are listed as controlled activities.

Design Element – Internal Private Access Roads:

1. Specimen tree planting should be provided on all public and internal private access roads within the Motorway Edge Precinct.

Design Element – Existing Vegetation:

1. Where ever possible layouts should retain and protect existing mature trees, particularly those of indigenous species, where these contribute to the site character and amenity.

Design Element – Planting:

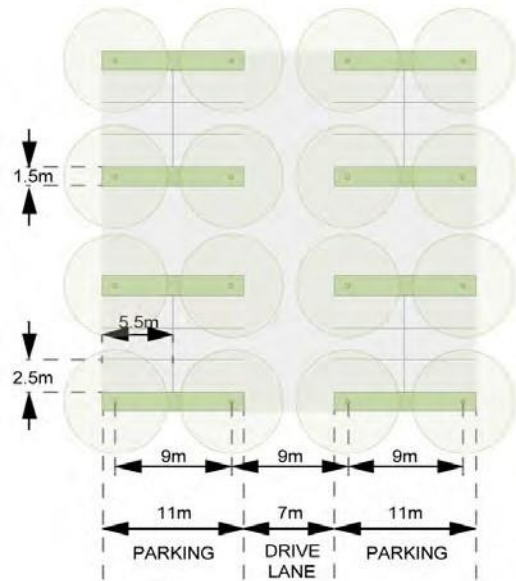
1. Planting should be designed to have a large scale landscape effect and combine native as well as appropriate exotic species to provide seasonal change and quality amenity.
2. Where reserve land adjoins the motorway boundary planting that creates a continuous visual barrier to eastward views from the SH1 (Southern Motorway) corridor should be avoided, however landscape design should emphasise the current sequence of intermittent views to the Hunua Ranges from the SH1 corridor and the pattern of variable depth of such views.
3. Where industrial sites adjoin the motorway boundary, a detailed rule applies requiring a double row of Leyland Cypress to create the appearance of a rural shelterbelt providing a continuous visual barrier defining the curve in the motorway alignment.

Design Element – Buildings:

1. Buildings should be located with design consideration for their visibility and reduced visual impact as viewed from the SH1, (Southern Motorway) corridor and the desirability of maintaining a sense of openness as seen from the motorway.
2. The visual mass of larger buildings should be minimised by employing the following methods:
 - Utilising subdued, recessive colours;
 - Providing variation in materials and finish for facades viewed from the motorway;
 - Creating variation of roof profiles with consideration given to the overall roofscape viewed from the motorway;
 - All rooftop servicing and plant should be designed as an integral part of the roofscape with particular consideration given to the view from the motorway.

Design Element – Parking Areas:

1. Parking areas should be designed to incorporate trees to break up the scale of hard surface areas.
2. Adoption of the Fully Planted Permeable Carpark Design Layout (refer Diagram 6) style of parking is advocated within the Motorway Edge Precinct.



Design Element – Internal Site layout:

1. Storage and waste management activities should be located and / or designed to be screened from view of the State Highway.

Diagram 6: Fully planted permeable carpark design layout - detail

COMMERCIAL SERVICES PRECINCT DESIGN ASSESSMENT CRITERIA

The following criteria shall apply to building design and appearance, landscape design and internal site layout within the Commercial Services Precinct where activities are listed as controlled activities.

Design Element – Block Size, Lot Type and Orientation:

1. Buildings on corner lots should be designed to provide for a quality architectural response to the corner. Appropriate design responses would be provision of additional height at the corner, windows and activities addressing both street frontages (avoidance of blank walls to one or both sides of the corner). Service activities such as loading docks or storage yards should not be located on corners or any site frontage.

Design Element – Street Interface Design:

1. Built development should front the street with a quality recognisable pedestrian entry to the street.
2. Parking should be provided on the road network adjacent to Commercial Service Precinct areas with on site parking layouts designed in accordance with the typical layout identified (refer Attachment 4).

Design Element – Signage:

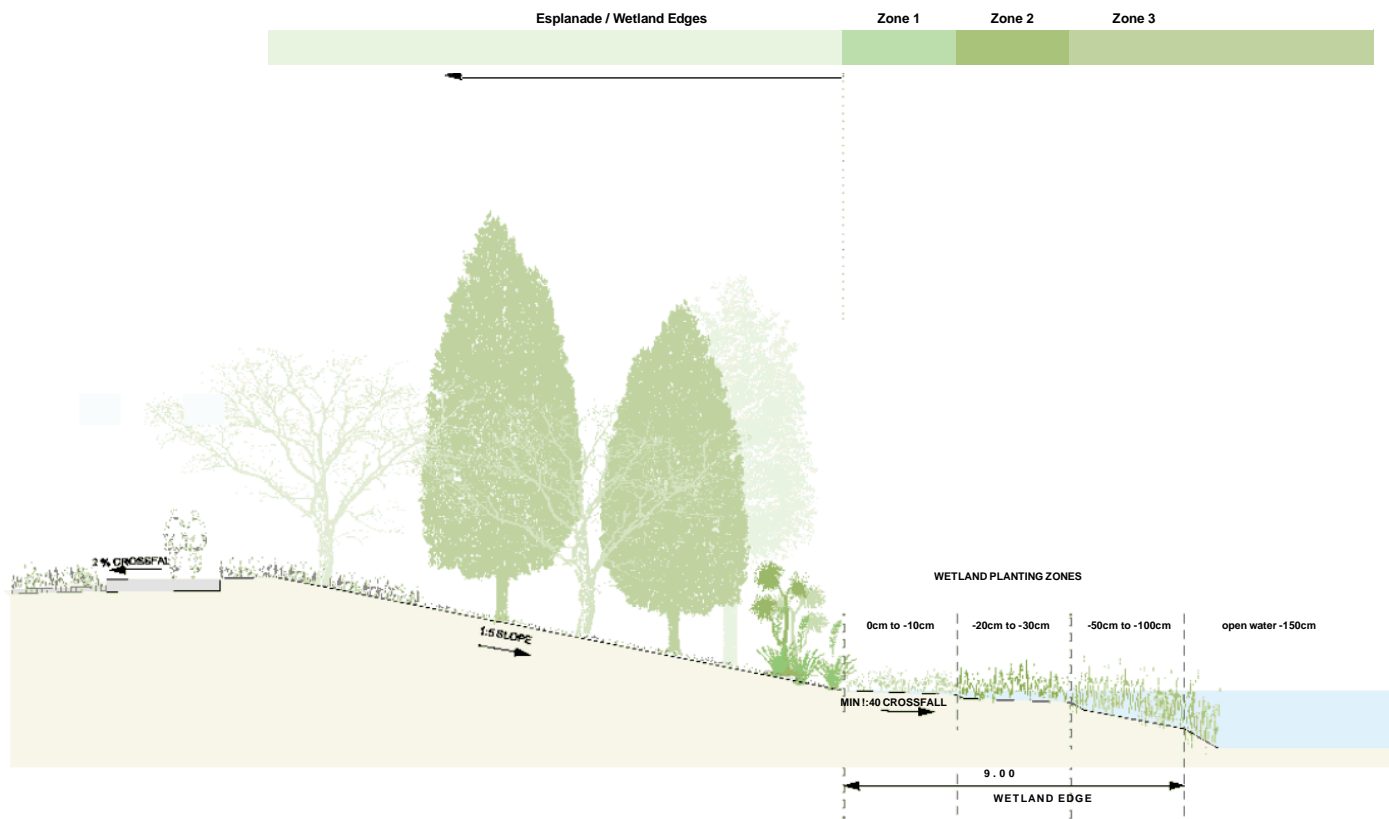
1. Signage for each Commercial Services Precinct development should be coordinated including the physical location of signs, their type, face, style and content with a maximum of two signs per business, one located to address the street frontage and one to identify the building entry (a third sign is permissible where the service access is separate from building entry or there are multiple entries).

Design Element – Service Areas:

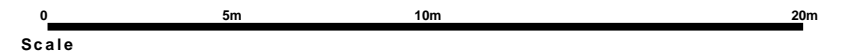
1. Service areas should be located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service /storage and dock areas.

Attachment 2

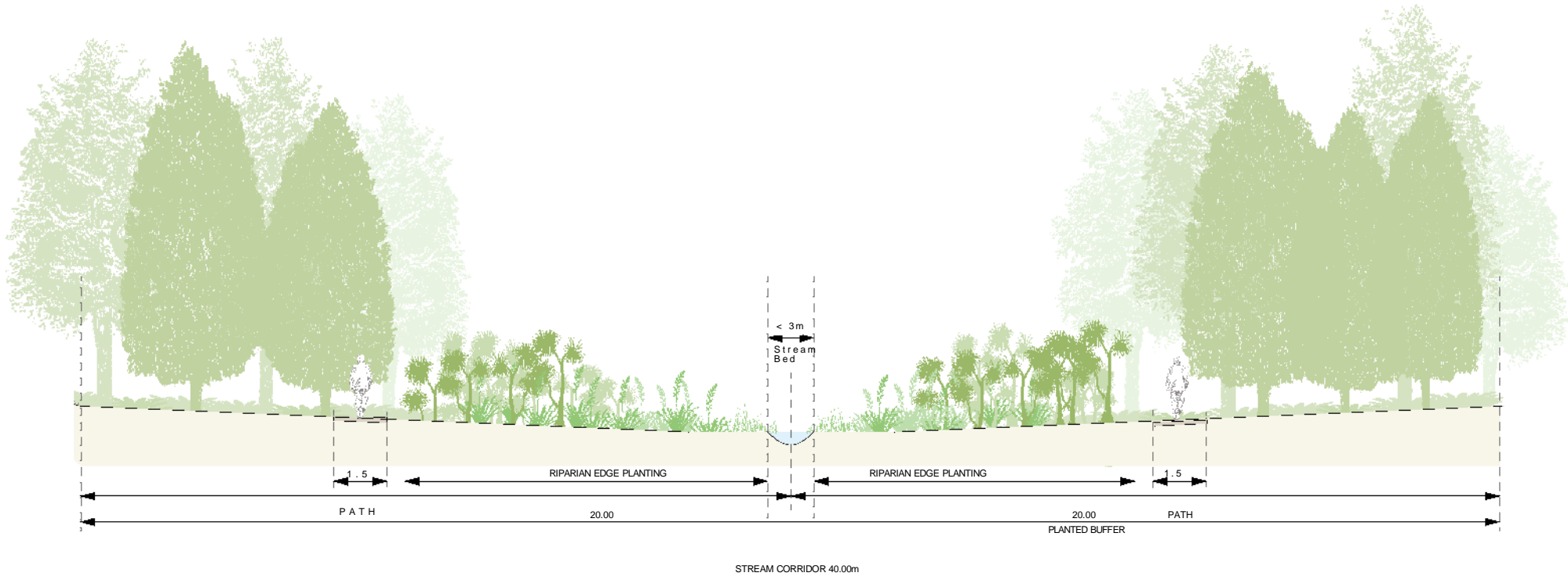
Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections



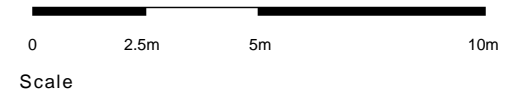
Location	Botanical Name	Common Name
Esplanade / Wetland Edges	<i>Salix babylonica</i>	Weeping Willow
	<i>Dacrycarpus darydiodes</i>	Kahikatea
	<i>Cordylone australis</i>	Cabbage palm
	<i>Anemathele lessoniana</i>	Wind grass
	<i>Carex secta</i> <i>Carex testacea</i>	Purei
Zone 1 Wetlands (0 to -10cm)	<i>Carex geminata</i> <i>Cyperus ustulatus</i> <i>Cordaderia fulvia</i>	Toetoe
Zone 2 Wetlands (-20 to -30cm)	<i>Schoenoplectus validus</i> <i>Eleocharis acuta</i> <i>Juncus gregiflorus</i> <i>Bolboschoenus fluviatilis</i> <i>Leptocarpus similis</i>	Kopupu / kuta Spike rush Wiwi rush Ririwaka Oioi /Jointed Rush
Zone 3 Wetlands (-50 to -100cm)	<i>Baumea rubiginosa</i> <i>Baumea articulata</i> <i>Baumea teretifolia</i> <i>Eleocharis sphacelata</i> <i>Juncus pallidus</i>	Ngawha / Great spike rush Giant rush



INDICATIVE WETLAND EDGE DETAIL



INDICATIVE 40m RIPARIAN BUFFER FOR STREAM BEDS LESS THAN 3m WIDE





TYPICAL ONE SIDED RIPARIAN BUFFER FOR STREAM BEDS LESS THAN 3m WIDE



INDICATIVE ONE SIDED RIPARIAN BUFFER FOR STREAM BEDS 3m AND GREATER

Attachment 3

Drury South Industrial Precinct

Indigenous Species Plant List

Note: The species underlined are recognised as being rare / uncommon in the Auckland region.

Wetland Species

Schoenoplectus tabernaemontani also Eleocharis sphacelata	Multiple Māori names include kukuta and kutakuta.
Carex virgata and Carex secta	pukio
Baumea articulata	jointed twig-rush
Typha orientalis	raupo
Myriophyllum robustum	stout water milfoil
Baumea tenax	
Isachne glabosa	swamp grass
Phormium tenax	particularly the variety known to Maori as 'Muka' - soft for weaving

Riparian Marginal Species

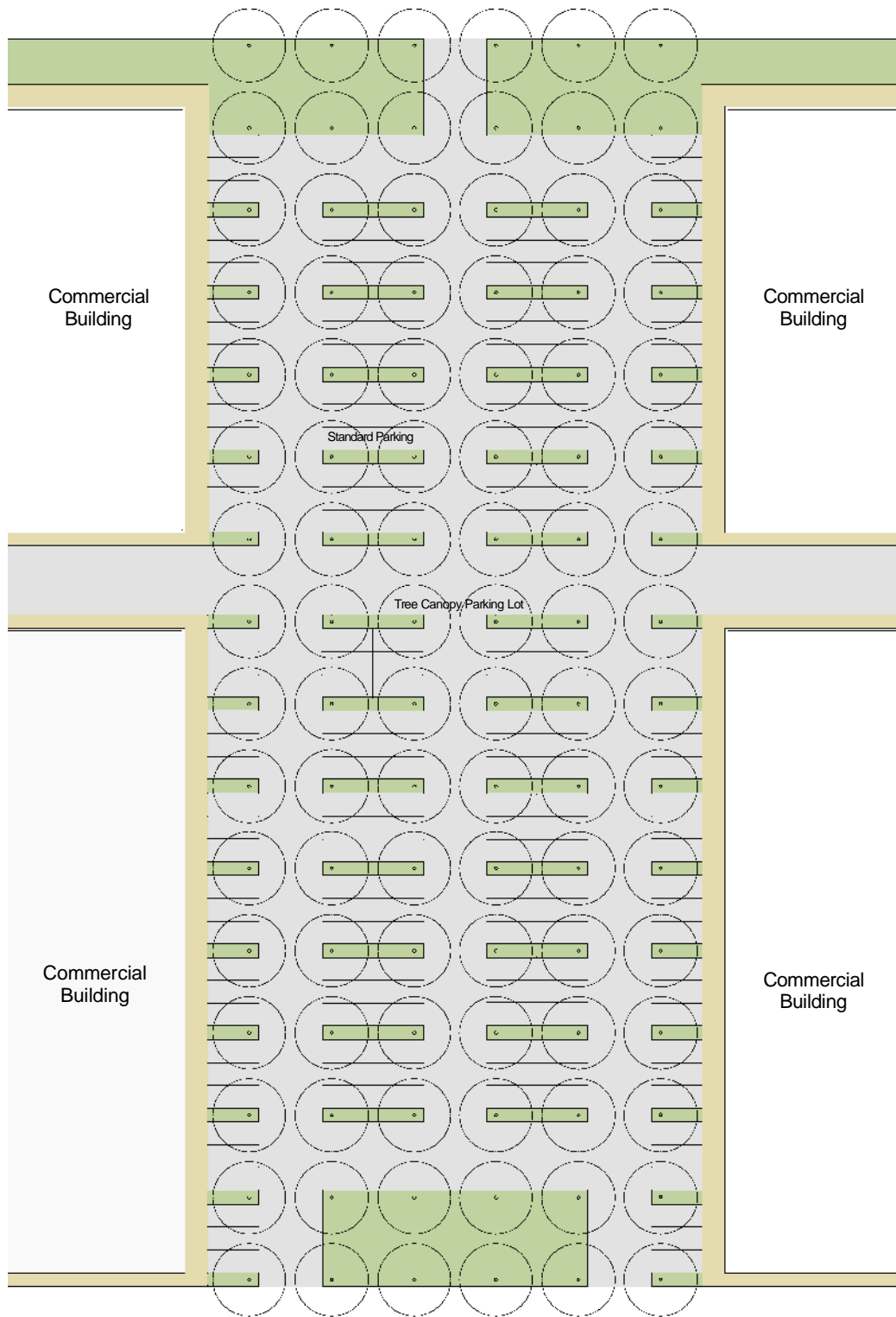
Freycinetia baueriana	kie kei
Alectryon excelsa	titoki
Vitex lucens	puriri
Prumnopitys taxifolia	matai
Sophora microphlla	kowhai
Rhopalostylis sapida	nikau
Hoheria populnea	lacebark
Corynocarpus laevigatus	karaka
Plagianthus betulinus	manatu
Pennantia corymbosa	kaikomako
Hedycarya arborea	pigeonwood
Aristolelia serrata	makomako
Kunzea ericoides	kanuka
Cordyline australis	ti whanake
Dysoxylum spectabile	kohekohe
Coprosma grandifolia	kanono
Streblus banksii	towai
Streblus microphylla	turepo
Myrsine divaricata	weeping matipo
Marrattia salicina	king fern

Swamp Forest Species

<i>Syzygium maire</i>	maire, tawake
<i>Laurelia novae-zelandiae</i>	pukatea
<i>Carpodetus serratus</i>	putaputaweta
<i>Phormium tenax</i>	harakeke
<i>Coprosma tenuicaulis</i>	hukihuki
<i>Dacrycarpus dacrydioides</i>	kahikatea
<i>Blechnum novae-zelandiae</i>	swamp kiokio
<i>Cortaderia fulvida</i>	toetoe
<i>Astelia grandis</i>	swamp astelia
<i>Schefflera digitata</i>	pate
<i>Podocarpus totara</i>	totara

Attachment 4

Typical Sub-Precinct C Mixed Use Precinct Access and Car Park Layout



0 10m 20m 40m

Scale

TYPICAL COMMERCIAL LAYOUT

Attachment 5

**Drury South Industrial Precinct: Stream and Wetland Rehabilitation Guidelines
(June 2013)**

Drury South Industrial Precinct

Stream and Wetland Rehabilitation Guidelines

June2013



Boffa Miskell



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Drury South Industrial Precinct
Stream and Wetland Rehabilitation Guidelines



1.0 Introduction

1.1 Purpose of this Document

The Drury South Industrial Precinct (DSIP) Stream and Wetland Rehabilitation Guidelines provide a summary of proposed stream and wetland works associated with the DSIP project. This includes all stream corridors to be removed, realigned, or restored, and wetlands created associated with stormwater management. The purpose of this document is to achieve the following:

1. To provide technical input to the planning process (to be read in conjunction with the Ecological and Landscape Assessments, Assessment of Environmental Effects (AEE) and Infrastructure Assessment report (IAR).
2. To provide the project team with a set of principles for treatment of riparian (stream and wetland) areas within the DSIP area.

1.2 Proposed Stream and Wetland Rehabilitation Works

In line with the proposed Drury South Industrial Precinct, the existing Hingaia and Maketu streams will be protected and enhanced by corridors of riparian restoration 40 metres in width (20m on each bank). Dense riparian planting will also occur along SH1 in association with the Roslyn Stream realignment and along the northern boundary of the site in association with a newly formed northern stream realignment.

Some streams and farm drains within the DSIP area will be filled. Piped infrastructure or vegetated swales will direct these modified catchments to the Hingaia Stream. These systems, as well as stormwater runoff from business activities will be treated for water quality in extensive wetland areas associated with the Hingaia stream corridor. These wetland areas will function for stormwater quality and quantity, ecosystem function and values, landscape amenity, natural character, and recreation.

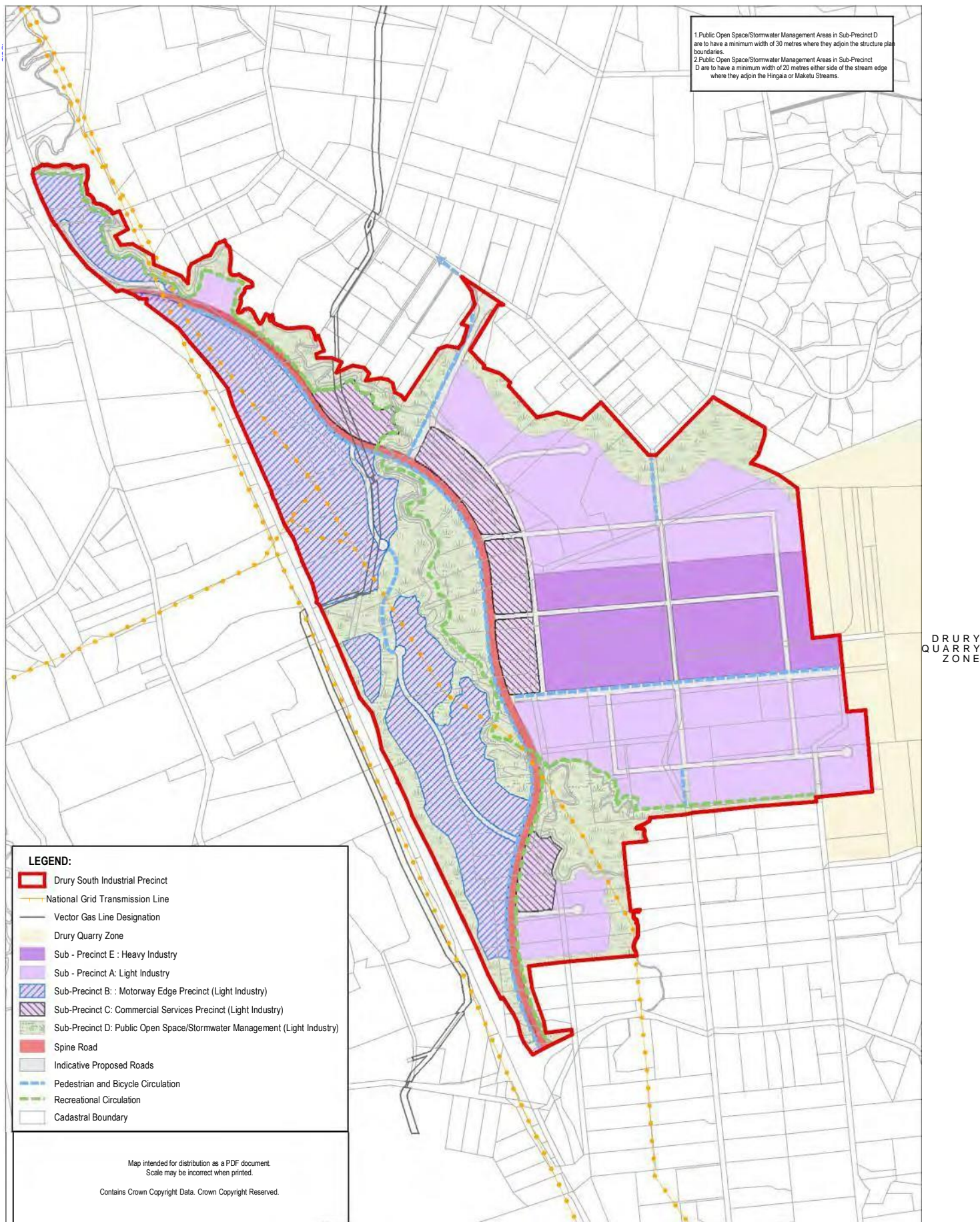


FIGURE1:DSIP Concept Plan - December 2010 (Source: BECA Ltd)

Drury South Industrial Precinct Stream and Wetland Rehabilitation Guidelines

2.0 Streams of the Project Area

2.1 Existing Streams and Proposed Mitigation

The Hingaia Stream flows through the DSIP area from south to north before continuing through the Drury Township to discharge to Drury Creek and eventually the Pahurehure Inlet to the Manukau Harbour. The Maketu Stream flows into the site at the south eastern corner of the DSIP area, and joins with the Hingaia Stream. The Roslyn Stream flows from the west under the State Highway and joins a further tributary to the Hingaia Stream. The remainder of streams traversing the site do not have officially recorded names, are smaller, highly modified, and in some cases have been piped.

An assessment of the existing surface water network and receiving environment has been carried out as part of the Hingaia Stream ICMP. This included a stream ecology study, "The Hingaia Catchment Environmental Assessment, Golder Associates, August 2009". This study included field survey of streams within the DSIP area with respect to water quality, and aquatic flora and fauna. Each stream potentially affected by the DSIP has been evaluated by the 'stream ecological valuation' method (SEV) in accordance with the technical publication ARC TP302:2008.

Existing watercourses and modified farm drains between Stevensons Quarry and SH1 will need to be filled or re-aligned to accommodate the DSIP earthworks footprint. This includes intermittent and permanent streams (refer Figure 2). Many of the existing overland flowpaths are farm drains, constructed for active drainage. All streams to be affected by the proposed DSIP have been heavily modified by farming or roading operations, including dredging, spraying, straightening, and ongoing impact by stock. In general all of these streams have low to moderate functional values for stream ecology.

Proposed mitigation for stream loss includes the restoration of riparian zones along the length of the Hingaia and Maketu Streams within the DSIP Area. This includes a 40m wide planted riparian buffer along all streams. In addition, streams to be re-aligned will have an appropriate stream profile and riparian planting to provide for sustainable stream function.



One of many existing intermittent farm drains showing evidence of earthworks, spraying and access by stock



LOCATION A (FIGURE 2) - The northern stream is directed along Quarry Road in a highly constrained and modified environment, with low ecological values



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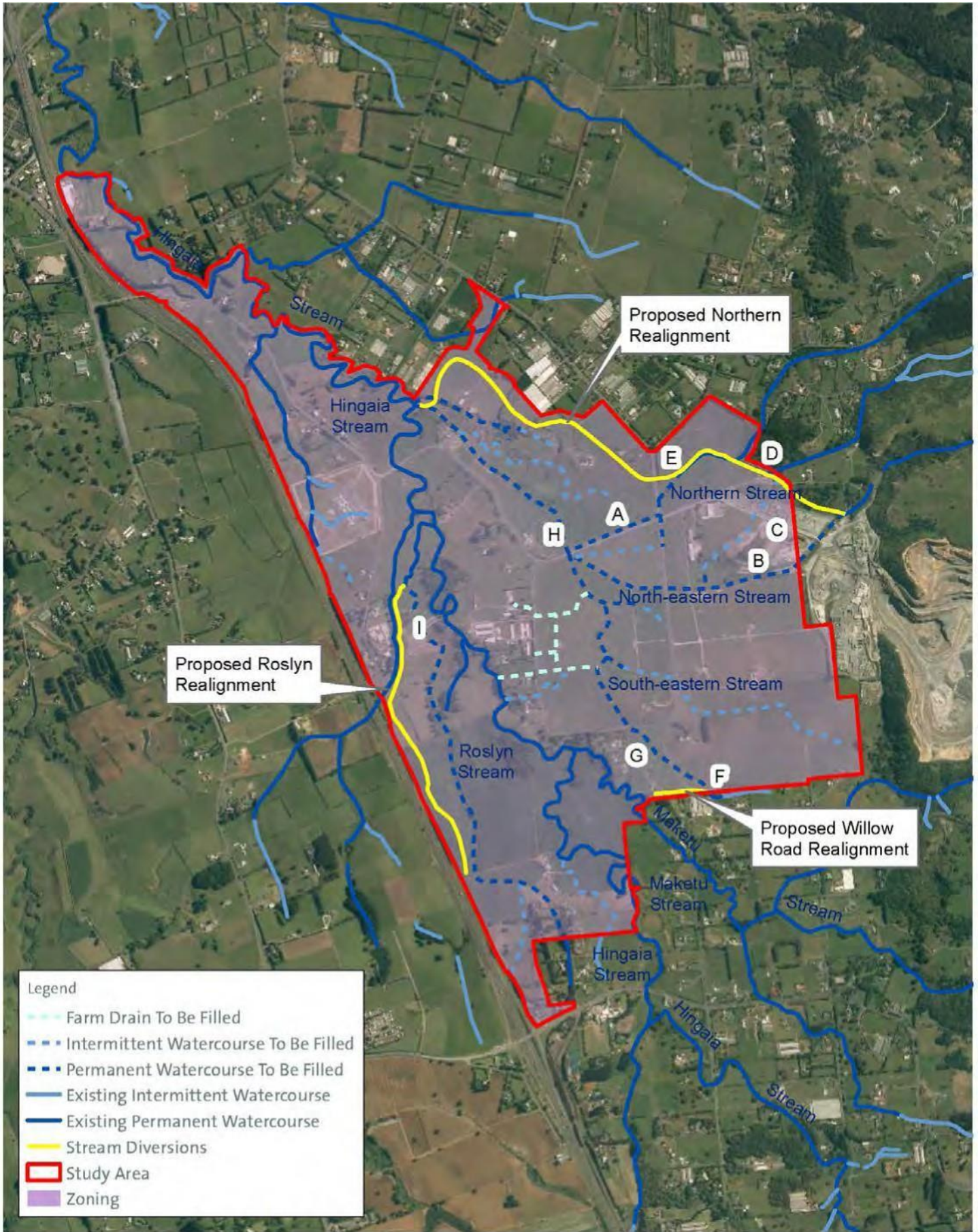


FIGURE2: DSIP Existing and Proposed Water Courses (Source: BECA Ltd)

2.1.1 Northern Streams

A tributary to the northeast of Stevenson Quarry is currently dammed in its headwaters for quarry operations before being reticulated to a channel (refer Figure 2, Location B below). The northeastern stream also receives stormwater from the quarry via adjacent treatment facilities (Location C). As part of the works to accommodate the DSIP, the upper catchment of this stream will be directed to the existing northern stream corridor (Location D).

This northern stream will be rehabilitated with an enhanced stream profile, and restored streambank and floodplain vegetation. The northern re-alignment will be 1,800m in length, comprising 1,500m of new channel and 300m of rehabilitated channel.



LOCATION B (FIG 2) - The north-eastern channel flowing through mixed exotic vegetation



LOCATION C (FIG 2) - The north-eastern channel directed alongside the quarry settlement ponds



LOCATION D (FIG 2) - The existing northern stream channel will be enhanced to receive there – aligned north-eastern tributary



LOCATION E (FIG 2) - The northern stream at the base of the northern escarpment will be rehabilitated as part of the proposed works

2.1.2 Southern Streams

The streams to be filled between the quarry and the Hingaia Stream are relatively small, with low gradient catchments that do not extend beyond the project area. A stream from the southeast of the site (refer Figure 2 and Photos Location F and G) conveys a number of intermittent stream tributaries from the centre of the project area, before joining with the existing northern stream and northeastern tributary previously mentioned (Location H). The southeastern stream and its tributaries have no vegetation cover beyond aquatic macrophytes and pasture species. These watercourses have been heavily modified by pastoral land use.



LOCATION F (FIG2)-The southeastern stream ponding behind a road culvert, 50 metres downstream of the proposed Willow Road Re-alignment



LOCATION G (FIG2)-The southeastern stream wends through the middle of the project area before combining with the northern stream

At least 230 metres of the headwaters of the southeastern stream will be retained, enhanced, and linked westward to the Maketu Stream via an 180m section of new channel (the Willow Road Realignment). This realignment will be planted with a riparian buffer. The remaining watercourses between the Hingaia Stream and quarry will be filled.

2.1.3 3 Eastern Streams

The Roslyn Stream (Location I) to the west of the Hingaia Stream will be re-aligned toward the SH1 corridor. The current stream is an open farm channel with low summer flows and dense growth of the exotic reed sweet grass (*Glyceria maxima*). The re-alignment will include filling of 450m of the upper reach of this stream, and formation of 1,600m of newly aligned channel. The realigned channel will be formed with an appropriate profile and rehabilitated for enhanced ecological function, with a 20 metre wide riparian corridor on both sides.



LOCATION H (FIG2)-The channel flowing to the Hingaia, containing the combined flows of the south-eastern, northern, and north-eastern streams following a rain event



LOCATION I (FIG2) – The Roslyn Stream (mid-ground), a farm channel with low flows, is to be realigned and rehabilitated

2.2 Existing Streambank Erosion

Streambank erosion has been identified in the ICMP studies as an existing issue at a number of locations. The Hingaia Stream is subject to extensive bank erosion, identified near the Quarry Road bridge on the Hingaia Stream and near Davies Road Bridge on the Maketu Stream.

Stormwater wetlands prior to the Hingaia channel are proposed for the DSIP in order to detain any additional flows that may adversely impact stream erosion (refer Section 3.5). Riparian vegetation is proposed along the Maketu and Hingaia and for all re-aligned stream channels to stabilise banks in the short term and reach a sustainable stream equilibrium in the long term.



A lack of riparian vegetation and active erosion along the Hingaia channel



The Maketu channel with erosion scour at the outside bank

2.3 Existing Aquatic Ecology

As part of the Hingaia Stream ICMP, Golder and Associates undertook SEV surveys of representative stream reaches (Golder 2009). Most of the stream environments in the project area had poor functional values due to extensive modification by agriculture.

The Hingaia ICMP surveyed thirteen sites within the DSIP Area. The best quality site was on the Maketu Stream, with higher scores across all functional categories. Another site, located on the lower Hingaia Stream, also scored relatively high. The best value site for the tributaries was located on the northeastern quarry stream. Full descriptions of functional ecology values can be found in the DSIP Assessment of Ecological Effects (Boffa Miskell 2010).

A total of 6 species of fish were recorded across the project area. Shortfin eels were the most common species, with occurrences of longfin eel, common bully, inanga and cran's bully. Five of the seven tributary sites had no fish, or mosquito fish only. The mosquito fish is an exotic pest fish classified as 'Unwanted' under Biosecurity legislation. These sites had very low fish community values.

Macroinvertebrate communities indicated low environmental quality at most sites. Except for the northeastern stream, tributary sites were characterised by worms, dipteran flies, leaches, and flatworms, suggesting nutrient enrichment and fine sediment. The Maketu site had a notable portion of mayflies (*Zephlebia* spp.), possibly due to better water quality (e.g. lower water temperature).

3.0: Stream and Wetland Rehabilitation

3.1 Rehabilitation Principles

The following rehabilitation principles are intended to inform the rehabilitation of streams and wetlands in the DSIP area. The principles have been prepared by an inter-disciplinary project team, including landscape architects, planners, ecologists, and engineers. Principles seek to enhance the landscape and ecology values of the riparian systems, while providing appropriate design responses for hydraulic flow and stormwater management.

3.1.1 Landscape Values

There is significant opportunity to improve the natural character values within the DSIP area. Stream and wetland environments will also be integrated within a wider open space network, providing opportunities for enhanced recreation and landscape buffers. The following landscape principles apply to proposed stream and wetland rehabilitation:

- Contribute to landscape amenity values
- Provide vegetated buffers to specific land use activities as appropriate
- Integrate stream and wetland rehabilitation with streetscape and open space planning
- Provide for visual and physical access to rehabilitated natural areas
- Optimise natural character values through the planting of representative native communities
- Provide a diversity of natural habitats and plant communities to achieve a variety of landscape and spatial character, and to demonstrate a legible sequence of habitat types.
- Structure riparian vegetation to screen/define undesirable views, offer broad views to wetland environments, and frame distant views to eastern Hunua hills from SH1
- Apply appropriate standards for CPTED and IPTED for public or maintenance access
- Place pedestrian bridges as necessary to ensure landscape connections, and investigate opportunities to use existing stream spans (infrastructure) for this function
- Identify opportunities to involve the community in stream restoration planting
- Liaise with relevant representatives and apply appropriate protocols for any archaeological sites or heritage elements associated with rehabilitation works
- Enhance Cultural Value through the re-establishment of indigenous species and investigating cultural harvest opportunities

3.1.2 Ecological Functions

Enhancing ecological functions within the DSIP area will require a combined response to aquatic and terrestrial environments, in order to restore target species, representative habitats, and ecological processes. The following ecology principles apply to stream and wetland rehabilitation:

- Plant stream margins, banks and floodplain areas to achieve not less than 40m total width (10m min width either side of stream corridor)
- Utilise species sourced from the Manukau Ecological District that are representative of natural vegetation communities as predicted by LENZ
- Restore representative in-stream heterogeneity, providing for pool, riffle, run and cascade sequences as appropriate.
- Provide fish passage to the extent possible, including bullies and inanga to within their natural range
- Preserve groundwater influence and inundation regimes for existing floodplain forest in proposed stream corridors
- Provide appropriate transitional edge vegetation to remnant mature vegetation
- Optimise site coalescence between remnant vegetation areas along the Hingaia Stream
- Provide for breeding populations of water and wetland birds species
- Provide for appropriate staging and construction techniques to avoid potential impacts to downstream environments and in-stream aquatic habitat.

3.1.3 Hydrology and Hydraulics (H&H)

Stream and wetland rehabilitation will provide opportunities for water quality treatment for the DSIP, and appropriate hydraulic flows, and hydrologic capacity for the catchment. The following H&H principles apply to the rehabilitation areas:

- Use biotechnical stream stabilisation to restore a sustainable streambank morphology
- Apply a cross sectional profile that resembles a natural staged channel, including a permanent flow channel, a stream channel based on a bankfull (approximate two year average recurrence interval (ARI)), and associated floodplains and berms to hold the one hundred year ARI.
- Provide for an appropriate stream meander patterns for the floodplain extent, longitudinal stream profile, flow velocities, and expected bankfull event.
- Provide for hydraulic connections and fish passage to stormwater wetlands wherever extended detention is not required
- Place all forebay devices for stormwater wetlands outside of the 5 year ARI flood extent.



FIGURE 3: DSIP Concept Planting plan. (Source Boffa Miskell and Source Design)

3.2 Open Space Network

The stream and wetland rehabilitation concepts (refer Figure 3) integrate with a broader open space network to optimize specific requirements for public use and access, to ensure diverse representative habitats, and to enhance environmental services for the DSIP.

The open space network reinforces existing features and patterns of the project area. The Hingaia Stream corridor will be reinforced by wide riparian margins of representative planting of early successional forest, as well as kahikatea floodplain forest. In the north a substantial open space buffer is set aside to reinforce the natural escarpment separating the DSIP basin from the Fitzgerald Road ridgeline. This occurs in conjunction with the northern stream realignment and associated riparian rehabilitation works. In the south west of the project area, riparian planting along there – aligned Roslyn stream will form a landscape buffer to SH1.

Larger remnants of existing vegetation will be coalesced along the Hingaia Stream. Planting in association with stormwater wetland areas will further buffer and augment the conservation values of these remnants.

3.3 Stream Rehabilitation

The land use change associated with the DSIP provides a significant opportunity to restore the Hingaia Stream, a low gradient moderate order stream, which retains remnant kahikatea floodplain forest. The project also provides the opportunity to coalesce modified drainage channels across the site into a larger order stream channel and floodplain, with supporting streambank and floodplain vegetation. Stream rehabilitation proposals are the result of an iterative design process between ecologists, landscape architects, and engineers to optimise the principles of these guidelines.

3.3.1 Hingaia Stream

The Hingaia Stream is a significant watercourse, with a wide, actively meandering channel across the floodplain. The stream currently runs through pastoral and agricultural land uses, and receives runoff from existing farm drains in the project area. The rehabilitation of the Hingaia stream is a key objective of the DSIP, with a 40 metre vegetated buffer proposed along the corridor where it corresponds with the project area. The width of the riparian buffer would extend to accommodate a stormwater treatment swale proposed along a northern reach, and stormwater wetlands proposed within the Hingaia Stream's extended floodplain.

The rehabilitation of the Hingaia Stream will include:

1. The coalescence of the floodplain forest remnants (including significant natural areas) already occurring within Hingaia floodplain
2. The restoration planting of streambanks along the length of the stream within the Project Area, with the potential for specific interventions to restore the stream profile at erosion hot spots
3. The planting of banks and proposed riparian buffers with simple lowland plant communities with the expectation that these communities will secede with time to include more diverse species
4. Planting of feature areas of flax-cabbage tree and broadleaf species on extended floodplains
5. Hydrological connections and fish passage to stormwater wetlands where practical

3.3.2 Stream Realignments

A number of farm drains and watercourses will be replaced with overland flow paths and reticulated networks associated with the proposed development. In addition, some headwaters will be realigned to newly formed watercourses along the boundaries of the DSIP area. The Hingaia and the Maketu Streams will not be altered beyond restoration activities.

A detailed description of the potential effects on stream ecology and the proposed mitigation measures is presented in Boffa Miskell, 2010, "Drury South Business Project Assessment of Ecological Effects Associated with the Proposed Plan Change". These guidelines inform the potential design response to optimise the flood management function of the rehabilitated streams, and their landscape and ecology values.

3.3.2.1 Design Parameters

The profile of each re-aligned stream channel is based on the cross-sectional area to accommodate a 1.5 to 2 year average recurrence interval (ARI). This flow is traditionally associated with a 'bank-full' event with active stream erosion and re-deposition.

The morphology of realigned streams is also based on their substrate, longitudinal gradient, and association with their floodplain. These functions can be used to prescribe channel sinuosity and width to depth ratio (Rosgen 1994). The bankfull width is used as a function to predict the stream meander wavelength and the radius of curvature for bends (Leopold 2003 and Thorne et al 2003). Refer to Figure 4 below.

Proposed stream morphology is intended to minimise friction within the channel to prevent active erosion, and also to provide a floodplain width that can accommodate the stream in equilibrium.

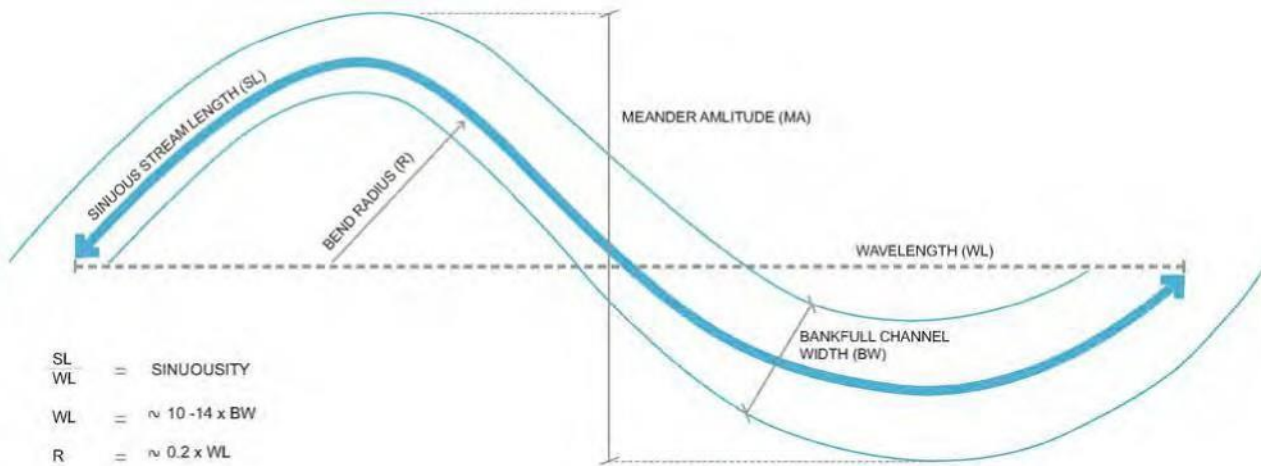


FIGURE 4: (above) The indicative relationship between channel width, and meander pattern

BELOW: A natural meander occurring as an overland flow event during flood conditions in the project area



3.3.2.2 Construction

Construction of the realigned channels is intended to occur off-line where possible, or to be staged to avoid potential impacts to downstream environments and in-stream aquatic habitat. Material selection is expected to be inert and where possible to be the equivalent of materials expected in these stream environments in their natural state.

It will be possible to utilize 'natural' materials through the application of biotechnical construction, which utilises a combination of persistent and biodegradable materials to retain channel shape until plants can establish. In general biotechnical responses for stream stabilisation can include:

- Stream profiling to respond to specific flow events
- Floodplains to dissipate flood velocities
- Stabilised bank toe and outside bends with hard materials such as rock, root vanes etc
- Directing flows and forming riffles through rock vanes
- Reinforcement of stream banks through planting established in erosion control blankets
- Stabilising the crown of banks with appropriate vegetation
- Provision of appropriate pool-riffle-run sequences.
- Grade control structures that accommodate fish passage
- Specific biotechnical treatments to accommodate 'nick' erosion points and stormwater outlets

3.3.2.3 Planting

Plant species selection will provide ecological functional values and representative plant communities. Stream planting objectives may include:

- Shade for temperature moderation
- Weed suppression
- Slope stabilization
- Tolerance to inundation
- Growth form to accommodate/obstruct views
- Stature to accommodate hydraulic flow rates
- Inherent aesthetic or spatial qualities of single plants or grouping of vegetation.

Based on LENZ predicted natural vegetation layers, representative plant communities for the DSIP area include lowland alluvial floodplain species, generally consisting of kahikatea forest. Other communities include tawa and pukatea, while matai, rimu and totara are generally restricted to better-drained soils. Titoki and puriri are locally abundant, with the potential for other broadleaf such as taraire, occurrence of kauri on the flanks of the basin, and occasional rimu and pukatea.

The project area extending into the flanks of the project basin and the hills beyond would be expected to support kauri, kahikatea, rimu and/or totara emergent over a diverse canopy dominated by varying mixtures of taraire and kohekohe. Other widespread tree species might include hinau, pukatea, rewarewa, and miro. Puriri is locally abundant at lower elevations, particularly on alluvial surfaces and tanekaha would be locally abundant, particularly on disturbed sites.

Where basalt occurs at the surface of the project area there may occur unique basalt forest environments, with an expected predominance of mahoe, karaka, kohekohe, totara, puriri, and titoki.

Until climax communities establish, it is expected that large areas of the riparian corridors will be planted with early succession and hardy species, such as riparian shrubs, kanuka, and totara to rapidly establish cover and to act as a nurse crop for later succession species. It is expected that certain low vegetation types will be applicable in places along the riparian corridors to accommodate hydraulic flows, to preserve viewshafts, and provide useable open space areas. Such planting may involve mown grass areas, sedge-rushlands, and flax-cabbage tree communities.

3.3.3 Northern Stream

A stream is proposed along the northern boundary of the DSIP area at the base of the northern escarpment. An existing section of this northern stream receives flows from three tributaries. A fourth tributary, previously described as the 'northeastern stream' (refer Section 2.1.1 and Figure 2) will also be directed to this channel from the quarry zone. The northern stream will accommodate the flow from these four tributaries, as well as localised catchments before discharging to the Hingaia Stream west of the proposed Link Road.

A typical northern stream cross section is shown in Figure 5, where a 'bankfull' channel represents the 1.5 year ARI event, and the associated floodplain conveys a 100 year ARI event with 500mm freeboard to the proposed development. Detailed design will provide pool-riffle and run sequences with adapted profiles. Biotechnical construction techniques will form narrower riffle sections, shallower point bars, and steeper outside bends.

The proposed sinuosity of the northern stream is relatively high, close to 1.5 times the wavelength (refer Figure 7). This is appropriate, based on the cross section of the bank full channel (with a low width to depth ratio) the longitudinal profile of the floodplain (a relatively flat lowland environment), and the general character of the bed materials and banks (being generally resistant but somewhat erodible).

The sinuosity is expected to reduce the longitudinal profile of the channel, reduce erosion of stream banks, provide strong connections to floodplain environments, and increase the overall length and diversity of stream habitat. Some stream reaches have constrained floodplains, where riffle sequences with local rock may be appropriate.

The northern re-alignment follows the northern boundary to combine stream environments with adjacent open space and to form a buffer to adjacent land use. The stream corridor and floodplain will be densely vegetated as indicated in figure 7. Planting will be dominated by early succession kanuka-totara forest. Kahikatea forest planting is proposed beside the Link Road entrance to act as a natural threshold at the DSIP entrance. Pockets of broadleaf forest are proposed to add diversity to the northern riparian corridor. Low areas of sedge-rushlands, grass areas, and flax-cabbage tree associations could provide views into the stream corridor from select locations.

3.3.4 Roslyn Stream Realignment

There is an existing water course running south to north through Roslyn Farm at the south west corner of the project area, which picks up flow from two culverts. Site assessment also revealed an existing spring feeding the stream. This stream will be realigned for part of its length whilst retaining links to existing spring and culvert in flows, the realigned corridor will provide a stronger vegetated element to adjacent to SH1 (refer Section 2.1.3 and Figure 2).

A typical Roslyn Stream diversion cross section is shown in Figure 6, where a dedicated 'bankfull' channel contains the 1.5 year ARI event, and the associated floodplain conveys a 100 year ARI event with 500mm freeboard to the proposed development. The Roslyn channel has a wide stream base with a lower depth to create a combined wetland/overland-flow-path appropriate for the small catchment, the low longitudinal gradient, and a strong groundwater influence.

Because the Roslyn channel is a lower energy environment than the northern re-alignment, with less likelihood of erosion, it is reasonable to expect a less sinuous character. Therefore a low sinuosity of 1.1 times the wavelength has been applied.

Planting along the Roslyn stream is proposed to be a combination of sedge-rushland planting and large swathes of flax-cabbage tree associations to create a wide wetland environment. Kanuka-totara forest may occur in existing knoll areas beside SH1 to frame views to the eastern Hunva foothills. Kanuka forest may continue along mid reaches of the stream and groups of kahikatea may occur alongside of a stormwater wetland to frame views from boardwalk locations and to shade permanent water features.

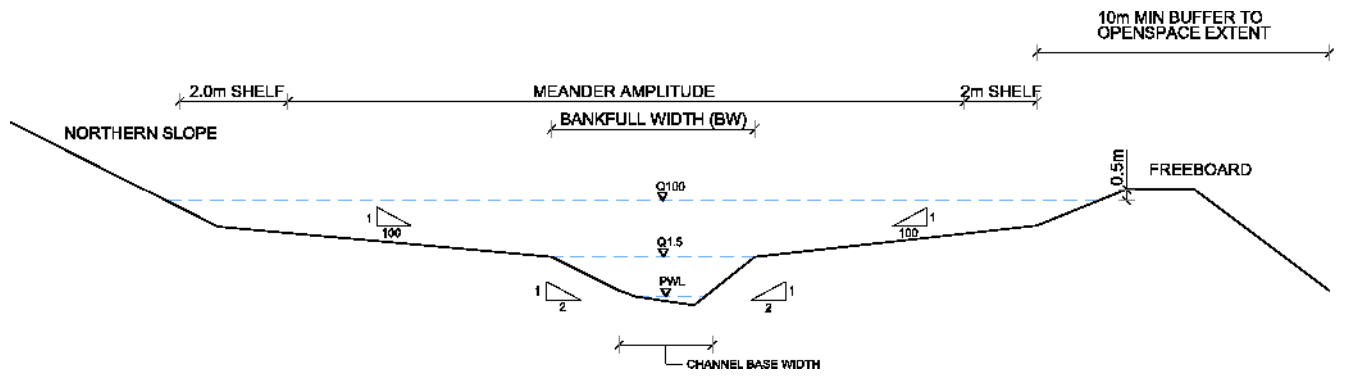


FIGURE 5: Typical section of the northern realignment in terms of flooding profiles

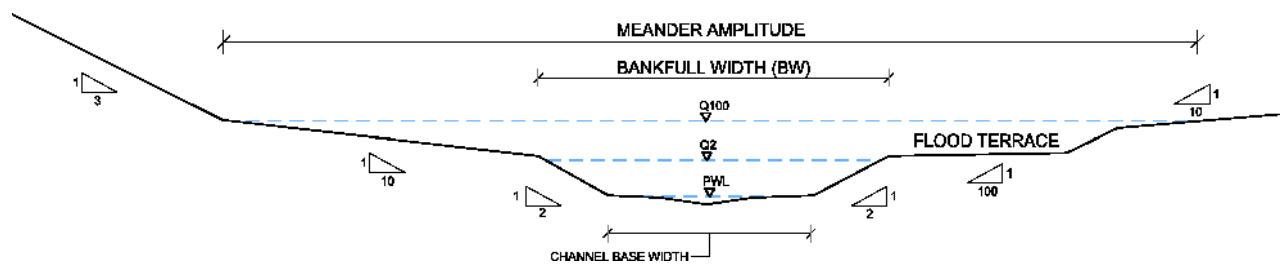


FIGURE6: Typical section of the Roslyn Stream realignment in terms of flooding profiles

3.3.5 Willow Road Realignment

There is a small roadside drain running east to west along Willow Road. The stream currently crosses Willow Road through a culvert near the intersection with Ramarama Road and continues north through the proposed DSIP area, eventually joining the Hingaia Stream. As discussed previously, this stream is heavily modified by pastoral land use and is largely unvegetated. It is proposed to divert this roadside drain directly west to the Maketu Stream along a vegetated riparian corridor that provides for a 1.5 year stream profile and accommodates a 100 year ARI event.

Drury South Industrial Precinct Stream and Wetland Rehabilitation Guidelines

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FIGURE 7: Proposed DRAFT planting plan for the Northern Re-alignment



FIGURE 8: Proposed DRAFT planting plan for the Roslyn Re-alignment

3.4 Riparian Revegetation Guidelines

3.4.1 Introduction

Riparian revegetation is proposed for the main stems of the Hingaia and Maketu Streams. In addition the Northern and Roslyn realignments will also be restored with riparian vegetation (as depicted in Figures 7 – 8). The progressive planting of these realignments as well as the present grasslands alongside the Hingaia and Maketu Streams will ultimately provide a greater extent of riparian bush, increasing the habitat opportunities and potential carrying capacity of the DSIP area as well as providing vegetated riparian corridors within the local landscape.

The following revegetation guidelines outline an accepted industry-wide approach to large scale revegetation programmes that should inform the development of the final detailed planting plans for the DSIP riparian margins.

3.4.2 General Procedure

The general procedure for the proposed revegetation plantings should be as set out below.

- Slope stabilization
- Seed should be sourced as is available from the Manukau Ecological District. However, notwithstanding the desire to use only genetic material sourced from this specific area in the revegetation programme, additional source material from the wider Auckland Ecological Region may be used.
- Planting of species into existing pasture should require pre-planting repeat herbicide applications to reduce the potential for grasses to compete with the seedlings planted.
- Blanket spraying in close proximity to the existing native bush areas needs to be avoided or very carefully managed so as to avoid by-kill. Herbicide should be carefully applied at least 2 weeks before planting.
- Where the earth has been previously compacted the areas to be revegetated should have a single treatment of earth tilling, in order to loosen the sub-soil and encourage successful rooting.
- Planting should be undertaken in favourable conditions, at the earliest opportunity during the planting season, preferably over the autumn months.
- The revegetation plantings should be supplemented with weed and browsing pest control to allow good establishment of the planted material. Ongoing weed control should be carried out until canopy closure is sufficient to suppress weed growth. Browsing pest control may be required over the longer term in order to allow these vegetated areas to progress in good health. However, once pest numbers are reduced to a minimal level, continued control should require a reduced effort.
- All planting and maintenance operations should be carried out by an approved contractor, experienced in native revegetation planting programmes.

3.4.3 Plant Material

- The plant material needs to be of the specified size and condition. All plants will have well developed root systems and a well-shaped stem and head free of disfigurements or injury, pests and disease.
- The plant material should have been sufficiently “hardened off” at the nursery prior to being passed on to the planting contractors.

3.4.3 Planting Methods

- Planting should follow an approved planting plan, indicating set-out, species, size, density and spacing.
- A dual system of planting is proposed, involving the establishment of a nurse crop of hardy pioneer species such as kanuka. These will be enriched with appropriate native tree species when the nurse crop has sufficiently established, which should be at approximately 3 years age.
- Nurse plant stock should be set out at appropriate spacing and percentages, and according to each species niche preferences.
- Once a good cover of the nurse plantings is established, enrichment plantings should be implemented. Enrichment species trees should be distributed (at wider centres) amongst nurse planting and according to site preferences in copses/groves spread further apart in subsequent seasons.
- The enrichment plantings may include the pruning or removal of modest numbers of nurse shrubs in order to create the necessary light wells.
- Plants should be set out and appropriately spaced in an informal manner avoiding straightlines and regular geometric patterns, while ensuring an even cover across the planting area. Species should be distributed at appropriate percentages and according to each species niche preferences, microclimate and ground conditions.
- Planting holes should be dug out to spade depth and seedlings located next to pre-dug holes in the correct species mix. Actual planting should be by hand only. The base of the planting hole should be filled evenly without compaction to a level where the top of the plant root ball is level with surrounding ground. The plant should be plumb and orientated so that the weathered face of the main stem faces north. When the backfilling is complete the plant should be gently firmed in. All plants should be encouraged to grow to maturity as naturally as possible to achieve their desired character and form, through sound management practices including weeding, and other accepted horticultural practises.
- Slow release fertiliser should be used within the proposed planting operation, with at least one tablet of 20-4-4(N-P-K) that is designed to last at least 12 months (preferably 24 months). The controlled release fertilizer tablets need to be inserted into each planting hole approximately half way up the back fill material, ensuring placement of the fertilizer on the upper slope side of each plant
- Approved chipped tree mulch or post-peeling bark mulch could be spread around the base of individual plants used in the mass revegetation plantings, but only in areas outside of the floodplain (to avoid mulch being washed away in floods).

3.5 Stormwater Management

Stormwater design is discussed in greater detail in the DSIP Infrastructure Assessment Report (BECA 2010). The general approach is to utilize the large floodplains associated with the Hingaia Stream to accommodate stormwater wetlands. Each wetland would include a forebay and accommodate the water quality volume. There is also allowance for extended detention to limit potential effects of stormwater volumes on downstream erosion.

Wetlands have been placed above the stream invert to not unduly effect ground water levels, and forebays have been placed above the 5 year flooding event to prevent re-suspension of contaminants stored in these areas.

Safety considerations have allowed for benching around the perimeter of each wetland and a reverse bench along each embankment. Appropriate maintenance access will be provided to forebays and to the base of wetlands for restorative maintenance if required.

Biotechnical approaches similar to those described for stream realignment works will be considered during detailed design, with specific consideration for the formation of access and outlets to the Hingaia, with fish passage possible to wetlands that are not required to detain extended detention volumes.

Planting would be exclusively sedges, rushes, and small riparian shrubs around wetlands for water quality treatment, to stabilize the wetland profile, and to allow ease of maintenance. Trees and taller shrubs would be expected at the edges of wetlands, at their interface with stream environments, and around the northern edges of forebays for shade.

3.5.1 Stormwater Wetland One

Stormwater Wetland One has been designed as a landscape amenity feature through an iterative design process between landscape architects, engineers, and ecologists. This has driven the design of forebays, the shape and extent of the permanent pools and wetland planting, the integration of multiple public access structures, and a pedestrian circulation path that crosses the Hingaia stream corridor (refer figure 9). Wetland One has been tiered to suit the local topography and the bathymetric design directs flows along three separate treatment paths.

3.5.2 Northern Swale

A swale is proposed for stormwater management along the western edge of the lower Hingaia Stream. The total width of the swale and vegetated buffer contributes an additional 25m of vegetation to the riparian buffer. The length of swale is significantly longer than required for water quality and is expected to exceed regulatory expectations at the entry point to the Hingaia.

Planting will be selected with the ability to sustain temporary ponding and saturated soils, and will allow appropriate hydraulic flows and residence time.



FIGURE 9: Proposed Planting Plan for Stormwater Wetland One

4.0: Summary

The DSIP area is traversed by the main stems of the Hingaia and Markeu Streams and several other permanent and intermittent streams and farm drains. Watercourses other than the Hingaia and Maketu Streams will be modified or re-aligned in order to facilitate the proposed land use. Stormwater management will also lead to the creation of additional naturalised wetland areas in association with the Hingaia Stream corridor.

All streams affected by the proposed DSIP have been previously modified by farming or roading operations, including dredging, spraying, straightening, and ongoing impact by stock. Stream bank erosion has been identified in the Hingaia ICMF as an existing issue at a number of locations. In general all of these streams have low to moderate functional values for stream ecology. Five of the seven tributaries to the Hingaia were observed as having very low to absent fish community values.

The DSIP Stream and Wetland Rehabilitation Guidelines establish a set of principles to enhance the landscape and ecology values of riparian systems in the DSIP area. The document is intended to provide technical input to the planning process and to provide guidance to ongoing more detailed design and implementation. The guidelines apply an inter-disciplinary approach to riparian rehabilitation.

Stream rehabilitation is proposed for the length of the Hingaia and Maketu Streams within the DSIP Area, including a 40m wide planted riparian buffer along the streams. In addition, streams to be realigned will have appropriate stream profiles and riparian planting to provide for sustainable stream function. Riparian rehabilitation will contribute to a wider open space network and enhanced natural character.

5.0: References

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**Attachment 7: Further Clause 20A changes to text – Numbering
corrections**

Memo

Date 21 October 2021

To: Celia Davison – Manager Planning - Central/South
 From: Sanjay Bangs – Senior Policy Planner - Central/South

Subject: **Plan Modification: Clause 20A modification to Auckland Unitary Plan**





Corrections are required to the Auckland Unitary Plan (Operative in Part) 2016 (the AUP).

I seek your approval of this plan modification pursuant to clause 20A, first schedule, Resource Management Act 1991.

You have delegated authority, as a tier four manager, to make a decision to correct an error to an operative plan under clause 20A. Schedule 2A of the Auckland Council Combined Chief Executives Delegation Register¹ authorises all powers, functions, and duties under RMA's first schedule (except clause 17 which cannot be delegated) to tier four positions.

Rule or Section of Unitary Plan	I410 Drury South Industrial and Mixed Use Precinct I410.11.1 Drury South Industrial Appendix
Subject Site (if applicable)	N/A
Legal Description (if applicable)	N/A
Nature of change	A Clause 20A modification is required to correct a number of minor errors in Chapter I410 in the AUP. Discussion Numbering errors detected in Chapter I410. This is not consistent with the Auckland Unitary Pan numbering format.
Effect of change	The change is minor in nature. The amendment does not change the application or intent of the provisions but rather it ensures the correct administering of the plan as was originally intended. There is no effect nor impact upon either the environment or persons.
Changes required to be made (text/in-text diagrams)	Amend Chapter I410 in the Operative in Part version. Refer to changes in red in Attachment 1 .
Changes required to be made (maps)	N/A
Attachments	Attachment 1: List of changes

¹ updated February 2021 and available on Kotahi at [Delegation Register](#)

<p>Prepared by: Sanjay Bangs Senior Policy Planner - Central/South</p>	<p>Text Entered by: Sarah El Karamany Planning Technician</p>
<p>Signature:</p> 	<p>Signature:</p> 
<p>Maps prepared by: N/A Geospatial Analyst</p>	<p>Reviewed by: Craig Cairncross Team Leader - Central/South</p>
<p>Signature:</p>	<p>Signature:</p> 
<p>Decision: I agree/disagree to authorise the Clause 20A modification using my delegated authority</p> <p>Celia Davison Manager Planning - Central/South Date: 27 October 2021</p>	
<p>Signature:</p> 	

Attachment 1: Text changes

I410. Drury South Industrial and Mixed Use Precinct

I410.1. Precinct description

The Drury South Industrial and Mixed Use Precinct applies to approximately 257ha of land, bounded by State Highway 1 in the west, the Drury Quarry and the Hunua foothills in the east, the rural areas of Fitzgerald Road in the north and Ararimu Road in the south, as shown on Precinct Plan 1. The transportation network development requirements of the precinct are shown on Precinct plan 2. The precinct is characterised by a flat to subdued contour and is traversed by the Hingaia Stream and its tributaries including the Maketu Streams. Land which surrounds and defines the precinct has more pronounced topographical contours. The precinct lies between the Drury and Ramarama interchanges on State Highway 1 and local traffic patterns are dominated by truck traffic accessing the Drury Quarry.

The zones within the precinct are Business – Light Industry Zone, Business – Heavy Industry Zone, Business – Mixed Use, and Open Space – Conservation Zone. The purpose of the precinct is to provide for land extensive industrial activity employment opportunities, and a mix of residential and supporting commercial in identified areas, as well as provide for areas of stormwater management, existing and proposed network utility infrastructure, public open space and proposed roads, while recognising the ecological, cultural, landscape and other environmental constraints of the locality.

The precinct is divided into the following sub-precincts:

- Sub-precinct A Light Industry (approximately 130ha)
- Sub-precinct B Motorway Edge (Light Industry) (approximately 45ha)
- Sub-precinct C Mixed Use (approximately 10ha)
- Sub-precinct D Open Space / Stormwater Management (approximately 41ha)
- Sub-precinct E: Heavy Industry (approximately 24ha).

Sub-precinct A is zoned Business – Light Industry Zone. Activities within the sub-precinct are subject to additional standards.

Sub-precinct B is zoned Business – Light Industry Zone. The Transpower switchyard is located within this sub-precinct. Activities in the sub-precinct are subject to additional landscaping and building layout design standards.

Sub-precinct C is zoned Business - Mixed Use. Activities within this sub-precinct are subject to additional standards. The sub-precinct also provides for certain commercial activities to enable a mix of residential and supporting commercial uses.

Sub-precinct D is zoned Business – Light Industry Zone but provides for recreational uses and will be rezoned to an appropriate zone (e.g. Open Space - Informal Recreation Zone) once the Public Open Space / Stormwater Management Areas shown on Precinct Plan 1 are developed and vested.

Sub-precinct E has an underlying zoning of Business – Heavy Industry Zone. Activities within the sub-precinct are subject to additional standards.

I410.2. Objectives [rp/dp]

The objectives of the underlying Business – Light Industry Zone apply in sub-precincts A-B, the objectives of the underlying Mixed Use zone apply in sub-Precinct C, the objectives of the Open Space – Informal Recreation Zone apply in sub-precinct D, the objectives of the underlying Business – Heavy Industry Zone apply in sub-precinct E and the Auckland-wide objectives as well as the precinct objectives below apply throughout in this the precinct, unless there is a conflict between the precinct objectives and the Auckland-wide objectives or underlying zone objectives, in which case the precinct objectives prevail.

- (1) Development maintains and enhances the stream ecology and the natural vegetation and habitat values of the Hingaia and Maketu streams.
- (2) The cultural heritage values of the precinct are maintained and enhanced.
- (3) Landscape and visual amenity values within the precinct are maintained and enhanced (particularly when viewed from State Highway 1).
- (4) The air quality, acoustic and other amenity values of surrounding areas are protected.
- (5) The establishment of a convenient and well-designed industrial area with good quality streetscapes and a mixed use precinct is facilitated.
- (6) The timely and co-ordinated provision of robust and sustainable transport, stormwater, water, wastewater, energy and communications infrastructure networks are provided.
- (7) A transport network to facilitate the safe and efficient movement of people, goods and services and manage effects on the safe and efficient operation of the surrounding transport network.
- (8) The Drury Quarry, activities within the Business – Heavy Industry Zone or the adjoining rural area operate efficiently and are not unreasonably constrained by other activities.
- (9) Development and land use within the precinct avoids or minimises adverse effects on significant existing high voltage electricity, natural gas and communications infrastructure.
- (10) Subdivision and development in the precinct area avoids or mitigates the adverse effects of stormwater runoff on surface and groundwater quality and avoids increased flood risks to habitable buildings upstream and downstream of the precinct.
- (11) Visual and physical links to the surrounding area are protected.
- (12) Landscaping themes are complementary, consistent and coherent throughout the precinct.

(13) Activities sensitive to noise adjacent to the strategic freight network (Maketu Road and New Quarry Access Road) serving the Drury Quarry are protected from unreasonable levels of transport noise.

(154) Activities in sub-precinct C do not compromise the function, role and amenity of the City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone and Business – Local Centre Zone (either zoned or identified in the Council approved Structure Plan for Drury).

I410.3. Policies [rp/dp]

The policies of the underlying Light Industry zone apply in sub-precincts A-B, the policies of the underlying Mixed Use zone apply in sub-Precinct C, the policies of the Open Space – Informal Recreation Zone apply in Sub-precinct D, the policies of the Business – Heavy Industry Zone apply in sub-precinct E and the Auckland-wide policies as well as the precinct policies below apply throughout the precinct unless there is a conflict between the precinct policies or underlying zone policies and the Auckland-wide policies, in which case the precinct policies prevail.

- (1) Protect and enhance the significant streams and vegetation within Sub-precinct D.
- (2) Enhance the biodiversity of ecological resources and linkages and restore degraded ecosystems while reducing stream bank erosion through riparian planting along retained watercourses in sub-precincts B and D.
- (3) Reflect the cultural heritage values of the Hingaia and Maketu streams as cultural linkages between historical hill top pa and coastal areas in the development of sub-precinct D.
- (4) Maintain a sense of openness and naturalness on land adjacent to State Highway 1.
- (5) Maintain visual and physical links to the surrounding area within the precinct.
- (6) Utilise complementary, consistent and coherent landscaping themes throughout the precinct.
- (7) Design and construct attractive wetland areas for stormwater treatment and detention that also provide reserve and visual amenity opportunities.
- (8) Provide public open space buffer areas between the land to be developed for business activities and surrounding rural land.
- (9) Ensure buildings in Sub-precinct C address and engage the street and public realm and exhibit a high standard of amenity and pedestrian safety and convenience.

(10)[Deleted]

- (101) Provide for transport infrastructure and connections including Maketu Road, Link Road, New Quarry Access Road and Ramarama Road through to Fitzgerald Road, to support safe and efficient movement for all modes within and through the precinct and to and from the surrounding transport network.
- (142) Provide high quality public open spaces in Sub-precinct D that result in opportunities for passive surveillance.
- (123) Provide adequate stormwater, water, wastewater, communications and energy networks in a timely and co-ordinated manner to service development within the precinct.
- (134) Co-ordinate transport network (including the state highway) improvements both within and outside the precinct with development within the precinct to manage adverse effects on the safe and efficient operation of the surrounding road transport network.
- (145) Make adequate provision within Sub-precinct D to detain the 100 year Average Recurrence Interval (ARI) event without adverse effects on the extent of flooding of upstream and downstream areas.
- (156) Provide sufficient floodplain storage within Sub-precinct D to avoid increasing flood risk upstream and downstream, and manage increased flood risk within the precinct, to habitable rooms for all flood events from the 50% and up to the 1% AEP.
- (167) Undertake earthworks to form the modified floodplain in a manner which ensures flood effects on downstream or upstream areas are not exacerbated.
- (178) Avoid locating buildings within the 100 year ARI modified floodplain.
- (189) Avoid locating infrastructure within the 100 year modified ARI floodplain unless it can be designed to be resilient to flood related damage and does not exacerbate flood risks for upstream or downstream activities.
- (1920) Identify overland flowpaths in a stormwater management plan or discharge consent and ensure that they remain unobstructed and able to convey surface water runoff safely into the reticulated stormwater network.
- (201) Avoid or mitigate adverse effects on surface or groundwater quality from stormwater runoff within the precinct through on-site stormwater management and containment and the provision of catchment based stormwater treatment ponds.
- (242) Mitigate any diversion or piping of existing degraded or modified watercourses by the ecological enhancement and landscape planting of existing natural and diverted watercourses within and immediately adjacent to the precinct.
- (223) In Sub-precinct A, B, D and E, avoid the establishment of sensitive residential land uses.

~~(24)~~[Deleted]

~~(235)~~Control activities sensitive to noise adjacent to the strategic freight network (Maketu Road and New Quarry Access Road) serving the Drury Quarry. so that occupants are not exposed to unreasonable levels of transport noise.

~~(246)~~Manage development and subsequent land use to minimise adverse effects on the efficient and safe operation of existing high voltage electrical transmission and distribution lines, fibre optic cables and the Vector natural gas pipeline.

~~(257)~~Encourage a mix of residential and commercial uses within Sub-precinct C close to potential public transport routes and open space amenity, which provides opportunities to integrate with the Drury South Residential Precinct and the balance of the Drury South Industrial and Mixed Use Precinct.

~~(268)~~Provide for a range of commercial activities in Sub-Precinct C that will not compromise the role and amenity of the Business – Metropolitan Centre zone, Business – Town Centre zone (either zoned or identified in the Council approved Structure Plan for Drury) beyond those effects ordinarily associated with trade effects on trade competitors. In particular:

(a) Discourage the concentration of retail activity in one part of sub-precinct C, having regard to the effects of the scale and type of retail activity proposed;

(b) Appropriately stage the provision of retail (including supermarkets) in Sub-Precinct C over time as development in the surrounding area occurs;

(c) Enable appropriately scaled office activities to establish in sub-precinct C that support surrounding land uses in the Drury South precinct.

~~(279)~~Encourage a complementary mix of convenience activities to locate in the southern part of sub-precinct C, where it would be most accessible to the Drury South Residential precinct and would support a local community focal point.

I410.4. Activity table

The provisions in any relevant overlays, zone and the Auckland-wide apply in this precinct unless otherwise specified below.

In the event of a conflict between the zone or Auckland-wide rules and the precinct rules, the precinct rules prevail.

Table I410.4.1 specifies the activity status of development and subdivision activities in the sub-precincts A-E pursuant to sections 9(3) and 11 of the Resource Management Act 1991.

Table I410.4.1 Activity table 1 – Sub-precincts A to E

Activity		Activity status
Development		
(A1)	Subdivision, or any development of land which precedes a	RD

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	subdivision, being undertaken which complies with Standard I410.6.3 below. (Note that for the purposes of this rule "development" means the carrying out of any work on the land including any earthworks or site preparation activities and the construction or alteration of any building)	
(A2)	Subdivision, or any development of land which precedes a subdivision, being undertaken which does not comply with Standard I410.6.3 below, or results in increased flood risk to habitable rooms for all flood events from the 50% and up to 1% AEP flood event downstream and upstream of the Structure Plan area.	NC
(A3)	The creation of vehicle access to any site with frontage to or from the Maketu Road shown on Precinct Plan 2 which also has frontage to another road shown on that Plan	RD
(A43A)	Residential activities in sub-precinct C which do not comply with Standard I410.6.5 (no-complaints covenant)	NC

Table I410.4.2 specifies the activity status of land use activities in Sub-precinct A pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.2 Activity table 2 – Sub-precinct A (Light Industry)

Activity		Activity status
Use		
Commerce		
(A54)	Commercial services	NC
(A46)	Dairies	NC
(A76)	Drive-through restaurants	NC
(A87)	Entertainment facilities	NC
(A98)	Food and beverage	NC
(A109)	Retail over 450m ² except for Trade Suppliers	Pr
(A119A)	Trade Suppliers	P
(A10)	Activities that do not comply with standards in I410.6.2(9)(10)	D

Table I410.4.3 specifies the activity status of land use and development activities in Sub-precinct B pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.3 Activity table 3 – Sub-precinct B (Light Industry - Motorway Edge)

Activity		Activity status
Use		
Commerce		
(A121)	Commercial services	NC

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(A1 32)	Dairies	NC
(A1 43)	Drive-through restaurants	NC
(A1 45)	Entertainment facilities	NC
(A1 65)	Food and beverage	NC
(A1 76)	Retail over 450m ²	Pr
Development		
(A1 87)	New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities	C
(A1 98)	Additions to buildings that are less than: <ul style="list-style-type: none"> • 10 per cent of the existing gross floor area of the building; or • 250m² whichever is the lesser	P
(A 2019)	Internal alterations to buildings	P
(A20)	Activities that do not comply with the standards in I410.6.2(9)(10)	D

Table I410.4.4 specifies the activity status of land use and development activities in Sub-precinct C pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.4 Activity table 4 – Sub-precinct C (Business - Mixed Use)

Activity		Activity status
Use		
Commerce		
(A21)	[Deleted]	
(A21 A)	Trade Suppliers	P
(A22)	[Deleted]	
(A22 A)	Garden Centres	P
(A23)	[Deleted]	
(A23 A)	Motor Vehicle Sales	P
(A24)	[Deleted]	
(A24 A)	Marine Retail	P
(A25)	[Deleted]	
(A25 A)	Department Stores	NC
(A26)	[Deleted]	
(A26 A)	A single supermarket greater than 2000m ² gross floor area	RD
(A27)	[Deleted]	

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(A27 A)	Retail not otherwise permitted up to 200m ² gross floor area per tenancy	P
(A28)	[Deleted]	
(A28 A)	Retail not otherwise permitted greater than 200m ² gross floor area per tenancy	D
(A29)	[Deleted]	
(A29 A)	Offices up to 500m ² per tenancy	P
(A30)	[Deleted]	
(A30 A)	Offices between 501m ² – 1000m ² per tenancy	RD
(A31)	[Deleted]	
(A31 A)	Offices greater than 1000m ² per tenancy	D
(A32)	[Deleted]	
(A32 A)	Activities that do not comply with the standards in I410.6.2 (9) (10)	D
(A33)	[Deleted]	

Table I410.4.5 specifies the activity status of land use activities in Sub-precinct D pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.5 Activity table 5 – Sub-Precinct D (Open Space – Informal Recreation Zone / Stormwater Management)

Activity		Activity status
Use		
Community		
(A32 4)	Any activity listed as a permitted activity in the Open Space – Informal Recreation Zone	P
(A33 5)	Stormwater management devices	P
(A34 6)	Activities that do not comply with the standards in I410.6.2	D

Table I410.4.6 specifies the activity status of land use activities in Sub-precinct E pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.6 Activity table 6 – Sub-precinct E (Heavy Industry)

Activity		Activity status
Use		
Commerce		
(A35 7)	Dairies	NC
(A36 8)	Food and beverage	NC
(A37 9)	Activities that do not comply with the standards in I410.6.2	D

I410.5. Notification

- (1) An application for resource consent for a controlled activity listed in Tables I410.4.1 - I410.4.6 above will be considered without public or limited notification or the need to obtain written approval from affected parties unless the Council decides that special circumstances exist under section 95A(4) of the Resource Management Act 1991.
- (2) Any application for resource consent for an activity listed in Tables I410.4.1 - I410.4.6 and which is not listed in I410.5(1) will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.
- (3) When deciding who is an affected person in relation to any activity for the purposes of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in [Rule C1.13\(4\)](#).

I410.6. Standards

The overlay, Auckland-wide and zone standards apply in this precinct, unless otherwise specified below.

For the purposes of Rule E27.6.1(2)(b), the following activities have been assessed as part of an Integrated Transport Assessment on which the Drury South Industrial and Mixed Use Precinct provisions for Sub-precinct A and C are based:

Activity	GFA (m²)
Supermarket	4,500
Retail	4,400
Offices	15,000
Trade suppliers	11,000
Supporting commercial services	3,300
Residential – apartments	12,300
Activity	GFA (m²)
Residential – Retirement Villages	22,000

I410.6.1. Sub-precinct C

All activities listed as permitted in Table I410.4.4 must comply with the following standards

I410.6.1.1. ~~Deleted~~

- (1) ~~Deleted~~
- (2) ~~Deleted~~

I410.6.1.1A. Retail and Office Gross Floor Area

- (1) Retail must not exceed a total of 1000m² gross floor area in Sub-Precinct C. This excludes one supermarket greater than 2000m², service stations, trade suppliers, garden centres, motor vehicle sales, marine retail and food and beverage.
- (2) Retail activities specified in (1) above, greater than 1000m² and up to and including 4,500m² in Sub-Precinct C will be assessed as a restricted discretionary activity on a non-notified basis.
- (3) Retail activities specified in (1) above, greater than 4,500m² in Sub-Precinct C will be assessed as a discretionary activity.
- (4) Offices must not exceed 15,000m² in total in Sub-Precinct C. Offices greater than 15,000m² will be assessed as a discretionary activity.
- (5) Trade suppliers within Sub-Precincts A and C must not exceed a total of 11,000m² gross floor area. Trade suppliers that are greater than 11,000m² gross floor area will be assessed as a restricted discretionary activity on a non-notified basis.

I410.6.1.2. [Deleted]

- (1) [Deleted]
- (2) [Deleted]

I410.6.1.3. [Deleted]

- (1) [Deleted]

I410.6.1.4. [Deleted]

- (1) [Deleted]
- (2) [Deleted]

I410.6.2. Sub-precincts A-E

The standards are those listed in the Auckland-wide rules (in respect of sub-precincts A-E), Business – Light Industry Zone (in respect of sub-precincts A-B), Business – Mixed Use Zone (in respect of sub-precinct C), the Open Space – Informal Recreation Zone (in respect of sub-precinct D) and the Business – Heavy Industry Zone (in respect of Sub-precinct E) except as follows:

- (1) [Deleted]

(42) Buildings must not exceed 25m in height in Sub-precinct E and Sub-Precinct C.

(23) Within the Drury South Industrial and Mixed Use Precinct the industrial zone height in relation to boundary control will not apply, and instead, buildings must not project beyond a 45 degree recession plane measured from a point

2 metres vertically above ground level along the residential or public open space boundary.

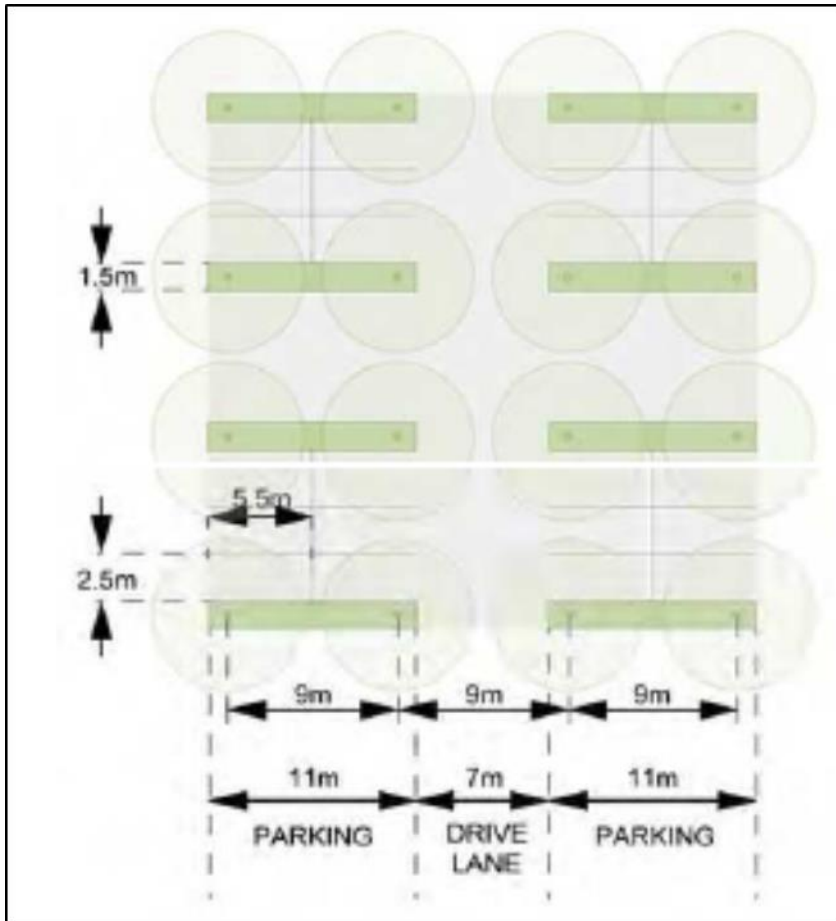
- (34) All new roads must be designed and constructed to comply with the provisions of New Zealand Standard NZS6806:2010 "Acoustics – Road Traffic Noise – New and Altered Roads".
- (45) The upward waste light ratio from any luminaire must not be more than 3 per cent. The upward waste light ratio is defined as: "The ratio of the light flux emitted above the horizontal by a luminaire to the total light flux emitted, expressed as a percentage, evaluated for the upcast angle".
- (56) Any required security fence must be setback a minimum of 3 metres from the front boundary and such fencing (whether in front yards or on rear or side boundaries) must be 2 metre maximum height and must not incorporate barbed or razor wire or an angled top. Fence posts and wire mesh are to be black coloured.

(7) [Deleted]

(7A) Where any new building is proposed, the reflectivity value of the roof or roofs must not exceed 30 per cent.

(8) Within Sub-precinct B no less than 30 per cent of the net site area of each site is to be in permeable landscape area (including any on site stormwater treatment). Where on site car parking adopts a layout fully conforming with the fully planted permeable carpark design layout detailed in Figure I410.6.2.1 below, the permeable landscape area may be reduced to no less than 20 per cent of the site area.

Figure I410.6.2.1 Carpark design



~~(9)~~[Deleted]

(910) Any land modification to form the 1% AEP modified flood plain must:

- (a) not reduce flood storage capacity in the precinct; and
- (b) not change the flood characteristics upstream or downstream of the precinct for all flood events from the 50% and up to the 1% AEP flood event in ways that result in an increase in peak flood levels.

I410.6.3. Subdivision or development preceding subdivision in Sub-precincts A – E

- (1) Proposed roads (including pedestrian and bicycle routes) identified on the Precinct Plan 1 and Precinct Plan 2, must be located generally in the position indicated on Precinct plan 1 and Precinct Plan 2. An alternative roading layout may be proposed provided that an integrated approach to land use and transport can be achieved throughout the Drury South Industrial and Drury South Residential precincts.
- (2) The land identified as part of Sub-precinct D on Precinct plan 1 must be developed upon subdivision or development of the relevant area. Proposed stormwater management areas must be located generally in the position

indicated on Precinct Plan 1, and must be offered to the Council. Vegetated buffers not less than 40 metres in total width are to be provided along stream corridors within stormwater management areas and must include a minimum of 10 metres of native riparian planting either side of the stream edge. Off-site stormwater management services including wetlands and the primary and secondary stormwater conveyance system is to be vested at no cost to the council in accordance with a network discharge consent or other relevant discharge consent or a stormwater management plan approved by the Council. All stormwater management areas and wetlands must be designed to serve a dual function to treat stormwater and provide ecological benefits.

- (3) Reticulated water services must be supplied to the precinct and all new water infrastructure must be fully funded (including consenting costs) by the developer(s) of the land within the precinct. Such services must be provided to the relevant part of the precinct in advance of or concurrent with a resource consent for subdivision and development provided that any necessary resource consents or designations for the reticulated water services have been granted.
- (4) Wastewater services are to be provided to the precinct either by (in no particular order):
 - (a) the construction of a connection to Watercare's existing wastewater network and any necessary upgrading of that network that is required to service the Precinct; and/or
 - (b) the construction of a Wastewater Treatment Plant to service the Precinct, or a larger catchment if required.

In either case wastewater services are to be provided in a manner approved by Watercare and constructed to Watercare's design and operational standards. The developer(s) must fully fund (including consenting costs) all new wastewater infrastructure required to service the Precinct. Wastewater services must be provided to the relevant part of the Precinct in advance of or concurrent with a resource consent for subdivision and development provided that any necessary resource consents or designations for the reticulated water services have been granted. In the event that a new regional wastewater treatment plant becomes available to service the precinct, and subject to approval from Watercare, the precinct could be connected to that plant.

Note: that for the purposes of the Standards I410.6.3(1)-(4) above, references to "Watercare" means Watercare Services Limited and references to "development" means the carrying out of any work on the land including any earthworks or site preparation activities and the construction or alteration of any building.

I410.6.4. Sub-Precinct C (Noise and Ventilation)

- (1) Any building containing a noise sensitive space within Sub-Precinct C must be located and/or designed and/or insulated, or screened by suitable barriers, so that the design noise levels do not exceed:
 - (a) 40 dB $L_{Aeq(24\ h)}$ inside any noise sensitive space; and
 - (b) 70 dB $L_{Aeq(24\ h)}$ incident on any façade facing Maketu Road that encloses a noise sensitive space.
- (2) Compliance with Standard I410.6.4(1) must be determined based on a road traffic noise level 10m from the nearest traffic lane of Maketu Road of 75 dB $L_{Aeq(24\ h)}$, 83 dB $L_{eq(24\ h)}$ at 63 Hz and 79 dB $L_{eq(24\ h)}$ at 125 Hz.
- (3) For residential dwellings, where the internal noise levels in Standard 1 can only be complied with when doors or windows to those rooms are closed, those rooms adopt the relevant mechanical ventilation and/or cooling requirements of E25.6.10(3)(b) or (c).
- (4) For the avoidance of doubt, the noise insulation requirements set out in Standard I410.6.4(1)-(3) apply in addition to any other noise insulation requirements set out in Chapter E25 – Noise and Vibration.

I410.6.5. Sub-Precinct C (Restrictive non-complaint covenant)

- (1) Residential activities in Sub-precinct C shall be subject to a restrictive non-complaint covenant* in favour of the operator of Drury Quarry.

*For the purposes of the Drury South Industrial and Mixed Use precinct and of this rule a 'restrictive non-complaint covenant' is defined as a restrictive covenant registered on the Title to the property or a binding agreement to covenant, in favour of the operator of Drury Quarry, by the landowner (and binding any successors in title) not to complain as to effects generated by the lawful operation of the quarry, including heavy vehicle movement noise. The restrictive non-complaint covenant is limited to the effects that could be lawfully generated by the quarry activities at the time the agreement to covenant is entered into. This does not require the covenantor to forego any right to lodge submissions in respect of resource consent applications or plan changes in relation to quarry activities (although an individual restrictive non-complaint covenant may do so.) Details of the existence of covenant documents may be obtained from the Quarry Operator, its solicitors, or in the case of registered covenants by searching the Title to the property.

I410.7. Assessment – controlled activities

I410.7.1. Matters of control

The Council will reserve its control to all of the following matters when assessing a controlled activity resource consent application:

- (1) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct B:
 - (a) retention of existing vegetation;

- (b) planting;
- (c) building design and appearance;
- (d) parking area design;
- (e) storage and waste management location and design; and
- (f) vehicular access;

(2) [Deleted]

I410.7.2. Assessment criteria

The Council will consider the relevant assessment criteria below for controlled activities:

- (1) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct B:

- (a) retention of existing vegetation:

- (i) the extent to which layouts retain and protect existing mature trees, particularly those of indigenous species, where these contribute to the site character and amenity.

- (b) planting:

- (i) the extent to which planting is designed to have a large scale landscape effect and combine native as well as appropriate exotic species to provide seasonal change and quality amenity; or
 - (ii) where public open space land adjoins the motorway, the extent to which boundary planting that creates a continuous visual barrier to eastward views from the State Highway 1 corridor is avoided and whether landscape design emphasises the current sequence of intermittent views to the Hunua Ranges from the State Highway 1 corridor and the pattern of variable depth of such views;
 - (iii) the extent to which the integrated site layout, building and landscape design provides a high quality and visually attractive frontage to State Highway 1, while ensuring any landscaping, including the use of large tree and shrub species, does not restrict access to the electricity infrastructure for maintenance and does not compromise the safe and reliable operation of the electricity network.

Advice note: In considering whether this criterion is met, the Council may take into account whether a review has been undertaken by or on behalf of Counties Power which confirms that the proposed planting will not affect the safe and reliable operation and maintenance of the electricity network.

- (c) building design and appearance:

- (i) the extent to which buildings are located with design consideration for their visibility and reduced visual impact as viewed from the State Highway 1 corridor and the desirability of maintaining a sense of openness as seen from the motorway; or
- (ii) the extent to which the visual mass of larger buildings is minimised by employing the following methods:
 - utilising subdued, recessive colours;
 - providing variation in materials and finish for facades viewed from the motorway;
 - creating variation of roof profiles with consideration given to the overall roofscape viewed from the motorway;
 - all rooftop servicing and plant should be designed as an integral part of the roofscape with particular consideration given to the view from the motorway;

(d) parking area design:

- (i) the extent to which parking areas are designed to incorporate trees to break up the scale of hard surface areas; or
- (ii) the extent to which the fully planted permeable carpark design layout (refer Figure I410.6.2.1 above) style of parking is adopted within Sub-precinct B;

(e) storage and waste management location and design:

- (i) the extent to which storage and waste management activities are located and/or designed to be screened from view of State Highway 1;

(f) vehicular access:

- (i) the extent to which proposed vehicle access to sites adjoining the Maketu_Road and New Quarry Access Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;

(2) ~~Deleted~~

I410.8. Assessment – restricted discretionary activities

I410.8.1. Matters of discretion

The Council will consider the relevant assessment criteria below for restricted discretionary activities, in addition to the assessment criteria specified for the relevant restricted discretionary activities in the overlay, Auckland wide or zone provisions:

- (1) subdivision or any development of land which precedes a subdivision being undertaken which complies with Standard I410.6.3:
 - (a) the relevant council and Auckland Transport development code or codes of practice;
 - (b) geotechnical and seismic;
 - (c) servicing and development sequencing;
 - (d) design and layout;
 - (e) earthworks;
 - (f) transportation network development requirements;
 - (g) ecology;
 - (h) Counties Power 110 Kv sub-transmission lines; and
 - (i) stormwater management;
- (2) the creation of vehicle access to any site with frontage to or from the Maketu Road shown on Precinct Plan 2 which also has frontage to another road shown on that plan:
 - (a) effect of the location and design of the access on the safe and efficient operation of the adjacent transport network; and
 - (b) adequacy of access arrangements.
- (3) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:
 - (a) building design;
 - (b) parking area design;
 - (c) signs;
 - (d) service area location;
 - (e) vehicular access; and
 - (f) mitigation of traffic noise.

- (4) A single supermarket greater than 2000m², supermarkets exceeding 450m² and up to 2000m² gross floor area per tenancy, offices between 501m² – 1000m² per tenancy and retail greater than 1000m² and up to and including 4,500m² in Sub-Precinct C
- (a) the compatibility of the effects of intensity and scale of the development arising from the numbers of people and/or vehicles using the site, with the existing and expected future amenity values of the surrounding area and any practicable mitigation measures that would be appropriate to manage those effects;
 - (b) the effects of the design and location of parking areas and vehicle access and servicing arrangements on visual amenity of the streetscape and on pedestrian safety;
 - (c) the effects of the size, composition, characteristics, and concentration of retail or office activities proposed in Sub-precinct C on the existing and expected future function, role and amenity of other Metropolitan or Town Centres that are zoned or are identified in a Council approved Structure Plan for Drury, having regard to the need to enable convenient access of communities to commercial and community services while disregarding any effects ordinarily associated with trade effects on trade competitors;
 - (d) In determining (c) above, whether the activity is coordinated with the rate of residential and commercial development in the local area to ensure that the activity individually, or in combination with other consented or permitted activities, meets the needs of the local catchment;
 - (e) whether the retail or office proposal, individually, or in combination with other consented or permitted activities, meets the needs of the local residential and employment catchment;
 - (f) the assessment of the above matters having regard to the need to provide for the functional requirements of the activity.
- (5) Trade Suppliers in Sub-Precincts A and C greater than 11,000m² gross floor area
- (a) Effects of the activity on the safe and efficient operation of the surrounding transport network.
- (6) Infringement I410.6.4 – Sub-Precinct C (Noise and Ventilation)
- (a) the effects of land transport noise of the noise sensitive activity;
 - (b) the potential reverse sensitivity effects of the infringement.

I410.8.2. Assessment criteria

The Council will restrict its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application, in addition to the

matters specified for the relevant restricted discretionary activities in the overlay, Auckland-wide or zone provisions:

- (1) subdivision, or any development of land which precedes a subdivision being undertaken, which complies with Standard I410.6.3:
 - (a) the extent to which the subdivision or development is in accordance with the relevant codes or codes of practice or engineering standards, and whether the road network is consistent with its intended function as set out within those codes or codes of practice and the subdivision design assessment criteria set out in Appendix I410.11.
 - (b) the extent to which the subdivided lots or the land on which the development is to be undertaken are geotechnically suitable for the development of a permitted activity or an activity for which resource consent has been obtained. This may include an assessment of the following:
 - (i) any proposed fill materials;
 - (ii) stability in areas of deep cut particularly adjacent to the boundaries of the Precinct;
 - (iii) settlement and stability issues associated with the Hingaia and Maketu streams;
 - (iv) time dependent settlement;
 - (v) ground seismicity and buffer zone; or
 - (vi) liquefaction;
 - (c) the extent to which subdivision and development occurs in a logical and sequential manner in relation to:
 - (i) the implementation of improvements and/or upgrades to the roading network;
 - (iiA) the implementation of a potential pedestrian and cycling connection shown on Precinct Plan 1 between the Drury South Residential Precinct and Sub-Precinct C and the integration of this with proposed built development in Sub-Precinct C;
 - (iii) the establishment of the stormwater management areas within sub-precinct D identified on Precinct Plan 1 and catchment wide stormwater management devices as identified in the relevant discharge consent and/or stormwater management plan required by the special information requirements below;
 - (iiV) the provision for overland flowpaths identified in an approved discharge consent and/or stormwater management plan required by the special information requirements below; or

- (iv) the provision of wastewater facilities, water supply, electricity, gas and telecommunications, including the protection and /or relocation of any existing local electricity, gas and communications assets;
- (d) the extent to which subdivision design and layout gives effect to the objectives and policies identified for the Drury South Industrial and Mixed Use Precinct and the subdivision design assessment criteria set out in Appendix I410.11.1.
- (e) the extent to which the earthworks required by the subdivision or development:
 - (i) avoid or mitigate adverse effects on land stability, existing underground infrastructure facilities (such as the Vector gas pipeline and Telecom telecommunications cables), and groundwater quantity and quality;
 - (ii) avoid or mitigate adverse effects on the visual quality of the landscape or natural landforms, watercourses, habitats or vegetation;
 - (iii) avoid or mitigate adverse effects on traffic management within the area or create damage, danger, or nuisance to surrounding residents or the Ramarama School;
 - (iv) consider opportunities to recharge the aquifer using treated stormwater where permeable soils are available;
 - (v) ensure that the creation of level development platforms are contoured to integrate with the surrounding street environment and open space corridors;
 - (vi) screen retaining walls from public view;
 - (vii) provide and maintain continuity of overland flow paths both within the site, as well as upstream and downstream; and where overland flow paths are diverted and/or altered show how:
 - potential effects on other properties from the diversion or alteration is avoided or mitigated;
 - effects from scouring and erosion are mitigated;
 - further changes to the overland flow path will be limited, when appropriate through an easement in favour of Council;
 - (viii) if located in the 1% AEP modified flood plain, including earthworks for the formation of stormwater management devices such as wetlands and/or for necessary infrastructure (including associated landscaping and accessways), whether:
 - the design of the device, including associated earthworks, landscaping and accessways avoids impeding flood flows or

otherwise exacerbating flood risk upstream or downstream of the site and how such effects can be avoided;

- the design of the device or mitigation works is resilient to damage from the full range of flood events;
- access to the device for maintenance is provided and maintenance plans address potential effects that may result from the proposed access route;

(f) the extent to which the following transportation network requirements are met:

(i) whether subdivision or development will result in the central 'Maketu Road' being progressively constructed on an alignment consistent with that indicated in Precinct plan 2;

(ii) whether the following road projects indicatively shown on Precinct plan 2 will be completed before any buildings within the precinct are occupied:

- the realignment of existing Quarry Road onto the alignment of the 'Maketu Road' from the State Highway 1 over-bridge to the southern extent of the first stage of subdivision;
- the upgrading of the existing Quarry Road/Great South Road intersection;
- the provision of traffic signals or an alternative upgrade which achieves equivalent transport performance at the existing Great South Road/State Highway 22 (Karaka Road) intersection;
- under the scenario where development of the Precinct proceeds in advance of the Mill Road Corridor Project, the upgrading of the right turn bay on Waihoehoe Road at the Waihoehoe Road/Fitzgerald Road intersection;

(iii) whether a new dedicated pedestrian path and cycleway has been constructed between the existing Drury township and the precinct before development and occupation of more than 25 hectares of Industrial zoned land within the precinct occurs;

(iv) whether Ramarama Road, at the northern boundary of the precinct remains open as defined on Precinct Plan 2;

(v) whether the Link Road from the Maketu Road to Fitzgerald Road shown on Precinct Plan 2 is provided and shoulder widening, intersection treatments and localised widening works within the existing road reserve on Fitzgerald Road between the Link Road and Waihoehoe Road is undertaken before Ramarama Road is closed at the northern boundary of the Precinct;

- (vi) whether the 'Avenue' Road and the portion of the Maketu Road shown on Precinct Plan 2 is provided as the adjacent Sub-precinct C is developed, and whether the 'Avenue' Road is connected with Maketu Road at the southern end of Sub-precinct C, and is extended to, but not connected with, Maketu Road at the northern end of Sub-Precinct C. An alternative location for vehicle access through a portion of Sub-precinct C (the 'Avenue Road') may be appropriate where it is safe and efficient, and provided that a continuous and high amenity pedestrian and cycle connection is located along the western edge.
- (vii) whether Ramarama Road, at the southern boundary of the precinct, is closed to all vehicular traffic by the time 89 hectares of Industrial zoned land within the precinct has been subdivided or developed;
- (viii) whether the southern portion of the Maketu Road that connects to Ararimu Road is constructed before:
- Ramarama Road is closed at the southern boundary of the Precinct; or
 - any development of the precinct south of the New Quarry Access Road shown on Precinct Plan 2 occurs;
- (ix) whether State Highway 1 Ramarama Interchange is capable of accommodating the traffic from the subdivided and developed portion of the precinct including the predicted traffic from the land which is the subject of the application. To enable assessment of this criterion, applications for subdivision or development must include a traffic assessment of the effects of the subdivision or development on the interchange prepared by a qualified and experienced traffic engineer.
- Note: This criterion will be considered to be met where such an assessment includes a review undertaken by or on behalf of NZTA which confirms that there is sufficient capacity or planned capacity at this interchange to accommodate the predicted increase in traffic;
- (g) in respect of those new areas of planting in stormwater management and wetland areas in Sub-precinct D the extent to which:
- (i) plants should be eco-sourced as close as possible to the developed area;
 - (ii) the mechanisms proposed ensure the weed and pest management programme and the herpetofaunal mitigation/rehabilitation plan are implemented;
 - (iii) The public open space area that adjoins the southern boundary of the Precinct will provide the basis of an ecological corridor linkage of 30 metres in width between the southern buffer in the Precinct and bush areas in the Special Purpose – Quarry Zone when planted with

suitable tree species at the time of subdivision of the adjoining industrial zoned land;

- (h) whether the existing 110kV Counties Power electricity lines are provided for in the existing positions in any subdivision or whether the existing lines can be relocated in agreement with Counties Power;
- (i) whether the stormwater management plan and works proposed as part of the subdivision or development:
 - (i) comply with any approved discharge consent;
 - (ii) are effective in avoiding, remedying or mitigating the potential adverse effects of stormwater discharge on water quality and flood hazards. In the case of stormwater management facilities within private land this assessment will include how the operation and maintenance of such facilities is to be secured by way of appropriate covenants or consent notices;
 - (iii) can effectively contain all the natural and diverted streams and their margins, wetlands, and other off-site stormwater management devices;
 - (iv) provide for overland flowpaths;
 - (v) require a bond or other security to be provided to ensure that the stormwater management works will be completed, with such bond to be released when the works are completed and the stormwater management areas and their devices are vested in council;
 - (vi) ensure that subdivision and development does not result in increased flood risk to habitable rooms for all flood events from the 50% and up to 1% AEP flood event downstream and upstream of the precinct;
- (2) the creation of vehicle access to any site with frontage to or from the Maketu Road shown on Precinct plan 2 which also has frontage to another road shown on that plan:
 - (a) any adverse effect from the location and design of the access on the safe and efficient operation of the adjacent transport network, including public transport, cyclists and general traffic, having regard to:
 - (i) the number of other access points to or from the Maketu Road in the vicinity of the proposed access;
 - (ii) whether conflicts will be reduced by the presence of a raised central median which prevents right turning in the vicinity of the site;
 - (iii) visibility and safe sight distances particularly the extent to which vehicles entering/exiting the site can see, and be seen by, pedestrians, cyclists and other vehicles on the footpath and road carriageway;

- (iv) existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring in all weathers;
 - (v) existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in the this Plan; and
 - (vi) existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleways.
- (b) whether the access arrangements are practicable and adequate having regard to site limitations and layout, and arrangement of buildings and activities, users and operational requirements, and having regard to whether the site can reasonably be served by shared or amalgamated access with another site or sites on the Maketu Road where the sites in question are held in the same ownership.
- (3) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:
- (a) building design:
 - (i) the extent to which buildings on corner lots are designed to provide for a quality architectural response to the corner. Appropriate design responses include the provision of additional height at the corner, windows and activities addressing both street frontages and avoiding blank walls to one or both sides of the corner;
 - (ii) the extent to which built development fronts the street and open space with a quality recognisable pedestrian entry or entries to the street.
 - (iii) Where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road;
 - (iv) the extent to which developments for trade suppliers, garden centres, marine retail, motor vehicle sales or supermarkets provide a quality frontage to the street and provide appropriate treatments to side and rear boundaries, including quality fencing and landscaping, to recognise the broader range of activities enabled in sub-precinct C and the higher standard of amenity expected in the Mixed Use zone, while also taking into account the functional requirements of the activity.
 - (b) parking area design:
 - (i) the extent to which parking is provided on the road network adjacent to sub-precinct C areas and on-site parking layouts are designed in accordance with the typical layout identified in Appendix I410.11.1.

(c) signs:

- (i) the extent to which signs for each sub-precinct C development are coordinated including the physical location of signs, their type-face, style and content;

(d) service area location:

- (i) the extent to which service areas are located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service/storage and dock areas;

(e) vehicular access:

- (i) the extent to which proposed vehicle access to sites adjoining the Maketu Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;

(f) mitigation of traffic noise:

- (i) the extent to which premises offering food and beverages, health professional rooms and childcare centres (being permitted activities which may be sensitive to heavy commercial vehicle traffic noise) are designed to mitigate traffic noise effects. Mitigation measures may include acoustic treatment of buildings and arranging site layout so noise sensitive activities are screened from the heavy traffic noise.

(g) Drury South Industrial and Mixed Use precinct Appendix

- (i) The extent to which buildings and development in Sub-Precinct C are consistent with the criteria in Appendix I410,11.2.

(4) A single supermarket greater than 2000m², supermarkets exceeding 450m² and up to 2000m² gross floor area per tenancy, offices between 501m² – 1000m² per tenancy and retail greater than 1000m² and up to and including 4,500m² in Sub-Precinct C

- (a) The extent to which the effects of the size, composition, characteristics and concentration of retail or office activities in Sub-precinct C will be complementary to the existing and expected future function, role and amenity of other Metropolitan or Town Centres that are zoned or are identified in a Council approved Structure Plan, having regard to the need to enable convenient access of communities to commercial and community services while disregarding any effects ordinarily associated with trade effects on trade competitors;
- (b) The extent to which retail that meets local convenience needs is located at the southern part of sub-precinct C, where it would be most accessible to

the Drury South Residential precinct and would support a local community focal point.

- (c) The extent to which the activity is coordinated with the rate of residential and commercial development in the wider area to ensure that the activity individually, or in combination with other consented or permitted activities, meets the needs of the local catchment;
 - (d) The extent to which the size, composition and characteristics of any office activity would serve a local function and support adjoining businesses in Drury South.
- (5) Trade Suppliers in Sub-Precincts A and C greater than 11,000m² gross floor area
- (a) the extent to which the activity affects the safe and efficient operation of the adjacent transport network including pedestrian and cycling movement, particularly at peak traffic times;
 - (b) the extent to which the proposal incorporates mitigation measures to address adverse effects.
- (6) Infringement I410.6.4 – Sub-Precinct C (Noise and Ventilation)
- (a) the extent to which the type of activity proposed is likely to be adversely affected by the expected levels of transport noise;
 - (b) the extent to which any characteristics of the proposed use or area make compliance with of New Zealand Standard NZS6806:2010 "Acoustics – Road Traffic Noise – New and Altered Roads" unnecessary;
 - (c) whether the building and any outdoor living areas are appropriately located, and/or setback an appropriate distance from the Spine Road and/or State Highway 1 to minimise the potential for adverse effects from land transport noise.

I410.9. Special information requirements

I410.9.1. Earthworks plans

- (1) Any application for subdivision or development must be accompanied by detailed earthworks plans. Such plans must:
 - (a) describe the nature and scale of the proposed earthworks, such as the extent of cut and/or fill, sources of fill and how the cut and fill is to be transported;
 - (b) describe the construction management and communication methods to be followed to minimise nuisances and disruption to surrounding residents and Ramarama School (in particular, dust, traffic and noise impacts) during the construction period; and

- (c) provide detailed design of the modified flood plain.

I410.9.2. Ecological management plans

- (1) In respect of any new areas of planting in Sub-precinct D the following must be provided:
 - (a) a weed and pest management programme for any new areas of planting within the stormwater management areas and wetland areas and remaining indigenous forest fragments in Sub-precinct D; and
 - (b) a herpetofaunal mitigation/rehabilitation plan which targets only potentially suitable lizard habitat for relocation searches.

I410.9.3. Stormwater management report and plans

- (1) Any application for subdivision or development preceding subdivision must be accompanied by detailed stormwater management report and plans. Such report and plans must:
 - (a) describe how the plans comply with the conditions of any relevant discharge consent;
 - (b) identify overland flow paths;
 - (c) describe the nature and extent of any off-site stormwater management devices and how these devices are to be delivered if they are on land outside the application site;
 - (d) if stormwater management devices are to be located within the modified 1% AEP floodplain, describe how these devices are to be designed to be resilient to flood-related damage while not exacerbating flood risks for upstream or downstream activities;
 - (e) where streams are to be diverted and/or recreated as identified on the precinct plan, describe how this is to be achieved in a way that ensures that they function in a manner similar to natural stream systems. Detailed landscape treatment plans will be required to demonstrate:
 - (i) the proposed long section and cross sections;
 - (ii) how the new stream banks are to be stabilised;
 - (iii) how pool – riffles - run sequences are to be formed; and
 - (iv) how stormwater outlets are controlled.
- (2) A subdivision application for vacant lot subdivision or a land use application for a new building or buildings in Sub-precinct C must be accompanied by an indicative 'integration plan' showing how the proposed development integrates with potential future development in the remainder of Sub-precinct C, including existing or potential transport connections and activities.

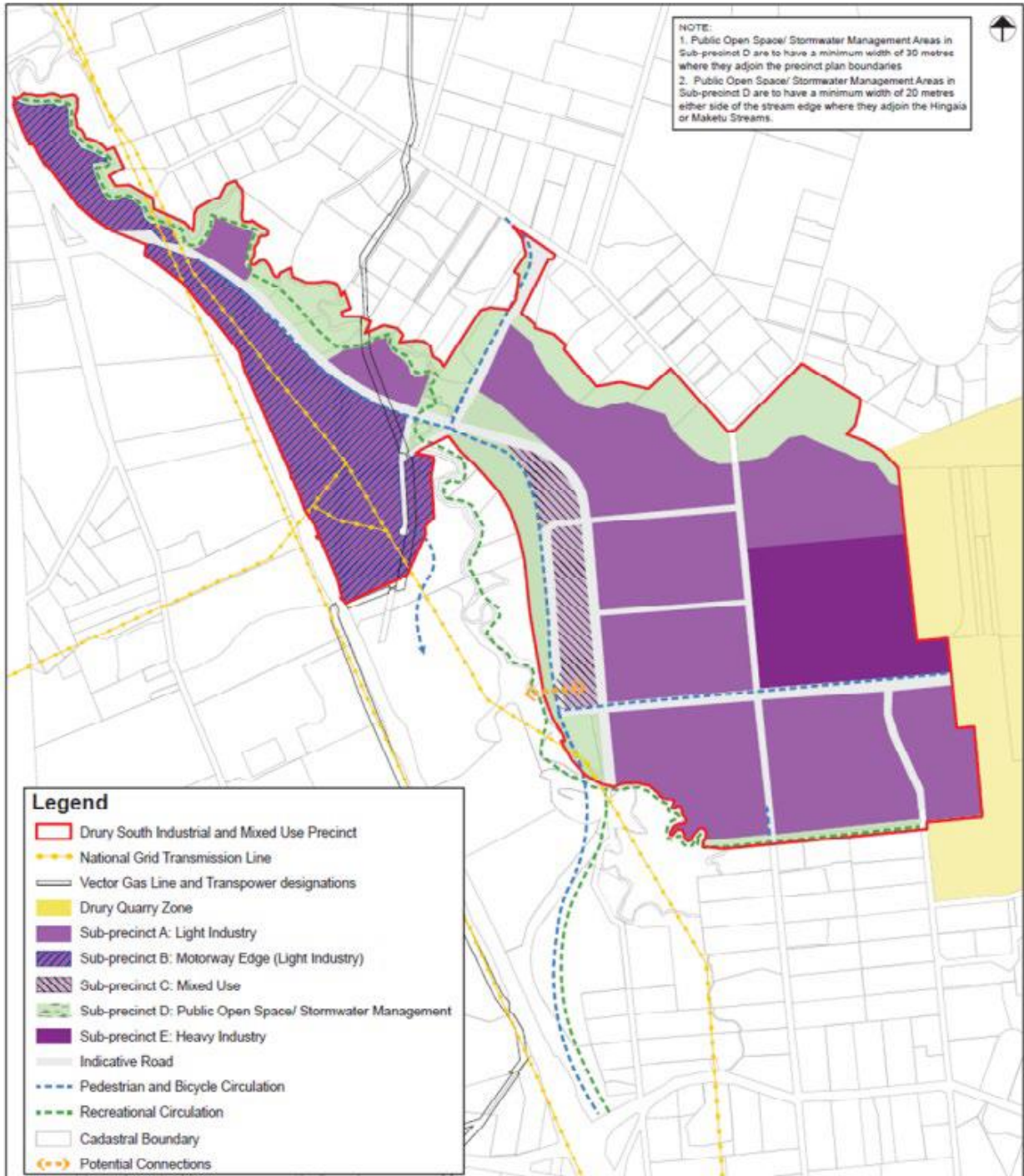
I410 Drury South Industrial Precinct

To avoid doubt, this plan is not subject to any approval from the Council and is for information only. Its purpose is to inform how a particular stage of development will positively contribute to the visual quality and interest of streets, public open spaces and pedestrian amenity, movement and safety (Policy H13.3(3)), in an integrated manner across Sub-precinct C.

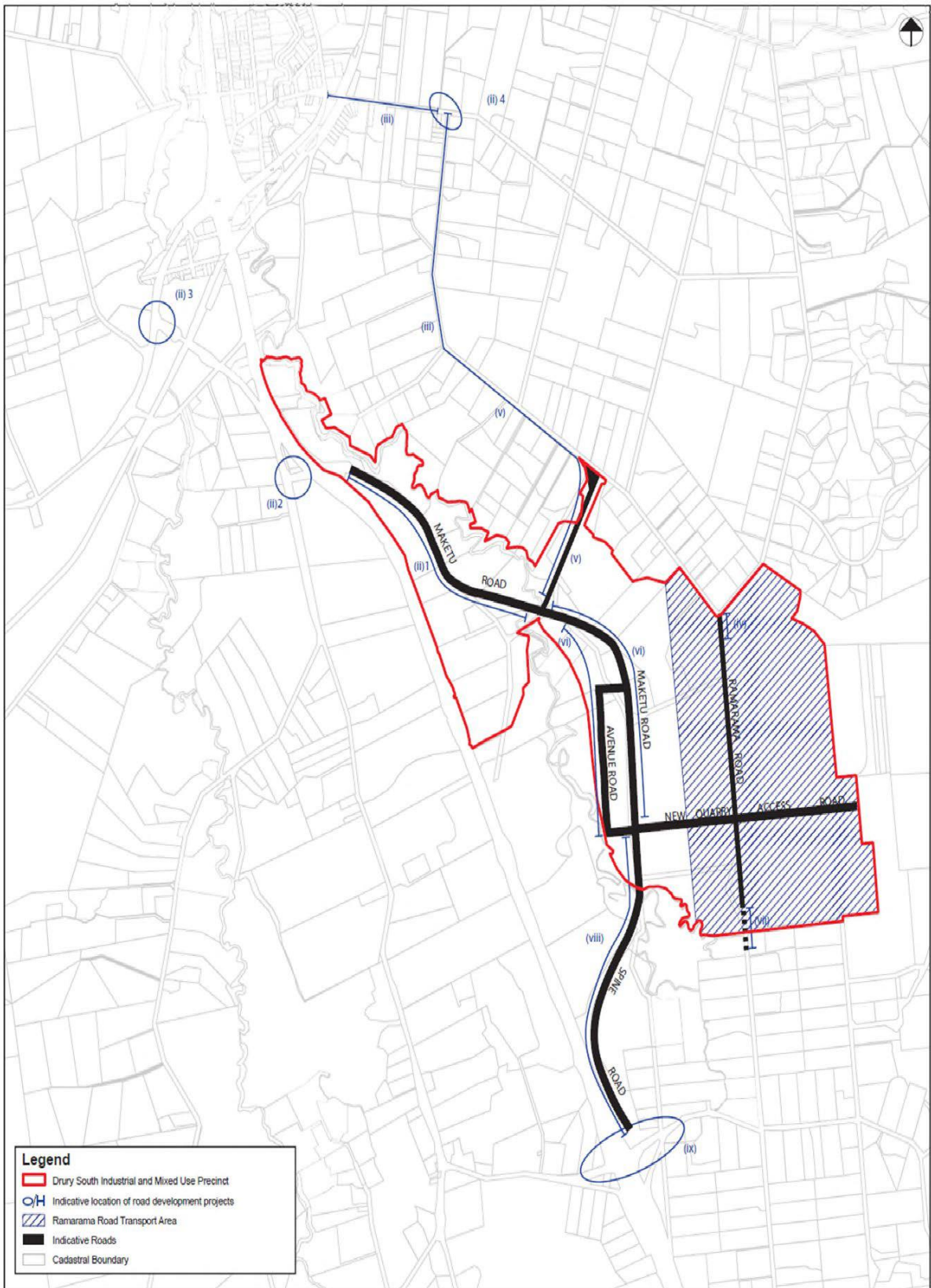
I410.10. Precinct plans

I410.10.1 Drury South Industrial and Mixed Use: Precinct plan 1

I410 Drury South Industrial Precinct



I410.10.2 Drury South Industrial and Mixed Use: Precinct plan 2



I410.11. Appendices

**Attachment 8: Further Clause 20A changes to
text – Precinct Name**

Memo

Date: 21 October 2021

To: Celia Davison – Manager Planning - Central/South
 From: Sanjay Bangs – Senior Policy Planner - Central/South

Subject: Plan Modification: Clause 20A modification to Auckland Unitary Plan

Corrections are required to the Auckland Unitary Plan (Operative in Part) 2016 (the AUP).






I seek your approval of this plan modification pursuant to clause 20A, first schedule, Resource Management Act 1991.

You have delegated authority, as a tier four manager, to make a decision to correct an error to an operative plan under clause 20A. Schedule 2A of the Auckland Council Combined Chief Executives Delegation Register authorises all powers, functions, and duties under RMA’s first schedule (except clause 17 which cannot be delegated) to tier four positions.

Rule or Section of Unitary Plan	<p><u>Chapter I Precincts</u> I410 Drury South Industrial and Mixed Use Precinct I410.11.1 Drury South Industrial Precinct Appendix 1</p>
Subject Site (if applicable)	Multiple sites within the Drury South Industrial and Mixed Use Precinct at Quarry Road, Fitzgerald Road and Ramarama Road, Drury
Legal Description (if applicable)	-
Nature of change	<p>Changes are required to the Drury South Industrial and Mixed Use Precinct to:</p> <ul style="list-style-type: none"> • Rename the precinct title to make it easier to depict on the AUP GIS Viewer • Update a clause in Chapter I140.11.1 Drury South Industrial Precinct Appendix <p>This request is intended to be read alongside the AUP update request to make Plan Change 46 (Drury South) (PC46) operative.</p> <p>Precinct Title</p> <p>PC46 has amended the title of the precinct from ‘<i>Drury South Industrial Precinct</i>’ to ‘<i>Drury South Industrial and Mixed Use Precinct</i>’.</p> <p>Subsequent to decision making on Plan Change 46, Auckland Council’s geospatial staff have advised that the amended precinct title will difficult to depict on the Unitary Plan maps. As such, it is proposed to shorten the precinct title to ‘<i>Drury South Precinct</i>’, including updating all references within Chapter I140 and I140.11.1, and amending the precinct name in the AUP Viewer.</p> <p>In addition, the decision version of the precinct contained numbering errors which are being corrected.</p>

	<p>Update Clause 3 to Additional Design Element 6</p> <p>The amendments made by PC46 to Chapter I140.11.1 were made in error as they were overlaid on an outdated version of the base text. Since PC46 was lodged, Plan Change 4 (PC4) had made minor amendments to Chapter I140.11.1 to address technical errors and update references.</p> <p>The conflict between the operative text (as amended by PC4) and the PC46 text (based on a prior base text) has now been rectified through an Environment Court dispensation. This is discussed in the AUP update for PC46 which accompanies this Clause 20A amendment.</p> <p>However, there is a clause introduced by PC4 that references road cross sections, which were subsequently deleted by PC46. This was not addressed by the Environment Court dispensation. This reference sits within Clause 3 to Additional Design Element 6. The reference to road cross sections should be deleted as follows:</p> <p style="text-align: center;"><i>3. Specimen tree planting should be provided on all public and internal private access roads within the Motorway Edge Sub-Precinct. Refer Attachment 1 Typical Road Cross Section for Motorway Edge Sub-Precinct.</i></p>
Effect of change	The change to precinct title and numbering are administrative. The effect of the changes are both neutral and less than minor. No person would benefit or be prejudiced by these changes.
Changes required to be made (text/in-text diagrams)	Refer to markups shown in red in Attachment 1 .
Changes required to be made (maps)	Amend the precinct name on the AUP Viewer under Unitary Plan Management Layers: Precincts, from <i>Drury South Industrial and Mixed Use Precinct</i> to <i>Drury South Precinct</i> . Amend sub-precinct names accordingly.
Attachments	Attachment 1: Changes to text

¹ updated February 2021 and available on Kotahi at [Delegation Register](#)

<p>Prepared by: Sanjay Bangs Senior Policy Planner – Central/South</p>	<p>Text Entered by: Sarah El Karamany Planning Technician</p>
<p>Signature:</p> 	<p>Signature:</p> 
<p>Maps prepared by: Shelley Glassey Geospatial Analyst</p>	<p>Reviewed by: Craig Cairncross Team Leader - Central/South</p>
<p>Signature:</p> 	<p>Signature:</p> 
<p>Decision: I agree/disagree to authorise the Clause 20A modification using my delegated authority</p> <p>Celia Davison Manager Planning - Central/South Date: 27 October 2021</p>	
<p>Signature:</p> 	

Attachment 1: Text changes

I410. Drury South ~~Industrial and Mixed Use~~ Precinct

I410.1. Precinct description

The Drury South ~~Industrial and Mixed Use~~ Precinct applies to approximately 257ha of land, bounded by State Highway 1 in the west, the Drury Quarry and the Hunua foothills in the east, the rural areas of Fitzgerald Road in the north and Ararimu Road in the south, as shown on Precinct Plan 1. The transportation network development requirements of the precinct are shown on Precinct plan 2. The precinct is characterised by a flat to subdued contour and is traversed by the Hingaia Stream and its tributaries including the Maketu Streams. Land which surrounds and defines the precinct has more pronounced topographical contours. The precinct lies between the Drury and Ramarama interchanges on State Highway 1 and local traffic patterns are dominated by truck traffic accessing the Drury Quarry.

The zones within the precinct are Business – Light Industry Zone, Business – Heavy Industry Zone, Business – Mixed Use, and Open Space – Conservation Zone. The purpose of the precinct is to provide for land extensive industrial activity employment opportunities, and a mix of residential and supporting commercial in identified areas, as well as provide for areas of stormwater management, existing and proposed network utility infrastructure, public open space and proposed roads, while recognising the ecological, cultural, landscape and other environmental constraints of the locality.

The precinct is divided into the following sub-precincts:

- Sub-precinct A Light Industry (approximately 130ha)
- Sub-precinct B Motorway Edge (Light Industry) (approximately 45ha)
- Sub-precinct C Mixed Use (approximately 10ha)
- Sub-precinct D Open Space / Stormwater Management (approximately 41ha)
- Sub-precinct E: Heavy Industry (approximately 24ha).

Sub-precinct A is zoned Business – Light Industry Zone. Activities within the sub-precinct are subject to additional standards.

Sub-precinct B is zoned Business – Light Industry Zone. The Transpower switchyard is located within this sub-precinct. Activities in the sub-precinct are subject to additional landscaping and building layout design standards.

Sub-precinct C is zoned Business - Mixed Use. Activities within this sub-precinct are subject to additional standards. The sub-precinct also provides for certain commercial activities to enable a mix of residential and supporting commercial uses.

Sub-precinct D is zoned Business – Light Industry Zone but provides for recreational uses and will be rezoned to an appropriate zone (e.g. Open Space - Informal Recreation Zone) once the Public Open Space / Stormwater Management Areas shown on Precinct Plan 1 are developed and vested.

Sub-precinct E has an underlying zoning of Business – Heavy Industry Zone. Activities within the sub-precinct are subject to additional standards.

I410.2. Objectives [rp/dp]

The objectives of the underlying Business – Light Industry Zone apply in sub-precincts A-B, the objectives of the underlying Mixed Use zone apply in sub-Precinct C, the objectives of the Open Space – Informal Recreation Zone apply in sub-precinct D, the objectives of the underlying Business – Heavy Industry Zone apply in sub-precinct E and the Auckland-wide objectives as well as the precinct objectives below apply throughout in this the precinct, unless there is a conflict between the precinct objectives and the Auckland-wide objectives or underlying zone objectives, in which case the precinct objectives prevail.

- (1) Development maintains and enhances the stream ecology and the natural vegetation and habitat values of the Hingaia and Maketu streams.
- (2) The cultural heritage values of the precinct are maintained and enhanced.
- (3) Landscape and visual amenity values within the precinct are maintained and enhanced (particularly when viewed from State Highway 1).
- (4) The air quality, acoustic and other amenity values of surrounding areas are protected.
- (5) The establishment of a convenient and well-designed industrial area with good quality streetscapes and a mixed use precinct is facilitated.
- (6) The timely and co-ordinated provision of robust and sustainable transport, stormwater, water, wastewater, energy and communications infrastructure networks are provided.
- (7) A transport network to facilitate the safe and efficient movement of people, goods and services and manage effects on the safe and efficient operation of the surrounding transport network.
- (8) The Drury Quarry, activities within the Business – Heavy Industry Zone or the adjoining rural area operate efficiently and are not unreasonably constrained by other activities.
- (9) Development and land use within the precinct avoids or minimises adverse effects on significant existing high voltage electricity, natural gas and communications infrastructure.
- (10) Subdivision and development in the precinct area avoids or mitigates the adverse effects of stormwater runoff on surface and groundwater quality and avoids increased flood risks to habitable buildings upstream and downstream of the precinct.
- (11) Visual and physical links to the surrounding area are protected.
- (12) Landscaping themes are complementary, consistent and coherent throughout the precinct.

- (13) Activities sensitive to noise adjacent to the strategic freight network (Maketu Road and New Quarry Access Road) serving the Drury Quarry are protected from unreasonable levels of transport noise.
- (14) Activities in sub-precinct C do not compromise the function, role and amenity of the City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone and Business – Local Centre Zone (either zoned or identified in the Council approved Structure Plan for Drury).

I410.3. Policies [rp/dp]

The policies of the underlying Light Industry zone apply in sub-precincts A-B, the policies of the underlying Mixed Use zone apply in sub-Precinct C, the policies of the Open Space – Informal Recreation Zone apply in Sub-precinct D, the policies of the Business – Heavy Industry Zone apply in sub-precinct E and the Auckland-wide policies as well as the precinct policies below apply throughout the precinct unless there is a conflict between the precinct policies or underlying zone policies and the Auckland-wide policies, in which case the precinct policies prevail.

- (1) Protect and enhance the significant streams and vegetation within Sub-precinct D.
- (2) Enhance the biodiversity of ecological resources and linkages and restore degraded ecosystems while reducing stream bank erosion through riparian planting along retained watercourses in sub-precincts B and D.
- (3) Reflect the cultural heritage values of the Hingaia and Maketu streams as cultural linkages between historical hill top pa and coastal areas in the development of sub-precinct D.
- (4) Maintain a sense of openness and naturalness on land adjacent to State Highway 1.
- (5) Maintain visual and physical links to the surrounding area within the precinct.
- (6) Utilise complementary, consistent and coherent landscaping themes throughout the precinct.
- (7) Design and construct attractive wetland areas for stormwater treatment and detention that also provide reserve and visual amenity opportunities.
- (8) Provide public open space buffer areas between the land to be developed for business activities and surrounding rural land.
- (9) Ensure buildings in Sub-precinct C address and engage the street and public realm and exhibit a high standard of amenity and pedestrian safety and convenience.
- (10) [Deleted]

- (11) Provide for transport infrastructure and connections including Maketu Road, Link Road, New Quarry Access Road and Ramarama Road through to Fitzgerald Road, to support safe and efficient movement for all modes within and through the precinct and to and from the surrounding transport network.
- (12) Provide high quality public open spaces in Sub-precinct D that result in opportunities for passive surveillance.
- (13) Provide adequate stormwater, water, wastewater, communications and energy networks in a timely and co-ordinated manner to service development within the precinct.
- (14) Co-ordinate transport network (including the state highway) improvements both within and outside the precinct with development within the precinct to manage adverse effects on the safe and efficient operation of the surrounding road transport network.
- (15) Make adequate provision within Sub-precinct D to detain the 100 year Average Recurrence Interval (ARI) event without adverse effects on the extent of flooding of upstream and downstream areas.
- (16) Provide sufficient floodplain storage within Sub-precinct D to avoid increasing flood risk upstream and downstream, and manage increased flood risk within the precinct, to habitable rooms for all flood events from the 50% and up to the 1% AEP.
- (17) Undertake earthworks to form the modified floodplain in a manner which ensures flood effects on downstream or upstream areas are not exacerbated.
- (18) Avoid locating buildings within the 100 year ARI modified floodplain.
- (19) Avoid locating infrastructure within the 100 year modified ARI floodplain unless it can be designed to be resilient to flood related damage and does not exacerbate flood risks for upstream or downstream activities.
- (20) Identify overland flowpaths in a stormwater management plan or discharge consent and ensure that they remain unobstructed and able to convey surface water runoff safely into the reticulated stormwater network.
- (21) Avoid or mitigate adverse effects on surface or groundwater quality from stormwater runoff within the precinct through on-site stormwater management and containment and the provision of catchment based stormwater treatment ponds.
- (22) Mitigate any diversion or piping of existing degraded or modified watercourses by the ecological enhancement and landscape planting of existing natural and diverted watercourses within and immediately adjacent to the precinct.
- (23) In Sub-precinct A, B, D and E, avoid the establishment of sensitive residential land uses.

- (24) [Deleted]
- (25) Control activities sensitive to noise adjacent to the strategic freight network (Maketu Road and New Quarry Access Road) serving the Drury Quarry. so that occupants are not exposed to unreasonable levels of transport noise.
- (26) Manage development and subsequent land use to minimise adverse effects on the efficient and safe operation of existing high voltage electrical transmission and distribution lines, fibre optic cables and the Vector natural gas pipeline.
- (27) Encourage a mix of residential and commercial uses within Sub-precinct C close to potential public transport routes and open space amenity, which provides opportunities to integrate with the Drury South Residential Precinct and the balance of the Drury South ~~Industrial and Mixed Use~~ Precinct.
- (28) Provide for a range of commercial activities in Sub-Precinct C that will not compromise the role and amenity of the Business – Metropolitan Centre zone, Business – Town Centre zone (either zoned or identified in the Council approved Structure Plan for Drury) beyond those effects ordinarily associated with trade effects on trade competitors. In particular:
- (a) Discourage the concentration of retail activity in one part of sub-precinct C, having regard to the effects of the scale and type of retail activity proposed;
 - (b) Appropriately stage the provision of retail (including supermarkets) in Sub-Precinct C over time as development in the surrounding area occurs;
 - (c) Enable appropriately scaled office activities to establish in sub-precinct C that support surrounding land uses in the Drury South precinct.
- (29) Encourage a complementary mix of convenience activities to locate in the southern part of sub-precinct C, where it would be most accessible to the Drury South Residential precinct and would support a local community focal point.

I410.4. Activity table

The provisions in any relevant overlays, zone and the Auckland-wide apply in this precinct unless otherwise specified below.

In the event of a conflict between the zone or Auckland-wide rules and the precinct rules, the precinct rules prevail.

Table I410.4.1 specifies the activity status of development and subdivision activities in the sub-precincts A-E pursuant to sections 9(3) and 11 of the Resource Management Act 1991.

Table I410.4.1 Activity table 1 – Sub-precincts A to E

Activity		Activity status
Development		
(A1)	Subdivision, or any development of land which precedes a	RD

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	subdivision, being undertaken which complies with Standard I410.6.3 below. (Note that for the purposes of this rule "development" means the carrying out of any work on the land including any earthworks or site preparation activities and the construction or alteration of any building)	
(A2)	Subdivision, or any development of land which precedes a subdivision, being undertaken which does not comply with Standard I410.6.3 below, or results in increased flood risk to habitable rooms for all flood events from the 50% and up to 1% AEP flood event downstream and upstream of the Structure Plan area.	NC
(A3)	The creation of vehicle access to any site with frontage to or from the Maketu Road shown on Precinct Plan 2 which also has frontage to another road shown on that Plan	RD
(A3A)	Residential activities in sub-precinct C which do not comply with Standard I410.6.5 (no-complaints covenant)	NC

Table I410.4.2 specifies the activity status of land use activities in Sub-precinct A pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.2 Activity table 2 – Sub-precinct A (Light Industry)

Activity		Activity status
Use		
Commerce		
(A4)	Commercial services	NC
(A5)	Dairies	NC
(A6)	Drive-through restaurants	NC
(A7)	Entertainment facilities	NC
(A8)	Food and beverage	NC
(A9)	Retail over 450m ² except for Trade Suppliers	Pr
(A9A)	Trade Suppliers	P
(A10)	Activities that do not comply with standards in I410.6.2(10)	D

Table I410.4.3 specifies the activity status of land use and development activities in Sub-precinct B pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.3 Activity table 3 – Sub-precinct B (Light Industry - Motorway Edge)

Activity		Activity status
Use		
Commerce		
(A11)	Commercial services	NC
(A12)	Dairies	NC

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(A13)	Drive-through restaurants	NC
(A14)	Entertainment facilities	NC
(A15)	Food and beverage	NC
(A16)	Retail over 450m ²	Pr
Development		
(A17)	New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities	C
(A18)	Additions to buildings that are less than: <ul style="list-style-type: none"> • 10 per cent of the existing gross floor area of the building; or • 250m² whichever is the lesser	P
(A19)	Internal alterations to buildings	P
(A20)	Activities that do not comply with the standards in I410.6.2(10)	D

Table I410.4.4 specifies the activity status of land use and development activities in Sub-precinct C pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.4 Activity table 4 – Sub-precinct C (Business - Mixed Use)

Activity		Activity status
Use		
Commerce		
(A21)	[Deleted]	
(A21A)	Trade Suppliers	P
(A22)	[Deleted]	
(A22A)	Garden Centres	P
(A23)	[Deleted]	
(A23A)	Motor Vehicle Sales	P
(A24)	[Deleted]	
(A24A)	Marine Retail	P
(A25)	[Deleted]	
(A25A)	Department Stores	NC
(A26)	[Deleted]	
(A26A)	A single supermarket greater than 2000m ² gross floor area	RD
(A27)	[Deleted]	
(A27A)	Retail not otherwise permitted up to 200m ² gross floor area per tenancy	P

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(A28)	[Deleted]	
(A28A)	Retail not otherwise permitted greater than 200m ² gross floor area per tenancy	D
(A29)	[Deleted]	
(A29A)	Offices up to 500m ² per tenancy	P
(A30)	[Deleted]	
(A30A)	Offices between 501m ² – 1000m ² per tenancy	RD
(A31)	[Deleted]	
(A31A)	Offices greater than 1000m ² per tenancy	D
(A32)	[Deleted]	
(A32A)	Activities that do not comply with the standards in I410.6.2(10)	D
(A33)	[Deleted]	

Table I410.4.5 specifies the activity status of land use activities in Sub-precinct D pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.5 Activity table 5 – Sub-Precinct D (Open Space – Informal Recreation Zone / Stormwater Management)

Activity		Activity status
Use		
Community		
(A34)	Any activity listed as a permitted activity in the Open Space – Informal Recreation Zone	P
(A35)	Stormwater management devices	P
(A36)	Activities that do not comply with the standards in I410.6.2	D

Table I410.4.6 specifies the activity status of land use activities in Sub-precinct E pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.6 Activity table 6 – Sub-precinct E (Heavy Industry)

Activity		Activity status
Use		
Commerce		
(A37)	Dairies	NC
(A38)	Food and beverage	NC
(A39)	Activities that do not comply with the standards in I410.6.2	D

I410.5. Notification

- (1) An application for resource consent for a controlled activity listed in Tables I410.4.1 - I410.4.6 above will be considered without public or limited notification or the need to obtain written approval from affected parties unless the Council decides that special circumstances exist under section 95A(4) of the Resource Management Act 1991.
- (2) Any application for resource consent for an activity listed in Tables I410.4.1 - I410.4.6 and which is not listed in I410.5(1) will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.
- (3) When deciding who is an affected person in relation to any activity for the purposes of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in [Rule C1.13\(4\)](#).

I410.6. Standards

The overlay, Auckland-wide and zone standards apply in this precinct, unless otherwise specified below.

For the purposes of Rule E27.6.1(2)(b), the following activities have been assessed as part of an Integrated Transport Assessment on which the Drury South ~~Industrial and Mixed Use~~ Precinct provisions for Sub-precinct A and C are based:

Activity	GFA (m ²)
Supermarket	4,500
Retail	4,400
Offices	15,000
Trade suppliers	11,000
Supporting commercial services	3,300
Residential – apartments	12,300
Activity	GFA (m ²)
Residential – Retirement Villages	22,000

I410.6.1. Sub-precinct C

All activities listed as permitted in Table I410.4.4 must comply with the following standards

I410.6.1.1. [Deleted]

(1) [Deleted]

(2) [Deleted]

I410.6.1.1A. Retail and Office Gross Floor Area

- (1) Retail must not exceed a total of 1000m² gross floor area in Sub-Precinct C. This excludes one supermarket greater than 2000m², service stations, trade suppliers, garden centres, motor vehicle sales, marine retail and food and beverage.
- (2) Retail activities specified in (1) above, greater than 1000m² and up to and including 4,500m² in Sub-Precinct C will be assessed as a restricted discretionary activity on a non-notified basis.
- (3) Retail activities specified in (1) above, greater than 4,500m² in Sub-Precinct C will be assessed as a discretionary activity.
- (4) Offices must not exceed 15,000m² in total in Sub-Precinct C. Offices greater than 15,000m² will be assessed as a discretionary activity.
- (5) Trade suppliers within Sub-Precincts A and C must not exceed a total of 11,000m² gross floor area. Trade suppliers that are greater than 11,000m² gross floor area will be assessed as a restricted discretionary activity on a non-notified basis.

I410.6.1.2. [Deleted]

- (1) [Deleted]
- (2) [Deleted]

I410.6.1.3. [Deleted]

- (1) [Deleted]

I410.6.1.4. [Deleted]

- (1) [Deleted]
- (2) [Deleted]

I410.6.2. Sub-precincts A-E

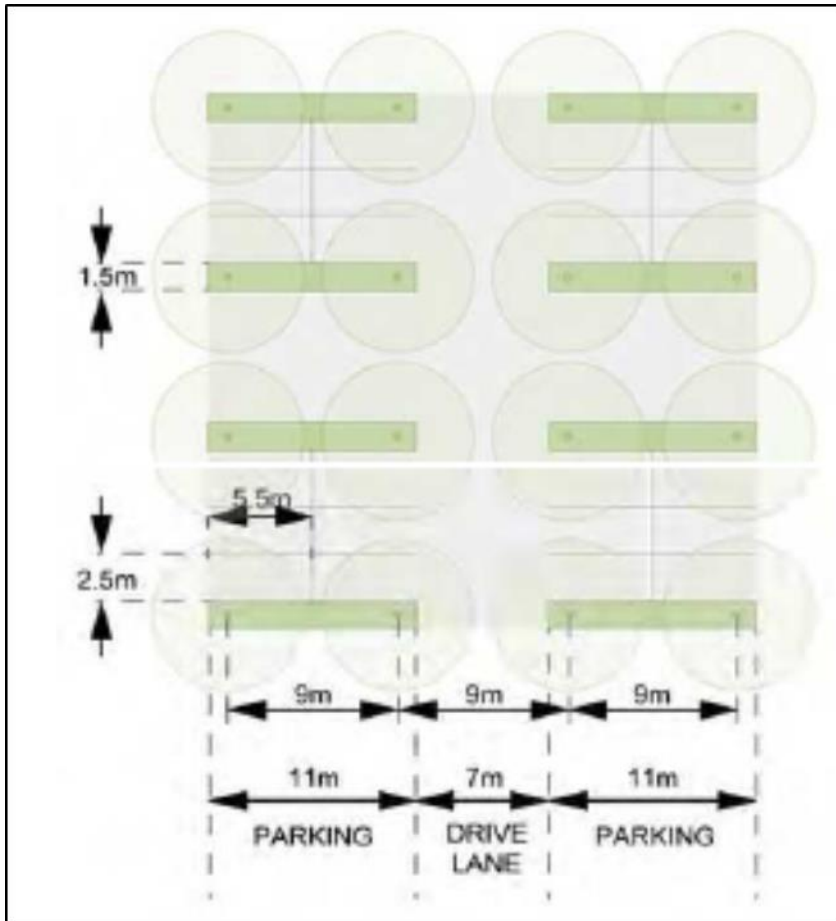
The standards are those listed in the Auckland-wide rules (in respect of sub-precincts A-E), Business – Light Industry Zone (in respect of sub-precincts A-B), Business – Mixed Use Zone (in respect of sub-precinct C), the Open Space – Informal Recreation Zone (in respect of sub-precinct D) and the Business – Heavy Industry Zone (in respect of Sub-precinct E) except as follows:

- (1) [Deleted]
- (2) Buildings must not exceed 25m in height in Sub-precinct E and Sub-Precinct C.
- (3) Within the Drury South ~~Industrial and Mixed Use~~ Precinct the industrial zone height in relation to boundary control will not apply, and instead, buildings must not project beyond a 45 degree recession plane measured from a point

2 metres vertically above ground level along the residential or public open space boundary.

- (4) All new roads must be designed and constructed to comply with the provisions of New Zealand Standard NZS6806:2010 "Acoustics – Road Traffic Noise – New and Altered Roads".
- (5) The upward waste light ratio from any luminaire must not be more than 3 per cent. The upward waste light ratio is defined as: "The ratio of the light flux emitted above the horizontal by a luminaire to the total light flux emitted, expressed as a percentage, evaluated for the upcast angle".
- (6) Any required security fence must be setback a minimum of 3 metres from the front boundary and such fencing (whether in front yards or on rear or side boundaries) must be 2 metre maximum height and must not incorporate barbed or razor wire or an angled top. Fence posts and wire mesh are to be black coloured.
- (7) [Deleted]
- (7A) Where any new building is proposed, the reflectivity value of the roof or roofs must not exceed 30 per cent.
- (8) Within Sub-precinct B no less than 30 per cent of the net site area of each site is to be in permeable landscape area (including any on site stormwater treatment). Where on site car parking adopts a layout fully conforming with the fully planted permeable carpark design layout detailed in Figure I410.6.2.1 below, the permeable landscape area may be reduced to no less than 20 per cent of the site area.

Figure I410.6.2.1 Carpark design



(9) [Deleted]

(10) Any land modification to form the 1% AEP modified flood plain must:

- (a) not reduce flood storage capacity in the precinct; and
- (b) not change the flood characteristics upstream or downstream of the precinct for all flood events from the 50% and up to the 1% AEP flood event in ways that result in an increase in peak flood levels.

I410.6.3. Subdivision or development preceding subdivision in Sub-precincts A – E

- (1) Proposed roads (including pedestrian and bicycle routes) identified on the Precinct Plan 1 and Precinct Plan 2, must be located generally in the position indicated on Precinct plan 1 and Precinct Plan 2. An alternative roading layout may be proposed provided that an integrated approach to land use and transport can be achieved throughout the Drury South Industrial and Drury South Residential precincts.
- (2) The land identified as part of Sub-precinct D on Precinct plan 1 must be developed upon subdivision or development of the relevant area. Proposed stormwater management areas must be located generally in the position indicated on Precinct Plan 1, and must be offered to the Council. Vegetated

buffers not less than 40 metres in total width are to be provided along stream corridors within stormwater management areas and must include a minimum of 10 metres of native riparian planting either side of the stream edge. Off-site stormwater management services including wetlands and the primary and secondary stormwater conveyance system is to be vested at no cost to the council in accordance with a network discharge consent or other relevant discharge consent or a stormwater management plan approved by the Council. All stormwater management areas and wetlands must be designed to serve a dual function to treat stormwater and provide ecological benefits.

- (3) Reticulated water services must be supplied to the precinct and all new water infrastructure must be fully funded (including consenting costs) by the developer(s) of the land within the precinct. Such services must be provided to the relevant part of the precinct in advance of or concurrent with a resource consent for subdivision and development provided that any necessary resource consents or designations for the reticulated water services have been granted.
- (4) Wastewater services are to be provided to the precinct either by (in no particular order):
 - (a) the construction of a connection to Watercare's existing wastewater network and any necessary upgrading of that network that is required to service the Precinct; and/or
 - (b) the construction of a Wastewater Treatment Plant to service the Precinct, or a larger catchment if required.

In either case wastewater services are to be provided in a manner approved by Watercare and constructed to Watercare's design and operational standards. The developer(s) must fully fund (including consenting costs) all new wastewater infrastructure required to service the Precinct. Wastewater services must be provided to the relevant part of the Precinct in advance of or concurrent with a resource consent for subdivision and development provided that any necessary resource consents or designations for the reticulated water services have been granted. In the event that a new regional wastewater treatment plant becomes available to service the precinct, and subject to approval from Watercare, the precinct could be connected to that plant.

Note: that for the purposes of the Standards I410.6.3(1)-(4) above, references to "Watercare" means Watercare Services Limited and references to "development" means the carrying out of any work on the land including any earthworks or site preparation activities and the construction or alteration of any building.

I410.6.4. Sub-Precinct C (Noise and Ventilation)

- (1) Any building containing a noise sensitive space within Sub-Precinct C must be located and/or designed and/or insulated, or screened by suitable barriers, so that the design noise levels do not exceed:
 - (a) 40 dB $L_{Aeq(24\text{ h})}$ inside any noise sensitive space; and
 - (b) 70 dB $L_{Aeq(24\text{ h})}$ incident on any façade facing Maketu Road that encloses a noise sensitive space.
- (2) Compliance with Standard I410.6.4(1) must be determined based on a road traffic noise level 10m from the nearest traffic lane of Maketu Road of 75 dB $L_{Aeq(24\text{ h})}$, 83 dB $L_{eq(24\text{ h})}$ at 63 Hz and 79 dB $L_{eq(24\text{ h})}$ at 125 Hz.
- (3) For residential dwellings, where the internal noise levels in Standard 1 can only be complied with when doors or windows to those rooms are closed, those rooms adopt the relevant mechanical ventilation and/or cooling requirements of E25.6.10(3)(b) or (c).
- (4) For the avoidance of doubt, the noise insulation requirements set out in Standard I410.6.4(1)-(3) apply in addition to any other noise insulation requirements set out in Chapter E25 – Noise and Vibration.

I410.6.5. Sub-Precinct C (Restrictive non-complaint covenant)

- (1) Residential activities in Sub-precinct C shall be subject to a restrictive non-complaint covenant* in favour of the operator of Drury Quarry.

*For the purposes of the Drury South ~~Industrial and Mixed Use~~ precinct and of this rule a 'restrictive non-complaint covenant' is defined as a restrictive covenant registered on the Title to the property or a binding agreement to covenant, in favour of the operator of Drury Quarry, by the landowner (and binding any successors in title) not to complain as to effects generated by the lawful operation of the quarry, including heavy vehicle movement noise. The restrictive non-complaint covenant is limited to the effects that could be lawfully generated by the quarry activities at the time the agreement to covenant is entered into. This does not require the covenantor to forego any right to lodge submissions in respect of resource consent applications or plan changes in relation to quarry activities (although an individual restrictive non-complaint covenant may do so.) Details of the existence of covenant documents may be obtained from the Quarry Operator, its solicitors, or in the case of registered covenants by searching the Title to the property.

I410.7. Assessment – controlled activities

I410.7.1. Matters of control

The Council will reserve its control to all of the following matters when assessing a controlled activity resource consent application:

- (1) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct B:

- (a) retention of existing vegetation;
- (b) planting;
- (c) building design and appearance;
- (d) parking area design;
- (e) storage and waste management location and design; and
- (f) vehicular access;

(2) [Deleted]

I410.7.2. Assessment criteria

The Council will consider the relevant assessment criteria below for controlled activities:

- (1) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct B:
 - (a) retention of existing vegetation:
 - (i) the extent to which layouts retain and protect existing mature trees, particularly those of indigenous species, where these contribute to the site character and amenity.
 - (b) planting:
 - (i) the extent to which planting is designed to have a large scale landscape effect and combine native as well as appropriate exotic species to provide seasonal change and quality amenity; or
 - (ii) where public open space land adjoins the motorway, the extent to which boundary planting that creates a continuous visual barrier to eastward views from the State Highway 1 corridor is avoided and whether landscape design emphasises the current sequence of intermittent views to the Hunua Ranges from the State Highway 1 corridor and the pattern of variable depth of such views;
 - (iii) the extent to which the integrated site layout, building and landscape design provides a high quality and visually attractive frontage to State Highway 1, while ensuring any landscaping, including the use of large tree and shrub species, does not restrict access to the electricity infrastructure for maintenance and does not compromise the safe and reliable operation of the electricity network.

Advice note: In considering whether this criterion is met, the Council may take into account whether a review has been undertaken by or on behalf of Counties Power which confirms that the proposed planting will not affect the safe and reliable operation and maintenance of the electricity network.

(c) building design and appearance:

- (i) the extent to which buildings are located with design consideration for their visibility and reduced visual impact as viewed from the State Highway 1 corridor and the desirability of maintaining a sense of openness as seen from the motorway; or
- (ii) the extent to which the visual mass of larger buildings is minimised by employing the following methods:
 - utilising subdued, recessive colours;
 - providing variation in materials and finish for facades viewed from the motorway;
 - creating variation of roof profiles with consideration given to the overall roofscape viewed from the motorway;
 - all rooftop servicing and plant should be designed as an integral part of the roofscape with particular consideration given to the view from the motorway;

(d) parking area design:

- (i) the extent to which parking areas are designed to incorporate trees to break up the scale of hard surface areas; or
- (ii) the extent to which the fully planted permeable carpark design layout (refer Figure I410.6.2.1 above) style of parking is adopted within Sub-precinct B;

(e) storage and waste management location and design:

- (i) the extent to which storage and waste management activities are located and/or designed to be screened from view of State Highway 1;

(f) vehicular access:

- (i) the extent to which proposed vehicle access to sites adjoining the Maketu_Road and New Quarry Access Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;

(2) [Deleted]

I410.8. Assessment – restricted discretionary activities

I410.8.1. Matters of discretion

The Council will consider the relevant assessment criteria below for restricted discretionary activities, in addition to the assessment criteria specified for the relevant restricted discretionary activities in the overlay, Auckland wide or zone provisions:

- (1) subdivision or any development of land which precedes a subdivision being undertaken which complies with Standard I410.6.3:
 - (a) the relevant council and Auckland Transport development code or codes of practice;
 - (b) geotechnical and seismic;
 - (c) servicing and development sequencing;
 - (d) design and layout;
 - (e) earthworks;
 - (f) transportation network development requirements;
 - (g) ecology;
 - (h) Counties Power 110 Kv sub-transmission lines; and
 - (i) stormwater management;
- (2) the creation of vehicle access to any site with frontage to or from the Maketu Road shown on Precinct Plan 2 which also has frontage to another road shown on that plan:
 - (a) effect of the location and design of the access on the safe and efficient operation of the adjacent transport network; and
 - (b) adequacy of access arrangements.
- (3) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:
 - (a) building design;
 - (b) parking area design;
 - (c) signs;
 - (d) service area location;
 - (e) vehicular access; and
 - (f) mitigation of traffic noise.

- (4) A single supermarket greater than 2000m², supermarkets exceeding 450m² and up to 2000m² gross floor area per tenancy, offices between 501m² – 1000m² per tenancy and retail greater than 1000m² and up to and including 4,500m² in Sub-Precinct C
- (a) the compatibility of the effects of intensity and scale of the development arising from the numbers of people and/or vehicles using the site, with the existing and expected future amenity values of the surrounding area and any practicable mitigation measures that would be appropriate to manage those effects;
 - (b) the effects of the design and location of parking areas and vehicle access and servicing arrangements on visual amenity of the streetscape and on pedestrian safety;
 - (c) the effects of the size, composition, characteristics, and concentration of retail or office activities proposed in Sub-precinct C on the existing and expected future function, role and amenity of other Metropolitan or Town Centres that are zoned or are identified in a Council approved Structure Plan for Drury, having regard to the need to enable convenient access of communities to commercial and community services while disregarding any effects ordinarily associated with trade effects on trade competitors;
 - (d) In determining (c) above, whether the activity is coordinated with the rate of residential and commercial development in the local area to ensure that the activity individually, or in combination with other consented or permitted activities, meets the needs of the local catchment;
 - (e) whether the retail or office proposal, individually, or in combination with other consented or permitted activities, meets the needs of the local residential and employment catchment;
 - (f) the assessment of the above matters having regard to the need to provide for the functional requirements of the activity.
- (5) Trade Suppliers in Sub-Precincts A and C greater than 11,000m² gross floor area
- (a) Effects of the activity on the safe and efficient operation of the surrounding transport network.
- (6) Infringement I410.6.4 – Sub-Precinct C (Noise and Ventilation)
- (a) the effects of land transport noise of the noise sensitive activity;
 - (b) the potential reverse sensitivity effects of the infringement.

I410.8.2. Assessment criteria

The Council will restrict its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application, in addition to the

matters specified for the relevant restricted discretionary activities in the overlay, Auckland-wide or zone provisions:

- (1) subdivision, or any development of land which precedes a subdivision being undertaken, which complies with Standard I410.6.3:
 - (a) the extent to which the subdivision or development is in accordance with the relevant codes or codes of practice or engineering standards, and whether the road network is consistent with its intended function as set out within those codes or codes of practice and the subdivision design assessment criteria set out in Appendix I410.11.
 - (b) the extent to which the subdivided lots or the land on which the development is to be undertaken are geotechnically suitable for the development of a permitted activity or an activity for which resource consent has been obtained. This may include an assessment of the following:
 - (i) any proposed fill materials;
 - (ii) stability in areas of deep cut particularly adjacent to the boundaries of the Precinct;
 - (iii) settlement and stability issues associated with the Hingaia and Maketu streams;
 - (iv) time dependent settlement;
 - (v) ground seismicity and buffer zone; or
 - (vi) liquefaction;
 - (c) the extent to which subdivision and development occurs in a logical and sequential manner in relation to:
 - (i) the implementation of improvements and/or upgrades to the roading network;
 - (iA) the implementation of a potential pedestrian and cycling connection shown on Precinct Plan 1 between the Drury South Residential Precinct and Sub-Precinct C and the integration of this with proposed built development in Sub-Precinct C;
 - (ii) the establishment of the stormwater management areas within sub-precinct D identified on Precinct Plan 1 and catchment wide stormwater management devices as identified in the relevant discharge consent and/or stormwater management plan required by the special information requirements below;
 - (iii) the provision for overland flowpaths identified in an approved discharge consent and/or stormwater management plan required by the special information requirements below; or

- (iv) the provision of wastewater facilities, water supply, electricity, gas and telecommunications, including the protection and /or relocation of any existing local electricity, gas and communications assets;
- (d) the extent to which subdivision design and layout gives effect to the objectives and policies identified for the Drury South ~~Industrial and Mixed Use~~ Precinct and the subdivision design assessment criteria set out in Appendix I410.11.1.
- (e) the extent to which the earthworks required by the subdivision or development:
- (i) avoid or mitigate adverse effects on land stability, existing underground infrastructure facilities (such as the Vector gas pipeline and Telecom telecommunications cables), and groundwater quantity and quality;
 - (ii) avoid or mitigate adverse effects on the visual quality of the landscape or natural landforms, watercourses, habitats or vegetation;
 - (iii) avoid or mitigate adverse effects on traffic management within the area or create damage, danger, or nuisance to surrounding residents or the Ramarama School;
 - (iv) consider opportunities to recharge the aquifer using treated stormwater where permeable soils are available;
 - (v) ensure that the creation of level development platforms are contoured to integrate with the surrounding street environment and open space corridors;
 - (vi) screen retaining walls from public view;
 - (vii) provide and maintain continuity of overland flow paths both within the site, as well as upstream and downstream; and where overland flow paths are diverted and/or altered show how:
 - potential effects on other properties from the diversion or alteration is avoided or mitigated;
 - effects from scouring and erosion are mitigated;
 - further changes to the overland flow path will be limited, when appropriate through an easement in favour of Council;
 - (viii) if located in the 1% AEP modified flood plain, including earthworks for the formation of stormwater management devices such as wetlands and/or for necessary infrastructure (including associated landscaping and accessways), whether:
 - the design of the device, including associated earthworks, landscaping and accessways avoids impeding flood flows or

otherwise exacerbating flood risk upstream or downstream of the site and how such effects can be avoided;

- the design of the device or mitigation works is resilient to damage from the full range of flood events;
- access to the device for maintenance is provided and maintenance plans address potential effects that may result from the proposed access route;

(f) the extent to which the following transportation network requirements are met:

- (i) whether subdivision or development will result in the central 'Maketu Road' being progressively constructed on an alignment consistent with that indicated in Precinct plan 2;
- (ii) whether the following road projects indicatively shown on Precinct plan 2 will be completed before any buildings within the precinct are occupied:
 - the realignment of existing Quarry Road onto the alignment of the 'Maketu Road' from the State Highway 1 over-bridge to the southern extent of the first stage of subdivision;
 - the upgrading of the existing Quarry Road/Great South Road intersection;
 - the provision of traffic signals or an alternative upgrade which achieves equivalent transport performance at the existing Great South Road/State Highway 22 (Karaka Road) intersection;
 - under the scenario where development of the Precinct proceeds in advance of the Mill Road Corridor Project, the upgrading of the right turn bay on Waihoehoe Road at the Waihoehoe Road/Fitzgerald Road intersection;
- (iii) whether a new dedicated pedestrian path and cycleway has been constructed between the existing Drury township and the precinct before development and occupation of more than 25 hectares of Industrial zoned land within the precinct occurs;
- (iv) whether Ramarama Road, at the northern boundary of the precinct remains open as defined on Precinct Plan 2;
- (v) whether the Link Road from the Maketu Road to Fitzgerald Road shown on Precinct Plan 2 is provided and shoulder widening, intersection treatments and localised widening works within the existing road reserve on Fitzgerald Road between the Link Road and Waihoehoe Road is undertaken before Ramarama Road is closed at the northern boundary of the Precinct;

- (vi) whether the 'Avenue' Road and the portion of the Maketu Road shown on Precinct Plan 2 is provided as the adjacent Sub-precinct C is developed, and whether the 'Avenue' Road is connected with Maketu Road at the southern end of Sub-precinct C, and is extended to, but not connected with, Maketu Road at the northern end of Sub-Precinct C. An alternative location for vehicle access through a portion of Sub-precinct C (the 'Avenue Road') may be appropriate where it is safe and efficient, and provided that a continuous and high amenity pedestrian and cycle connection is located along the western edge.
- (vii) whether Ramarama Road, at the southern boundary of the precinct, is closed to all vehicular traffic by the time 89 hectares of Industrial zoned land within the precinct has been subdivided or developed;
- (viii) whether the southern portion of the Maketu Road that connects to Ararimu Road is constructed before:
- Ramarama Road is closed at the southern boundary of the Precinct; or
 - any development of the precinct south of the New Quarry Access Road shown on Precinct Plan 2 occurs;
- (ix) whether State Highway 1 Ramarama Interchange is capable of accommodating the traffic from the subdivided and developed portion of the precinct including the predicted traffic from the land which is the subject of the application. To enable assessment of this criterion, applications for subdivision or development must include a traffic assessment of the effects of the subdivision or development on the interchange prepared by a qualified and experienced traffic engineer.
- Note: This criterion will be considered to be met where such an assessment includes a review undertaken by or on behalf of NZTA which confirms that there is sufficient capacity or planned capacity at this interchange to accommodate the predicted increase in traffic;
- (g) in respect of those new areas of planting in stormwater management and wetland areas in Sub-precinct D the extent to which:
- (i) plants should be eco-sourced as close as possible to the developed area;
 - (ii) the mechanisms proposed ensure the weed and pest management programme and the herpetofaunal mitigation/rehabilitation plan are implemented;
 - (iii) The public open space area that adjoins the southern boundary of the Precinct will provide the basis of an ecological corridor linkage of 30 metres in width between the southern buffer in the Precinct and bush areas in the Special Purpose – Quarry Zone when planted with

suitable tree species at the time of subdivision of the adjoining industrial zoned land;

- (h) whether the existing 110kV Counties Power electricity lines are provided for in the existing positions in any subdivision or whether the existing lines can be relocated in agreement with Counties Power;
- (i) whether the stormwater management plan and works proposed as part of the subdivision or development:
 - (i) comply with any approved discharge consent;
 - (ii) are effective in avoiding, remedying or mitigating the potential adverse effects of stormwater discharge on water quality and flood hazards. In the case of stormwater management facilities within private land this assessment will include how the operation and maintenance of such facilities is to be secured by way of appropriate covenants or consent notices;
 - (iii) can effectively contain all the natural and diverted streams and their margins, wetlands, and other off-site stormwater management devices;
 - (iv) provide for overland flowpaths;
 - (v) require a bond or other security to be provided to ensure that the stormwater management works will be completed, with such bond to be released when the works are completed and the stormwater management areas and their devices are vested in council;
 - (vi) ensure that subdivision and development does not result in increased flood risk to habitable rooms for all flood events from the 50% and up to 1% AEP flood event downstream and upstream of the precinct;
- (2) the creation of vehicle access to any site with frontage to or from the Maketu Road shown on Precinct plan 2 which also has frontage to another road shown on that plan:
 - (a) any adverse effect from the location and design of the access on the safe and efficient operation of the adjacent transport network, including public transport, cyclists and general traffic, having regard to:
 - (i) the number of other access points to or from the Maketu Road in the vicinity of the proposed access;
 - (ii) whether conflicts will be reduced by the presence of a raised central median which prevents right turning in the vicinity of the site;
 - (iii) visibility and safe sight distances particularly the extent to which vehicles entering/exiting the site can see, and be seen by, pedestrians, cyclists and other vehicles on the footpath and road carriageway;

- (iv) existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring in all weathers;
 - (v) existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in the this Plan; and
 - (vi) existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleways.
- (b) whether the access arrangements are practicable and adequate having regard to site limitations and layout, and arrangement of buildings and activities, users and operational requirements, and having regard to whether the site can reasonably be served by shared or amalgamated access with another site or sites on the Maketu Road where the sites in question are held in the same ownership.
- (3) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:
- (a) building design:
 - (i) the extent to which buildings on corner lots are designed to provide for a quality architectural response to the corner. Appropriate design responses include the provision of additional height at the corner, windows and activities addressing both street frontages and avoiding blank walls to one or both sides of the corner;
 - (ii) the extent to which built development fronts the street and open space with a quality recognisable pedestrian entry or entries to the street.
 - (iii) Where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road;
 - (iv) the extent to which developments for trade suppliers, garden centres, marine retail, motor vehicle sales or supermarkets provide a quality frontage to the street and provide appropriate treatments to side and rear boundaries, including quality fencing and landscaping, to recognise the broader range of activities enabled in sub-precinct C and the higher standard of amenity expected in the Mixed Use zone, while also taking into account the functional requirements of the activity.
 - (b) parking area design:
 - (i) the extent to which parking is provided on the road network adjacent to sub-precinct C areas and on-site parking layouts are designed in accordance with the typical layout identified in Appendix I410.11.1.

(c) signs:

- (i) the extent to which signs for each sub-precinct C development are coordinated including the physical location of signs, their type-face, style and content;

(d) service area location:

- (i) the extent to which service areas are located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service/storage and dock areas;

(e) vehicular access:

- (i) the extent to which proposed vehicle access to sites adjoining the Maketu Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;

(f) mitigation of traffic noise:

- (i) the extent to which premises offering food and beverages, health professional rooms and childcare centres (being permitted activities which may be sensitive to heavy commercial vehicle traffic noise) are designed to mitigate traffic noise effects. Mitigation measures may include acoustic treatment of buildings and arranging site layout so noise sensitive activities are screened from the heavy traffic noise.

(g) Drury South **Industrial and Mixed Use** precinct Appendix

- (i) The extent to which buildings and development in Sub-Precinct C are consistent with the criteria in Appendix I410,11.2.

(4) A single supermarket greater than 2000m², supermarkets exceeding 450m² and up to 2000m² gross floor area per tenancy, offices between 501m² – 1000m² per tenancy and retail greater than 1000m² and up to and including 4,500m² in Sub-Precinct C

- (a) The extent to which the effects of the size, composition, characteristics and concentration of retail or office activities in Sub-precinct C will be complementary to the existing and expected future function, role and amenity of other Metropolitan or Town Centres that are zoned or are identified in a Council approved Structure Plan, having regard to the need to enable convenient access of communities to commercial and community services while disregarding any effects ordinarily associated with trade effects on trade competitors;

- (b) The extent to which retail that meets local convenience needs is located at the southern part of sub-precinct C, where it would be most accessible to

the Drury South Residential precinct and would support a local community focal point.

- (c) The extent to which the activity is coordinated with the rate of residential and commercial development in the wider area to ensure that the activity individually, or in combination with other consented or permitted activities, meets the needs of the local catchment;
 - (d) The extent to which the size, composition and characteristics of any office activity would serve a local function and support adjoining businesses in Drury South.
- (5) Trade Suppliers in Sub-Precincts A and C greater than 11,000m² gross floor area
- (a) the extent to which the activity affects the safe and efficient operation of the adjacent transport network including pedestrian and cycling movement, particularly at peak traffic times;
 - (b) the extent to which the proposal incorporates mitigation measures to address adverse effects.
- (6) Infringement I410.6.4 – Sub-Precinct C (Noise and Ventilation)
- (a) the extent to which the type of activity proposed is likely to be adversely affected by the expected levels of transport noise;
 - (b) the extent to which any characteristics of the proposed use or area make compliance with of New Zealand Standard NZS6806:2010 "Acoustics – Road Traffic Noise – New and Altered Roads" unnecessary;
 - (c) whether the building and any outdoor living areas are appropriately located, and/or setback an appropriate distance from the Spine Road and/or State Highway 1 to minimise the potential for adverse effects from land transport noise.

I410.9. Special information requirements

I410.9.1. Earthworks plans

- (1) Any application for subdivision or development must be accompanied by detailed earthworks plans. Such plans must:
 - (a) describe the nature and scale of the proposed earthworks, such as the extent of cut and/or fill, sources of fill and how the cut and fill is to be transported;
 - (b) describe the construction management and communication methods to be followed to minimise nuisances and disruption to surrounding residents and Ramarama School (in particular, dust, traffic and noise impacts) during the construction period; and

- (c) provide detailed design of the modified flood plain.

I410.9.2. Ecological management plans

- (1) In respect of any new areas of planting in Sub-precinct D the following must be provided:
 - (a) a weed and pest management programme for any new areas of planting within the stormwater management areas and wetland areas and remaining indigenous forest fragments in Sub-precinct D; and
 - (b) a herpetofaunal mitigation/rehabilitation plan which targets only potentially suitable lizard habitat for relocation searches.

I410.9.3. Stormwater management report and plans

- (1) Any application for subdivision or development preceding subdivision must be accompanied by detailed stormwater management report and plans. Such report and plans must:
 - (a) describe how the plans comply with the conditions of any relevant discharge consent;
 - (b) identify overland flow paths;
 - (c) describe the nature and extent of any off-site stormwater management devices and how these devices are to be delivered if they are on land outside the application site;
 - (d) if stormwater management devices are to be located within the modified 1% AEP floodplain, describe how these devices are to be designed to be resilient to flood-related damage while not exacerbating flood risks for upstream or downstream activities;
 - (e) where streams are to be diverted and/or recreated as identified on the precinct plan, describe how this is to be achieved in a way that ensures that they function in a manner similar to natural stream systems. Detailed landscape treatment plans will be required to demonstrate:
 - (i) the proposed long section and cross sections;
 - (ii) how the new stream banks are to be stabilised;
 - (iii) how pool – riffles - run sequences are to be formed; and
 - (iv) how stormwater outlets are controlled.
- (2) A subdivision application for vacant lot subdivision or a land use application for a new building or buildings in Sub-precinct C must be accompanied by an indicative 'integration plan' showing how the proposed development integrates with potential future development in the remainder of Sub-precinct C, including existing or potential transport connections and activities.

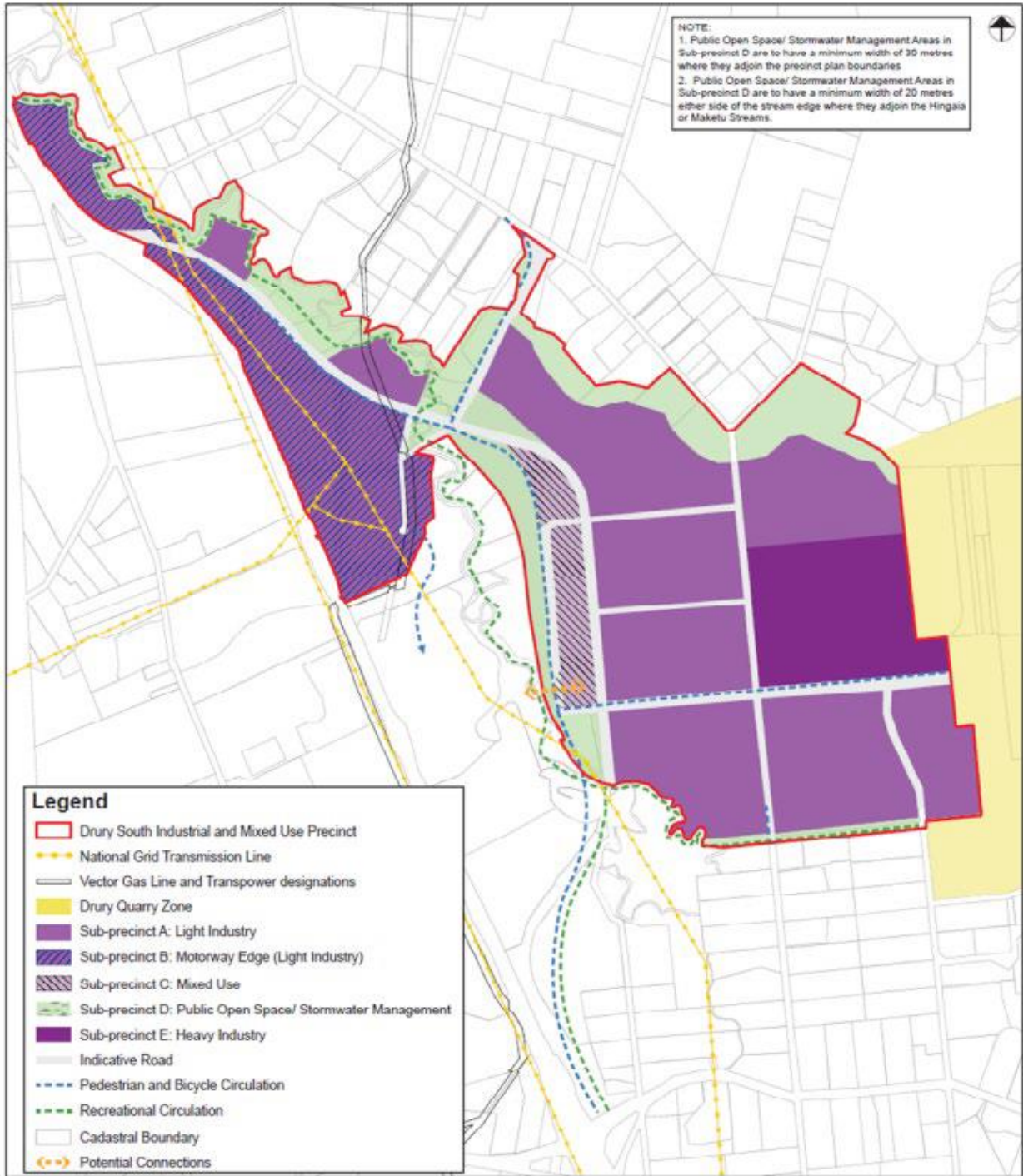
I410 Drury South Industrial Precinct

To avoid doubt, this plan is not subject to any approval from the Council and is for information only. Its purpose is to inform how a particular stage of development will positively contribute to the visual quality and interest of streets, public open spaces and pedestrian amenity, movement and safety (Policy H13.3(3)), in an integrated manner across Sub-precinct C.

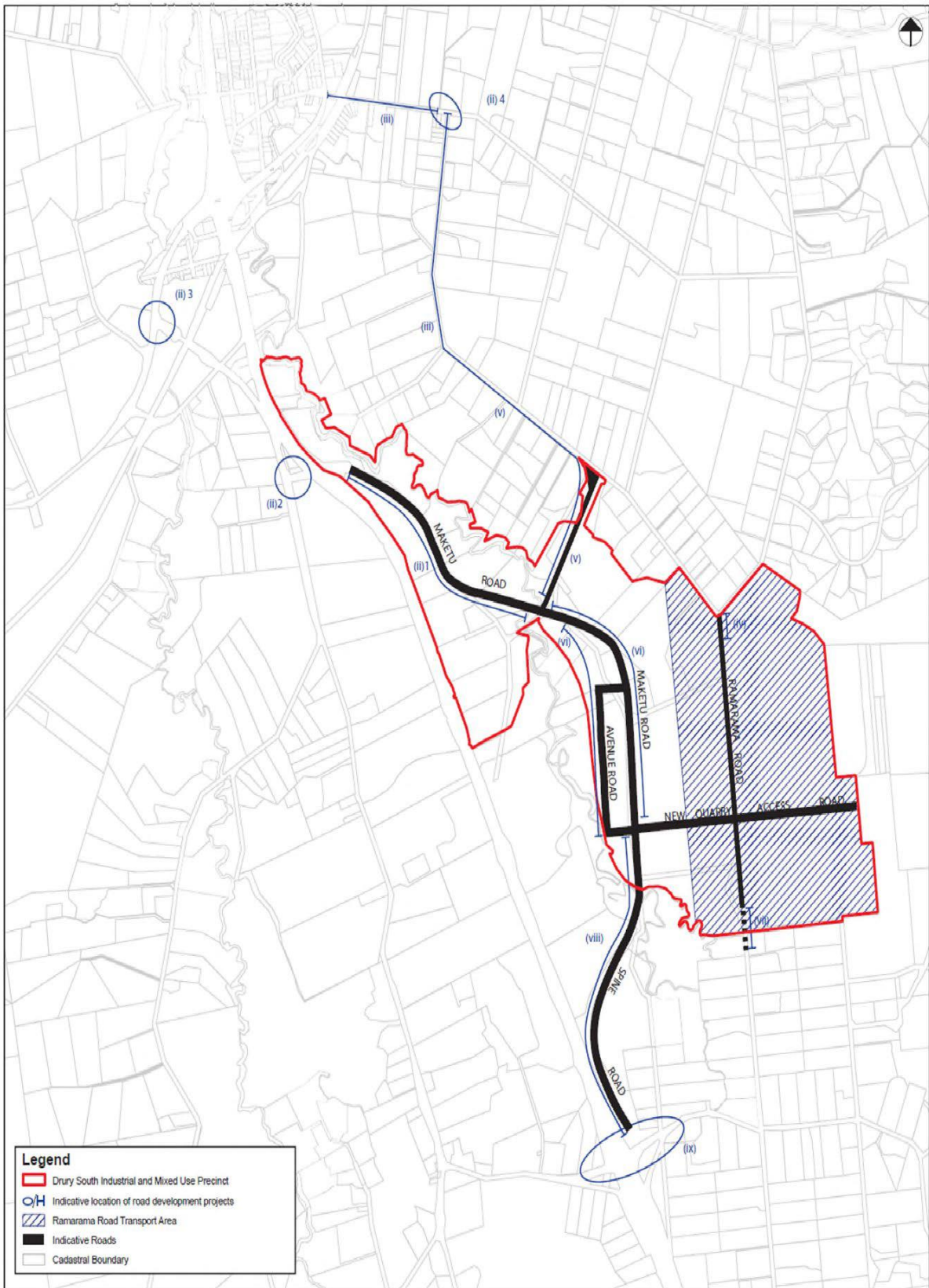
I410.10. Precinct plans

I410.10.1 Drury South ~~Industrial and Mixed Use~~: Precinct plan 1

I410 Drury South Industrial Precinct



I410.10.2 Drury South Industrial and Mixed Use: Precinct plan 2



I410.11. Appendices

Attachment One

I410.11.1: Attachment 5 (Drury South **Industrial** Appendix)

APPENDIX: DRURY SOUTH INDUSTRIAL PRECINCT _SUBDIVISION DESIGN ASSESSMENT CRITERIA

PURPOSE OF APPENDIX I410.11.1

Within the Drury South **Industrial** Precinct, applications for any subdivision or any development of land which precedes a subdivision being undertaken which complies with Standard I410.6.3 as a restricted discretionary activity will be assessed in terms of a series of matters to which the Council will restrict the exercise of its discretion. One of the matters which the Council will have regard to as set out in standard I410.8.2(1)(d) is:

*the extent to which subdivision design and layout gives effect to the objectives and policies identified for the Drury South **Industrial** Precinct and the subdivision design assessment criteria set out in Appendix I410.11.1.*

In addition, the criteria will also be used in the consideration of discretionary applications for subdivision, as appropriate.

This appendix sets out assessment criteria under a number of "Design Elements". Accompanying illustrations are intended to support the text and represent good design solutions, but are not intended to represent the only design solution. All illustrations are indicative only.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged.

It is recognized that certain proposals will not achieve absolute accordance with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or ;
- whether the proposal represents a better design solution than that suggested by the criterion.

Planting plans and maintenance plans for recreation and esplanade reserves and stormwater management areas will need to be submitted with applications for subdivision consent and approved by the Council.

Design Element 1: Road, Reserve and Access Networks:

1. Earthworks should be undertaken principally at the initial subdivision stage, and where appropriate the creation of reasonably flat sites should occur at the bulk earthworks stage (in order to avoid creating retaining walls at site development stage).
2. Road patterns should maximise convenient / direct access to the Maketu Road and limit connection to existing rural roads (such as Ararimu Road) except where this relates to the wider essential network.
3. The road pattern should facilitate access to and accessibility within Sub-precinct C Mixed Use.
4. Road patterns should be logical and contribute to the legibility of and ease of wayfinding within the area (refer Diagrams 1 and 2 for generic legibility and proposed street hierarchy).
5. Subdivision layout design should achieve protection and enhancement of all significant streams / tributaries to be retained and their riparian corridors (20m minimum either side from edge of stream) and concentrate open space as part of the riparian network (refer Diagram 3).
6. Subdivision layout design should achieve an interconnected open space and movement network.
7. Safe pedestrian and cycle routes through the structure plan area should be integrated with the riparian, reserve and road design.
8. Equestrian bridle trails should be integrated with riparian reserve development and provide access to the large centrally located public open space / stormwater management area.

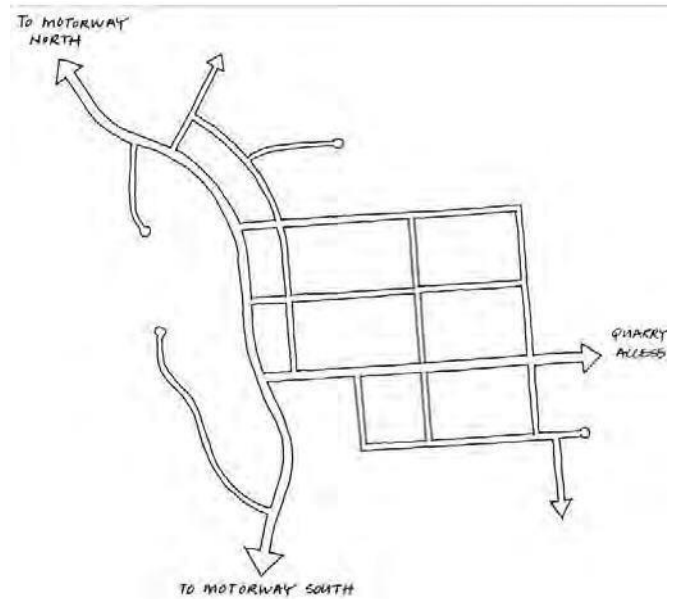


Diagram 1: Legible road hierarchy to assist wayfinding

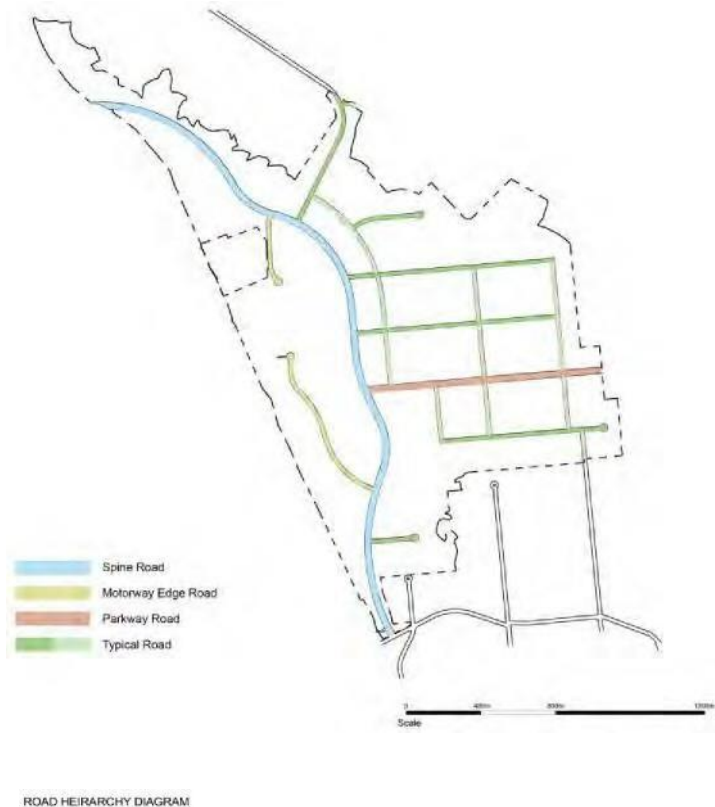


Diagram 2: Road hierarchy

9. Layouts should retain mature trees within the riparian corridors, particularly those of indigenous species.
10. In Motorway Edge Sub-precinct areas layouts should seek to retain as many existing established trees, particularly those of indigenous species, as possible.
11. In Motorway Edge Sub-precinct, areas access to sites off the Maketu Road should be combined wherever practicable.

Explanation:

Design Element 1 pertains to the overall site topography and the general layout of the networks of roads, reserves and other access linkages that make up the public space of the Drury South **Industrial** Precinct. These should be considered in an integrated fashion together with the development blocks that they create.

The existing site topography within the proposed **Industrial** Precinct is relatively flat although bulk earthworks including cut and fill will be required to establish levels for future development above the flood plain and appropriate falls across the land.

The riparian corridors of the Hingaia and Maketu Streams and their significant tributaries will remain an important feature of the site topography once the Precinct is established. Vegetation associated with these corridors is also important to the structuring, screening and ecology of the area and its proposed activities.

The riparian corridors also provide a focus for future recreation and open space development and form part of the enhancement framework for the Precinct.

The road network and hierarchy (refer Diagrams 1 and 2), has been designed to efficiently direct traffic into and out of the Precinct connecting to the Southern Motorway (SH1) at both the Ramarama (south) and Drury (north) interchanges. The proposed Spine Road is important to the legibility and traffic efficiency of the Precinct; this route will provide the primary connection into and out of the Precinct with other streets connected to the Maketu Road through corridor.

The proposed street network has also been designed to limit the impact of vehicles destined for the Precinct on existing rural residential and community roads such as the road accessing and adjacent to the Ramarama School. Implementation of the street network to achieve the beneficial improvements to heavy vehicle (including quarry truck) and other Precinct related traffic movement is imperative as a part of delivery of the zone.

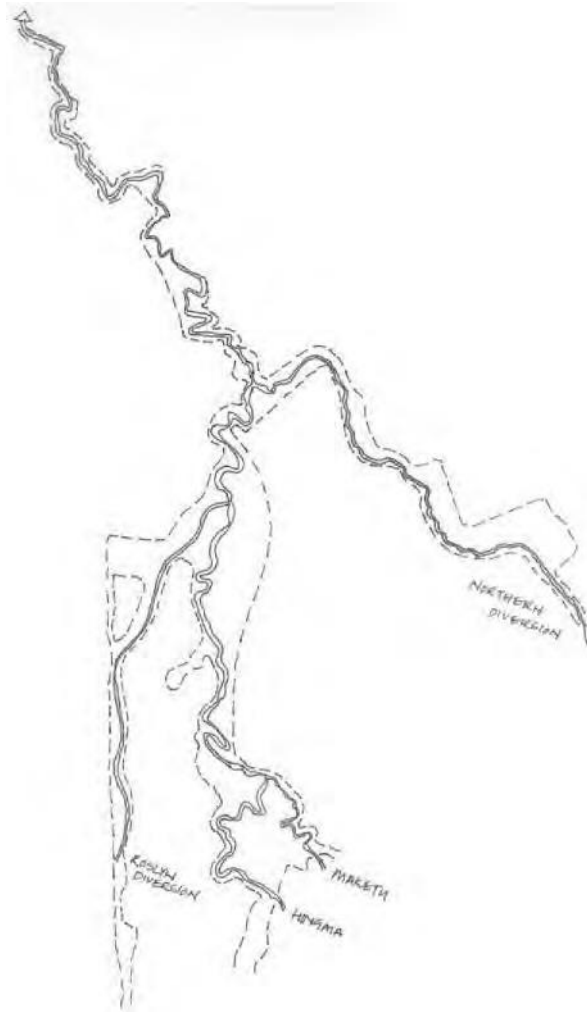


Diagram 3: Open space concentrated along Hingaia, Maketu, Roslyn and Northern Diversion Stream corridors

By its nature the Sub-precinct C Mixed Use will require a finer grain street network with smaller street blocks, greater walkability, good service access and parking.

A legible road pattern (refer Diagram 1) is one that is easily understandable for the people that use it and that provides cues for first time users as well as those habitual users. Consistent road design and landscape themes can further emphasise the position of each street in the road hierarchy and in the pattern of streets in the wider area. Road patterns that are logical and easy to comprehend and navigate make an area feel more comfortable and help to provide a sense of identity.

Design Element 2: - Block Size, Lot Type and Orientation:

1. Blocks should be of a scale and shape to achieve a permeable street layout suited to the functional requirements of the proposed land use.
2. All lots should front onto and be accessed directly from a legal road. Rear lots are to be avoided (refer Diagram 4).
3. Through lots (with dual road frontage) are permissible (refer Diagram 4).

Explanation:

Design Element 2 describes the principles for consideration in the layout of blocks and lots within the Precinct.

Blocks within an industrial area are typically larger than those within finer grain residential or Mixed Use areas. A good permeable and well connected-street network is however still required in Light and Heavy Industry Sub-precincts A, B and E to facilitate access, provide an appropriate street address and reduce traffic volumes on side streets. Within Sub-precinct C Mixed Use, Design Element 1 also provides opportunities for views through to the open space corridor to the west of the Sub-precinct from Maketu Road.



Diagram 4: All lots should front onto a legal road; through lots are permissible

Lots need to be of a size and shape to accommodate large scale, land extensive land uses and flexible to enable reasonable long term growth. At the same time rear lots are considered undesirable with a preference for development to address the street.

Design Element 3: - Roads and Accessways:

1. In addition to Auckland Transport Code of Practice and Council's Development Code requirements, minimum road and design elements should be appropriate to the nature of the function that they provide and also reflect urban design legibility considerations – i.e. wayfinding, as set out in Table 1 below.
2. Cyclists should be accommodated on the street carriageway.
3. A consistent palette of traffic management tools should be used across the Precinct. Traffic management devices such as chicanes, speed humps and other such restrictive management devices are not expected, however the use of thematic planting and measures such as localised narrowing to create thresholds or define changes in the street environment could be used.

4. All streets are required to accommodate strong avenue specimen tree planting. Refer Cross Sections Attachment 1. This planting is required to achieve the breaking up of the overall scale of the development particularly as seen from elevated locations, as well as to establish the enhanced expected amenity and character of the Precinct.
5. In addition to the street avenue planting a planted central median is also required on the roads identified as 'Arterial' and 'Parkway'.

Explanation:

Design Element 3 pertains to principles for the design of roads and other access routes within the Precinct. Road design should be appropriate to function and provide practical widths for vehicular access, including for emergency vehicles, parking, planting and services.

Pedestrian and cycle paths should generally be integrated with road and reserve design. Paths which are separated from vehicle routes should be designed for safety.

Table 1 below sets out the indicative function and design elements of the collector roads within the Drury South ~~Industrial and Mixed Use~~ pPrecinct.

Table 1 – Indicative Road Function and Required Design Elements

Road Name	Proposed Role and Function of Road in Precinct Area	Freight or Heavy Vehicle Route	Minimum Road Reserve ²	Total Number of Lanes	Design Speed (kph)	Access Restriction	Bus Provision ⁴	Median	Cycle Provision ⁵	Pedestrian Provision
Maketu Road ¹ South of Link Road	Arterial	Yes	33.45m	4	60	Yes ³	Yes	No	Yes – separated	Both Sides
Maketu Road (North of Link Road)	Collector	Yes	27.65m	2	60	Yes ³	Yes	Yes (Flushed)	Yes	Both Sides
New Quarry Access Road ¹	Collector	Yes	27.65m	2	50	No	Yes	Yes (Flushed)	Yes – shared path	Both Sides
Link Road	Collector	Yes	27.65m	2	60	No	Yes	Yes (Flushed)	Yes	Both Sides
Ramarama Road (Fitzgerald Road Connection)	Collector	Yes	21m	2	50	No	Yes	Yes (Flushed)	Yes	Both Sides

Note 1: Already have Engineering Plan Approval and are under construction

Note 2: Typical minimum cross section which may need to be varied in specific locations where required to accommodate batters, structures, intersection design, significant constraints or other localised design requirements.

Note 3: Refer to Assessment Criteria I410.8.1(2)

Note 4: Carriageway lanes and geometry of intersections capable of accommodating buses.

Note 5: Type of cycle provision, i.e. separated or shared path, to be confirmed at the Engineering Plan Approval stage, based on nature and character of the Local Road.

Design Element 4: Reserves, Stormwater Management Areas and Riparian Planting:

1. Stormwater detention and treatment reserves should be located in general accordance with the locations shown in the Drury South ~~Industrial~~ Precinct Plan and in accordance with the relevant stormwater discharge consents, the Council's Development Code and relevant technical publications. The Cross Sections (Attachment 2) illustrate the Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections.
2. Stormwater ponds should be designed to fit in with the surrounding landscape and appear as an integrally designed infrastructural component of the overall setting.
3. Vegetated buffers, not less than 40m in total width for any retained permanent or diverted stream, should be provided on the margins of streams, ponds and wetlands and should:
 - Include native species as identified in Attachment 3;
 - Include native trees on the lower and upper banks of ponds predominantly to the north and west to provide shade;
 - Provide a minimum of 10m of native planting either side of the stream corridor including shallow water rushes and sedges;
 - Avoid vegetation that will exacerbate flooding and the blockage of water flow along the immediate riparian corridor.

The only exception to these requirements is the retained permanent stream in the northwest of the Precinct (adjacent to the Transpower site) which will be subject to a minimum requirement of 10m of native planting either side of the stream corridor only.

Note: Attachment 5 sets out 'Stream and Wetland Rehabilitation Guidelines (June 2013) for the DSSP area.

4. Walkways / cycleways along riparian corridors and through buffer planting should be designed to minimise any impacts on ecological function and give due consideration to personal safety and Crime Prevention Through Environmental Design (CPTED) principles.
5. Edge buffer reserves should be located in accordance with the Drury South **Industrial** Precinct Plan, be a minimum of 30m in width and be planted in generally accordance with Diagram 5 below. Planting should be fast growing rural shelter belt species capable of attaining a minimum height of 6 metres at maturity.



Diagram 5: Typical landscape buffer cross section

6. Suitable mechanisms to ensure the establishment and ongoing maintenance of landscaping of reserves and stormwater management areas until those areas are vested in the Council will be required to ensure the long term success of any landscaping.

Explanation:

Design Element 4 pertains to matters for consideration for locating, sizing and designing reserves stormwater management areas and riparian planting. These areas will be generally located in accordance with the locations shown in the Drury South **Industrial** Precinct Plan; regard should also be given to Design Element 5 when designing reserves within the Precinct.

The principal reserve network within the Precinct, as illustrated in the Drury South **Industrial** Precinct Plan, is structured around riparian protection and enhancement as well as stormwater management including detention and treatment. The reserve network is however designed for multiple functions and values including passive and active recreation, pedestrian / cycle commuter access, ecological values, visual screening / separation and aesthetic amenity.

The Precinct Plan also includes buffer reserves, adjoining the Light Industry zoned Sub-precincts A and B. The main purpose of these reserve is to physically and visually screen and separate adjacent existing land uses and residents from these areas. These reserves are planted to maintain a robust rural character with a woodlot/ shelter belt form of land management. Whilst providing multiple functions including biodiversity and aesthetic values, their primary function will remain as that of a buffer to land uses outside of the Precinct.

Design Element 5: Reserve Interface Design:

1. Reserves intended for public recreation and use should be designed to be bounded by public roads as much as possible given topographical and natural feature constraints. (Note proposed buffer reserves are not intended to be bounded by public roads)
2. Where reserves or riparian buffer areas adjoin lots, the boundary should be securely delineated and fenced to avoid encroachment (refer Diagram 5).

Explanation:

Reserves intended for public use that are well fronted by public roads are more secure because of the informal surveillance from the road and activities that interface with the road across the carriageway. Ideally not less than half the total length of legal boundary of any reserve should adjoin a legal road.

Design Element 5a: Earthworks and Retaining Walls

1. Changes of level adjoining streets and open space corridors should be achieved by gently battering and contouring land.
2. Where retaining walls are required, they should be screened from public view. This may be achieved by planting and breaking up the vertical extent of walls through physical stepping.

Additional Sub-Precinct Criteria

In the case of subdivision within Sub-precinct B Motorway Edge and Sub-precinct C Mixed Use, the following criteria shall also apply and take precedence over the general assessment criteria for subdivision stated above, where this is inconsistency or conflict.

Additional Design Element 6: Subdivision within Sub-precinct B Motorway Edge

1. Earthworks should be designed to retain a more natural, undulating topography and character outside of building platforms and other areas required through function to retain a flat topography.
2. Intersections between public roads serving the sub-precinct and the north south primary road (Maketu Road corridor) should be minimised.
3. Specimen tree planting should be provided on all public and internal private access roads within the Motorway Edge Sub-Precinct. ~~Refer Attachment 1 Typical Road CrossSection for Motorway Edge Sub-Precinct.~~

Additional Design Element 7: Subdivision within Sub-precinct C Mixed Use

1. Where through lots with dual street frontage are created, these should provide frontage to both street edges (i.e. no rear elevations to the street). However, where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road.

APPENDIX I410.11.2: DRURY SOUTH INDUSTRIAL PRECINCT – SUB-PRECINCT B MOTORWAY EDGE PRECINCT AND SUB-PRECINCT C MIXED USE ASSESSMENT CRITERIA

PURPOSE OF APPENDIX I410.11.2

In Sub-precinct B Motorway Edge New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities' are controlled activities and in Sub-precinct C Mixed

Use, 'New buildings' and 'Additions and alterations not otherwise provided for' are restricted discretionary activities.

Rule 6.15.1 sets out controlled activity assessment criteria for all restricted discretionary activities in the industrial zones and contains the following clause:

"In the case of the Motorway Edge Precinct and the Commercial Service Precinct within the Drury South Structure Plan Area (Part 5B.4 in Section One of the District Plan) the Council will, in addition to the criteria set out in (a) to (f) above, assess the application against the criteria set out for those precincts in Appendix 5B.4.B in Section One of the District Plan."

This Appendix sets out assessment criteria under a number of "Design Elements" for both Sub-precinct B Motorway Edge and the Sub-precinct C Mixed Use.

The criteria listed under each Design Element are intended to give flexibility, enabling site responsive designs, while ensuring that development provides a positive contribution to the amenity of the Precinct.

The criteria are intended to guide development rather than prescribe exact design and layout. Most criteria are illustrated. The illustrations are intended to support the text and are representative of good design solutions, but are not necessarily intended to represent the only design solution.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged. It is recognised that certain proposals will not achieve absolute accordance with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or ;
- whether the proposal represents a better design solution than that suggested by the criterion.

Applicants will also be required to provide a Landscape Concept Plan with sufficient detail to ensure that the relevant assessment criteria are able to be considered, identifying hard and soft landscaping treatment, large grade specimen trees (species and planting size), groupings of ground covers and shrubs with species schedule.

SUB-PRECINCT B MOTORWAY EDGE PRECINCT DESIGN ASSESSMENT CRITERIA

The following criteria shall apply to 'New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities Sub-precinct B Motorway Edge Precinct.

Design Element – Internal Private Access Roads:

1. Specimen tree planting should be provided on all public and internal private access roads within the Sub-precinct B Motorway Edge.

Design Element – Existing Vegetation:

1. Where ever possible layouts should retain and protect existing mature trees, particularly those of indigenous species, where these contribute to the site character and amenity.

Design Element – Planting:

1. Planting should be designed to have a large scale landscape effect and combine native as well as appropriate exotic species to provide seasonal change and quality amenity.
2. Where reserve land adjoins the motorway, boundary planting that creates a continuous visual barrier to eastward views from the SH1 (Southern Motorway) corridor should be avoided, however landscape design should emphasise the current sequence of intermittent views to the Hunua Ranges from the SH1 corridor and the pattern of variable depth of such views.
3. Where industrial sites adjoin the motorway boundary, a detailed rule applies requiring a double row of Leyland Cypress to create the appearance of a rural shelterbelt providing a continuous visual barrier defining the curve in the motorway alignment.

Design Element – Buildings:

1. Buildings should be located with design consideration for their visibility and reduced visual impact as viewed from the SH1, (Southern Motorway) corridor and the desirability of maintaining a sense of openness as seen from the motorway.
2. The visual mass of larger buildings should be minimised by employing the following methods:
 - Utilising subdued, recessive colours;
 - Providing variation in materials and finish for facades viewed from the motorway;
 - Creating variation of roof profiles with consideration given to the overall roofscape viewed from the motorway;
 - All rooftop servicing and plant should be designed as an integral part of the roofscape with particular consideration given to the view from the motorway.

Design Element – Parking Areas:

1. Parking areas should be designed to incorporate trees to break up the scale of hard surface areas.
2. Adoption of the Fully Planted Permeable Carpark Design Layout (refer Diagram 6) style of parking is advocated within Sub-precinct B Motorway Edge.

Design Element – Internal Site layout:

1. Storage and waste management activities should be located and / or designed to be screened from view of the State Highway.

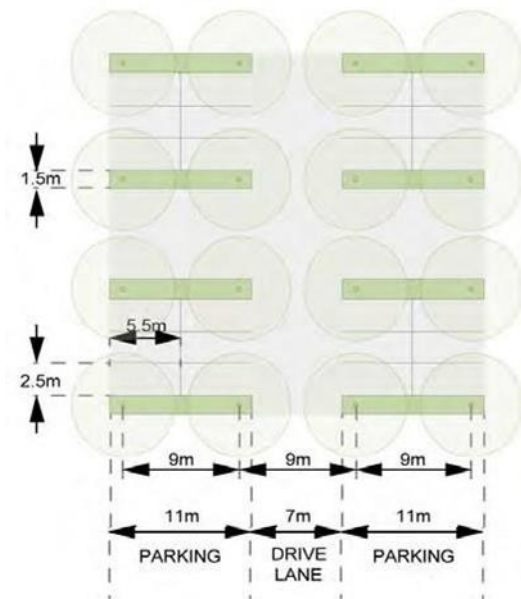


Diagram 6: Fully planted permeable carpark design layout - detail

SUB-PRECINCT C MIXED USE DESIGN ASSESSMENT CRITERIA

The following criteria shall apply to 'New buildings' and 'Additions and alterations not otherwise provided for' in Sub-precinct C Mixed Use.

Design Element – Block Size, Lot Type and Orientation:

1. Buildings on corner lots should be designed to provide for a quality architectural response to the corner. Appropriate design responses include provision of additional height at the corner and windows and activities addressing both street frontages. Service activities such as loading docks or storage yards should not be located on corners or any site frontage, however, where this is required to support the functional and operational requirements of the activity, the service area visible from the street should be minimised as much as practicable and attractively screened from public view with landscaping.

Design Element – Street Interface Design:

1. Built development should front the street with a quality, recognisable pedestrian entry to the street.
2. At-grade parking should be located and designed in such a manner as to avoid or mitigate adverse effects on pedestrian amenity and the streetscape. This includes through positioning carparking away from street frontages, to the sides or rear of buildings and the use of extensive landscaping within the carpark, including tree planting. Refer to Attachment 4 for an example of a layout and design consistent with this guideline.

Design Element – Signage:

1. Signage for each Sub-precinct C Mixed Use development

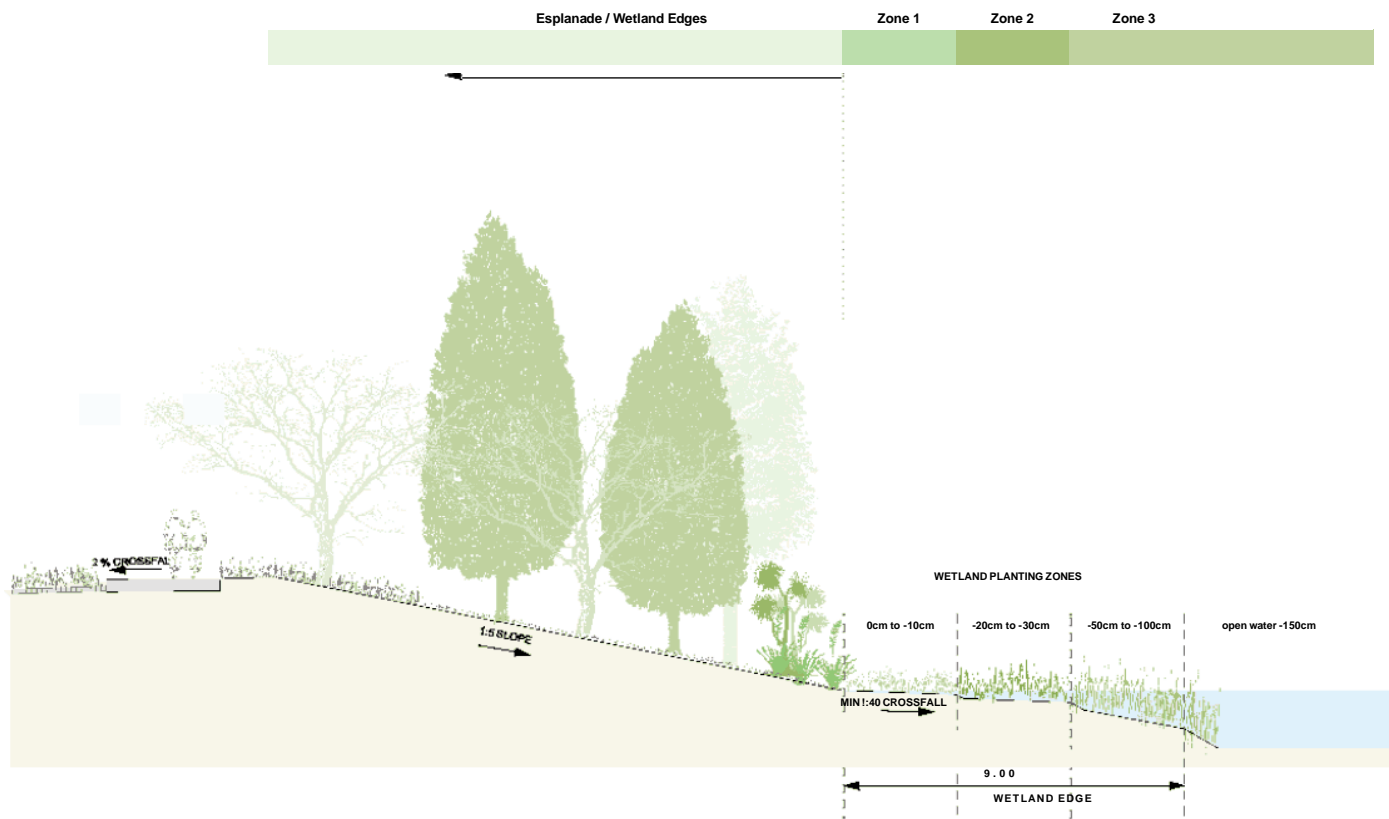
should be coordinated including the physical location of signs, their type face, style and content with a maximum of two signs per business, one located to address the street frontage and one to identify the building entry (a third sign is permissible where the service access is separate from building entry or there are multiple entries).

Design Element – Service Areas:

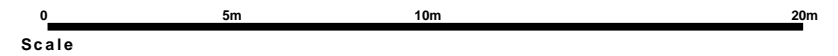
1. Service areas should be located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service / storage and dock areas. However, where this is required to support the functional and operational requirements of the activity, the service area visible from the street should be minimised as much as practicable and attractively screened from public view with landscaping.

Attachment 2

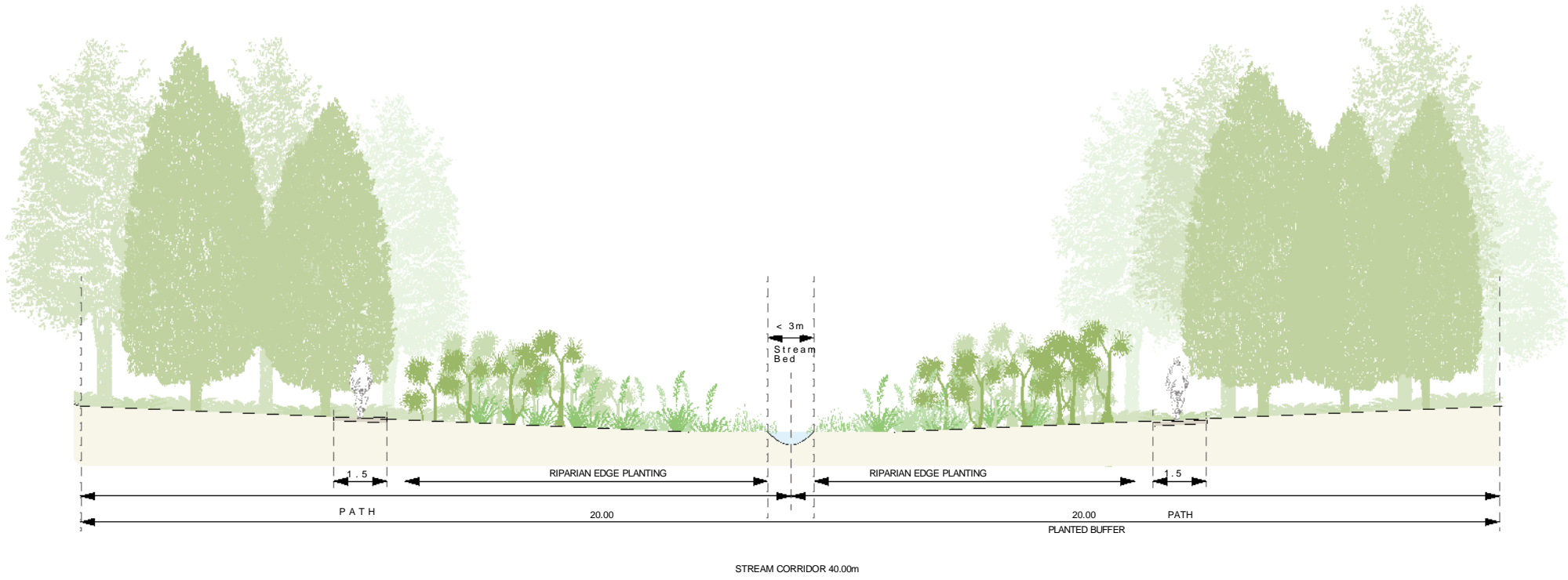
Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections



Location	Botanical Name	Common Name
Esplanade / Wetland Edges	<i>Salix babylonica</i>	Weeping Willow
	<i>Dacrycarpus darydiodes</i>	Kahikatea
	<i>Cordylone australis</i>	Cabbage palm
	<i>Anemathele lessoniana</i>	Wind grass
	<i>Carex secta</i> <i>Carex testacea</i>	Purei
Zone 1 Wetlands (0 to -10cm)	<i>Carex geminata</i> <i>Cyperus ustulatus</i> <i>Cordaderia fulvia</i>	Toetoe
Zone 2 Wetlands (-20 to -30cm)	<i>Schoenoplectus validus</i> <i>Eleocharis acuta</i> <i>Juncus gregiflorus</i> <i>Bolboschoenus fluviatilis</i> <i>Leptocarpus similis</i>	Kopupu / kuta Spike rush Wiwi rush Ririwaka Oioi /Jointed Rush
Zone 3 Wetlands (-50 to -100cm)	<i>Baumea rubiginosa</i> <i>Baumea articulata</i> <i>Baumea teretifolia</i> <i>Eleocharis sphacelata</i> <i>Juncus pallidus</i>	Ngawha / Great spike rush Giant rush



INDICATIVE WETLAND EDGE DETAIL



INDICATIVE 40m RIPARIAN BUFFER FOR STREAM BEDS LESS THAN 3m WIDE





TYPICAL ONE SIDED RIPARIAN BUFFER FOR STREAM BEDS LESS THAN 3m WIDE



INDICATIVE ONE SIDED RIPARIAN BUFFER FOR STREAM BEDS 3m AND GREATER

Attachment 3

Drury South ~~Industrial~~ Precinct

Indigenous Species Plant List

Note: The species underlined are recognised as being rare / uncommon in the Auckland region.

WetlandSpecies

Schoenoplectus tabernaemontani also Eleocharis sphacelata	Multiple Māori names include kukuta and kutakuta.
Carex virgata and Carex secta	pukio
Baumea articulata	jointed twig-rush
Typha orientalis	raupo
Myriophyllum robustum	stout water milfoil
Baumea tenax	
Isachne glabosa	swamp grass
Phormium tenax	particularly the variety known to Maori as 'Muka' - soft for weaving

Riparian Marginal Species

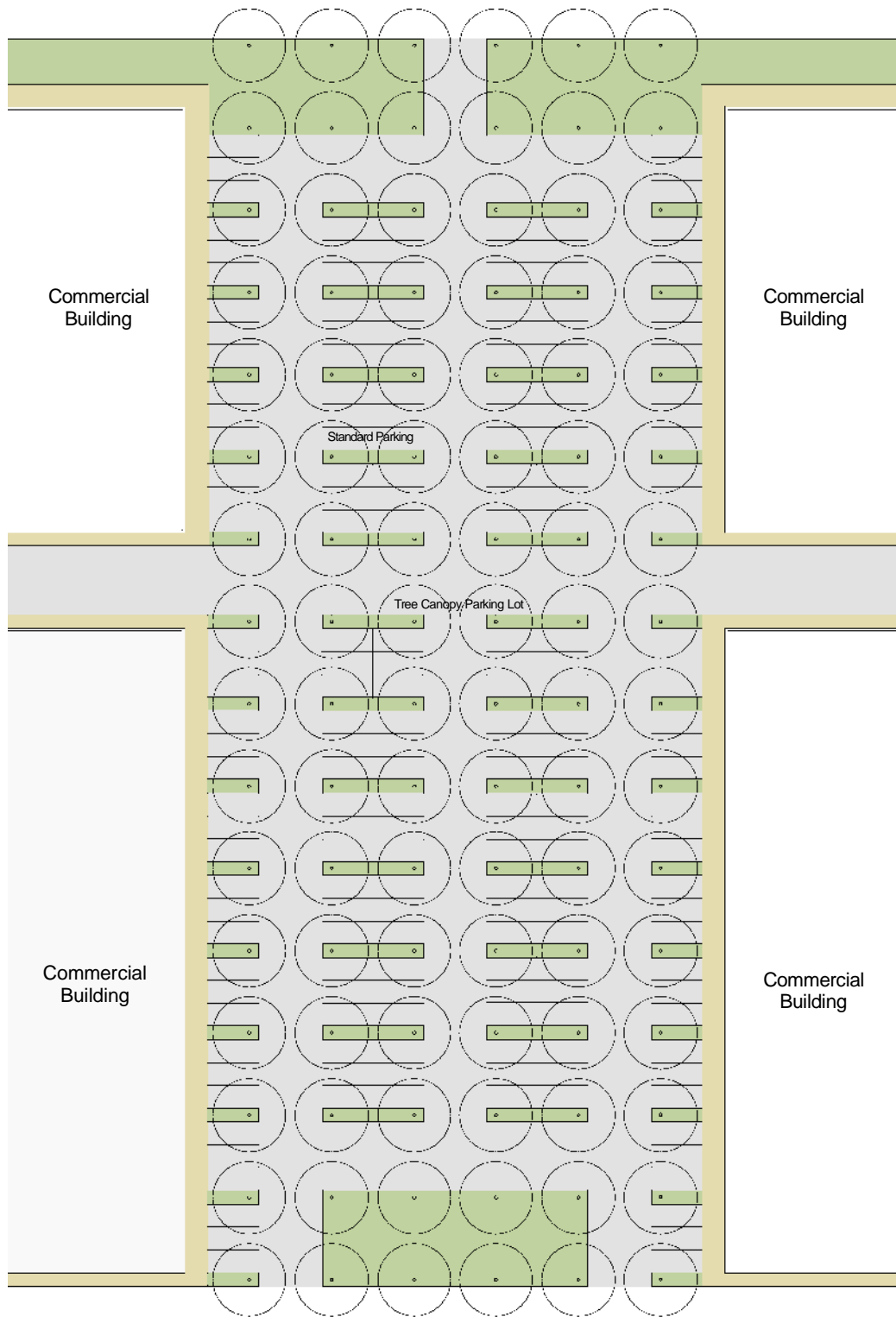
Freycinetia baueriana	kie kei
Alectryon excelsa	titoki
Vitex lucens	puriri
Prumnopitys taxifolia	matai
Sophora microphlla	kowhai
Rhopalostylis sapida	nikau
Hoheria populnea	lacebark
Corynocarpus laevigatus	karaka
Plagianthus betulinus	manatu
Pennantia corymbosa	kaikomako
Hedycarya arborea	pigeonwood
Aristolelia serrata	makomako
Kunzea ericoides	kanuka
Cordyline australis	ti whanake
Dysoxylum spectabile	kohekohe
Coprosma grandifolia	kanono
Streblus banksii	towai
Streblus microphylla	turepo
Myrsine divaricata	weeping matipo
Marrattia salicina	king fern

Swamp Forest Species

<i>Syzygium maire</i>	maire, tawake
<i>Laurelia novae-zelandiae</i>	pukatea
<i>Carpodetus serratus</i>	putaputaweta
<i>Phormium tenax</i>	harakeke
<i>Coprosma tenuicaulis</i>	hukihuki
<i>Dacrycarpus dacrydioides</i>	kahikatea
<i>Blechnum novae-zelandiae</i>	swamp kiokio
<i>Cortaderia fulvida</i>	toetoe
<i>Astelia grandis</i>	swamp astelia
<i>Schefflera digitata</i>	pate
<i>Podocarpus totara</i>	totara

Attachment 4

Typical Sub-Precinct C Mixed Use Precinct Access and Car Park Layout



Scale

TYPICAL COMMERCIAL LAYOUT

Attachment 5

**Drury South Industrial Precinct: Stream and Wetland Rehabilitation Guidelines
(June 2013)**

Drury South Industrial Precinct

Stream and Wetland Rehabilitation Guidelines

June 2013



Boffa Miskell



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Drury South Industrial Precinct
Stream and Wetland Rehabilitation Guidelines



1.0 Introduction

1.1 Purpose of this Document

The Drury South Industrial Precinct (DSIP) Stream and Wetland Rehabilitation Guidelines provide a summary of proposed stream and wetland works associated with the DSIP project. This includes all stream corridors to be removed, realigned, or restored, and wetlands created associated with stormwater management. The purpose of this document is to achieve the following:

1. To provide technical input to the planning process (to be read in conjunction with the Ecological and Landscape Assessments, Assessment of Environmental Effects (AEE) and Infrastructure Assessment report (IAR).
2. To provide the project team with a set of principles for treatment of riparian (stream and wetland) areas within the DSIP area.

1.2 Proposed Stream and Wetland Rehabilitation Works

In line with the proposed Drury South Industrial Precinct, the existing Hingaia and Maketu streams will be protected and enhanced by corridors of riparian restoration 40 metres in width (20m on each bank). Dense riparian planting will also occur along SH1 in association with the Roslyn Stream realignment and along the northern boundary of the site in association with a newly formed northern stream realignment.

Some streams and farm drains within the DSIP area will be filled. Piped infrastructure or vegetated swales will direct these modified catchments to the Hingaia Stream. These systems, as well as stormwater runoff from business activities will be treated for water quality in extensive wetland areas associated with the Hingaia stream corridor. These wetland areas will function for stormwater quality and quantity, ecosystem function and values, landscape amenity, natural character, and recreation.

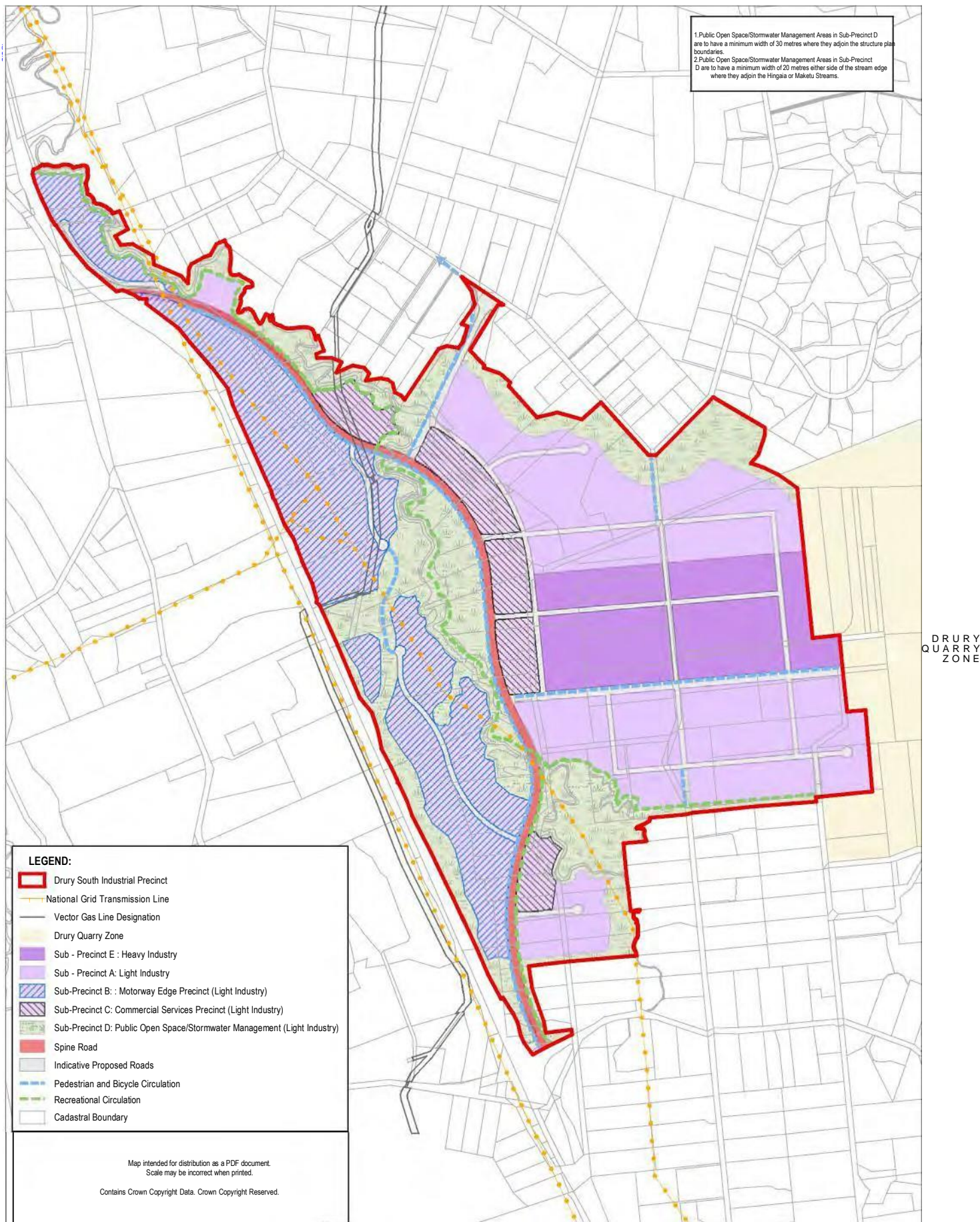


FIGURE1:DSIP Concept Plan - December 2010 (Source: BECA Ltd)

Drury South Industrial Precinct Stream and Wetland Rehabilitation Guidelines

2.0 Streams of the Project Area

2.1 Existing Streams and Proposed Mitigation

The Hingaia Stream flows through the DSIP area from south to north before continuing through the Drury Township to discharge to Drury Creek and eventually the Pahurehure Inlet to the Manukau Harbour. The Maketu Stream flows into the site at the south eastern corner of the DSIP area, and joins with the Hingaia Stream. The Roslyn Stream flows from the west under the State Highway and joins a further tributary to the Hingaia Stream. The remainder of streams traversing the site do not have officially recorded names, are smaller, highly modified, and in some cases have been piped.

An assessment of the existing surface water network and receiving environment has been carried out as part of the Hingaia Stream ICMP. This included a stream ecology study, "The Hingaia Catchment Environmental Assessment, Golder Associates, August 2009". This study included field survey of streams within the DSIP area with respect to water quality, and aquatic flora and fauna. Each stream potentially affected by the DSIP has been evaluated by the 'stream ecological valuation' method (SEV) in accordance with the technical publication ARC TP302:2008.

Existing watercourses and modified farm drains between Stevensons Quarry and SH1 will need to be filled or re-aligned to accommodate the DSIP earthworks footprint. This includes intermittent and permanent streams (refer Figure 2). Many of the existing overland flowpaths are farm drains, constructed for active drainage. All streams to be affected by the proposed DSIP have been heavily modified by farming or roading operations, including dredging, spraying, straightening, and ongoing impact by stock. In general all of these streams have low to moderate functional values for stream ecology.

Proposed mitigation for stream loss includes the restoration of riparian zones along the length of the Hingaia and Maketu Streams within the DSIP Area. This includes a 40m wide planted riparian buffer along all streams. In addition, streams to be re-aligned will have an appropriate stream profile and riparian planting to provide for sustainable stream function.



One of many existing intermittent farm drains showing evidence of earthworks, spraying and access by stock



LOCATION A (FIGURE 2) - The northern stream is directed along Quarry Road in a highly constrained and modified environment, with low ecological values



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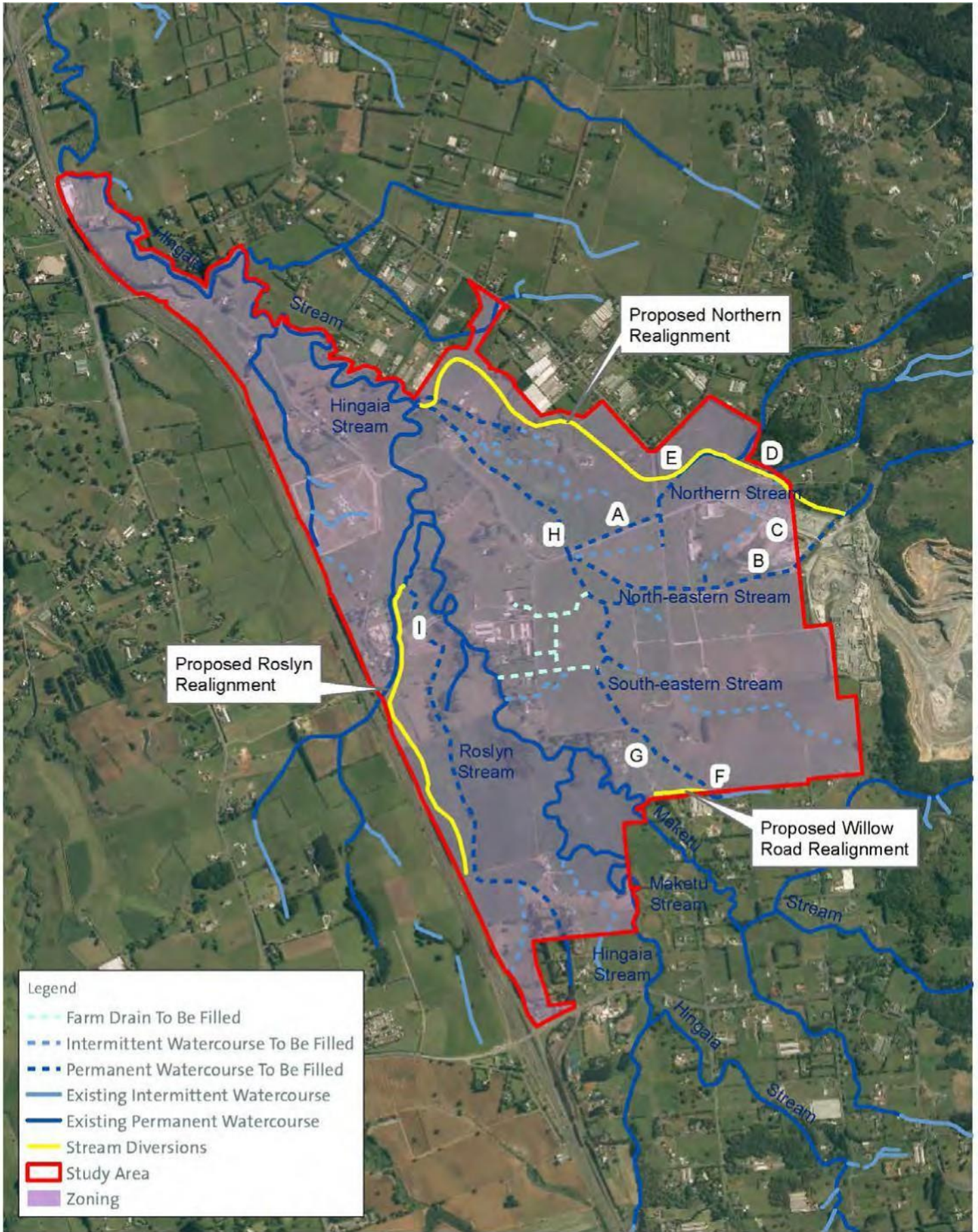


FIGURE2: DSIP Existing and Proposed Water Courses (Source: BECA Ltd)

2.1.1 Northern Streams

A tributary to the northeast of Stevenson Quarry is currently dammed in its headwaters for quarry operations before being reticulated to a channel (refer Figure 2, Location B below). The northeastern stream also receives stormwater from the quarry via adjacent treatment facilities (Location C). As part of the works to accommodate the DSIP, the upper catchment of this stream will be directed to the existing northern stream corridor (Location D).

This northern stream will be rehabilitated with an enhanced stream profile, and restored streambank and floodplain vegetation. The northern re-alignment will be 1,800m in length, comprising 1,500m of new channel and 300m of rehabilitated channel.



LOCATION B (FIG 2) - The north-eastern channel flowing through mixed exotic vegetation



LOCATION C (FIG 2) - The north-eastern channel directed alongside the quarry settlement ponds



LOCATION D (FIG 2) - The existing northern stream channel will be enhanced to receive there – aligned north-eastern tributary



LOCATION E (FIG 2) - The northern stream at the base of the northern escarpment will be rehabilitated as part of the proposed works

2.1.2 Southern Streams

The streams to be filled between the quarry and the Hingaia Stream are relatively small, with low gradient catchments that do not extend beyond the project area. A stream from the southeast of the site (refer Figure 2 and Photos Location F and G) conveys a number of intermittent stream tributaries from the centre of the project area, before joining with the existing northern stream and northeastern tributary previously mentioned (Location H). The southeastern stream and its tributaries have no vegetation cover beyond aquatic macrophytes and pasture species. These watercourses have been heavily modified by pastoral land use.



LOCATION F (FIG2)-The southeastern stream ponding behind a road culvert, 50 metres downstream of the proposed Willow Road Re-alignment



LOCATION G (FIG2)-The southeastern stream wends through the middle of the project area before combining with the northern stream

At least 230 metres of the headwaters of the southeastern stream will be retained, enhanced, and linked westward to the Maketu Stream via an 180m section of new channel (the Willow Road Realignment). This realignment will be planted with a riparian buffer. The remaining watercourses between the Hingaia Stream and quarry will be filled.

2.1.3 3 Eastern Streams

The Roslyn Stream (Location I) to the west of the Hingaia Stream will be re-aligned toward the SH1 corridor. The current stream is an open farm channel with low summer flows and dense growth of the exotic reed sweet grass (*Glyceria maxima*). The re-alignment will include filling of 450m of the upper reach of this stream, and formation of 1,600m of newly aligned channel. The realigned channel will be formed with an appropriate profile and rehabilitated for enhanced ecological function, with a 20 metre wide riparian corridor on both sides.



LOCATION H (FIG2)-The channel flowing to the Hingaia, containing the combined flows of the south-eastern, northern, and north-eastern streams following a rain event



LOCATION I (FIG2) – The Roslyn Stream (mid-ground), a farm channel with low flows, is to be realigned and rehabilitated

2.2 Existing Streambank Erosion

Streambank erosion has been identified in the ICMP studies as an existing issue at a number of locations. The Hingaia Stream is subject to extensive bank erosion, identified near the Quarry Road bridge on the Hingaia Stream and near Davies Road Bridge on the Maketu Stream.

Stormwater wetlands prior to the Hingaia channel are proposed for the DSIP in order to detain any additional flows that may adversely impact stream erosion (refer Section 3.5). Riparian vegetation is proposed along the Maketu and Hingaia and for all re-aligned stream channels to stabilise banks in the short term and reach a sustainable stream equilibrium in the long term.



A lack of riparian vegetation and active erosion along the Hingaia channel



The Maketu channel with erosion scour at the outside bank

2.3 Existing Aquatic Ecology

As part of the Hingaia Stream ICMP, Golder and Associates undertook SEV surveys of representative stream reaches (Golder 2009). Most of the stream environments in the project area had poor functional values due to extensive modification by agriculture.

The Hingaia ICMP surveyed thirteen sites within the DSIP Area. The best quality site was on the Maketu Stream, with higher scores across all functional categories. Another site, located on the lower Hingaia Stream, also scored relatively high. The best value site for the tributaries was located on the northeastern quarry stream. Full descriptions of functional ecology values can be found in the DSIP Assessment of Ecological Effects (Boffa Miskell 2010).

A total of 6 species of fish were recorded across the project area. Shortfin eels were the most common species, with occurrences of longfin eel, common bully, inanga and cran's bully. Five of the seven tributary sites had no fish, or mosquito fish only. The mosquito fish is an exotic pest fish classified as 'Unwanted' under Biosecurity legislation. These sites had very low fish community values.

Macroinvertebrate communities indicated low environmental quality at most sites. Except for the northeastern stream, tributary sites were characterised by worms, dipteran flies, leaches, and flatworms, suggesting nutrient enrichment and fine sediment. The Maketu site had a notable portion of mayflies (*Zephlebia* spp.), possibly due to better water quality (e.g. lower water temperature).

3.0: Stream and Wetland Rehabilitation

3.1 Rehabilitation Principles

The following rehabilitation principles are intended to inform the rehabilitation of streams and wetlands in the DSIP area. The principles have been prepared by an inter-disciplinary project team, including landscape architects, planners, ecologists, and engineers. Principles seek to enhance the landscape and ecology values of the riparian systems, while providing appropriate design responses for hydraulic flow and stormwater management.

3.1.1 Landscape Values

There is significant opportunity to improve the natural character values within the DSIP area. Stream and wetland environments will also be integrated within a wider open space network, providing opportunities for enhanced recreation and landscape buffers. The following landscape principles apply to proposed stream and wetland rehabilitation:

- Contribute to landscape amenity values
- Provide vegetated buffers to specific land use activities as appropriate
- Integrate stream and wetland rehabilitation with streetscape and open space planning
- Provide for visual and physical access to rehabilitated natural areas
- Optimise natural character values through the planting of representative native communities
- Provide a diversity of natural habitats and plant communities to achieve a variety of landscape and spatial character, and to demonstrate a legible sequence of habitat types.
- Structure riparian vegetation to screen/define undesirable views, offer broad views to wetland environments, and frame distant views to eastern Hunua hills from SH1
- Apply appropriate standards for CPTED and IPTED for public or maintenance access
- Place pedestrian bridges as necessary to ensure landscape connections, and investigate opportunities to use existing stream spans (infrastructure) for this function
- Identify opportunities to involve the community in stream restoration planting
- Liaise with relevant representatives and apply appropriate protocols for any archaeological sites or heritage elements associated with rehabilitation works
- Enhance Cultural Value through the re-establishment of indigenous species and investigating cultural harvest opportunities

3.1.2 Ecological Functions

Enhancing ecological functions within the DSIP area will require a combined response to aquatic and terrestrial environments, in order to restore target species, representative habitats, and ecological processes. The following ecology principles apply to stream and wetland rehabilitation:

- Plant stream margins, banks and floodplain areas to achieve not less than 40m total width (10m min width either side of stream corridor)
- Utilise species sourced from the Manukau Ecological District that are representative of natural vegetation communities as predicted by LENZ
- Restore representative in-stream heterogeneity, providing for pool, riffle, run and cascade sequences as appropriate.
- Provide fish passage to the extent possible, including bullies and inanga to within their natural range
- Preserve groundwater influence and inundation regimes for existing floodplain forest in proposed stream corridors
- Provide appropriate transitional edge vegetation to remnant mature vegetation
- Optimise site coalescence between remnant vegetation areas along the Hingaia Stream
- Provide for breeding populations of water and wetland birds species
- Provide for appropriate staging and construction techniques to avoid potential impacts to downstream environments and in-stream aquatic habitat.

3.1.3 Hydrology and Hydraulics (H&H)

Stream and wetland rehabilitation will provide opportunities for water quality treatment for the DSIP, and appropriate hydraulic flows, and hydrologic capacity for the catchment. The following H&H principles apply to the rehabilitation areas:

- Use biotechnical stream stabilisation to restore a sustainable streambank morphology
- Apply a cross sectional profile that resembles a natural staged channel, including a permanent flow channel, a stream channel based on a bankfull (approximate two year average recurrence interval (ARI)), and associated floodplains and berms to hold the one hundred year ARI.
- Provide for an appropriate stream meander patterns for the floodplain extent, longitudinal stream profile, flow velocities, and expected bankfull event.
- Provide for hydraulic connections and fish passage to stormwater wetlands wherever extended detention is not required
- Place all forebay devices for stormwater wetlands outside of the 5 year ARI flood extent.



FIGURE 3: DSIP Concept Planting plan. (Source Boffa Miskell and Source Design)

3.2 Open Space Network

The stream and wetland rehabilitation concepts (refer Figure 3) integrate with a broader open space network to optimize specific requirements for public use and access, to ensure diverse representative habitats, and to enhance environmental services for the DSIP.

The open space network reinforces existing features and patterns of the project area. The Hingaia Stream corridor will be reinforced by wide riparian margins of representative planting of early successional forest, as well as kahikatea floodplain forest. In the north a substantial open space buffer is set aside to reinforce the natural escarpment separating the DSIP basin from the Fitzgerald Road ridgeline. This occurs in conjunction with the northern stream realignment and associated riparian rehabilitation works. In the south west of the project area, riparian planting along there – aligned Roslyn stream will form a landscape buffer to SH1.

Larger remnants of existing vegetation will be coalesced along the Hingaia Stream. Planting in association with stormwater wetland areas will further buffer and augment the conservation values of these remnants.

3.3 Stream Rehabilitation

The land use change associated with the DSIP provides a significant opportunity to restore the Hingaia Stream, a low gradient moderate order stream, which retains remnant kahikatea floodplain forest. The project also provides the opportunity to coalesce modified drainage channels across the site into a larger order stream channel and floodplain, with supporting streambank and floodplain vegetation. Stream rehabilitation proposals are the result of an iterative design process between ecologists, landscape architects, and engineers to optimise the principles of these guidelines.

3.3.1 Hingaia Stream

The Hingaia Stream is a significant watercourse, with a wide, actively meandering channel across the floodplain. The stream currently runs through pastoral and agricultural land uses, and receives runoff from existing farm drains in the project area. The rehabilitation of the Hingaia stream is a key objective of the DSIP, with a 40 metre vegetated buffer proposed along the corridor where it corresponds with the project area. The width of the riparian buffer would extend to accommodate a stormwater treatment swale proposed along a northern reach, and stormwater wetlands proposed within the Hingaia Stream's extended floodplain.

The rehabilitation of the Hingaia Stream will include:

1. The coalescence of the floodplain forest remnants (including significant natural areas) already occurring within Hingaia floodplain
2. The restoration planting of streambanks along the length of the stream within the Project Area, with the potential for specific interventions to restore the stream profile at erosion hot spots
3. The planting of banks and proposed riparian buffers with simple lowland plant communities with the expectation that these communities will secede with time to include more diverse species
4. Planting of feature areas of flax-cabbage tree and broadleaf species on extended floodplains
5. Hydrological connections and fish passage to stormwater wetlands where practical

3.3.2 Stream Realignments

A number of farm drains and watercourses will be replaced with overland flow paths and reticulated networks associated with the proposed development. In addition, some headwaters will be realigned to newly formed watercourses along the boundaries of the DSIP area. The Hingaia and the Maketu Streams will not be altered beyond restoration activities.

A detailed description of the potential effects on stream ecology and the proposed mitigation measures is presented in Boffa Miskell, 2010, "Drury South Business Project Assessment of Ecological Effects Associated with the Proposed Plan Change". These guidelines inform the potential design response to optimise the flood management function of the rehabilitated streams, and their landscape and ecology values.

3.3.2.1 Design Parameters

The profile of each re-aligned stream channel is based on the cross-sectional area to accommodate a 1.5 to 2 year average recurrence interval (ARI). This flow is traditionally associated with a 'bank-full' event with active stream erosion and re-deposition.

The morphology of realigned streams is also based on their substrate, longitudinal gradient, and association with their floodplain. These functions can be used to prescribe channel sinuosity and width to depth ratio (Rosgen 1994). The bankfull width is used as a function to predict the stream meander wavelength and the radius of curvature for bends (Leopold 2003 and Thorne et al 2003). Refer to Figure 4 below.

Proposed stream morphology is intended to minimise friction within the channel to prevent active erosion, and also to provide a floodplain width that can accommodate the stream in equilibrium.

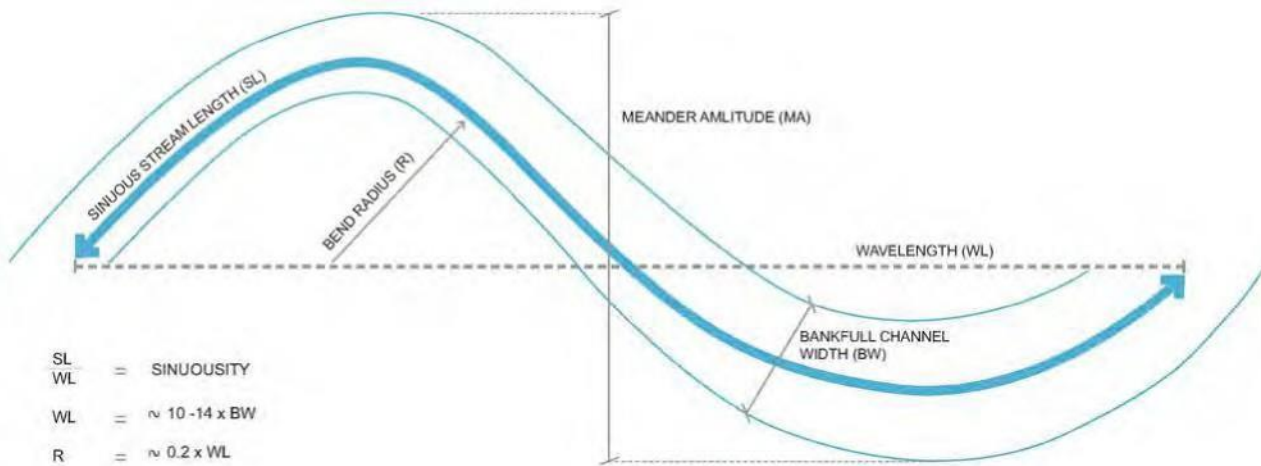


FIGURE 4: (above) The indicative relationship between channel width, and meander pattern

BELOW: A natural meander occurring as an overland flow event during flood conditions in the project area



3.3.2.2 Construction

Construction of the realigned channels is intended to occur off-line where possible, or to be staged to avoid potential impacts to downstream environments and in-stream aquatic habitat. Material selection is expected to be inert and where possible to be the equivalent of materials expected in these stream environments in their natural state.

It will be possible to utilize 'natural' materials through the application of biotechnical construction, which utilises a combination of persistent and biodegradable materials to retain channel shape until plants can establish. In general biotechnical responses for stream stabilisation can include:

- Stream profiling to respond to specific flow events
- Floodplains to dissipate flood velocities
- Stabilised bank toe and outside bends with hard materials such as rock, root vanes etc
- Directing flows and forming riffles through rock vanes
- Reinforcement of stream banks through planting established in erosion control blankets
- Stabilising the crown of banks with appropriate vegetation
- Provision of appropriate pool-riffle-run sequences.
- Grade control structures that accommodate fish passage
- Specific biotechnical treatments to accommodate 'nick' erosion points and stormwater outlets

3.3.2.3 Planting

Plant species selection will provide ecological functional values and representative plant communities. Stream planting objectives may include:

- Shade for temperature moderation
- Weed suppression
- Slope stabilization
- Tolerance to inundation
- Growth form to accommodate/obstruct views
- Stature to accommodate hydraulic flow rates
- Inherent aesthetic or spatial qualities of single plants or grouping of vegetation.

Based on LENZ predicted natural vegetation layers, representative plant communities for the DSIP area include lowland alluvial floodplain species, generally consisting of kahikatea forest. Other communities include tawa and pukatea, while matai, rimu and totara are generally restricted to better-drained soils. Titoki and puriri are locally abundant, with the potential for other broadleaf such as taraire, occurrence of kauri on the flanks of the basin, and occasional rimu and pukatea.

The project area extending into the flanks of the project basin and the hills beyond would be expected to support kauri, kahikatea, rimu and/or totara emergent over a diverse canopy dominated by varying mixtures of taraire and kohekohe. Other widespread tree species might include hinau, pukatea, rewarewa, and miro. Puriri is locally abundant at lower elevations, particularly on alluvial surfaces and tanekaha would be locally abundant, particularly on disturbed sites.

Where basalt occurs at the surface of the project area there may occur unique basalt forest environments, with an expected predominance of mahoe, karaka, kohekohe, totara, puriri, and titoki.

Until climax communities establish, it is expected that large areas of the riparian corridors will be planted with early succession and hardy species, such as riparian shrubs, kanuka, and totara to rapidly establish cover and to act as a nurse crop for later succession species. It is expected that certain low vegetation types will be applicable in places along the riparian corridors to accommodate hydraulic flows, to preserve viewshafts, and provide useable open space areas. Such planting may involve mown grass areas, sedge-rushlands, and flax-cabbage tree communities.

3.3.3 Northern Stream

A stream is proposed along the northern boundary of the DSIP area at the base of the northern escarpment. An existing section of this northern stream receives flows from three tributaries. A fourth tributary, previously described as the 'northeastern stream' (refer Section 2.1.1 and Figure 2) will also be directed to this channel from the quarry zone. The northern stream will accommodate the flow from these four tributaries, as well as localised catchments before discharging to the Hingaia Stream west of the proposed Link Road.

A typical northern stream cross section is shown in Figure 5, where a 'bankfull' channel represents the 1.5 year ARI event, and the associated floodplain conveys a 100 year ARI event with 500mm freeboard to the proposed development. Detailed design will provide pool-riffle and run sequences with adapted profiles. Biotechnical construction techniques will form narrower riffle sections, shallower point bars, and steeper outside bends.

The proposed sinuosity of the northern stream is relatively high, close to 1.5 times the wavelength (refer Figure 7). This is appropriate, based on the cross section of the bank full channel (with a low width to depth ratio) the longitudinal profile of the floodplain (a relatively flat lowland environment), and the general character of the bed materials and banks (being generally resistant but somewhat erodible).

The sinuosity is expected to reduce the longitudinal profile of the channel, reduce erosion of stream banks, provide strong connections to floodplain environments, and increase the overall length and diversity of stream habitat. Some stream reaches have constrained floodplains, where riffle sequences with local rock may be appropriate.

The northern re-alignment follows the northern boundary to combine stream environments with adjacent open space and to form a buffer to adjacent land use. The stream corridor and floodplain will be densely vegetated as indicated in figure 7. Planting will be dominated by early succession kanuka-totara forest. Kahikatea forest planting is proposed beside the Link Road entrance to act as a natural threshold at the DSIP entrance. Pockets of broadleaf forest are proposed to add diversity to the northern riparian corridor. Low areas of sedge-rushlands, grass areas, and flax-cabbage tree associations could provide views into the stream corridor from select locations.

3.3.4 Roslyn Stream Realignment

There is an existing water course running south to north through Roslyn Farm at the south west corner of the project area, which picks up flow from two culverts. Site assessment also revealed an existing spring feeding the stream. This stream will be realigned for part of its length whilst retaining links to existing spring and culvert in flows, the realigned corridor will provide a stronger vegetated element to adjacent to SH1 (refer Section 2.1.3 and Figure 2).

A typical Roslyn Stream diversion cross section is shown in Figure 6, where a dedicated 'bankfull' channel contains the 1.5 year ARI event, and the associated floodplain conveys a 100 year ARI event with 500mm freeboard to the proposed development. The Roslyn channel has a wide stream base with a lower depth to create a combined wetland/overland-flow-path appropriate for the small catchment, the low longitudinal gradient, and a strong groundwater influence.

Because the Roslyn channel is a lower energy environment than the northern re-alignment, with less likelihood of erosion, it is reasonable to expect a less sinuous character. Therefore a low sinuosity of 1.1 times the wavelength has been applied.

Planting along the Roslyn stream is proposed to be a combination of sedge-rushland planting and large swathes of flax-cabbage tree associations to create a wide wetland environment. Kanuka-totara forest may occur in existing knoll areas beside SH1 to frame views to the eastern Hunva foothills. Kanuka forest may continue along mid reaches of the stream and groups of kahikatea may occur alongside of a stormwater wetland to frame views from boardwalk locations and to shade permanent water features.

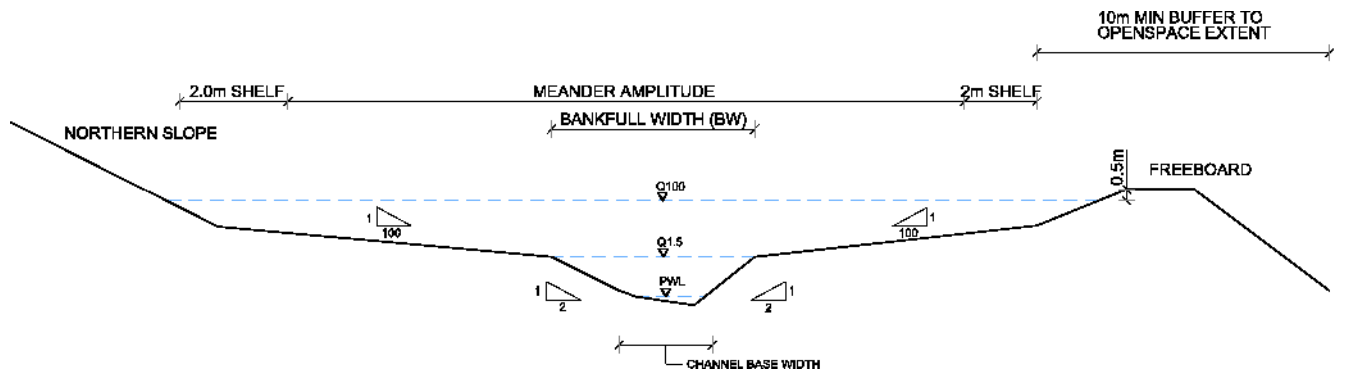


FIGURE 5: Typical section of the northern realignment in terms of flooding profiles

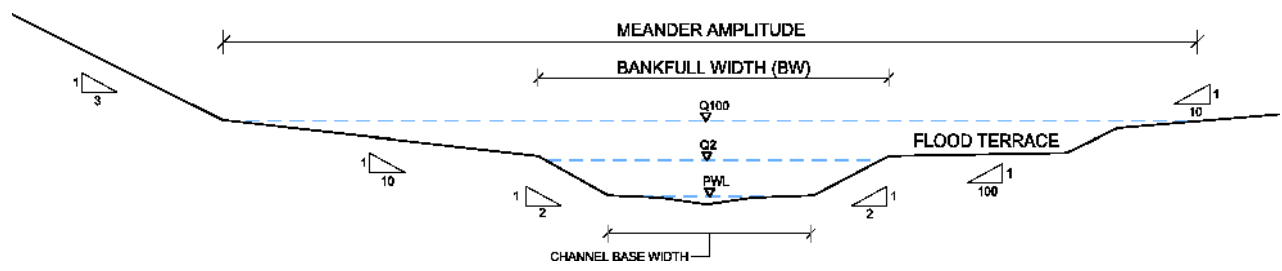


FIGURE6: Typical section of the Roslyn Stream realignment in terms of flooding profiles

3.3.5 Willow Road Realignment

There is a small roadside drain running east to west along Willow Road. The stream currently crosses Willow Road through a culvert near the intersection with Ramarama Road and continues north through the proposed DSIP area, eventually joining the Hingaia Stream. As discussed previously, this stream is heavily modified by pastoral land use and is largely unvegetated. It is proposed to divert this roadside drain directly west to the Maketu Stream along a vegetated riparian corridor that provides for a 1.5 year stream profile and accommodates a 100 year ARI event.

Drury South Industrial Precinct Stream and Wetland Rehabilitation Guidelines

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FIGURE 7: Proposed DRAFT planting plan for the Northern Re-alignment



FIGURE 8: Proposed DRAFT planting plan for the Roslyn Re-alignment

3.4 Riparian Revegetation Guidelines

3.4.1 Introduction

Riparian revegetation is proposed for the main stems of the Hingaia and Maketu Streams. In addition the Northern and Roslyn realignments will also be restored with riparian vegetation (as depicted in Figures 7 – 8). The progressive planting of these realignments as well as the present grasslands alongside the Hingaia and Maketu Streams will ultimately provide a greater extent of riparian bush, increasing the habitat opportunities and potential carrying capacity of the DSIP area as well as providing vegetated riparian corridors within the local landscape.

The following revegetation guidelines outline an accepted industry-wide approach to large scale revegetation programmes that should inform the development of the final detailed planting plans for the DSIP riparian margins.

3.4.2 General Procedure

The general procedure for the proposed revegetation plantings should be as set out below.

- Slope stabilization
- Seed should be sourced as is available from the Manukau Ecological District. However, notwithstanding the desire to use only genetic material sourced from this specific area in the revegetation programme, additional source material from the wider Auckland Ecological Region may be used.
- Planting of species into existing pasture should require pre-planting repeat herbicide applications to reduce the potential for grasses to compete with the seedlings planted.
- Blanket spraying in close proximity to the existing native bush areas needs to be avoided or very carefully managed so as to avoid by-kill. Herbicide should be carefully applied at least 2 weeks before planting.
- Where the earth has been previously compacted the areas to be revegetated should have a single treatment of earth tilling, in order to loosen the sub-soil and encourage successful rooting.
- Planting should be undertaken in favourable conditions, at the earliest opportunity during the planting season, preferably over the autumn months.
- The revegetation plantings should be supplemented with weed and browsing pest control to allow good establishment of the planted material. Ongoing weed control should be carried out until canopy closure is sufficient to suppress weed growth. Browsing pest control may be required over the longer term in order to allow these vegetated areas to progress in good health. However, once pest numbers are reduced to a minimal level, continued control should require a reduced effort.
- All planting and maintenance operations should be carried out by an approved contractor, experienced in native revegetation planting programmes.

3.4.3 Plant Material

- The plant material needs to be of the specified size and condition. All plants will have well developed root systems and a well-shaped stem and head free of disfigurements or injury, pests and disease.
- The plant material should have been sufficiently “hardened off” at the nursery prior to being passed on to the planting contractors.

3.4.3 Planting Methods

- Planting should follow an approved planting plan, indicating set-out, species, size, density and spacing.
- A dual system of planting is proposed, involving the establishment of a nurse crop of hardy pioneer species such as kanuka. These will be enriched with appropriate native tree species when the nurse crop has sufficiently established, which should be at approximately 3 years age.
- Nurse plant stock should be set out at appropriate spacing and percentages, and according to each species niche preferences.
- Once a good cover of the nurse plantings is established, enrichment plantings should be implemented. Enrichment species trees should be distributed (at wider centres) amongst nurse planting and according to site preferences in copses/groves spread further apart in subsequent seasons.
- The enrichment plantings may include the pruning or removal of modest numbers of nurse shrubs in order to create the necessary light wells.
- Plants should be set out and appropriately spaced in an informal manner avoiding straightlines and regular geometric patterns, while ensuring an even cover across the planting area. Species should be distributed at appropriate percentages and according to each species niche preferences, microclimate and ground conditions.
- Planting holes should be dug out to spade depth and seedlings located next to pre-dug holes in the correct species mix. Actual planting should be by hand only. The base of the planting hole should be filled evenly without compaction to a level where the top of the plant root ball is level with surrounding ground. The plant should be plumb and orientated so that the weathered face of the main stem faces north. When the backfilling is complete the plant should be gently firmed in. All plants should be encouraged to grow to maturity as naturally as possible to achieve their desired character and form, through sound management practices including weeding, and other accepted horticultural practises.
- Slow release fertiliser should be used within the proposed planting operation, with at least one tablet of 20-4-4(N-P-K) that is designed to last at least 12 months (preferably 24 months). The controlled release fertilizer tablets need to be inserted into each planting hole approximately half way up the back fill material, ensuring placement of the fertilizer on the upper slope side of each plant
- Approved chipped tree mulch or post-peeling bark mulch could be spread around the base of individual plants used in the mass revegetation plantings, but only in areas outside of the floodplain (to avoid mulch being washed away in floods).

3.5 Stormwater Management

Stormwater design is discussed in greater detail in the DSIP Infrastructure Assessment Report (BECA 2010). The general approach is to utilize the large floodplains associated with the Hingaia Stream to accommodate stormwater wetlands. Each wetland would include a forebay and accommodate the water quality volume. There is also allowance for extended detention to limit potential effects of stormwater volumes on downstream erosion.

Wetlands have been placed above the stream invert to not unduly effect ground water levels, and forebays have been placed above the 5 year flooding event to prevent re-suspension of contaminants stored in these areas.

Safety considerations have allowed for benching around the perimeter of each wetland and a reverse bench along each embankment. Appropriate maintenance access will be provided to forebays and to the base of wetlands for restorative maintenance if required.

Biotechnical approaches similar to those described for stream realignment works will be considered during detailed design, with specific consideration for the formation of access and outlets to the Hingaia, with fish passage possible to wetlands that are not required to detain extended detention volumes.

Planting would be exclusively sedges, rushes, and small riparian shrubs around wetlands for water quality treatment, to stabilize the wetland profile, and to allow ease of maintenance. Trees and taller shrubs would be expected at the edges of wetlands, at their interface with stream environments, and around the northern edges of forebays for shade.

3.5.1 Stormwater Wetland One

Stormwater Wetland One has been designed as a landscape amenity feature through an iterative design process between landscape architects, engineers, and ecologists. This has driven the design of forebays, the shape and extent of the permanent pools and wetland planting, the integration of multiple public access structures, and a pedestrian circulation path that crosses the Hingaia stream corridor (refer figure 9). Wetland One has been tiered to suit the local topography and the bathymetric design directs flows along three separate treatment paths.

3.5.2 Northern Swale

A swale is proposed for stormwater management along the western edge of the lower Hingaia Stream. The total width of the swale and vegetated buffer contributes an additional 25m of vegetation to the riparian buffer. The length of swale is significantly longer than required for water quality and is expected to exceed regulatory expectations at the entry point to the Hingaia.

Planting will be selected with the ability to sustain temporary ponding and saturated soils, and will allow appropriate hydraulic flows and residence time.



FIGURE 9: Proposed Planting Plan for Stormwater Wetland One

4.0: Summary

The DSIP area is traversed by the main stems of the Hingaia and Markeu Streams and several other permanent and intermittent streams and farm drains. Watercourses other than the Hingaia and Maketu Streams will be modified or re-aligned in order to facilitate the proposed land use. Stormwater management will also lead to the creation of additional naturalised wetland areas in association with the Hingaia Stream corridor.

All streams affected by the proposed DSIP have been previously modified by farming or roading operations, including dredging, spraying, straightening, and ongoing impact by stock. Stream bank erosion has been identified in the Hingaia ICMF as an existing issue at a number of locations. In general all of these streams have low to moderate functional values for stream ecology. Five of the seven tributaries to the Hingaia were observed as having very low to absent fish community values.

The DSIP Stream and Wetland Rehabilitation Guidelines establish a set of principles to enhance the landscape and ecology values of riparian systems in the DSIP area. The document is intended to provide technical input to the planning process and to provide guidance to ongoing more detailed design and implementation. The guidelines apply an inter-disciplinary approach to riparian rehabilitation.

Stream rehabilitation is proposed for the length of the Hingaia and Maketu Streams within the DSIP Area, including a 40m wide planted riparian buffer along the streams. In addition, streams to be realigned will have appropriate stream profiles and riparian planting to provide for sustainable stream function. Riparian rehabilitation will contribute to a wider open space network and enhanced natural character.

5.0: References

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Attachment 9: PC 46 Updated Text clean version

I410. Drury South Precinct

I410.1. Precinct description

The Drury South Precinct applies to approximately 257ha of land, bounded by State Highway 1 in the west, the Drury Quarry and the Hunua foothills in the east, the rural areas of Fitzgerald Road in the north and Ararimu Road in the south, as shown on Precinct Plan 1. The transportation network development requirements of the precinct are shown on Precinct plan 2. The precinct is characterised by a flat to subdued contour and is traversed by the Hingaia Stream and its tributaries including the Maketu Streams. Land which surrounds and defines the precinct has more pronounced topographical contours. The precinct lies between the Drury and Ramarama interchanges on State Highway 1 and local traffic patterns are dominated by truck traffic accessing the Drury Quarry.

The zones within the precinct are Business – Light Industry Zone, Business – Heavy Industry Zone, Business – Mixed Use, and Open Space – Conservation Zone. The purpose of the precinct is to provide for land extensive industrial activity employment opportunities, and a mix of residential and supporting commercial in identified areas, as well as provide for areas of stormwater management, existing and proposed network utility infrastructure, public open space and proposed roads, while recognising the ecological, cultural, landscape and other environmental constraints of the locality.

The precinct is divided into the following sub-precincts:

- Sub-precinct A Light Industry (approximately 130ha)
- Sub-precinct B Motorway Edge (Light Industry) (approximately 45ha)
- Sub-precinct C Mixed Use (approximately 10ha)
- Sub-precinct D Open Space / Stormwater Management (approximately 41ha)
- Sub-precinct E: Heavy Industry (approximately 24ha).

Sub-precinct A is zoned Business – Light Industry Zone. Activities within the sub-precinct are subject to additional standards.

Sub-precinct B is zoned Business – Light Industry Zone. The Transpower switchyard is located within this sub-precinct. Activities in the sub-precinct are subject to additional landscaping and building layout design standards.

Sub-precinct C is zoned Business - Mixed Use. Activities within this sub-precinct are subject to additional standards. The sub-precinct also provides for certain commercial activities to enable a mix of residential and supporting commercial uses.

Sub-precinct D is zoned Business – Light Industry Zone but provides for recreational uses and will be rezoned to an appropriate zone (e.g. Open Space - Informal Recreation Zone) once the Public Open Space / Stormwater Management Areas shown on Precinct Plan 1 are developed and vested.

Sub-precinct E has an underlying zoning of Business – Heavy Industry Zone. Activities within the sub-precinct are subject to additional standards.

I410.2. Objectives [rp/dp]

The objectives of the underlying Business – Light Industry Zone apply in sub-precincts A-B, the objectives of the underlying Mixed Use zone apply in sub-Precinct C, the objectives of the Open Space – Informal Recreation Zone apply in sub-precinct D, the objectives of the underlying Business – Heavy Industry Zone apply in sub-precinct E and the Auckland-wide objectives as well as the precinct objectives below apply throughout in this the precinct, unless there is a conflict between the precinct objectives and the Auckland-wide objectives or underlying zone objectives, in which case the precinct objectives prevail.

- (1) Development maintains and enhances the stream ecology and the natural vegetation and habitat values of the Hingaia and Maketu streams.
- (2) The cultural heritage values of the precinct are maintained and enhanced.
- (3) Landscape and visual amenity values within the precinct are maintained and enhanced (particularly when viewed from State Highway 1).
- (4) The air quality, acoustic and other amenity values of surrounding areas are protected.
- (5) The establishment of a convenient and well-designed industrial area with good quality streetscapes and a mixed use precinct is facilitated.
- (6) The timely and co-ordinated provision of robust and sustainable transport, stormwater, water, wastewater, energy and communications infrastructure networks are provided.
- (7) A transport network to facilitate the safe and efficient movement of people, goods and services and manage effects on the safe and efficient operation of the surrounding transport network.
- (8) The Drury Quarry, activities within the Business – Heavy Industry Zone or the adjoining rural area operate efficiently and are not unreasonably constrained by other activities.
- (9) Development and land use within the precinct avoids or minimises adverse effects on significant existing high voltage electricity, natural gas and communications infrastructure.
- (10) Subdivision and development in the precinct area avoids or mitigates the adverse effects of stormwater runoff on surface and groundwater quality and avoids increased flood risks to habitable buildings upstream and downstream of the precinct.
- (11) Visual and physical links to the surrounding area are protected.
- (12) Landscaping themes are complementary, consistent and coherent throughout the precinct.

- (13) Activities sensitive to noise adjacent to the strategic freight network (Maketu Road and New Quarry Access Road) serving the Drury Quarry are protected from unreasonable levels of transport noise.
- (14) Activities in sub-precinct C do not compromise the function, role and amenity of the City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone and Business – Local Centre Zone (either zoned or identified in the Council approved Structure Plan for Drury).

I410.3. Policies [rp/dp]

The policies of the underlying Light Industry zone apply in sub-precincts A-B, the policies of the underlying Mixed Use zone apply in sub-Precinct C, the policies of the Open Space – Informal Recreation Zone apply in Sub-precinct D, the policies of the Business – Heavy Industry Zone apply in sub-precinct E and the Auckland-wide policies as well as the precinct policies below apply throughout the precinct unless there is a conflict between the precinct policies or underlying zone policies and the Auckland-wide policies, in which case the precinct policies prevail.

- (1) Protect and enhance the significant streams and vegetation within Sub-precinct D.
- (2) Enhance the biodiversity of ecological resources and linkages and restore degraded ecosystems while reducing stream bank erosion through riparian planting along retained watercourses in sub-precincts B and D.
- (3) Reflect the cultural heritage values of the Hingaia and Maketu streams as cultural linkages between historical hill top pa and coastal areas in the development of sub-precinct D.
- (4) Maintain a sense of openness and naturalness on land adjacent to State Highway 1.
- (5) Maintain visual and physical links to the surrounding area within the precinct.
- (6) Utilise complementary, consistent and coherent landscaping themes throughout the precinct.
- (7) Design and construct attractive wetland areas for stormwater treatment and detention that also provide reserve and visual amenity opportunities.
- (8) Provide public open space buffer areas between the land to be developed for business activities and surrounding rural land.
- (9) Ensure buildings in Sub-precinct C address and engage the street and public realm and exhibit a high standard of amenity and pedestrian safety and convenience.
- (10) [Deleted]

- (11) Provide for transport infrastructure and connections including Maketu Road, Link Road, New Quarry Access Road and Ramarama Road through to Fitzgerald Road, to support safe and efficient movement for all modes within and through the precinct and to and from the surrounding transport network.
- (12) Provide high quality public open spaces in Sub-precinct D that result in opportunities for passive surveillance.
- (13) Provide adequate stormwater, water, wastewater, communications and energy networks in a timely and co-ordinated manner to service development within the precinct.
- (14) Co-ordinate transport network (including the state highway) improvements both within and outside the precinct with development within the precinct to manage adverse effects on the safe and efficient operation of the surrounding road transport network.
- (15) Make adequate provision within Sub-precinct D to detain the 100 year Average Recurrence Interval (ARI) event without adverse effects on the extent of flooding of upstream and downstream areas.
- (16) Provide sufficient floodplain storage within Sub-precinct D to avoid increasing flood risk upstream and downstream, and manage increased flood risk within the precinct, to habitable rooms for all flood events from the 50% and up to the 1% AEP.
- (17) Undertake earthworks to form the modified floodplain in a manner which ensures flood effects on downstream or upstream areas are not exacerbated.
- (18) Avoid locating buildings within the 100 year ARI modified floodplain.
- (19) Avoid locating infrastructure within the 100 year modified ARI floodplain unless it can be designed to be resilient to flood related damage and does not exacerbate flood risks for upstream or downstream activities.
- (20) Identify overland flowpaths in a stormwater management plan or discharge consent and ensure that they remain unobstructed and able to convey surface water runoff safely into the reticulated stormwater network.
- (21) Avoid or mitigate adverse effects on surface or groundwater quality from stormwater runoff within the precinct through on-site stormwater management and containment and the provision of catchment based stormwater treatment ponds.
- (22) Mitigate any diversion or piping of existing degraded or modified watercourses by the ecological enhancement and landscape planting of existing natural and diverted watercourses within and immediately adjacent to the precinct.
- (23) In Sub-precinct A, B, D and E, avoid the establishment of sensitive residential land uses.

- (24) [Deleted]
- (25) Control activities sensitive to noise adjacent to the strategic freight network (Maketu Road and New Quarry Access Road) serving the Drury Quarry. so that occupants are not exposed to unreasonable levels of transport noise.
- (26) Manage development and subsequent land use to minimise adverse effects on the efficient and safe operation of existing high voltage electrical transmission and distribution lines, fibre optic cables and the Vector natural gas pipeline.
- (27) Encourage a mix of residential and commercial uses within Sub-precinct C close to potential public transport routes and open space amenity, which provides opportunities to integrate with the Drury South Residential Precinct and the balance of the Drury South Precinct.
- (28) Provide for a range of commercial activities in Sub-Precinct C that will not compromise the role and amenity of the Business – Metropolitan Centre zone, Business – Town Centre zone (either zoned or identified in the Council approved Structure Plan for Drury) beyond those effects ordinarily associated with trade effects on trade competitors. In particular:
- (a) Discourage the concentration of retail activity in one part of sub-precinct C, having regard to the effects of the scale and type of retail activity proposed;
 - (b) Appropriately stage the provision of retail (including supermarkets) in Sub-Precinct C over time as development in the surrounding area occurs;
 - (c) Enable appropriately scaled office activities to establish in sub-precinct C that support surrounding land uses in the Drury South precinct.
- (29) Encourage a complementary mix of convenience activities to locate in the southern part of sub-precinct C, where it would be most accessible to the Drury South Residential precinct and would support a local community focal point.

I410.4. Activity table

The provisions in any relevant overlays, zone and the Auckland-wide apply in this precinct unless otherwise specified below.

In the event of a conflict between the zone or Auckland-wide rules and the precinct rules, the precinct rules prevail.

Table I410.4.1 specifies the activity status of development and subdivision activities in the sub-precincts A-E pursuant to sections 9(3) and 11 of the Resource Management Act 1991.

Table I410.4.1 Activity table 1 – Sub-precincts A to E

Activity		Activity status
Development		
(A1)	Subdivision, or any development of land which precedes a	RD

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	subdivision, being undertaken which complies with Standard I410.6.3 below. (Note that for the purposes of this rule "development" means the carrying out of any work on the land including any earthworks or site preparation activities and the construction or alteration of any building)	
(A2)	Subdivision, or any development of land which precedes a subdivision, being undertaken which does not comply with Standard I410.6.3 below, or results in increased flood risk to habitable rooms for all flood events from the 50% and up to 1% AEP flood event downstream and upstream of the Structure Plan area.	NC
(A3)	The creation of vehicle access to any site with frontage to or from the Maketu Road shown on Precinct Plan 2 which also has frontage to another road shown on that Plan	RD
(A3A)	Residential activities in sub-precinct C which do not comply with Standard I410.6.5 (no-complaints covenant)	NC

Table I410.4.2 specifies the activity status of land use activities in Sub-precinct A pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.2 Activity table 2 – Sub-precinct A (Light Industry)

Activity		Activity status
Use		
Commerce		
(A4)	Commercial services	NC
(A5)	Dairies	NC
(A6)	Drive-through restaurants	NC
(A7)	Entertainment facilities	NC
(A8)	Food and beverage	NC
(A9)	Retail over 450m ² except for Trade Suppliers	Pr
(A9A)	Trade Suppliers	P
(A10)	Activities that do not comply with standards in I410.6.2(10)	D

Table I410.4.3 specifies the activity status of land use and development activities in Sub-precinct B pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.3 Activity table 3 – Sub-precinct B (Light Industry - Motorway Edge)

Activity		Activity status
Use		
Commerce		
(A11)	Commercial services	NC
(A12)	Dairies	NC

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(A13)	Drive-through restaurants	NC
(A14)	Entertainment facilities	NC
(A15)	Food and beverage	NC
(A16)	Retail over 450m ²	Pr
Development		
(A17)	New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities	C
(A18)	Additions to buildings that are less than: <ul style="list-style-type: none"> • 10 per cent of the existing gross floor area of the building; or • 250m² whichever is the lesser	P
(A19)	Internal alterations to buildings	P
(A20)	Activities that do not comply with the standards in I410.6.2(10)	D

Table I410.4.4 specifies the activity status of land use and development activities in Sub-precinct C pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.4 Activity table 4 – Sub-precinct C (Business - Mixed Use)

Activity		Activity status
Use		
Commerce		
(A21)	[Deleted]	
(A21A)	Trade Suppliers	P
(A22)	[Deleted]	
(A22A)	Garden Centres	P
(A23)	[Deleted]	
(A23A)	Motor Vehicle Sales	P
(A24)	[Deleted]	
(A24A)	Marine Retail	P
(A25)	[Deleted]	
(A25A)	Department Stores	NC
(A26)	[Deleted]	
(A26A)	A single supermarket greater than 2000m ² gross floor area	RD
(A27)	[Deleted]	
(A27A)	Retail not otherwise permitted up to 200m ² gross floor area per tenancy	P

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(A28)	[Deleted]	
(A28A)	Retail not otherwise permitted greater than 200m ² gross floor area per tenancy	D
(A29)	[Deleted]	
(A29A)	Offices up to 500m ² per tenancy	P
(A30)	[Deleted]	
(A30A)	Offices between 501m ² – 1000m ² per tenancy	RD
(A31)	[Deleted]	
(A31A)	Offices greater than 1000m ² per tenancy	D
(A32)	[Deleted]	
(A32A)	Activities that do not comply with the standards in I410.6.2(10)	D
(A33)	[Deleted]	

Table I410.4.5 specifies the activity status of land use activities in Sub-precinct D pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.5 Activity table 5 – Sub-Precinct D (Open Space – Informal Recreation Zone / Stormwater Management)

Activity		Activity status
Use		
Community		
(A34)	Any activity listed as a permitted activity in the Open Space – Informal Recreation Zone	P
(A35)	Stormwater management devices	P
(A36)	Activities that do not comply with the standards in I410.6.2	D

Table I410.4.6 specifies the activity status of land use activities in Sub-precinct E pursuant to section 9(3) of the Resource Management Act 1991.

Table I410.4.6 Activity table 6 – Sub-precinct E (Heavy Industry)

Activity		Activity status
Use		
Commerce		
(A37)	Dairies	NC
(A38)	Food and beverage	NC
(A39)	Activities that do not comply with the standards in I410.6.2	D

I410.5. Notification

- (1) An application for resource consent for a controlled activity listed in Tables I410.4.1 - I410.4.6 above will be considered without public or limited notification or the need to obtain written approval from affected parties unless the Council decides that special circumstances exist under section 95A(4) of the Resource Management Act 1991.
- (2) Any application for resource consent for an activity listed in Tables I410.4.1 - I410.4.6 and which is not listed in I410.5(1) will be subject to the normal tests for notification under the relevant sections of the Resource Management Act 1991.
- (3) When deciding who is an affected person in relation to any activity for the purposes of section 95E of the Resource Management Act 1991 the Council will give specific consideration to those persons listed in [Rule C1.13\(4\)](#).

I410.6. Standards

The overlay, Auckland-wide and zone standards apply in this precinct, unless otherwise specified below.

For the purposes of Rule E27.6.1(2)(b), the following activities have been assessed as part of an Integrated Transport Assessment on which the Drury South Precinct provisions for Sub-precinct A and C are based:

Activity	GFA (m²)
Supermarket	4,500
Retail	4,400
Offices	15,000
Trade suppliers	11,000
Supporting commercial services	3,300
Residential – apartments	12,300
Activity	GFA (m²)
Residential – Retirement Villages	22,000

I410.6.1. Sub-precinct C

All activities listed as permitted in Table I410.4.4 must comply with the following standards

I410.6.1.1. [Deleted]

- (1) [Deleted]
- (2) [Deleted]

I410.6.1.1A. Retail and Office Gross Floor Area

- (1) Retail must not exceed a total of 1000m² gross floor area in Sub-Precinct C. This excludes one supermarket greater than 2000m², service stations, trade suppliers, garden centres, motor vehicle sales, marine retail and food and beverage.
- (2) Retail activities specified in (1) above, greater than 1000m² and up to and including 4,500m² in Sub-Precinct C will be assessed as a restricted discretionary activity on a non-notified basis.
- (3) Retail activities specified in (1) above, greater than 4,500m² in Sub-Precinct C will be assessed as a discretionary activity.
- (4) Offices must not exceed 15,000m² in total in Sub-Precinct C. Offices greater than 15,000m² will be assessed as a discretionary activity.
- (5) Trade suppliers within Sub-Precincts A and C must not exceed a total of 11,000m² gross floor area. Trade suppliers that are greater than 11,000m² gross floor area will be assessed as a restricted discretionary activity on a non-notified basis.

I410.6.1.2. [Deleted]

- (1) [Deleted]
- (2) [Deleted]

I410.6.1.3. [Deleted]

- (1) [Deleted]

I410.6.1.4. [Deleted]

- (1) [Deleted]
- (2) [Deleted]

I410.6.2. Sub-precincts A-E

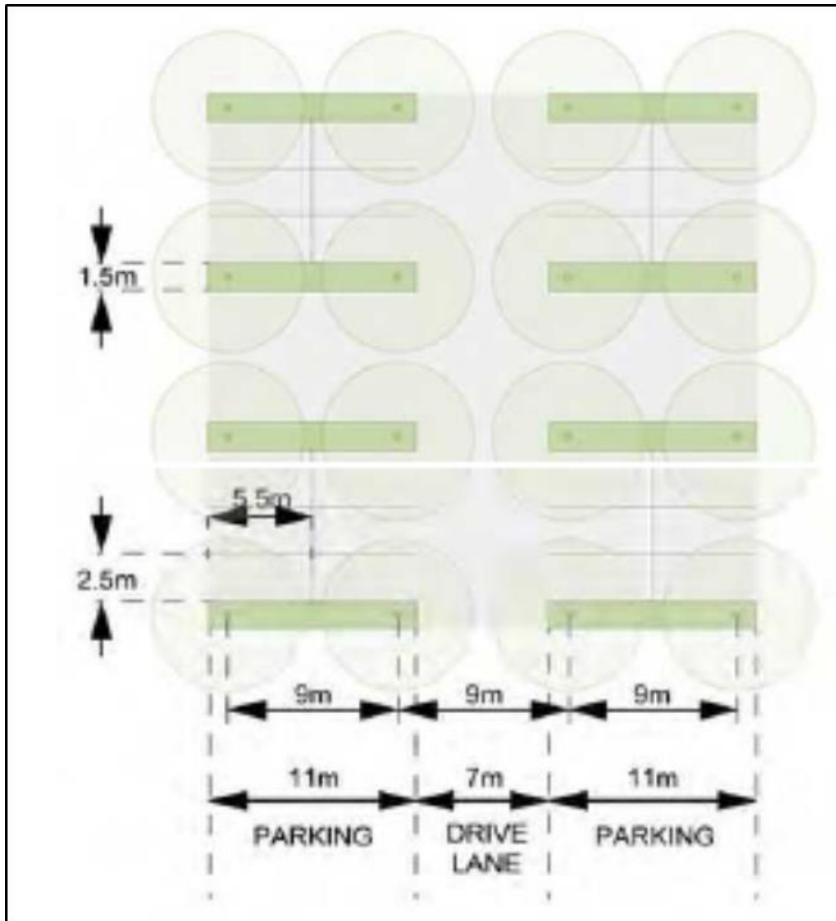
The standards are those listed in the Auckland-wide rules (in respect of sub-precincts A-E), Business – Light Industry Zone (in respect of sub-precincts A-B), Business – Mixed Use Zone (in respect of sub-precinct C), the Open Space – Informal Recreation Zone (in respect of sub-precinct D) and the Business – Heavy Industry Zone (in respect of Sub-precinct E) except as follows:

- (1) [Deleted]
- (2) Buildings must not exceed 25m in height in Sub-precinct E and Sub-Precinct C.
- (3) Within the Drury South Precinct the industrial zone height in relation to boundary control will not apply, and instead, buildings must not project beyond a 45 degree recession plane measured from a point 2 metres

vertically above ground level along the residential or public open space boundary.

- (4) All new roads must be designed and constructed to comply with the provisions of New Zealand Standard NZS6806:2010 "Acoustics – Road Traffic Noise – New and Altered Roads".
- (5) The upward waste light ratio from any luminaire must not be more than 3 per cent. The upward waste light ratio is defined as: "The ratio of the light flux emitted above the horizontal by a luminaire to the total light flux emitted, expressed as a percentage, evaluated for the upcast angle".
- (6) Any required security fence must be setback a minimum of 3 metres from the front boundary and such fencing (whether in front yards or on rear or side boundaries) must be 2 metre maximum height and must not incorporate barbed or razor wire or an angled top. Fence posts and wire mesh are to be black coloured.
- (7) [Deleted]
- (7A) Where any new building is proposed, the reflectivity value of the roof or roofs must not exceed 30 per cent.
- (8) Within Sub-precinct B no less than 30 per cent of the net site area of each site is to be in permeable landscape area (including any on site stormwater treatment). Where on site car parking adopts a layout fully conforming with the fully planted permeable carpark design layout detailed in Figure I410.6.2.1 below, the permeable landscape area may be reduced to no less than 20 per cent of the site area.

Figure I410.6.2.1 Carpark design



(9) [Deleted]

(10) Any land modification to form the 1% AEP modified flood plain must:

- (a) not reduce flood storage capacity in the precinct; and
- (b) not change the flood characteristics upstream or downstream of the precinct for all flood events from the 50% and up to the 1% AEP flood event in ways that result in an increase in peak flood levels.

I410.6.3. Subdivision or development preceding subdivision in Sub-precincts A – E

- (1) Proposed roads (including pedestrian and bicycle routes) identified on the Precinct Plan 1 and Precinct Plan 2, must be located generally in the position indicated on Precinct plan 1 and Precinct Plan 2. An alternative roading layout may be proposed provided that an integrated approach to land use and transport can be achieved throughout the Drury South and Drury South Residential precincts.
- (2) The land identified as part of Sub-precinct D on Precinct plan 1 must be developed upon subdivision or development of the relevant area. Proposed stormwater management areas must be located generally in the position indicated on Precinct Plan 1, and must be offered to the Council. Vegetated

buffers not less than 40 metres in total width are to be provided along stream corridors within stormwater management areas and must include a minimum of 10 metres of native riparian planting either side of the stream edge. Off-site stormwater management services including wetlands and the primary and secondary stormwater conveyance system is to be vested at no cost to the council in accordance with a network discharge consent or other relevant discharge consent or a stormwater management plan approved by the Council. All stormwater management areas and wetlands must be designed to serve a dual function to treat stormwater and provide ecological benefits.

- (3) Reticulated water services must be supplied to the precinct and all new water infrastructure must be fully funded (including consenting costs) by the developer(s) of the land within the precinct. Such services must be provided to the relevant part of the precinct in advance of or concurrent with a resource consent for subdivision and development provided that any necessary resource consents or designations for the reticulated water services have been granted.
- (4) Wastewater services are to be provided to the precinct either by (in no particular order):
 - (a) the construction of a connection to Watercare's existing wastewater network and any necessary upgrading of that network that is required to service the Precinct; and/or
 - (b) the construction of a Wastewater Treatment Plant to service the Precinct, or a larger catchment if required.

In either case wastewater services are to be provided in a manner approved by Watercare and constructed to Watercare's design and operational standards. The developer(s) must fully fund (including consenting costs) all new wastewater infrastructure required to service the Precinct. Wastewater services must be provided to the relevant part of the Precinct in advance of or concurrent with a resource consent for subdivision and development provided that any necessary resource consents or designations for the reticulated water services have been granted. In the event that a new regional wastewater treatment plant becomes available to service the precinct, and subject to approval from Watercare, the precinct could be connected to that plant.

Note: that for the purposes of the Standards I410.6.3(1)-(4) above, references to "Watercare" means Watercare Services Limited and references to "development" means the carrying out of any work on the land including any earthworks or site preparation activities and the construction or alteration of any building.

I410.6.4. Sub-Precinct C (Noise and Ventilation)

- (1) Any building containing a noise sensitive space within Sub-Precinct C must be located and/or designed and/or insulated, or screened by suitable barriers, so that the design noise levels do not exceed:
 - (a) 40 dB $L_{Aeq(24\text{ h})}$ inside any noise sensitive space; and
 - (b) 70 dB $L_{Aeq(24\text{ h})}$ incident on any façade facing Maketu Road that encloses a noise sensitive space.
- (2) Compliance with Standard I410.6.4(1) must be determined based on a road traffic noise level 10m from the nearest traffic lane of Maketu Road of 75 dB $L_{Aeq(24\text{ h})}$, 83 dB $L_{Aeq(24\text{ h})}$ at 63 Hz and 79 dB $L_{Aeq(24\text{ h})}$ at 125 Hz.
- (3) For residential dwellings, where the internal noise levels in Standard 1 can only be complied with when doors or windows to those rooms are closed, those rooms adopt the relevant mechanical ventilation and/or cooling requirements of E25.6.10(3)(b) or (c).
- (4) For the avoidance of doubt, the noise insulation requirements set out in Standard I410.6.4(1)-(3) apply in addition to any other noise insulation requirements set out in Chapter E25 – Noise and Vibration.

I410.6.5. Sub-Precinct C (Restrictive non-complaint covenant)

- (1) Residential activities in Sub-precinct C shall be subject to a restrictive non-complaint covenant* in favour of the operator of Drury Quarry.

*For the purposes of the Drury South precinct and of this rule a 'restrictive non-complaint covenant' is defined as a restrictive covenant registered on the Title to the property or a binding agreement to covenant, in favour of the operator of Drury Quarry, by the landowner (and binding any successors in title) not to complain as to effects generated by the lawful operation of the quarry, including heavy vehicle movement noise. The restrictive non-complaint covenant is limited to the effects that could be lawfully generated by the quarry activities at the time the agreement to covenant is entered into. This does not require the covenantor to forego any right to lodge submissions in respect of resource consent applications or plan changes in relation to quarry activities (although an individual restrictive non-complaint covenant may do so.) Details of the existence of covenant documents may be obtained from the Quarry Operator, its solicitors, or in the case of registered covenants by searching the Title to the property.

I410.7. Assessment – controlled activities

I410.7.1. Matters of control

The Council will reserve its control to all of the following matters when assessing a controlled activity resource consent application:

- (1) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct B:
 - (a) retention of existing vegetation;

- (b) planting;
- (c) building design and appearance;
- (d) parking area design;
- (e) storage and waste management location and design; and
- (f) vehicular access;

(2) [Deleted]

I410.7.2. Assessment criteria

The Council will consider the relevant assessment criteria below for controlled activities:

(1) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct B:

(a) retention of existing vegetation:

- (i) the extent to which layouts retain and protect existing mature trees, particularly those of indigenous species, where these contribute to the site character and amenity.

(b) planting:

- (i) the extent to which planting is designed to have a large scale landscape effect and combine native as well as appropriate exotic species to provide seasonal change and quality amenity; or
- (ii) where public open space land adjoins the motorway, the extent to which boundary planting that creates a continuous visual barrier to eastward views from the State Highway 1 corridor is avoided and whether landscape design emphasises the current sequence of intermittent views to the Hunua Ranges from the State Highway 1 corridor and the pattern of variable depth of such views;
- (iii) the extent to which the integrated site layout, building and landscape design provides a high quality and visually attractive frontage to State Highway 1, while ensuring any landscaping, including the use of large tree and shrub species, does not restrict access to the electricity infrastructure for maintenance and does not compromise the safe and reliable operation of the electricity network.

Advice note: In considering whether this criterion is met, the Council may take into account whether a review has been undertaken by or on behalf of Counties Power which confirms that the proposed planting will not affect the safe and reliable operation and maintenance of the electricity network.

(c) building design and appearance:

- (i) the extent to which buildings are located with design consideration for their visibility and reduced visual impact as viewed from the State Highway 1 corridor and the desirability of maintaining a sense of openness as seen from the motorway; or
- (ii) the extent to which the visual mass of larger buildings is minimised by employing the following methods:
 - utilising subdued, recessive colours;
 - providing variation in materials and finish for facades viewed from the motorway;
 - creating variation of roof profiles with consideration given to the overall roofscape viewed from the motorway;
 - all rooftop servicing and plant should be designed as an integral part of the roofscape with particular consideration given to the view from the motorway;

(d) parking area design:

- (i) the extent to which parking areas are designed to incorporate trees to break up the scale of hard surface areas; or
- (ii) the extent to which the fully planted permeable carpark design layout (refer Figure I410.6.2.1 above) style of parking is adopted within Sub-precinct B;

(e) storage and waste management location and design:

- (i) the extent to which storage and waste management activities are located and/or designed to be screened from view of State Highway 1;

(f) vehicular access:

- (i) the extent to which proposed vehicle access to sites adjoining the Maketu_Road and New Quarry Access Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;

(2) [Deleted]

I410.8. Assessment – restricted discretionary activities

I410.8.1. Matters of discretion

The Council will consider the relevant assessment criteria below for restricted discretionary activities, in addition to the assessment criteria specified for the relevant restricted discretionary activities in the overlay, Auckland wide or zone provisions:

- (1) subdivision or any development of land which precedes a subdivision being undertaken which complies with Standard I410.6.3:
 - (a) the relevant council and Auckland Transport development code or codes of practice;
 - (b) geotechnical and seismic;
 - (c) servicing and development sequencing;
 - (d) design and layout;
 - (e) earthworks;
 - (f) transportation network development requirements;
 - (g) ecology;
 - (h) Counties Power 110 Kv sub-transmission lines; and
 - (i) stormwater management;
- (2) the creation of vehicle access to any site with frontage to or from the Maketu Road shown on Precinct Plan 2 which also has frontage to another road shown on that plan:
 - (a) effect of the location and design of the access on the safe and efficient operation of the adjacent transport network; and
 - (b) adequacy of access arrangements.
- (3) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:
 - (a) building design;
 - (b) parking area design;
 - (c) signs;
 - (d) service area location;
 - (e) vehicular access; and
 - (f) mitigation of traffic noise.

- (4) A single supermarket greater than 2000m², supermarkets exceeding 450m² and up to 2000m² gross floor area per tenancy, offices between 501m² – 1000m² per tenancy and retail greater than 1000m² and up to and including 4,500m² in Sub-Precinct C
- (a) the compatibility of the effects of intensity and scale of the development arising from the numbers of people and/or vehicles using the site, with the existing and expected future amenity values of the surrounding area and any practicable mitigation measures that would be appropriate to manage those effects;
 - (b) the effects of the design and location of parking areas and vehicle access and servicing arrangements on visual amenity of the streetscape and on pedestrian safety;
 - (c) the effects of the size, composition, characteristics, and concentration of retail or office activities proposed in Sub-precinct C on the existing and expected future function, role and amenity of other Metropolitan or Town Centres that are zoned or are identified in a Council approved Structure Plan for Drury, having regard to the need to enable convenient access of communities to commercial and community services while disregarding any effects ordinarily associated with trade effects on trade competitors;
 - (d) In determining (c) above, whether the activity is coordinated with the rate of residential and commercial development in the local area to ensure that the activity individually, or in combination with other consented or permitted activities, meets the needs of the local catchment;
 - (e) whether the retail or office proposal, individually, or in combination with other consented or permitted activities, meets the needs of the local residential and employment catchment;
 - (f) the assessment of the above matters having regard to the need to provide for the functional requirements of the activity.
- (5) Trade Suppliers in Sub-Precincts A and C greater than 11,000m² gross floor area
- (a) Effects of the activity on the safe and efficient operation of the surrounding transport network.
- (6) Infringement I410.6.4 – Sub-Precinct C (Noise and Ventilation)
- (a) the effects of land transport noise of the noise sensitive activity;
 - (b) the potential reverse sensitivity effects of the infringement.

I410.8.2. Assessment criteria

The Council will restrict its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application, in addition to the

matters specified for the relevant restricted discretionary activities in the overlay, Auckland-wide or zone provisions:

- (1) subdivision, or any development of land which precedes a subdivision being undertaken, which complies with Standard I410.6.3:
 - (a) the extent to which the subdivision or development is in accordance with the relevant codes or codes of practice or engineering standards, and whether the road network is consistent with its intended function as set out within those codes or codes of practice and the subdivision design assessment criteria set out in Appendix I410.11.
 - (b) the extent to which the subdivided lots or the land on which the development is to be undertaken are geotechnically suitable for the development of a permitted activity or an activity for which resource consent has been obtained. This may include an assessment of the following:
 - (i) any proposed fill materials;
 - (ii) stability in areas of deep cut particularly adjacent to the boundaries of the Precinct;
 - (iii) settlement and stability issues associated with the Hingaia and Maketu streams;
 - (iv) time dependent settlement;
 - (v) ground seismicity and buffer zone; or
 - (vi) liquefaction;
 - (c) the extent to which subdivision and development occurs in a logical and sequential manner in relation to:
 - (i) the implementation of improvements and/or upgrades to the roading network;
 - (iA) the implementation of a potential pedestrian and cycling connection shown on Precinct Plan 1 between the Drury South Residential Precinct and Sub-Precinct C and the integration of this with proposed built development in Sub-Precinct C;
 - (ii) the establishment of the stormwater management areas within sub-precinct D identified on Precinct Plan 1 and catchment wide stormwater management devices as identified in the relevant discharge consent and/or stormwater management plan required by the special information requirements below;
 - (iii) the provision for overland flowpaths identified in an approved discharge consent and/or stormwater management plan required by the special information requirements below; or

- (iv) the provision of wastewater facilities, water supply, electricity, gas and telecommunications, including the protection and /or relocation of any existing local electricity, gas and communications assets;
- (d) the extent to which subdivision design and layout gives effect to the objectives and policies identified for the Drury South Precinct and the subdivision design assessment criteria set out in Appendix I410.11.1.
- (e) the extent to which the earthworks required by the subdivision or development:
 - (i) avoid or mitigate adverse effects on land stability, existing underground infrastructure facilities (such as the Vector gas pipeline and Telecom telecommunications cables), and groundwater quantity and quality;
 - (ii) avoid or mitigate adverse effects on the visual quality of the landscape or natural landforms, watercourses, habitats or vegetation;
 - (iii) avoid or mitigate adverse effects on traffic management within the area or create damage, danger, or nuisance to surrounding residents or the Ramarama School;
 - (iv) consider opportunities to recharge the aquifer using treated stormwater where permeable soils are available;
 - (v) ensure that the creation of level development platforms are contoured to integrate with the surrounding street environment and open space corridors;
 - (vi) screen retaining walls from public view;
 - (vii) provide and maintain continuity of overland flow paths both within the site, as well as upstream and downstream; and where overland flow paths are diverted and/or altered show how:
 - potential effects on other properties from the diversion or alteration is avoided or mitigated;
 - effects from scouring and erosion are mitigated;
 - further changes to the overland flow path will be limited, when appropriate through an easement in favour of Council;
 - (viii) if located in the 1% AEP modified flood plain, including earthworks for the formation of stormwater management devices such as wetlands and/or for necessary infrastructure (including associated landscaping and accessways), whether:
 - the design of the device, including associated earthworks, landscaping and accessways avoids impeding flood flows or otherwise exacerbating flood risk upstream or downstream of the site and how such effects can be avoided;

- the design of the device or mitigation works is resilient to damage from the full range of flood events;
 - access to the device for maintenance is provided and maintenance plans address potential effects that may result from the proposed access route;
- (f) the extent to which the following transportation network requirements are met:
- (i) whether subdivision or development will result in the central 'Maketu Road' being progressively constructed on an alignment consistent with that indicated in Precinct plan 2;
 - (ii) whether the following road projects indicatively shown on Precinct plan 2 will be completed before any buildings within the precinct are occupied:
 - the realignment of existing Quarry Road onto the alignment of the 'Maketu Road' from the State Highway 1 over-bridge to the southern extent of the first stage of subdivision;
 - the upgrading of the existing Quarry Road/Great South Road intersection;
 - the provision of traffic signals or an alternative upgrade which achieves equivalent transport performance at the existing Great South Road/State Highway 22 (Karaka Road) intersection;
 - under the scenario where development of the Precinct proceeds in advance of the Mill Road Corridor Project, the upgrading of the right turn bay on Waihoehoe Road at the Waihoehoe Road/Fitzgerald Road intersection;
 - (iii) whether a new dedicated pedestrian path and cycleway has been constructed between the existing Drury township and the precinct before development and occupation of more than 25 hectares of Industrial zoned land within the precinct occurs;
 - (iv) whether Ramarama Road, at the northern boundary of the precinct remains open as defined on Precinct Plan 2;
 - (v) whether the Link Road from the Maketu Road to Fitzgerald Road shown on Precinct Plan 2 is provided and shoulder widening, intersection treatments and localised widening works within the existing road reserve on Fitzgerald Road between the Link Road and Waihoehoe Road is undertaken before Ramarama Road is closed at the northern boundary of the Precinct;
 - (vi) whether the 'Avenue' Road and the portion of the Maketu Road shown on Precinct Plan 2 is provided as the adjacent Sub-precinct C is

developed, and whether the 'Avenue' Road is connected with Maketu Road at the southern end of Sub-precinct C, and is extended to, but not connected with, Maketu Road at the northern end of Sub-Precinct C. An alternative location for vehicle access through a portion of Sub-precinct C (the 'Avenue Road') may be appropriate where it is safe and efficient, and provided that a continuous and high amenity pedestrian and cycle connection is located along the western edge.

(vii) whether Ramarama Road, at the southern boundary of the precinct, is closed to all vehicular traffic by the time 89 hectares of Industrial zoned land within the precinct has been subdivided or developed;

(viii) whether the southern portion of the Maketu Road that connects to Ararimu Road is constructed before:

- Ramarama Road is closed at the southern boundary of the Precinct; or
- any development of the precinct south of the New Quarry Access Road shown on Precinct Plan 2 occurs;

(ix) whether State Highway 1 Ramarama Interchange is capable of accommodating the traffic from the subdivided and developed portion of the precinct including the predicted traffic from the land which is the subject of the application. To enable assessment of this criterion, applications for subdivision or development must include a traffic assessment of the effects of the subdivision or development on the interchange prepared by a qualified and experienced traffic engineer.

Note: This criterion will be considered to be met where such an assessment includes a review undertaken by or on behalf of NZTA which confirms that there is sufficient capacity or planned capacity at this interchange to accommodate the predicted increase in traffic;

(g) in respect of those new areas of planting in stormwater management and wetland areas in Sub-precinct D the extent to which:

- (i) plants should be eco-sourced as close as possible to the developed area;
- (ii) the mechanisms proposed ensure the weed and pest management programme and the herpetofaunal mitigation/rehabilitation plan are implemented;
- (iii) The public open space area that adjoins the southern boundary of the Precinct will provide the basis of an ecological corridor linkage of 30 metres in width between the southern buffer in the Precinct and bush areas in the Special Purpose – Quarry Zone when planted with suitable tree species at the time of subdivision of the adjoining industrial zoned land;

- (h) whether the existing 110kV Counties Power electricity lines are provided for in the existing positions in any subdivision or whether the existing lines can be relocated in agreement with Counties Power;
- (i) whether the stormwater management plan and works proposed as part of the subdivision or development:
 - (i) comply with any approved discharge consent;
 - (ii) are effective in avoiding, remedying or mitigating the potential adverse effects of stormwater discharge on water quality and flood hazards. In the case of stormwater management facilities within private land this assessment will include how the operation and maintenance of such facilities is to be secured by way of appropriate covenants or consent notices;
 - (iii) can effectively contain all the natural and diverted streams and their margins, wetlands, and other off-site stormwater management devices;
 - (iv) provide for overland flowpaths;
 - (v) require a bond or other security to be provided to ensure that the stormwater management works will be completed, with such bond to be released when the works are completed and the stormwater management areas and their devices are vested in council;
 - (vi) ensure that subdivision and development does not result in increased flood risk to habitable rooms for all flood events from the 50% and up to 1% AEP flood event downstream and upstream of the precinct;
- (2) the creation of vehicle access to any site with frontage to or from the Maketu Road shown on Precinct plan 2 which also has frontage to another road shown on that plan:
 - (a) any adverse effect from the location and design of the access on the safe and efficient operation of the adjacent transport network, including public transport, cyclists and general traffic, having regard to:
 - (i) the number of other access points to or from the Maketu Road in the vicinity of the proposed access;
 - (ii) whether conflicts will be reduced by the presence of a raised central median which prevents right turning in the vicinity of the site;
 - (iii) visibility and safe sight distances particularly the extent to which vehicles entering/exiting the site can see, and be seen by, pedestrians, cyclists and other vehicles on the footpath and road carriageway;
 - (iv) existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring in all weathers;

- (v) existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in the this Plan; and
 - (vi) existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleways.
- (b) whether the access arrangements are practicable and adequate having regard to site limitations and layout, and arrangement of buildings and activities, users and operational requirements, and having regard to whether the site can reasonably be served by shared or amalgamated access with another site or sites on the Maketu Road where the sites in question are held in the same ownership.
- (3) new buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities in Sub-precinct C:
- (a) building design:
 - (i) the extent to which buildings on corner lots are designed to provide for a quality architectural response to the corner. Appropriate design responses include the provision of additional height at the corner, windows and activities addressing both street frontages and avoiding blank walls to one or both sides of the corner;
 - (ii) the extent to which built development fronts the street and open space with a quality recognisable pedestrian entry or entries to the street.
 - (iii) Where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road;
 - (iv) the extent to which developments for trade suppliers, garden centres, marine retail, motor vehicle sales or supermarkets provide a quality frontage to the street and provide appropriate treatments to side and rear boundaries, including quality fencing and landscaping, to recognise the broader range of activities enabled in sub-precinct C and the higher standard of amenity expected in the Mixed Use zone, while also taking into account the functional requirements of the activity.
 - (b) parking area design:
 - (i) the extent to which parking is provided on the road network adjacent to sub-precinct C areas and on-site parking layouts are designed in accordance with the typical layout identified in Appendix I410.11.1.
 - (c) signs:

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- (i) the extent to which signs for each sub-precinct C development are coordinated including the physical location of signs, their type-face, style and content;
- (d) service area location:
 - (i) the extent to which service areas are located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service/storage and dock areas;
- (e) vehicular access:
 - (i) the extent to which proposed vehicle access to sites adjoining the Maketu Road shown on the Precinct plan 2 minimises any conflict with safety and efficiency of these routes as part of the strategic freight network;
- (f) mitigation of traffic noise:
 - (i) the extent to which premises offering food and beverages, health professional rooms and childcare centres (being permitted activities which may be sensitive to heavy commercial vehicle traffic noise) are designed to mitigate traffic noise effects. Mitigation measures may include acoustic treatment of buildings and arranging site layout so noise sensitive activities are screened from the heavy traffic noise.
- (g) Drury South precinct Appendix
 - (i) The extent to which buildings and development in Sub-Precinct C are consistent with the criteria in Appendix I410,11.2.
- (4) A single supermarket greater than 2000m², supermarkets exceeding 450m² and up to 2000m² gross floor area per tenancy, offices between 501m² – 1000m² per tenancy and retail greater than 1000m² and up to and including 4,500m² in Sub-Precinct C
 - (a) The extent to which the effects of the size, composition, characteristics and concentration of retail or office activities in Sub-precinct C will be complementary to the existing and expected future function, role and amenity of other Metropolitan or Town Centres that are zoned or are identified in a Council approved Structure Plan, having regard to the need to enable convenient access of communities to commercial and community services while disregarding any effects ordinarily associated with trade effects on trade competitors;
 - (b) The extent to which retail that meets local convenience needs is located at the southern part of sub-precinct C, where it would be most accessible to the Drury South Residential precinct and would support a local community focal point.

- (c) The extent to which the activity is coordinated with the rate of residential and commercial development in the wider area to ensure that the activity individually, or in combination with other consented or permitted activities, meets the needs of the local catchment;
 - (d) The extent to which the size, composition and characteristics of any office activity would serve a local function and support adjoining businesses in Drury South.
- (5) Trade Suppliers in Sub-Precincts A and C greater than 11,000m² gross floor area
- (a) the extent to which the activity affects the safe and efficient operation of the adjacent transport network including pedestrian and cycling movement, particularly at peak traffic times;
 - (b) the extent to which the proposal incorporates mitigation measures to address adverse effects.
- (6) Infringement I410.6.4 – Sub-Precinct C (Noise and Ventilation)
- (a) the extent to which the type of activity proposed is likely to be adversely affected by the expected levels of transport noise;
 - (b) the extent to which any characteristics of the proposed use or area make compliance with of New Zealand Standard NZS6806:2010 "Acoustics – Road Traffic Noise – New and Altered Roads" unnecessary;
 - (c) whether the building and any outdoor living areas are appropriately located, and/or setback an appropriate distance from the Spine Road and/or State Highway 1 to minimise the potential for adverse effects from land transport noise.

I410.9. Special information requirements

I410.9.1. Earthworks plans

- (1) Any application for subdivision or development must be accompanied by detailed earthworks plans. Such plans must:
 - (a) describe the nature and scale of the proposed earthworks, such as the extent of cut and/or fill, sources of fill and how the cut and fill is to be transported;
 - (b) describe the construction management and communication methods to be followed to minimise nuisances and disruption to surrounding residents and Ramarama School (in particular, dust, traffic and noise impacts) during the construction period; and
 - (c) provide detailed design of the modified flood plain.

I410.9.2. Ecological management plans

- (1) In respect of any new areas of planting in Sub-precinct D the following must be provided:
 - (a) a weed and pest management programme for any new areas of planting within the stormwater management areas and wetland areas and remaining indigenous forest fragments in Sub-precinct D; and
 - (b) a herpetofaunal mitigation/rehabilitation plan which targets only potentially suitable lizard habitat for relocation searches.

I410.9.3. Stormwater management report and plans

- (1) Any application for subdivision or development preceding subdivision must be accompanied by detailed stormwater management report and plans. Such report and plans must:
 - (a) describe how the plans comply with the conditions of any relevant discharge consent;
 - (b) identify overland flow paths;
 - (c) describe the nature and extent of any off-site stormwater management devices and how these devices are to be delivered if they are on land outside the application site;
 - (d) if stormwater management devices are to be located within the modified 1% AEP floodplain, describe how these devices are to be designed to be resilient to flood-related damage while not exacerbating flood risks for upstream or downstream activities;
 - (e) where streams are to be diverted and/or recreated as identified on the precinct plan, describe how this is to be achieved in a way that ensures that they function in a manner similar to natural stream systems. Detailed landscape treatment plans will be required to demonstrate:
 - (i) the proposed long section and cross sections;
 - (ii) how the new stream banks are to be stabilised;
 - (iii) how pool – riffles - run sequences are to be formed; and
 - (iv) how stormwater outlets are controlled.
- (2) A subdivision application for vacant lot subdivision or a land use application for a new building or buildings in Sub-precinct C must be accompanied by an indicative 'integration plan' showing how the proposed development integrates with potential future development in the remainder of Sub-precinct C, including existing or potential transport connections and activities.

To avoid doubt, this plan is not subject to any approval from the Council and is for information only. Its purpose is to inform how a particular stage of

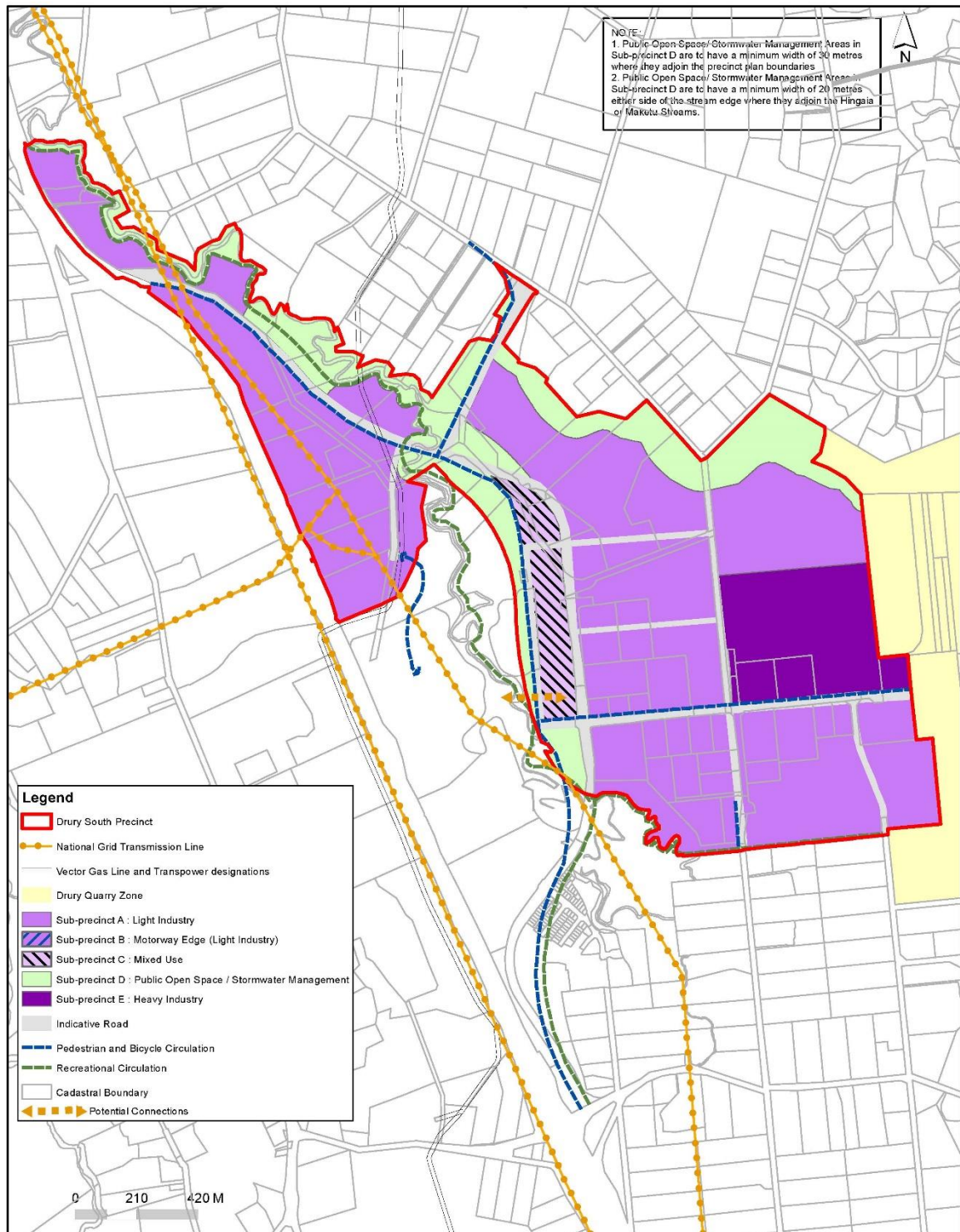
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development will positively contribute to the visual quality and interest of streets, public open spaces and pedestrian amenity, movement and safety (Policy H13.3(3)), in an integrated manner across Sub-precinct C.

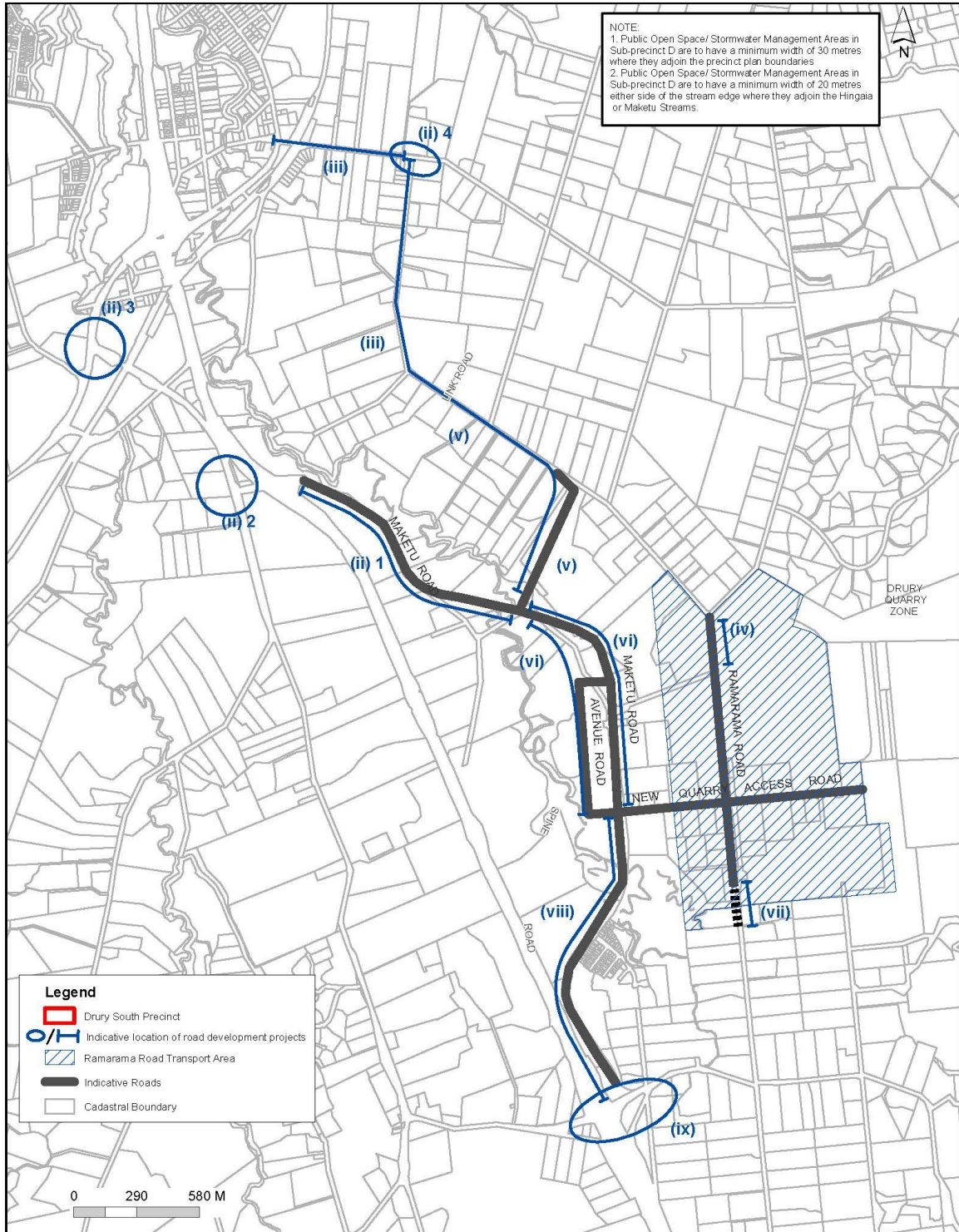
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I410.10. Precinct plans

I410.10.1 Drury South: Precinct plan 1



I410.10.2 Drury South: Precinct plan 2



I410.11. Appendices

Attachment One

I410.11.1: Attachment 5 (Drury South Appendix)

APPENDIX: DRURY SOUTH PRECINCT _SUBDIVISION DESIGN ASSESSMENT CRITERIA

PURPOSE OF APPENDIX I410.11.1

Within the Drury South Precinct, applications for any subdivision or any development of land which precedes a subdivision being undertaken which complies with Standard I410.6.3 as a restricted discretionary activity will be assessed in terms of a series of matters to which the Council will restrict the exercise of its discretion. One of the matters which the Council will have regard to as set out in standard I410.8.2(1)(d) is:

the extent to which subdivision design and layout gives effect to the objectives and policies identified for the Drury South Precinct and the subdivision design assessment criteria set out in Appendix I410.11.1.

In addition, the criteria will also be used in the consideration of discretionary applications for subdivision, as appropriate.

This appendix sets out assessment criteria under a number of "Design Elements". Accompanying illustrations are intended to support the text and represent good design solutions, but are not intended to represent the only design solution. All illustrations are indicative only.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged.

It is recognized that certain proposals will not achieve absolute accordance with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or ;
- whether the proposal represents a better design solution than that suggested by the criterion.

Planting plans and maintenance plans for recreation and esplanade reserves and stormwater management areas will need to be submitted with applications for subdivision consent and approved by the Council.

Design Element 1: Road, Reserve and Access Networks:

1. Earthworks should be undertaken principally at the initial subdivision stage, and where appropriate the creation of reasonably flat sites should occur at the bulk earthworks stage (in order to avoid creating retaining walls at site development stage).
2. Road patterns should maximise convenient / direct access to the Maketu Road and limit connection to existing rural roads (such as Ararimu Road) except where this relates to the wider essential network.
3. The road pattern should facilitate access to and accessibility within Sub-precinct C Mixed Use.
4. Road patterns should be logical and contribute to the legibility of and ease of wayfinding within the area (refer Diagrams 1 and 2 for generic legibility and proposed street hierarchy).
5. Subdivision layout design should achieve protection and enhancement of all significant streams / tributaries to be retained and their riparian corridors (20m minimum either side from edge of stream) and concentrate open space as part of the riparian network (refer Diagram 3).
6. Subdivision layout design should achieve an interconnected open space and movement network.
7. Safe pedestrian and cycle routes through the structure plan area should be integrated with the riparian, reserve and road design.
8. Equestrian bridle trails should be integrated with riparian reserve development and provide access to the large centrally located public open space / stormwater management area.

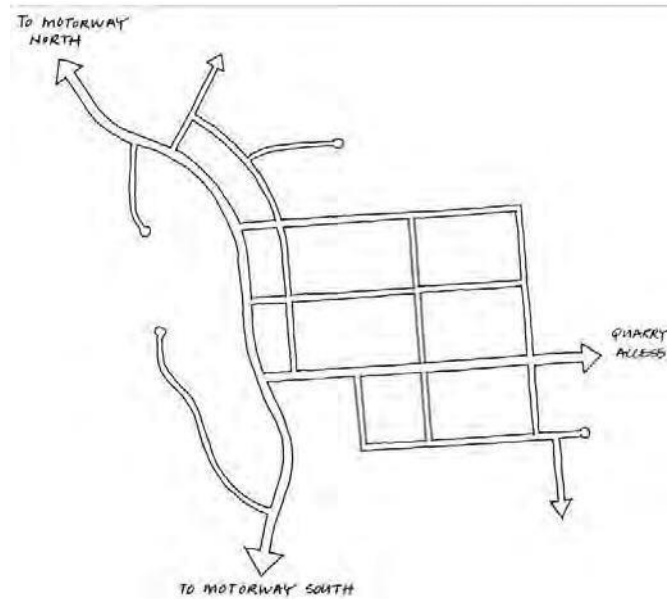


Diagram 1: Legible road hierarchy to assist wayfinding

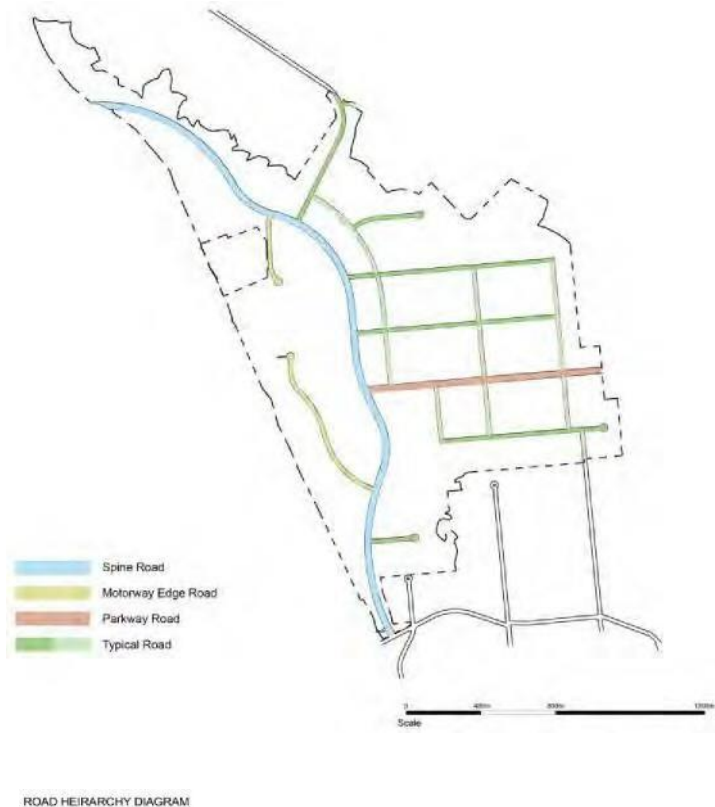


Diagram 2: Road hierarchy

9. Layouts should retain mature trees within the riparian corridors, particularly those of indigenous species.
10. In Motorway Edge Sub-precinct areas layouts should seek to retain as many existing established trees, particularly those of indigenous species, as possible.
11. In Motorway Edge Sub-precinct, areas access to sites off the Maketu Road should be combined wherever practicable.

Explanation:

Design Element 1 pertains to the overall site topography and the general layout of the networks of roads, reserves and other access linkages that make up the public space of the Drury South Precinct. These should be considered in an integrated fashion together with the development blocks that they create.

The existing site topography within the proposed Precinct is relatively flat although bulk earthworks including cut and fill will be required to establish levels for future development above the flood plain and appropriate falls across the land.

The riparian corridors of the Hingaia and Maketu Streams and their significant tributaries will remain an important feature of the site topography once the Precinct is established. Vegetation associated with these corridors is also important to the structuring, screening and ecology of the area and its proposed activities.

The riparian corridors also provide a focus for future recreation and open space development and form part of the enhancement framework for the Precinct.

The road network and hierarchy (refer Diagrams 1 and 2), has been designed to efficiently direct traffic into and out of the Precinct connecting to the Southern Motorway (SH1) at both the Ramarama (south) and Drury (north) interchanges. The proposed Spine Road is important to the legibility and traffic efficiency of the Precinct; this route will provide the primary connection into and out of the Precinct with other streets connected to the Maketu Road through corridor.

The proposed street network has also been designed to limit the impact of vehicles destined for the Precinct on existing rural residential and community roads such as the road accessing and adjacent to the Ramarama School. Implementation of the street network to achieve the beneficial improvements to heavy vehicle (including quarry truck) and other Precinct related traffic movement is imperative as a part of delivery of the zone.



Diagram 3: Open space concentrated along Hingaia, Maketu, Roslyn and Northern Diversion Stream corridors

By its nature the Sub-precinct C Mixed Use will require a finer grain street network with smaller street blocks, greater walkability, good service access and parking.

A legible road pattern (refer Diagram 1) is one that is easily understandable for the people that use it and that provides cues for first time users as well as those habitual users. Consistent road design and landscape themes can further emphasise the position of each street in the road hierarchy and in the pattern of streets in the wider area. Road patterns that are logical and easy to comprehend and navigate make an area feel more comfortable and help to provide a sense of identity.

Design Element 2: - Block Size, Lot Type and Orientation:

1. Blocks should be of a scale and shape to achieve a permeable street layout suited to the functional requirements of the proposed land use.
2. All lots should front onto and be accessed directly from a legal road. Rear lots are to be avoided (refer Diagram 4).
3. Through lots (with dual road frontage) are permissible (refer Diagram 4).

Explanation:

Design Element 2 describes the principles for consideration in the layout of blocks and lots within the Precinct.

Blocks within an industrial area are typically larger than those within finer grain residential or Mixed Use areas. A good permeable and well connected-street network is however still required in Light and Heavy Industry Sub-precincts A, B and E to facilitate access, provide an appropriate street address and reduce traffic volumes on side streets. Within Sub-precinct C Mixed Use, Design Element 1 also provides opportunities for views through to the open space corridor to the west of the Sub-precinct from Maketu Road.

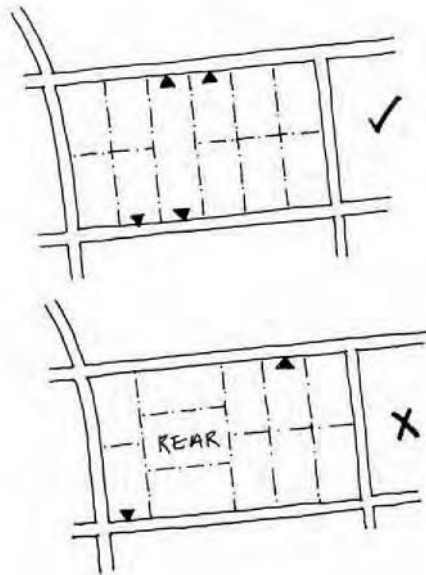


Diagram 4: All lots should front onto a legal road; through lots are permissible

Lots need to be of a size and shape to accommodate large scale, land extensive land uses and flexible to enable reasonable long term growth. At the same time rear lots are considered undesirable with a preference for development to address the street.

Design Element 3: - Roads and Accessways:

1. In addition to Auckland Transport Code of Practice and Council's Development Code requirements, minimum road and design elements should be appropriate to the nature of the function that they provide and also reflect urban design legibility considerations – i.e. wayfinding, as set out in Table 1 below.
2. Cyclists should be accommodated on the street carriageway.
3. A consistent palette of traffic management tools should be used across the Precinct. Traffic management devices such as chicanes, speed humps and other such restrictive management devices are not expected, however the use of thematic planting and measures such as localised narrowing to create thresholds or define changes in the street environment could be used.

4. All streets are required to accommodate strong avenue specimen tree planting. Refer Cross Sections Attachment 1. This planting is required to achieve the breaking up of the overall scale of the development particularly as seen from elevated locations, as well as to establish the enhanced expected amenity and character of the Precinct.
5. In addition to the street avenue planting a planted central median is also required on the roads identified as 'Arterial' and 'Parkway'.

Explanation:

Design Element 3 pertains to principles for the design of roads and other access routes within the Precinct. Road design should be appropriate to function and provide practical widths for vehicular access, including for emergency vehicles, parking, planting and services.

Pedestrian and cycle paths should generally be integrated with road and reserve design. Paths which are separated from vehicle routes should be designed for safety.

Table 1 below sets out the indicative function and design elements of the collector roads within the Drury South Precinct.

Table 1 – Indicative Road Function and Required Design Elements

Road Name	Proposed Role and Function of Road in Precinct Area	Freight or Heavy Vehicle Route	Minimum Road Reserve ²	Total Number of Lanes	Design Speed (kph)	Access Restriction	Bus Provision ⁴	Median	Cycle Provision ⁵	Pedestrian Provision
Maketu Road ¹ South of Link Road	Arterial	Yes	33.45m	4	60	Yes ³	Yes	No	Yes – separated	Both Sides
Maketu Road (North of Link Road)	Collector	Yes	27.65m	2	60	Yes ³	Yes	Yes (Flushed)	Yes	Both Sides
New Quarry Access Road ¹	Collector	Yes	27.65m	2	50	No	Yes	Yes (Flushed)	Yes – shared path	Both Sides
Link Road	Collector	Yes	27.65m	2	60	No	Yes	Yes (Flushed)	Yes	Both Sides
Ramarama Road (Fitzgerald Road Connection)	Collector	Yes	21m	2	50	No	Yes	Yes (Flushed)	Yes	Both Sides

Note 1: Already have Engineering Plan Approval and are under construction

Note 2: Typical minimum cross section which may need to be varied in specific locations where required to accommodate batters, structures, intersection design, significant constraints or other localised design requirements.

Note 3: Refer to Assessment Criteria I410.8.1(2)

Note 4: Carriageway lanes and geometry of intersections capable of accommodating buses.

Note 5: Type of cycle provision, i.e. separated or shared path, to be confirmed at the Engineering Plan Approval stage, based on nature and character of the Local Road.

Design Element 4: Reserves, Stormwater Management Areas and Riparian Planting:

1. Stormwater detention and treatment reserves should be located in general accordance with the locations shown in the Drury South Precinct Plan and in accordance with the relevant stormwater discharge consents, the Council's Development Code and relevant technical publications. The Cross Sections (Attachment 2) illustrate the Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections.
2. Stormwater ponds should be designed to fit in with the surrounding landscape and appear as an integrally designed infrastructural component of the overall setting.
3. Vegetated buffers, not less than 40m in total width for any retained permanent or diverted stream, should be provided on the margins of streams, ponds and wetlands and should:
 - Include native species as identified in Attachment 3;
 - Include native trees on the lower and upper banks of ponds predominantly to the north and west to provide shade;
 - Provide a minimum of 10m of native planting either side of the stream corridor including shallow water rushes and sedges;
 - Avoid vegetation that will exacerbate flooding and the blockage of water flow along the immediate riparian corridor.

The only exception to these requirements is the retained permanent stream in the northwest of the Precinct (adjacent to the Transpower site) which will be subject to a minimum requirement of 10m of native planting either side of the stream corridor only.

Note: Attachment 5 sets out 'Stream and Wetland Rehabilitation Guidelines (June 2013) for the DSSP area.

4. Walkways / cycleways along riparian corridors and through buffer planting should be designed to minimise any impacts on ecological function and give due consideration to personal safety and Crime Prevention Through Environmental Design (CPTED) principles.
5. Edge buffer reserves should be located in accordance with the Drury South Precinct Plan, be a minimum of 30m in width and be planted in generally accordance with Diagram 5 below. Planting should be fast growing rural shelter belt species capable of attaining a minimum height of 6 metres at maturity.



Diagram 5: Typical landscape buffer cross section

6. Suitable mechanisms to ensure the establishment and ongoing maintenance of landscaping of reserves and stormwater management areas until those areas are vested in the Council will be required to ensure the long term success of any landscaping.

Explanation:

Design Element 4 pertains to matters for consideration for locating, sizing and designing reserves stormwater management areas and riparian planting. These areas will be generally located in accordance with the locations shown in the Drury South Precinct Plan; regard should also be given to Design Element 5 when designing reserves within the Precinct.

The principal reserve network within the Precinct, as illustrated in the Drury South Precinct Plan, is structured around riparian protection and enhancement as well as stormwater management including detention and treatment. The reserve network is however designed for multiple functions and values including passive and active recreation, pedestrian / cycle commuter access, ecological values, visual screening / separation and aesthetic amenity.

The Precinct Plan also includes buffer reserves, adjoining the Light Industry zoned Sub-precincts A and B. The main purpose of these reserve is to physically and visually screen and separate adjacent existing land uses and residents from these areas. These reserves are planted to maintain a robust rural character with a woodlot/ shelter belt form of land management. Whilst providing multiple functions including biodiversity and aesthetic values, their primary function will remain as that of a buffer to land uses outside of the Precinct.

Design Element 5: Reserve Interface Design:

1. Reserves intended for public recreation and use should be designed to be bounded by public roads as much as possible given topographical and natural feature constraints. (Note proposed buffer reserves are not intended to be bounded by public roads)
2. Where reserves or riparian buffer areas adjoin lots, the boundary should be securely delineated and fenced to avoid encroachment (refer Diagram 5).

Explanation:

Reserves intended for public use that are well fronted by public roads are more secure because of the informal surveillance from the road and activities that interface with the road across the carriageway. Ideally not less than half the total length of legal boundary of any reserve should adjoin a legal road.

Design Element 5a: Earthworks and Retaining Walls

1. Changes of level adjoining streets and open space corridors should be achieved by gently battering and contouring land.
2. Where retaining walls are required, they should be screened from public view. This may be achieved by planting and breaking up the vertical extent of walls through physical stepping.

Additional Sub-Precinct Criteria

In the case of subdivision within Sub-precinct B Motorway Edge and Sub-precinct C Mixed Use, the following criteria shall also apply and take precedence over the general assessment criteria for subdivision stated above, where this is inconsistency or conflict.

Additional Design Element 6: Subdivision within Sub-precinct B Motorway Edge

1. Earthworks should be designed to retain a more natural, undulating topography and character outside of building platforms and other areas required through function to retain a flat topography.
2. Intersections between public roads serving the sub-precinct and the north south primary road (Maketu Road corridor) should be minimised.
3. Specimen tree planting should be provided on all public and internal private access roads within the Motorway Edge Sub-Precinct.

Additional Design Element 7: Subdivision within Sub-precinct C Mixed Use

1. Where through lots with dual street frontage are created, these should provide frontage to both street edges (i.e. no rear elevations to the street). However, where buildings are required to be setback from Maketu Road for acoustic amenity reasons, a safe and attractive edge to Maketu Road should be provided. Methods to achieve this include providing landscaping at the street edge and providing a good degree of glazing on the building facade overlooking Maketu Road.

APPENDIX I410.11.2: DRURY SOUTH PRECINCT – SUB-PRECINCT B MOTORWAY EDGE PRECINCT AND SUB- PRECINCT C MIXED USE ASSESSMENT CRITERIA

PURPOSE OF APPENDIX I410.11.2

In Sub-precinct B Motorway Edge New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities' are controlled activities and in Sub-precinct C Mixed

Use, 'New buildings' and 'Additions and alterations not otherwise provided for' are restricted discretionary activities.

Rule 6.15.1 sets out controlled activity assessment criteria for all restricted discretionary activities in the industrial zones and contains the following clause:

"In the case of the Motorway Edge Precinct and the Commercial Service Precinct within the Drury South Structure Plan Area (Part 5B.4 in Section One of the District Plan) the Council will, in addition to the criteria set out in (a) to (f) above, assess the application against the criteria set out for those precincts in Appendix 5B.4.B in Section One of the District Plan."

This Appendix sets out assessment criteria under a number of "Design Elements" for both Sub-precinct B Motorway Edge and the Sub-precinct C Mixed Use.

The criteria listed under each Design Element are intended to give flexibility, enabling site responsive designs, while ensuring that development provides a positive contribution to the amenity of the Precinct.

The criteria are intended to guide development rather than prescribe exact design and layout. Most criteria are illustrated. The illustrations are intended to support the text and are representative of good design solutions, but are not necessarily intended to represent the only design solution.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged. It is recognised that certain proposals will not achieve absolute accordance with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or ;
- whether the proposal represents a better design solution than that suggested by the criterion.

Applicants will also be required to provide a Landscape Concept Plan with sufficient detail to ensure that the relevant assessment criteria are able to be considered, identifying hard and soft landscaping treatment, large grade specimen trees (species and planting size), groupings of ground covers and shrubs with species schedule.

SUB-PRECINCT B MOTORWAY EDGE PRECINCT DESIGN ASSESSMENT CRITERIA

The following criteria shall apply to 'New buildings (excluding buildings for network utilities) or additions to buildings not otherwise provided for as permitted activities Sub-precinct B Motorway Edge Precinct.

Design Element – Internal Private Access Roads:

1. Specimen tree planting should be provided on all public and internal private access roads within the Sub-precinct B Motorway Edge.

Design Element – Existing Vegetation:

1. Where ever possible layouts should retain and protect existing mature trees, particularly those of indigenous species, where these contribute to the site character and amenity.

Design Element – Planting:

1. Planting should be designed to have a large scale landscape effect and combine native as well as appropriate exotic species to provide seasonal change and quality amenity.
2. Where reserve land adjoins the motorway, boundary planting that creates a continuous visual barrier to eastward views from the SH1 (Southern Motorway) corridor should be avoided, however landscape design should emphasise the current sequence of intermittent views to the Hunua Ranges from the SH1 corridor and the pattern of variable depth of such views.
3. Where industrial sites adjoin the motorway boundary, a detailed rule applies requiring a double row of Leyland Cypress to create the appearance of a rural shelterbelt providing a continuous visual barrier defining the curve in the motorway alignment.

Design Element – Buildings:

1. Buildings should be located with design consideration for their visibility and reduced visual impact as viewed from the SH1, (Southern Motorway) corridor and the desirability of maintaining a sense of openness as seen from the motorway.
2. The visual mass of larger buildings should be minimised by employing the following methods:
 - Utilising subdued, recessive colours;
 - Providing variation in materials and finish for facades viewed from the motorway;
 - Creating variation of roof profiles with consideration given to the overall roofscape viewed from the motorway;
 - All rooftop servicing and plant should be designed as an integral part of the roofscape with particular consideration given to the view from the motorway.

Design Element – Parking Areas:

1. Parking areas should be designed to incorporate trees to break up the scale of hard surface areas.
2. Adoption of the Fully Planted Permeable Carpark Design Layout (refer Diagram 6) style of parking is advocated within Sub-precinct B Motorway Edge.

Design Element – Internal Site layout:

1. Storage and waste management activities should be located and / or designed to be screened from view of the State Highway.

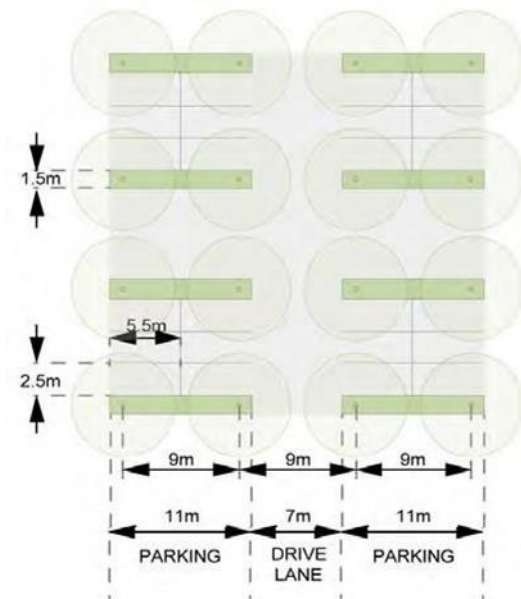


Diagram 6: Fully planted permeable carpark design layout - detail

SUB-PRECINCT C MIXED USE DESIGN ASSESSMENT CRITERIA

The following criteria shall apply to 'New buildings' and 'Additions and alterations not otherwise provided for' in Sub-precinct C Mixed Use.

Design Element – Block Size, Lot Type and Orientation:

1. Buildings on corner lots should be designed to provide for a quality architectural response to the corner. Appropriate design responses include provision of additional height at the corner and windows and activities addressing both street frontages. Service activities such as loading docks or storage yards should not be located on corners or any site frontage, however, where this is required to support the functional and operational requirements of the activity, the service area visible from the street should be minimised as much as practicable and attractively screened from public view with landscaping.

Design Element – Street Interface Design:

1. Built development should front the street with a quality, recognisable pedestrian entry to the street.
2. At-grade parking should be located and designed in such a manner as to avoid or mitigate adverse effects on pedestrian amenity and the streetscape. This includes through positioning carparking away from street frontages, to the sides or rear of buildings and the use of extensive landscaping within the carpark, including tree planting. Refer to Attachment 4 for an example of a layout and design consistent with this guideline.

Design Element – Signage:

1. Signage for each Sub-precinct C Mixed Use development

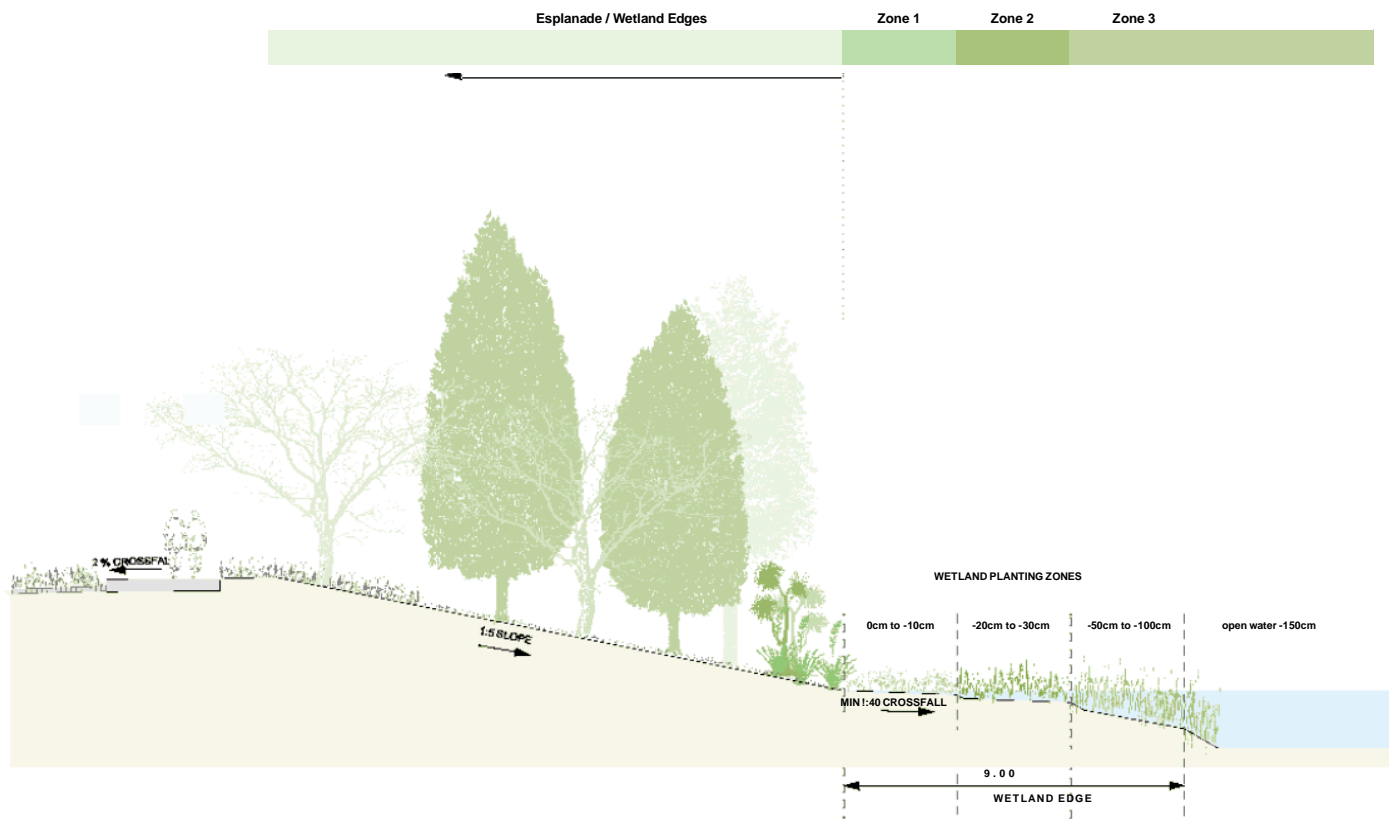
should be coordinated including the physical location of signs, their type face, style and content with a maximum of two signs per business, one located to address the street frontage and one to identify the building entry (a third sign is permissible where the service access is separate from building entry or there are multiple entries).

Design Element – Service Areas:

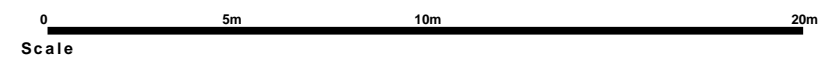
1. Service areas should be located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service / storage and dock areas. However, where this is required to support the functional and operational requirements of the activity, the service area visible from the street should be minimised as much as practicable and attractively screened from public view with landscaping.

Attachment 2

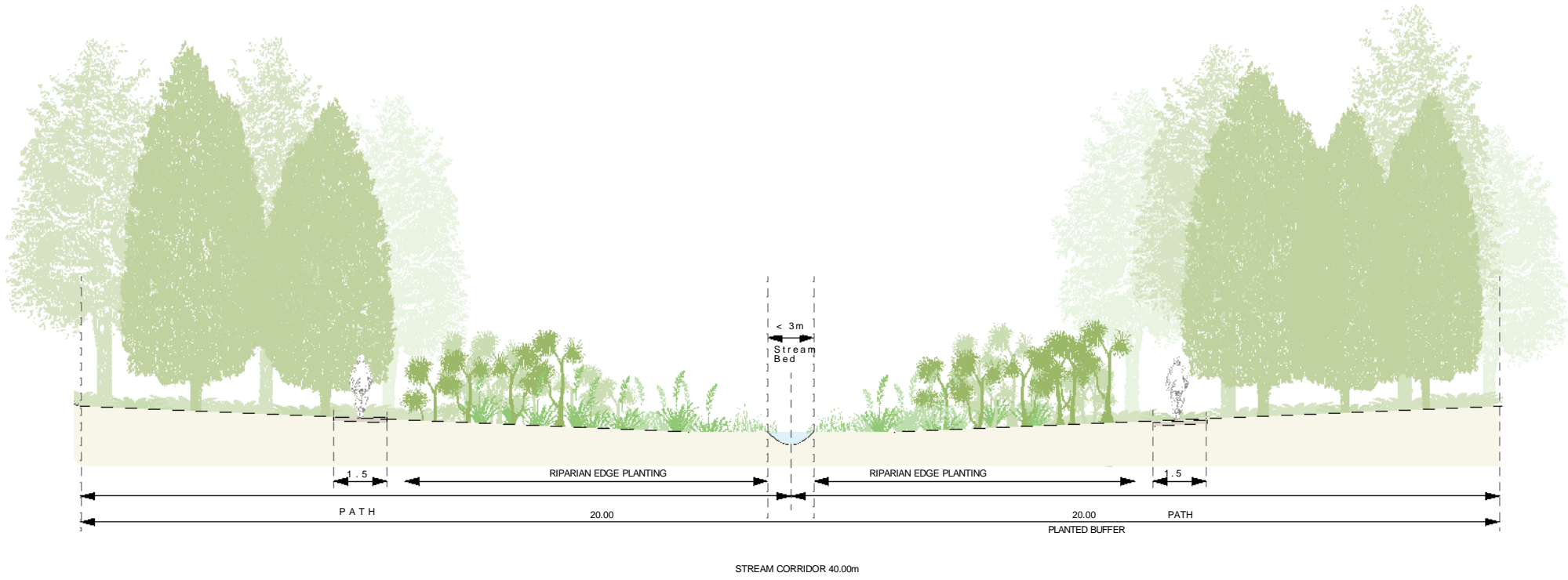
Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections



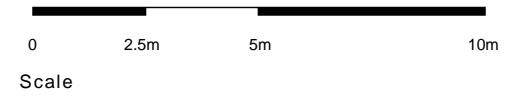
Location	Botanical Name	Common Name
Esplanade / Wetland Edges	<i>Salix babylonica</i>	Weeping Willow
	<i>Dacrycarpus darydiodes</i>	Kahikatea
	<i>Cordylina australis</i>	Cabbage palm
	<i>Anemathele lessoniana</i>	Wind grass
	<i>Carex secta</i> <i>Carex testacea</i>	Purei
Zone 1 Wetlands (0 to -10cm)	<i>Carex geminata</i> <i>Cyperus ustulatus</i> <i>Cordaderia fulvia</i>	Toetoe
Zone 2 Wetlands (-20 to -30cm)	<i>Schoenoplectus validus</i> <i>Eleocharis acuta</i> <i>Juncus gregiflorus</i> <i>Bolboschoenus fluviatilis</i> <i>Leptocarpus similis</i>	Kopupu / kuta Spike rush Wiwi rush Ririwaka Oioi /Jointed Rush
Zone 3 Wetlands (-50 to -100cm)	<i>Baumea rubiginosa</i> <i>Baumea articulata</i> <i>Baumea teretifolia</i> <i>Eleocharis sphacelata</i> <i>Juncus pallidus</i>	Ngawha / Great spike rush Giant rush



INDICATIVE WETLAND EDGE DETAIL

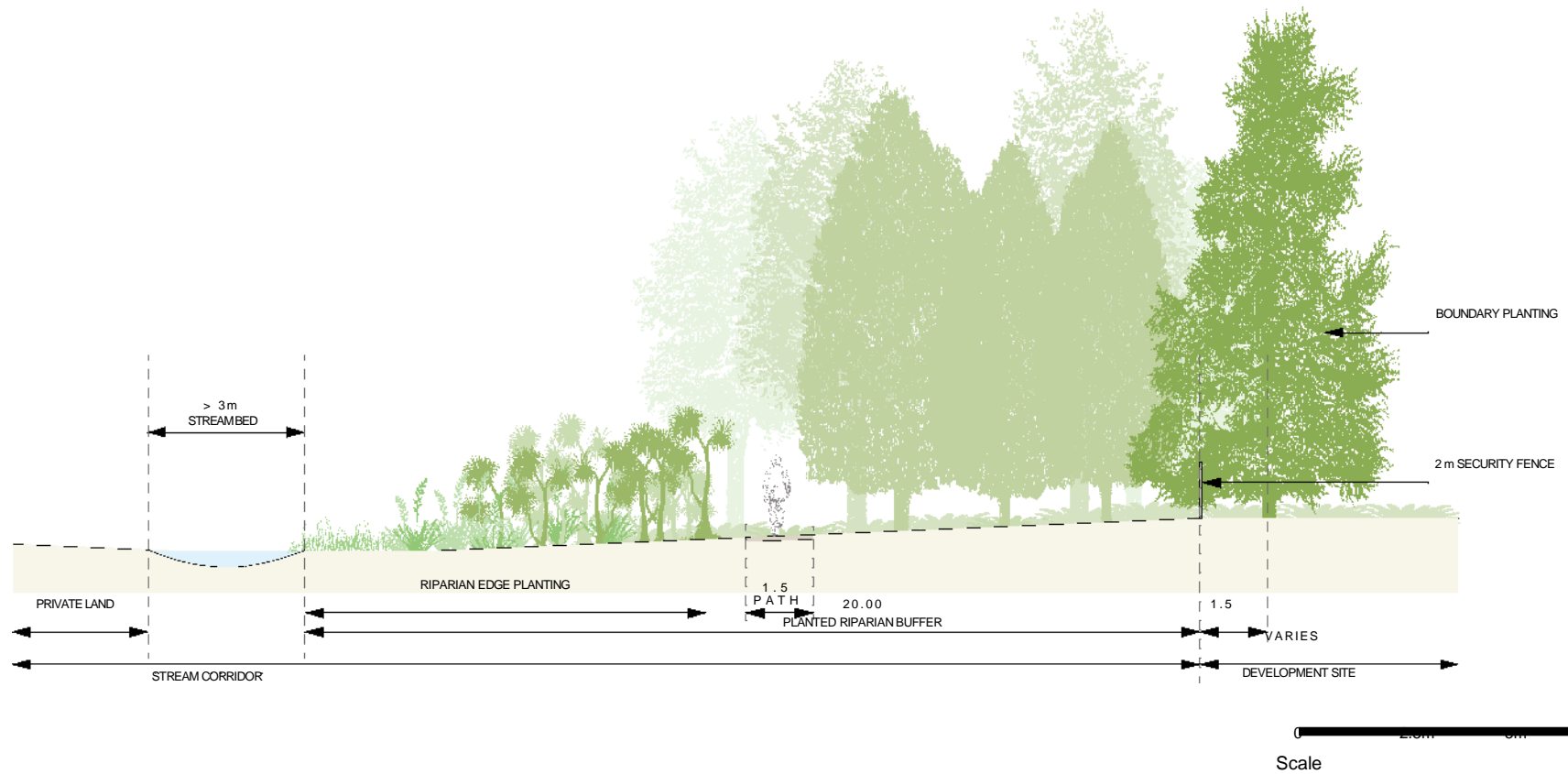


INDICATIVE 40m RIPARIAN BUFFER FOR STREAM BEDS LESS THAN 3m WIDE





TYPICAL ONE SIDED RIPARIAN BUFFER FOR STREAM BEDS LESS THAN 3m WIDE



INDICATIVE ONE SIDED RIPARIAN BUFFER FOR STREAM BEDS 3m AND GREATER

Attachment 3

Drury South Precinct

Indigenous Species Plant List

Note: The species underlined are recognised as being rare / uncommon in the Auckland region.

Wetland Species

Schoenoplectus tabernaemontani also Eleocharis sphacelata	Multiple Māori names include kukuta and kutakuta.
Carex virgata and Carex secta	pukio
Baumea articulata	jointed twig-rush
Typha orientalis	raupo
Myriophyllum robustum	stout water milfoil
Baumea tenax	
Isachne glabosa	swamp grass
Phormium tenax	particularly the variety known to Maori as 'Muka' - soft for weaving

Riparian Marginal Species

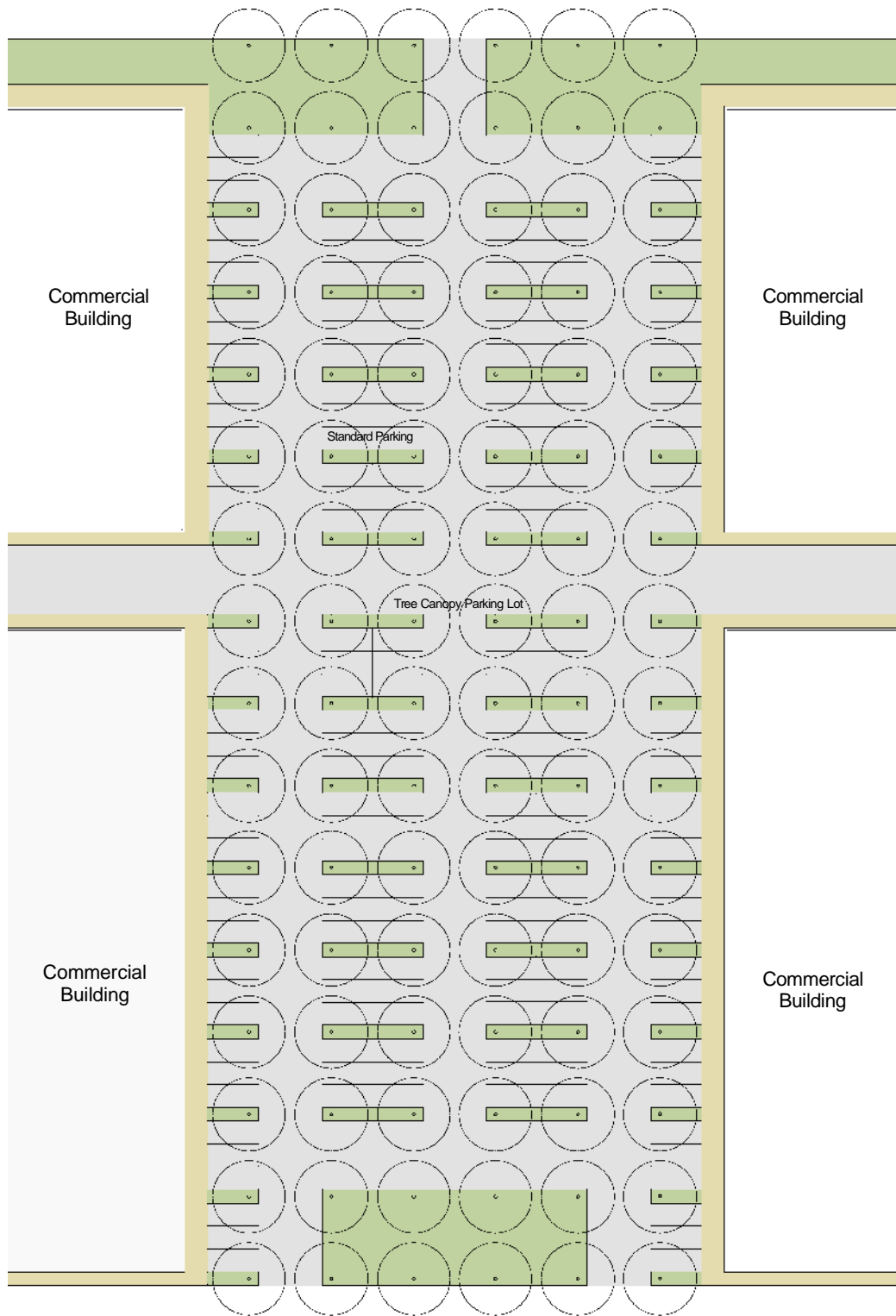
Freycinetia baueriana	kie kei
Alectryon excelsa	titoki
Vitex lucens	puriri
Prumnopitys taxifolia	matai
Sophora microphlla	kowhai
Rhopalostylis sapida	nikau
Hoheria populnea	lacebark
Corynocarpus laevigatus	karaka
Plagianthus betulinus	manatu
Pennantia corymbosa	kaikomako
Hedycarya arborea	pigeonwood
Aristolelia serrata	makomako
Kunzea ericoides	kanuka
Cordyline australis	ti whanake
Dysoxylum spectabile	kohekohe
Coprosma grandifolia	kanono
Streblus banksii	towai
Streblus microphylla	turepo
Myrsine divaricata	weeping matipo
Marrattia salicina	king fern

Swamp Forest Species

<i>Syzygium maire</i>	maire, tawake
<i>Laurelia novae-zelandiae</i>	pukatea
<i>Carpodetus serratus</i>	putaputaweta
<i>Phormium tenax</i>	harakeke
<i>Coprosma tenuicaulis</i>	hukihuki
<i>Dacrycarpus dacrydioides</i>	kahikatea
<i>Blechnum novae-zelandiae</i>	swamp kiokio
<i>Cortaderia fulvida</i>	toetoe
<i>Astelia grandis</i>	swamp astelia
<i>Schefflera digitata</i>	pate
<i>Podocarpus totara</i>	totara

Attachment 4

Typical Sub-Precinct C Mixed Use Precinct Access and Car Park Layout



0 10m 20m 40m

Scale

TYPICAL COMMERCIAL LAYOUT

Attachment 5

Drury South Precinct: Stream and Wetland Rehabilitation Guidelines (June 2013)

Drury South Industrial Precinct

Stream and Wetland Rehabilitation Guidelines

June 2013



Boffa Miskell



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Drury South Industrial Precinct
Stream and Wetland Rehabilitation Guidelines



1.0 Introduction

1.1 Purpose of this Document

The Drury South Industrial Precinct (DSIP) Stream and Wetland Rehabilitation Guidelines provide a summary of proposed stream and wetland works associated with the DSIP project. This includes all stream corridors to be removed, realigned, or restored, and wetlands created associated with stormwater management. The purpose of this document is to achieve the following:

1. To provide technical input to the planning process (to be read in conjunction with the Ecological and Landscape Assessments, Assessment of Environmental Effects (AEE) and Infrastructure Assessment report (IAR).
2. To provide the project team with a set of principles for treatment of riparian (stream and wetland) areas within the DSIP area.

1.2 Proposed Stream and Wetland Rehabilitation Works

In line with the proposed Drury South Industrial Precinct, the existing Hingaia and Maketu streams will be protected and enhanced by corridors of riparian restoration 40 metres in width (20m on each bank). Dense riparian planting will also occur along SH1 in association with the Roslyn Stream realignment and along the northern boundary of the site in association with a newly formed northern stream realignment.

Some streams and farm drains within the DSIP area will be filled. Piped infrastructure or vegetated swales will direct these modified catchments to the Hingaia Stream. These systems, as well as stormwater runoff from business activities will be treated for water quality in extensive wetland areas associated with the Hingaia stream corridor. These wetland areas will function for stormwater quality and quantity, ecosystem function and values, landscape amenity, natural character, and recreation.

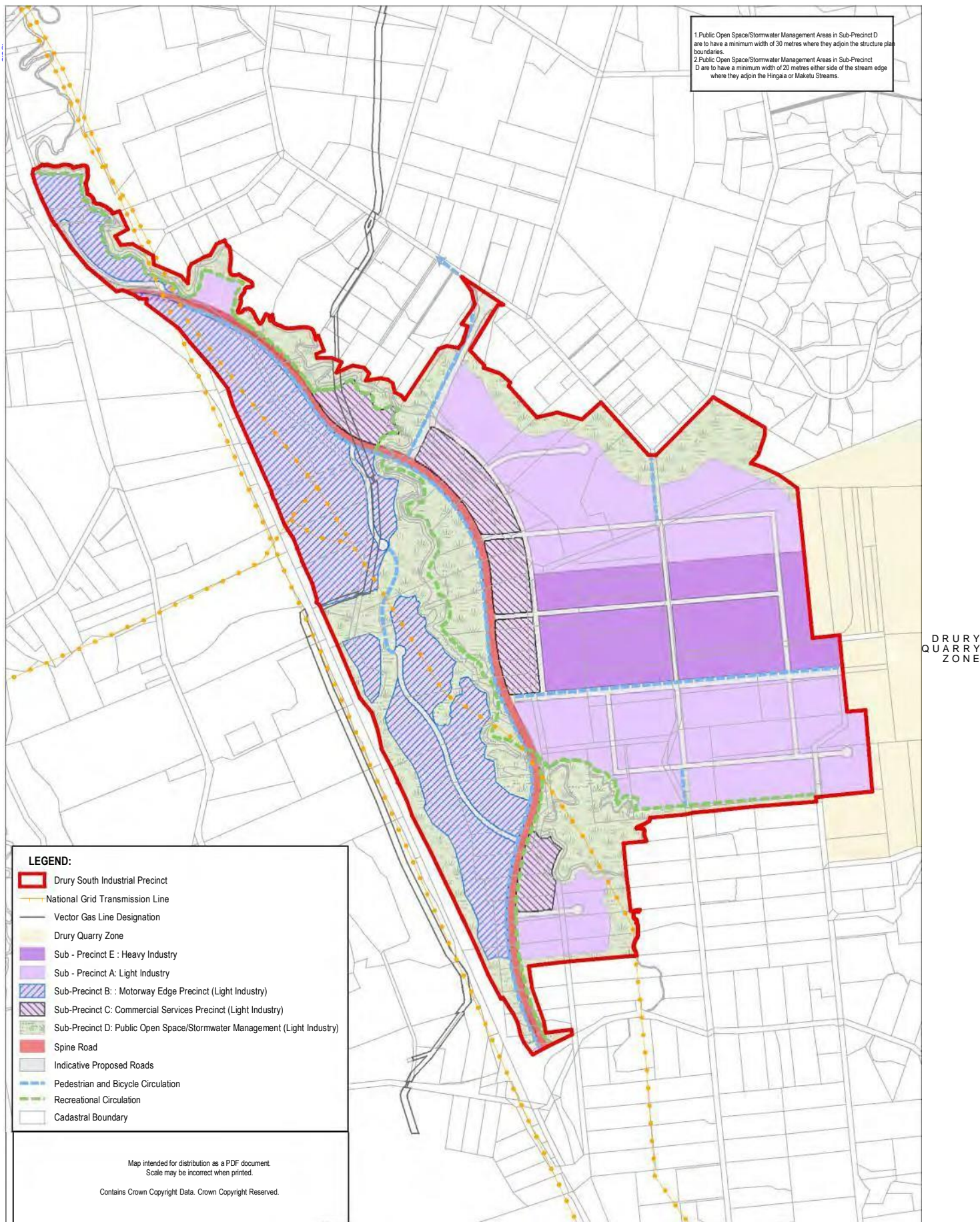


FIGURE1:DSIP Concept Plan - December 2010 (Source: BECA Ltd)

Drury South Industrial Precinct Stream and Wetland Rehabilitation Guidelines

2.0 Streams of the Project Area

2.1 Existing Streams and Proposed Mitigation

The Hingaia Stream flows through the DSIP area from south to north before continuing through the Drury Township to discharge to Drury Creek and eventually the Pahurehure Inlet to the Manukau Harbour. The Maketu Stream flows into the site at the south eastern corner of the DSIP area, and joins with the Hingaia Stream. The Roslyn Stream flows from the west under the State Highway and joins a further tributary to the Hingaia Stream. The remainder of streams traversing the site do not have officially recorded names, are smaller, highly modified, and in some cases have been piped.

An assessment of the existing surface water network and receiving environment has been carried out as part of the Hingaia Stream ICMP. This included a stream ecology study, "The Hingaia Catchment Environmental Assessment, Golder Associates, August 2009". This study included field survey of streams within the DSIP area with respect to water quality, and aquatic flora and fauna. Each stream potentially affected by the DSIP has been evaluated by the 'stream ecological valuation' method (SEV) in accordance with the technical publication ARC TP302:2008.

Existing watercourses and modified farm drains between Stevensons Quarry and SH1 will need to be filled or re-aligned to accommodate the DSIP earthworks footprint. This includes intermittent and permanent streams (refer Figure 2). Many of the existing overland flowpaths are farm drains, constructed for active drainage. All streams to be affected by the proposed DSIP have been heavily modified by farming or roading operations, including dredging, spraying, straightening, and ongoing impact by stock. In general all of these streams have low to moderate functional values for stream ecology.

Proposed mitigation for stream loss includes the restoration of riparian zones along the length of the Hingaia and Maketu Streams within the DSIP Area. This includes a 40m wide planted riparian buffer along all streams. In addition, streams to be re-aligned will have an appropriate stream profile and riparian planting to provide for sustainable stream function.



One of many existing intermittent farm drains showing evidence of earthworks, spraying and access by stock



LOCATION A (FIGURE 2) - The northern stream is directed along Quarry Road in a highly constrained and modified environment, with low ecological values



2.1.1 Northern Streams

A tributary to the northeast of Stevenson Quarry is currently dammed in its headwaters for quarry operations before being reticulated to a channel (refer Figure 2, Location B below). The northeastern stream also receives stormwater from the quarry via adjacent treatment facilities (Location C). As part of the works to accommodate the DSIP, the upper catchment of this stream will be directed to the existing northern stream corridor (Location D).

This northern stream will be rehabilitated with an enhanced stream profile, and restored streambank and floodplain vegetation. The northern re-alignment will be 1,800m in length, comprising 1,500m of new channel and 300m of rehabilitated channel.



LOCATION B (FIG 2) - The north-eastern channel flowing through mixed exotic vegetation



LOCATION C (FIG 2) - The north-eastern channel directed alongside the quarry settlement ponds



LOCATION D (FIG 2) - The existing northern stream channel will be enhanced to receive there – aligned north-eastern tributary



LOCATION E (FIG 2) - The northern stream at the base of the northern escarpment will be rehabilitated as part of the proposed works

2.1.2 Southern Streams

The streams to be filled between the quarry and the Hingaia Stream are relatively small, with low gradient catchments that do not extend beyond the project area. A stream from the southeast of the site (refer Figure 2 and Photos Location F and G) conveys a number of intermittent stream tributaries from the centre of the project area, before joining with the existing northern stream and northeastern tributary previously mentioned (Location H). The southeastern stream and its tributaries have no vegetation cover beyond aquatic macrophytes and pasture species. These watercourses have been heavily modified by pastoral land use.



LOCATION F (FIG2)-The southeastern stream ponding behind a road culvert, 50 metres downstream of the proposed Willow Road Re-alignment



LOCATION G (FIG2)-The southeastern stream wends through the middle of the project area before combining with the northern stream

At least 230 metres of the headwaters of the southeastern stream will be retained, enhanced, and linked westward to the Maketu Stream via an 180m section of new channel (the Willow Road Realignment). This realignment will be planted with a riparian buffer. The remaining watercourses between the Hingaia Stream and quarry will be filled.

2.1.3 3 Eastern Streams

The Roslyn Stream (Location I) to the west of the Hingaia Stream will be re-aligned toward the SH1 corridor. The current stream is an open farm channel with low summer flows and dense growth of the exotic reed sweet grass (*Glyceria maxima*). The re-alignment will include filling of 450m of the upper reach of this stream, and formation of 1,600m of newly aligned channel. The realigned channel will be formed with an appropriate profile and rehabilitated for enhanced ecological function, with a 20 metre wide riparian corridor on both sides.



LOCATION H (FIG2)-The channel flowing to the Hingaia, containing the combined flows of the south-eastern, northern, and north-eastern streams following a rain event



LOCATION I (FIG2) – The Roslyn Stream (mid-ground), a farm channel with low flows, is to be realigned and rehabilitated

2.2 Existing Streambank Erosion

Streambank erosion has been identified in the ICMP studies as an existing issue at a number of locations. The Hingaia Stream is subject to extensive bank erosion, identified near the Quarry Road bridge on the Hingaia Stream and near Davies Road Bridge on the Maketu Stream.

Stormwater wetlands prior to the Hingaia channel are proposed for the DSIP in order to detain any additional flows that may adversely impact stream erosion (refer Section 3.5). Riparian vegetation is proposed along the Maketu and Hingaia and for all re-aligned stream channels to stabilise banks in the short term and reach a sustainable stream equilibrium in the long term.



A lack of riparian vegetation and active erosion along the Hingaia channel



The Maketu channel with erosion scour at the outside bank

2.3 Existing Aquatic Ecology

As part of the Hingaia Stream ICMP, Golder and Associates undertook SEV surveys of representative stream reaches (Golder 2009). Most of the stream environments in the project area had poor functional values due to extensive modification by agriculture.

The Hingaia ICMP surveyed thirteen sites within the DSIP Area. The best quality site was on the Maketu Stream, with higher scores across all functional categories. Another site, located on the lower Hingaia Stream, also scored relatively high. The best value site for the tributaries was located on the northeastern quarry stream. Full descriptions of functional ecology values can be found in the DSIP Assessment of Ecological Effects (Boffa Miskell 2010).

A total of 6 species of fish were recorded across the project area. Shortfin eels were the most common species, with occurrences of longfin eel, common bully, inanga and cran's bully. Five of the seven tributary sites had no fish, or mosquito fish only. The mosquito fish is an exotic pest fish classified as 'Unwanted' under Biosecurity legislation. These sites had very low fish community values.

Macroinvertebrate communities indicated low environmental quality at most sites. Except for the northeastern stream, tributary sites were characterised by worms, dipteran flies, leaches, and flatworms, suggesting nutrient enrichment and fine sediment. The Maketu site had a notable portion of mayflies (*Zephlebia* spp.), possibly due to better water quality (e.g. lower water temperature).

3.0: Stream and Wetland Rehabilitation

3.1 Rehabilitation Principles

The following rehabilitation principles are intended to inform the rehabilitation of streams and wetlands in the DSIP area. The principles have been prepared by an inter-disciplinary project team, including landscape architects, planners, ecologists, and engineers. Principles seek to enhance the landscape and ecology values of the riparian systems, while providing appropriate design responses for hydraulic flow and stormwater management.

3.1.1 Landscape Values

There is significant opportunity to improve the natural character values within the DSIP area. Stream and wetland environments will also be integrated within a wider open space network, providing opportunities for enhanced recreation and landscape buffers. The following landscape principles apply to proposed stream and wetland rehabilitation:

- Contribute to landscape amenity values
- Provide vegetated buffers to specific land use activities as appropriate
- Integrate stream and wetland rehabilitation with streetscape and open space planning
- Provide for visual and physical access to rehabilitated natural areas
- Optimise natural character values through the planting of representative native communities
- Provide a diversity of natural habitats and plant communities to achieve a variety of landscape and spatial character, and to demonstrate a legible sequence of habitat types.
- Structure riparian vegetation to screen/define undesirable views, offer broad views to wetland environments, and frame distant views to eastern Hunua hills from SH1
- Apply appropriate standards for CPTED and IPTED for public or maintenance access
- Place pedestrian bridges as necessary to ensure landscape connections, and investigate opportunities to use existing stream spans (infrastructure) for this function
- Identify opportunities to involve the community in stream restoration planting
- Liaise with relevant representatives and apply appropriate protocols for any archaeological sites or heritage elements associated with rehabilitation works
- Enhance Cultural Value through the re-establishment of indigenous species and investigating cultural harvest opportunities

3.1.2 Ecological Functions

Enhancing ecological functions within the DSIP area will require a combined response to aquatic and terrestrial environments, in order to restore target species, representative habitats, and ecological processes. The following ecology principles apply to stream and wetland rehabilitation:

- Plant stream margins, banks and floodplain areas to achieve not less than 40m total width (10m min width either side of stream corridor)
- Utilise species sourced from the Manukau Ecological District that are representative of natural vegetation communities as predicted by LENZ
- Restore representative in-stream heterogeneity, providing for pool, riffle, run and cascade sequences as appropriate.
- Provide fish passage to the extent possible, including bullies and inanga to within their natural range
- Preserve groundwater influence and inundation regimes for existing floodplain forest in proposed stream corridors
- Provide appropriate transitional edge vegetation to remnant mature vegetation
- Optimise site coalescence between remnant vegetation areas along the Hingaia Stream
- Provide for breeding populations of water and wetland birds species
- Provide for appropriate staging and construction techniques to avoid potential impacts to downstream environments and in-stream aquatic habitat.

3.1.3 Hydrology and Hydraulics (H&H)

Stream and wetland rehabilitation will provide opportunities for water quality treatment for the DSIP, and appropriate hydraulic flows, and hydrologic capacity for the catchment. The following H&H principles apply to the rehabilitation areas:

- Use biotechnical stream stabilisation to restore a sustainable streambank morphology
- Apply a cross sectional profile that resembles a natural staged channel, including a permanent flow channel, a stream channel based on a bankfull (approximate two year average recurrence interval (ARI)), and associated floodplains and berms to hold the one hundred year ARI.
- Provide for an appropriate stream meander patterns for the floodplain extent, longitudinal stream profile, flow velocities, and expected bankfull event.
- Provide for hydraulic connections and fish passage to stormwater wetlands wherever extended detention is not required
- Place all forebay devices for stormwater wetlands outside of the 5 year ARI flood extent.



FIGURE 3: DSIP Concept Planting plan. (Source Boffa Miskell and Source Design)

3.2 Open Space Network

The stream and wetland rehabilitation concepts (refer Figure 3) integrate with a broader open space network to optimize specific requirements for public use and access, to ensure diverse representative habitats, and to enhance environmental services for the DSIP.

The open space network reinforces existing features and patterns of the project area. The Hingaia Stream corridor will be reinforced by wide riparian margins of representative planting of early successional forest, as well as kahikatea floodplain forest. In the north a substantial open space buffer is set aside to reinforce the natural escarpment separating the DSIP basin from the Fitzgerald Road ridgeline. This occurs in conjunction with the northern stream realignment and associated riparian rehabilitation works. In the south west of the project area, riparian planting along there – aligned Roslyn stream will form a landscape buffer to SH1.

Larger remnants of existing vegetation will be coalesced along the Hingaia Stream. Planting in association with stormwater wetland areas will further buffer and augment the conservation values of these remnants.

3.3 Stream Rehabilitation

The land use change associated with the DSIP provides a significant opportunity to restore the Hingaia Stream, a low gradient moderate order stream, which retains remnant kahikatea floodplain forest. The project also provides the opportunity to coalesce modified drainage channels across the site into a larger order stream channel and floodplain, with supporting streambank and floodplain vegetation. Stream rehabilitation proposals are the result of an iterative design process between ecologists, landscape architects, and engineers to optimise the principles of these guidelines.

3.3.1 Hingaia Stream

The Hingaia Stream is a significant watercourse, with a wide, actively meandering channel across the floodplain. The stream currently runs through pastoral and agricultural land uses, and receives runoff from existing farm drains in the project area. The rehabilitation of the Hingaia stream is a key objective of the DSIP, with a 40 metre vegetated buffer proposed along the corridor where it corresponds with the project area. The width of the riparian buffer would extend to accommodate a stormwater treatment swale proposed along a northern reach, and stormwater wetlands proposed within the Hingaia Stream's extended floodplain.

The rehabilitation of the Hingaia Stream will include:

1. The coalescence of the floodplain forest remnants (including significant natural areas) already occurring within Hingaia floodplain
2. The restoration planting of streambanks along the length of the stream within the Project Area, with the potential for specific interventions to restore the stream profile at erosion hot spots
3. The planting of banks and proposed riparian buffers with simple lowland plant communities with the expectation that these communities will secede with time to include more diverse species
4. Planting of feature areas of flax-cabbage tree and broadleaf species on extended floodplains
5. Hydrological connections and fish passage to stormwater wetlands where practical

3.3.2 Stream Realignments

A number of farm drains and watercourses will be replaced with overland flow paths and reticulated networks associated with the proposed development. In addition, some headwaters will be realigned to newly formed watercourses along the boundaries of the DSIP area. The Hingaia and the Maketu Streams will not be altered beyond restoration activities.

A detailed description of the potential effects on stream ecology and the proposed mitigation measures is presented in Boffa Miskell, 2010, "Drury South Business Project Assessment of Ecological Effects Associated with the Proposed Plan Change". These guidelines inform the potential design response to optimise the flood management function of the rehabilitated streams, and their landscape and ecology values.

3.3.2.1 Design Parameters

The profile of each re-aligned stream channel is based on the cross-sectional area to accommodate a 1.5 to 2 year average recurrence interval (ARI). This flow is traditionally associated with a 'bank-full' event with active stream erosion and re-deposition.

The morphology of realigned streams is also based on their substrate, longitudinal gradient, and association with their floodplain. These functions can be used to prescribe channel sinuosity and width to depth ratio (Rosgen 1994). The bankfull width is used as a function to predict the stream meander wavelength and the radius of curvature for bends (Leopold 2003 and Thorne et al 2003). Refer to Figure 4 below.

Proposed stream morphology is intended to minimise friction within the channel to prevent active erosion, and also to provide a floodplain width that can accommodate the stream in equilibrium.

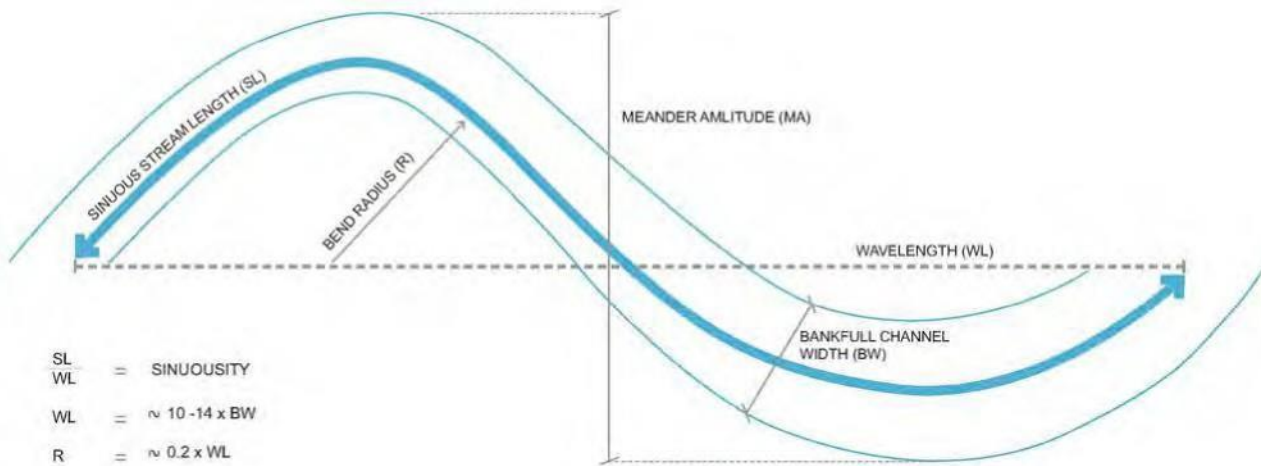


FIGURE 4: (above) The indicative relationship between channel width, and meander pattern

BELOW: A natural meander occurring as an overland flow event during flood conditions in the project area



3.3.2.2 Construction

Construction of the realigned channels is intended to occur off-line where possible, or to be staged to avoid potential impacts to downstream environments and in-stream aquatic habitat. Material selection is expected to be inert and where possible to be the equivalent of materials expected in these stream environments in their natural state.

It will be possible to utilize 'natural' materials through the application of biotechnical construction, which utilises a combination of persistent and biodegradable materials to retain channel shape until plants can establish. In general biotechnical responses for stream stabilisation can include:

- Stream profiling to respond to specific flow events
- Floodplains to dissipate flood velocities
- Stabilised bank toe and outside bends with hard materials such as rock, root vanes etc
- Directing flows and forming riffles through rock vanes
- Reinforcement of stream banks through planting established in erosion control blankets
- Stabilising the crown of banks with appropriate vegetation
- Provision of appropriate pool-riffle-run sequences.
- Grade control structures that accommodate fish passage
- Specific biotechnical treatments to accommodate 'nick' erosion points and stormwater outlets

3.3.2.3 Planting

Plant species selection will provide ecological functional values and representative plant communities. Stream planting objectives may include:

- Shade for temperature moderation
- Weed suppression
- Slope stabilization
- Tolerance to inundation
- Growth form to accommodate/obstruct views
- Stature to accommodate hydraulic flow rates
- Inherent aesthetic or spatial qualities of single plants or grouping of vegetation.

Based on LENZ predicted natural vegetation layers, representative plant communities for the DSIP area include lowland alluvial floodplain species, generally consisting of kahikatea forest. Other communities include tawa and pukatea, while matai, rimu and totara are generally restricted to better-drained soils. Titoki and puriri are locally abundant, with the potential for other broadleaf such as taraire, occurrence of kauri on the flanks of the basin, and occasional rimu and pukatea.

The project area extending into the flanks of the project basin and the hills beyond would be expected to support kauri, kahikatea, rimu and/or totara emergent over a diverse canopy dominated by varying mixtures of taraire and kohekohe. Other widespread tree species might include hinau, pukatea, rewarewa, and miro. Puriri is locally abundant at lower elevations, particularly on alluvial surfaces and tanekaha would be locally abundant, particularly on disturbed sites.

Where basalt occurs at the surface of the project area there may occur unique basalt forest environments, with an expected predominance of mahoe, karaka, kohekohe, totara, puriri, and titoki.

Until climax communities establish, it is expected that large areas of the riparian corridors will be planted with early succession and hardy species, such as riparian shrubs, kanuka, and totara to rapidly establish cover and to act as a nurse crop for later succession species. It is expected that certain low vegetation types will be applicable in places along the riparian corridors to accommodate hydraulic flows, to preserve viewshafts, and provide useable open space areas. Such planting may involve mown grass areas, sedge-rushlands, and flax-cabbage tree communities.

3.3.3 Northern Stream

A stream is proposed along the northern boundary of the DSIP area at the base of the northern escarpment. An existing section of this northern stream receives flows from three tributaries. A fourth tributary, previously described as the 'northeastern stream' (refer Section 2.1.1 and Figure 2) will also be directed to this channel from the quarry zone. The northern stream will accommodate the flow from these four tributaries, as well as localised catchments before discharging to the Hingaia Stream west of the proposed Link Road.

A typical northern stream cross section is shown in Figure 5, where a 'bankfull' channel represents the 1.5 year ARI event, and the associated floodplain conveys a 100 year ARI event with 500mm freeboard to the proposed development. Detailed design will provide pool-riffle and run sequences with adapted profiles. Biotechnical construction techniques will form narrower riffle sections, shallower point bars, and steeper outside bends.

The proposed sinuosity of the northern stream is relatively high, close to 1.5 times the wavelength (refer Figure 7). This is appropriate, based on the cross section of the bank full channel (with a low width to depth ratio) the longitudinal profile of the floodplain (a relatively flat lowland environment), and the general character of the bed materials and banks (being generally resistant but somewhat erodible).

The sinuosity is expected to reduce the longitudinal profile of the channel, reduce erosion of stream banks, provide strong connections to floodplain environments, and increase the overall length and diversity of stream habitat. Some stream reaches have constrained floodplains, where riffle sequences with local rock may be appropriate.

The northern re-alignment follows the northern boundary to combine stream environments with adjacent open space and to form a buffer to adjacent land use. The stream corridor and floodplain will be densely vegetated as indicated in figure 7. Planting will be dominated by early succession kanuka-totara forest. Kahikatea forest planting is proposed beside the Link Road entrance to act as a natural threshold at the DSIP entrance. Pockets of broadleaf forest are proposed to add diversity to the northern riparian corridor. Low areas of sedge-rushlands, grass areas, and flax-cabbage tree associations could provide views into the stream corridor from select locations.

3.3.4 Roslyn Stream Realignment

There is an existing water course running south to north through Roslyn Farm at the south west corner of the project area, which picks up flow from two culverts. Site assessment also revealed an existing spring feeding the stream. This stream will be realigned for part of its length whilst retaining links to existing spring and culvert in flows, the realigned corridor will provide a stronger vegetated element to adjacent to SH1 (refer Section 2.1.3 and Figure 2).

A typical Roslyn Stream diversion cross section is shown in Figure 6, where a dedicated 'bankfull' channel contains the 1.5 year ARI event, and the associated floodplain conveys a 100 year ARI event with 500mm freeboard to the proposed development. The Roslyn channel has a wide stream base with a lower depth to create a combined wetland/overland-flow-path appropriate for the small catchment, the low longitudinal gradient, and a strong groundwater influence.

Because the Roslyn channel is a lower energy environment than the northern re-alignment, with less likelihood of erosion, it is reasonable to expect a less sinuous character. Therefore a low sinuosity of 1.1 times the wavelength has been applied.

Planting along the Roslyn stream is proposed to be a combination of sedge-rushland planting and large swathes of flax-cabbage tree associations to create a wide wetland environment. Kanuka-totara forest may occur in existing knoll areas beside SH1 to frame views to the eastern Hunva foothills. Kanuka forest may continue along mid reaches of the stream and groups of kahikatea may occur alongside of a stormwater wetland to frame views from boardwalk locations and to shade permanent water features.

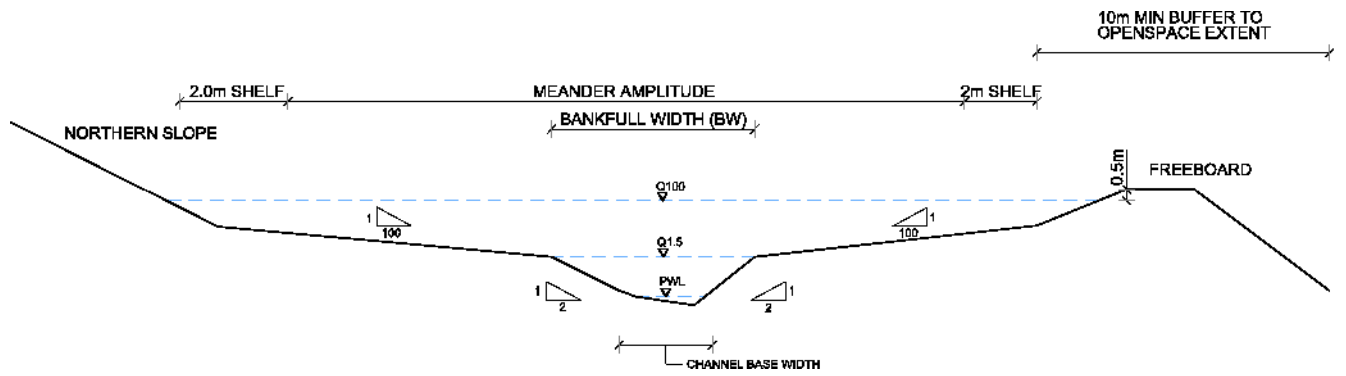


FIGURE 5: Typical section of the northern realignment in terms of flooding profiles

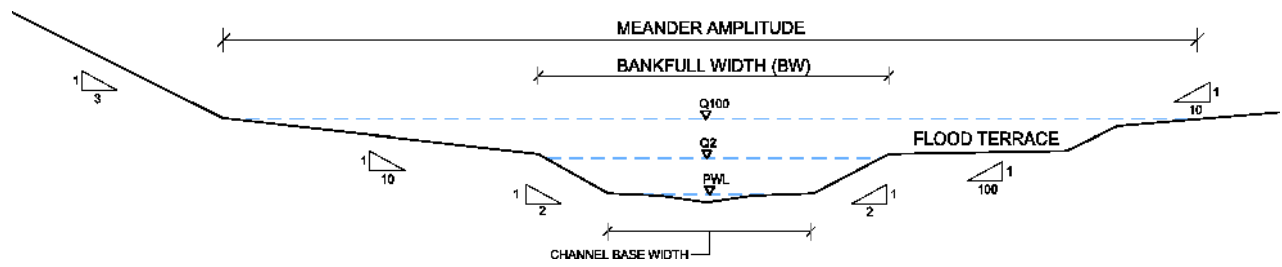


FIGURE6: Typical section of the Roslyn Stream realignment in terms of flooding profiles

3.3.5 Willow Road Realignment

There is a small roadside drain running east to west along Willow Road. The stream currently crosses Willow Road through a culvert near the intersection with Ramarama Road and continues north through the proposed DSIP area, eventually joining the Hingaia Stream. As discussed previously, this stream is heavily modified by pastoral land use and is largely unvegetated. It is proposed to divert this roadside drain directly west to the Maketu Stream along a vegetated riparian corridor that provides for a 1.5 year stream profile and accommodates a 100 year ARI event.

Drury South Industrial Precinct Stream and Wetland Rehabilitation Guidelines

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FIGURE 7: Proposed DRAFT planting plan for the Northern Re-alignment



FIGURE 8: Proposed DRAFT planting plan for the Roslyn Re-alignment

3.4 Riparian Revegetation Guidelines

3.4.1 Introduction

Riparian revegetation is proposed for the main stems of the Hingaia and Maketu Streams. In addition the Northern and Roslyn realignments will also be restored with riparian vegetation (as depicted in Figures 7 – 8). The progressive planting of these realignments as well as the present grasslands alongside the Hingaia and Maketu Streams will ultimately provide a greater extent of riparian bush, increasing the habitat opportunities and potential carrying capacity of the DSIP area as well as providing vegetated riparian corridors within the local landscape.

The following revegetation guidelines outline an accepted industry-wide approach to large scale revegetation programmes that should inform the development of the final detailed planting plans for the DSIP riparian margins.

3.4.2 General Procedure

The general procedure for the proposed revegetation plantings should be as set out below.

- Slope stabilization
- Seed should be sourced as is available from the Manukau Ecological District. However, notwithstanding the desire to use only genetic material sourced from this specific area in the revegetation programme, additional source material from the wider Auckland Ecological Region may be used.
- Planting of species into existing pasture should require pre-planting repeat herbicide applications to reduce the potential for grasses to compete with the seedlings planted.
- Blanket spraying in close proximity to the existing native bush areas needs to be avoided or very carefully managed so as to avoid by-kill. Herbicide should be carefully applied at least 2 weeks before planting.
- Where the earth has been previously compacted the areas to be revegetated should have a single treatment of earth tilling, in order to loosen the sub-soil and encourage successful rooting.
- Planting should be undertaken in favourable conditions, at the earliest opportunity during the planting season, preferably over the autumn months.
- The revegetation plantings should be supplemented with weed and browsing pest control to allow good establishment of the planted material. Ongoing weed control should be carried out until canopy closure is sufficient to suppress weed growth. Browsing pest control may be required over the longer term in order to allow these vegetated areas to progress in good health. However, once pest numbers are reduced to a minimal level, continued control should require a reduced effort.
- All planting and maintenance operations should be carried out by an approved contractor, experienced in native revegetation planting programmes.

3.4.3 Plant Material

- The plant material needs to be of the specified size and condition. All plants will have well developed root systems and a well-shaped stem and head free of disfigurements or injury, pests and disease.
- The plant material should have been sufficiently “hardened off” at the nursery prior to being passed on to the planting contractors.

3.4.3 Planting Methods

- Planting should follow an approved planting plan, indicating set-out, species, size, density and spacing.
- A dual system of planting is proposed, involving the establishment of a nurse crop of hardy pioneer species such as kanuka. These will be enriched with appropriate native tree species when the nurse crop has sufficiently established, which should be at approximately 3 years age.
- Nurse plant stock should be set out at appropriate spacing and percentages, and according to each species niche preferences.
- Once a good cover of the nurse plantings is established, enrichment plantings should be implemented. Enrichment species trees should be distributed (at wider centres) amongst nurse planting and according to site preferences in copses/groves spread further apart in subsequent seasons.
- The enrichment plantings may include the pruning or removal of modest numbers of nurse shrubs in order to create the necessary light wells.
- Plants should be set out and appropriately spaced in an informal manner avoiding straightlines and regular geometric patterns, while ensuring an even cover across the planting area. Species should be distributed at appropriate percentages and according to each species niche preferences, microclimate and ground conditions.
- Planting holes should be dug out to spade depth and seedlings located next to pre-dug holes in the correct species mix. Actual planting should be by hand only. The base of the planting hole should be filled evenly without compaction to a level where the top of the plant root ball is level with surrounding ground. The plant should be plumb and orientated so that the weathered face of the main stem faces north. When the backfilling is complete the plant should be gently firmed in. All plants should be encouraged to grow to maturity as naturally as possible to achieve their desired character and form, through sound management practices including weeding, and other accepted horticultural practises.
- Slow release fertiliser should be used within the proposed planting operation, with at least one tablet of 20-4-4(N-P-K) that is designed to last at least 12 months (preferably 24 months). The controlled release fertilizer tablets need to be inserted into each planting hole approximately half way up the back fill material, ensuring placement of the fertilizer on the upper slope side of each plant
- Approved chipped tree mulch or post-peeling bark mulch could be spread around the base of individual plants used in the mass revegetation plantings, but only in areas outside of the floodplain (to avoid mulch being washed away in floods).

3.5 Stormwater Management

Stormwater design is discussed in greater detail in the DSIP Infrastructure Assessment Report (BECA 2010). The general approach is to utilize the large floodplains associated with the Hingaia Stream to accommodate stormwater wetlands. Each wetland would include a forebay and accommodate the water quality volume. There is also allowance for extended detention to limit potential effects of stormwater volumes on downstream erosion.

Wetlands have been placed above the stream invert to not unduly effect ground water levels, and forebays have been placed above the 5 year flooding event to prevent re-suspension of contaminants stored in these areas.

Safety considerations have allowed for benching around the perimeter of each wetland and a reverse bench along each embankment. Appropriate maintenance access will be provided to forebays and to the base of wetlands for restorative maintenance if required.

Biotechnical approaches similar to those described for stream realignment works will be considered during detailed design, with specific consideration for the formation of access and outlets to the Hingaia, with fish passage possible to wetlands that are not required to detain extended detention volumes.

Planting would be exclusively sedges, rushes, and small riparian shrubs around wetlands for water quality treatment, to stabilize the wetland profile, and to allow ease of maintenance. Trees and taller shrubs would be expected at the edges of wetlands, at their interface with stream environments, and around the northern edges of forebays for shade.

3.5.1 Stormwater Wetland One

Stormwater Wetland One has been designed as a landscape amenity feature through an iterative design process between landscape architects, engineers, and ecologists. This has driven the design of forebays, the shape and extent of the permanent pools and wetland planting, the integration of multiple public access structures, and a pedestrian circulation path that crosses the Hingaia stream corridor (refer figure 9). Wetland One has been tiered to suit the local topography and the bathymetric design directs flows along three separate treatment paths.

3.5.2 Northern Swale

A swale is proposed for stormwater management along the western edge of the lower Hingaia Stream. The total width of the swale and vegetated buffer contributes an additional 25m of vegetation to the riparian buffer. The length of swale is significantly longer than required for water quality and is expected to exceed regulatory expectations at the entry point to the Hingaia.

Planting will be selected with the ability to sustain temporary ponding and saturated soils, and will allow appropriate hydraulic flows and residence time.



FIGURE 9: Proposed Planting Plan for Stormwater Wetland One

4.0: Summary

The DSIP area is traversed by the main stems of the Hingaia and Markeu Streams and several other permanent and intermittent streams and farm drains. Watercourses other than the Hingaia and Maketu Streams will be modified or re-aligned in order to facilitate the proposed land use. Stormwater management will also lead to the creation of additional naturalised wetland areas in association with the Hingaia Stream corridor.

All streams affected by the proposed DSIP have been previously modified by farming or roading operations, including dredging, spraying, straightening, and ongoing impact by stock. Stream bank erosion has been identified in the Hingaia ICMF as an existing issue at a number of locations. In general all of these streams have low to moderate functional values for stream ecology. Five of the seven tributaries to the Hingaia were observed as having very low to absent fish community values.

The DSIP Stream and Wetland Rehabilitation Guidelines establish a set of principles to enhance the landscape and ecology values of riparian systems in the DSIP area. The document is intended to provide technical input to the planning process and to provide guidance to ongoing more detailed design and implementation. The guidelines apply an inter-disciplinary approach to riparian rehabilitation.

Stream rehabilitation is proposed for the length of the Hingaia and Maketu Streams within the DSIP Area, including a 40m wide planted riparian buffer along the streams. In addition, streams to be realigned will have appropriate stream profiles and riparian planting to provide for sustainable stream function. Riparian rehabilitation will contribute to a wider open space network and enhanced natural character.

5.0: References

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