

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

PURPOSE OF APPENDIX 5B.4.A

Within the Drury South Structure Plan area, 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 Rule 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 on the Drury South Structure Plan in Part 5B.4 Section 1 of the District Plan and the assessment criteria set out in Appendix 5B.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 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 '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 Precinct areas layouts should seek to retain as many existing established trees, particularly those of indigenous species, as possible.
11. In Motorway Edge Precinct areas access to sites off the spine road should be combined wherever practicable.

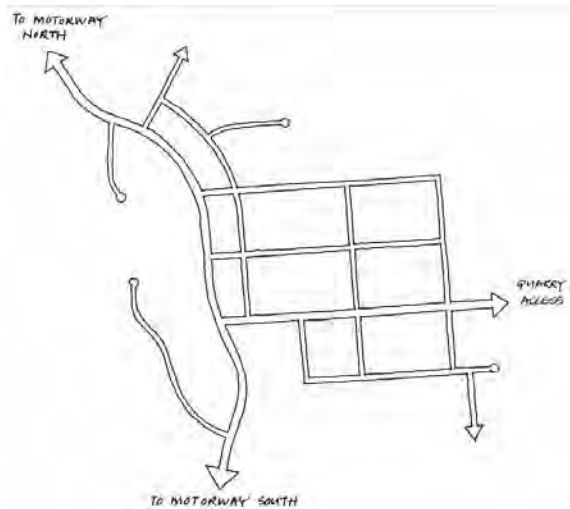


Diagram 1: Legible road hierarchy to assist wayfinding



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 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 zone 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; this route will provide the primary connection into and out of the zone with other streets connected to the spine road through corridor.

The proposed street network has also been designed to limit the impact of vehicles destined for the new 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 truck) and other zone related traffic movement is imperative as a part of delivery of the zone.

By their nature the Commercial Services Precinct areas 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 landuse.
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.

Blocks within an industrial area can be larger than those within finer grain residential or Commercial Services areas. A good permeable and well connected street network is however still required to facilitate access, provide an appropriate street address and reduce traffic volumes on side streets.

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 landuses 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 – Roads and Accessways:

1. In addition to transport engineering and Council’s Code of Practice requirements, 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. 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 enhanced amenity and character of the zone.
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. 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 Attachment1.

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.

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 permanent or diverted stream, should be provided on the margins of streams, ponds and wetlands and should:
 - Include native species as identified in Attachment3
 - 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 (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.

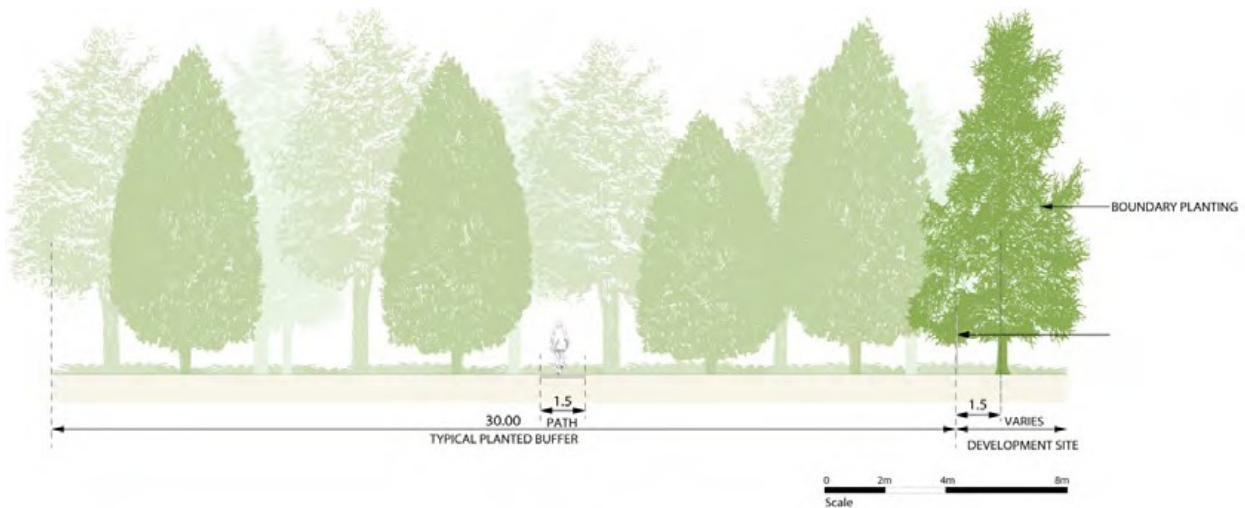


Diagram 5: Typical landscape buffer cross section

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, 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 also includes buffer reserves the main purpose of which is to physically and visually screen and separate adjacent existing land uses and residents from the 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 landuses outside of the 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 Motorway Edge Precincts and 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 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 precinct and the north south primary road (spine road corridor) should be minimised.

Additional Design Element 7: Subdivision within Commercial Services 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.

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.

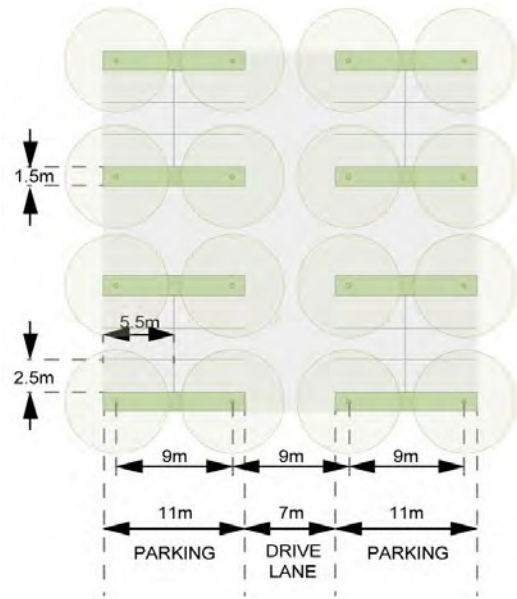


Diagram 6: Fully planted permeable carpark design layout - detail

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 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:

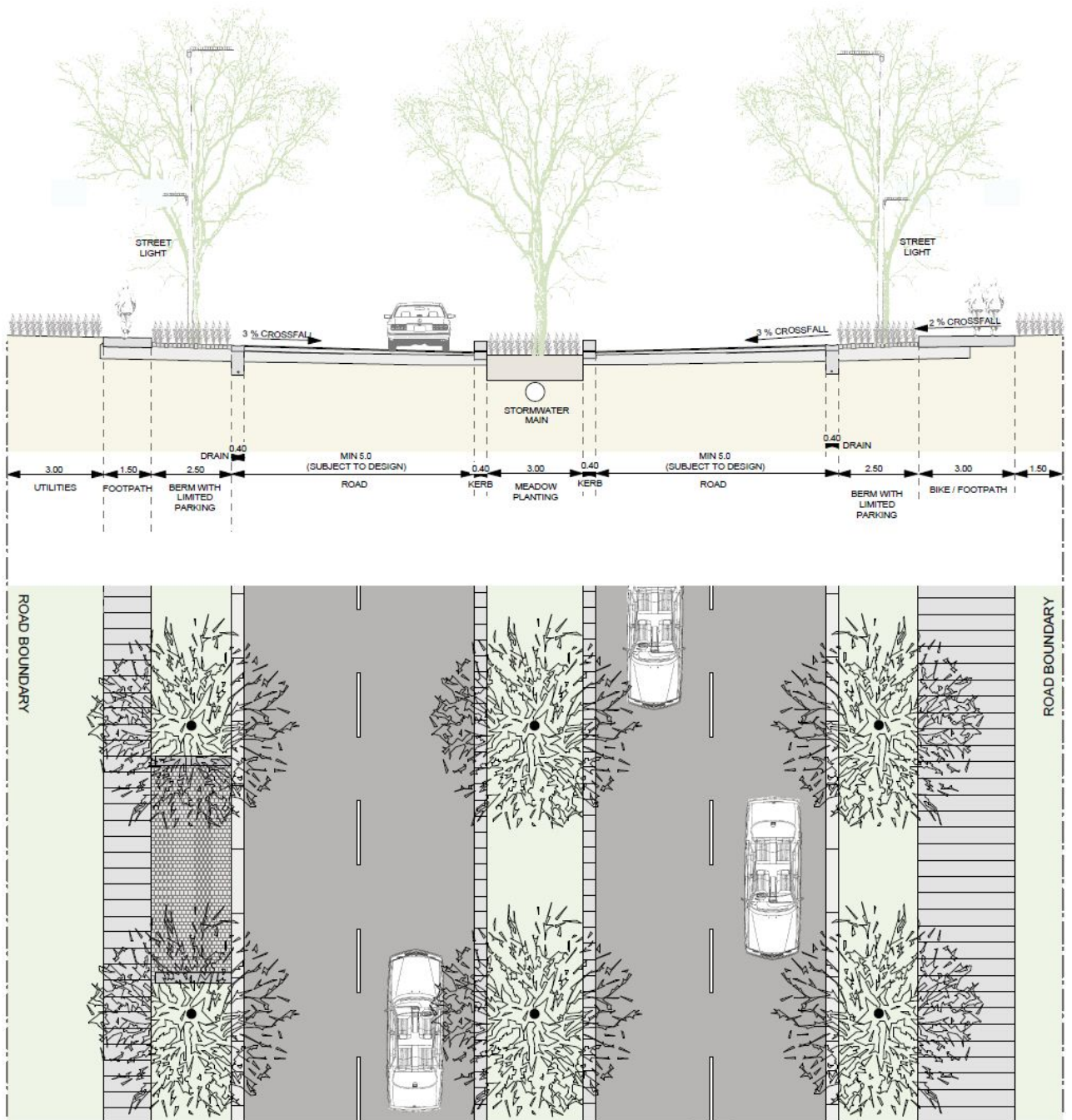
1. Signage for each Commercial Services Precinct development should be coordinated including the physical location of signs, their type face, style and content with a maximum of two signs per business, one located to address the street frontage and one to identify the building entry (a third sign is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

Design Element – Service Areas:

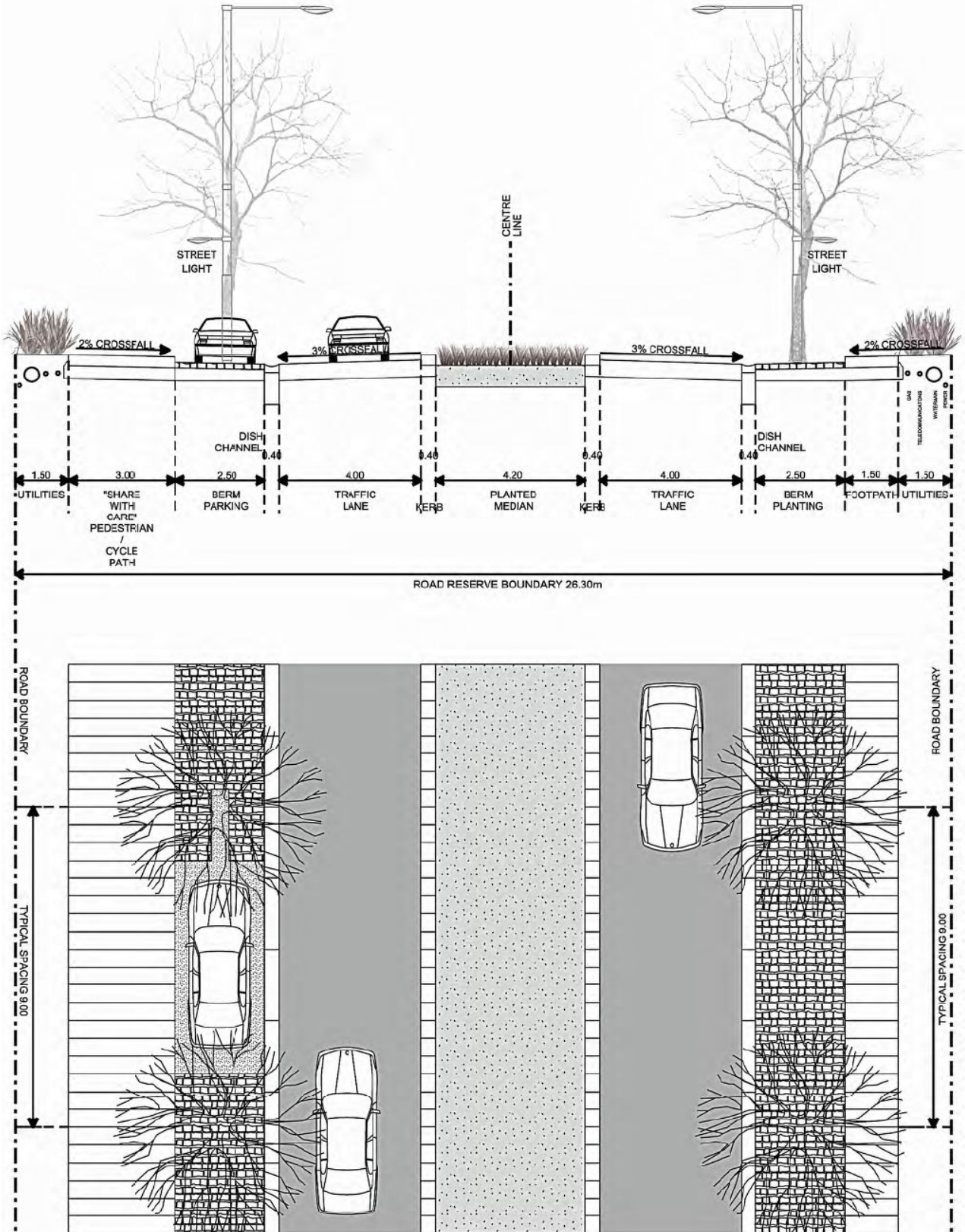
1. Service areas should be located so as to avoid observation from a public road with access either from a service lane, incorporation within the main building or full screening of service / storage and dock areas.

Attachment 1

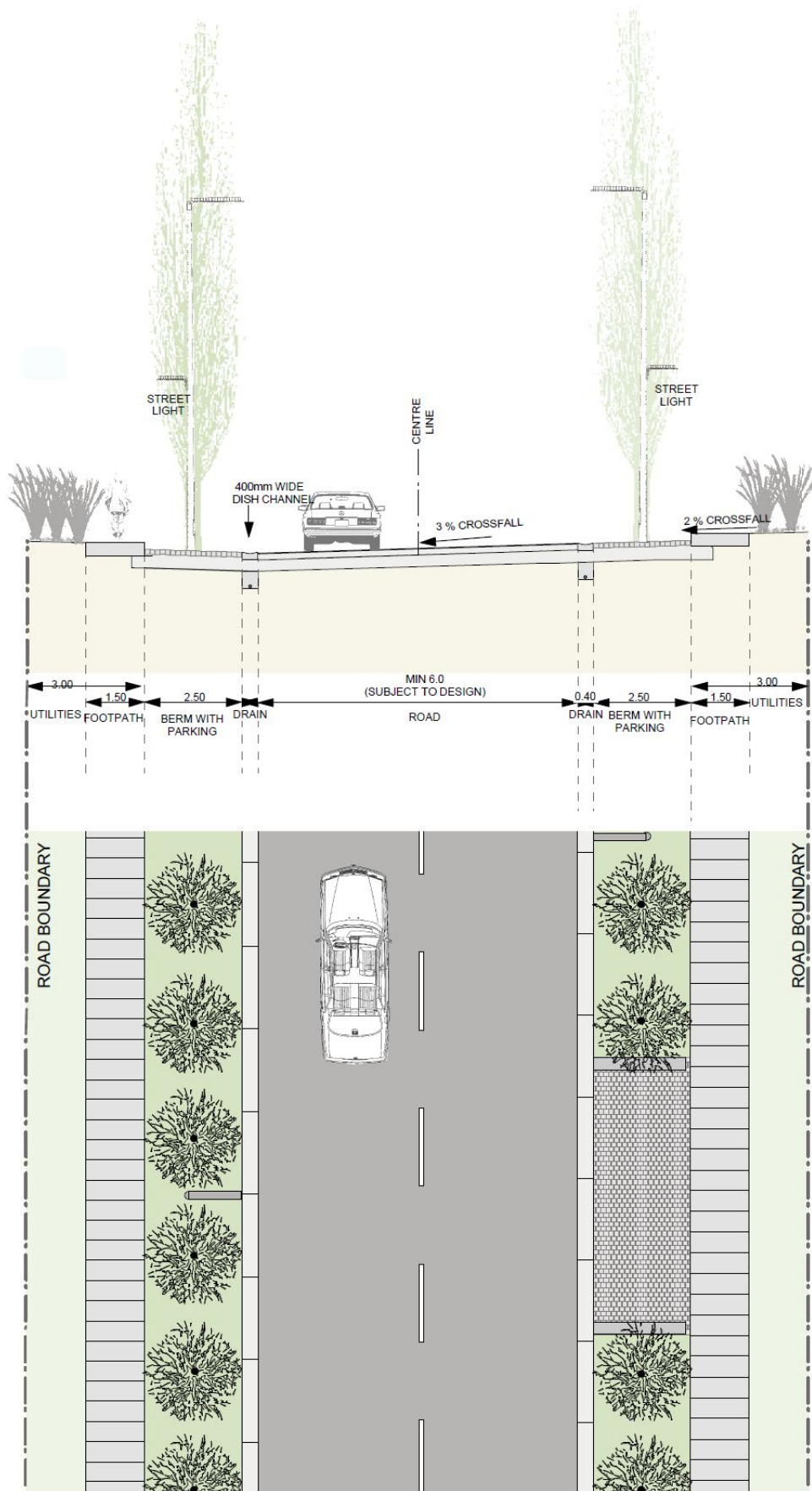
Typical Road Cross Sections



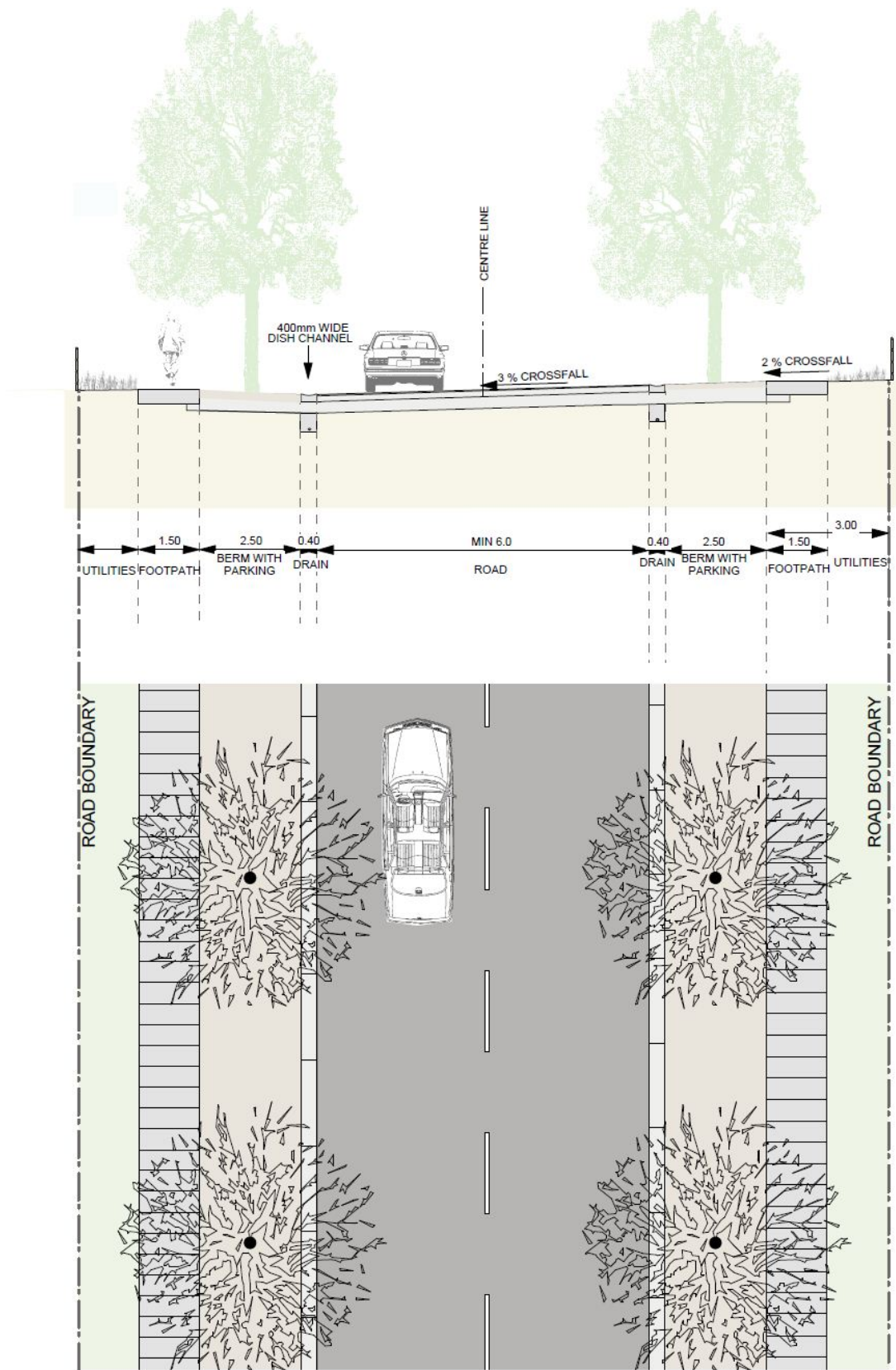
INDICATIVE ARTERIAL CROSS SECTION
(Spine Road)



INDICATIVE PARKWAY CROSS SECTION
(New Quarry Access Road)



INDICATIVE ROAD CROSS SECTION

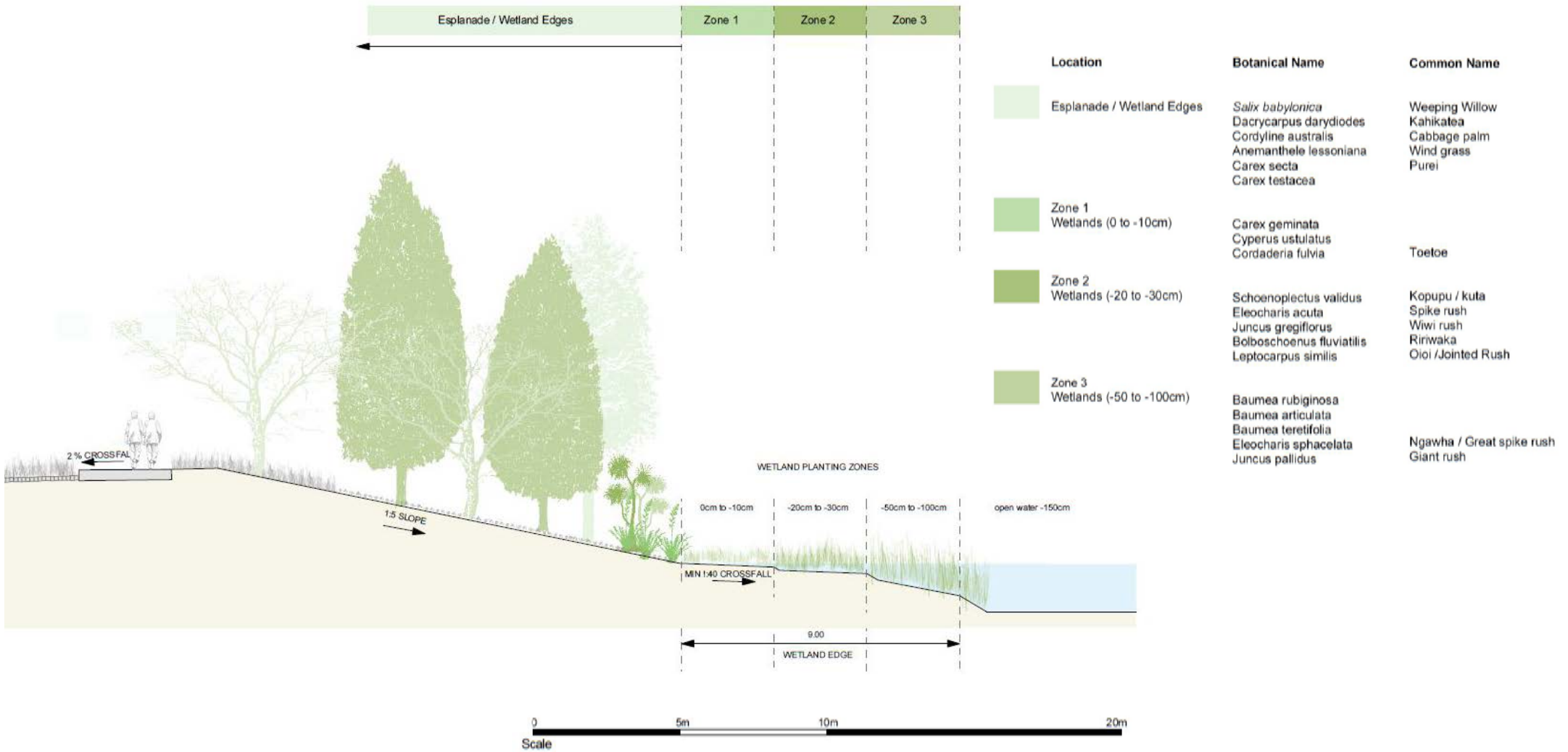


INDICATIVE MOTORWAY EDGE PRECINCT ROAD CROSS SECTION

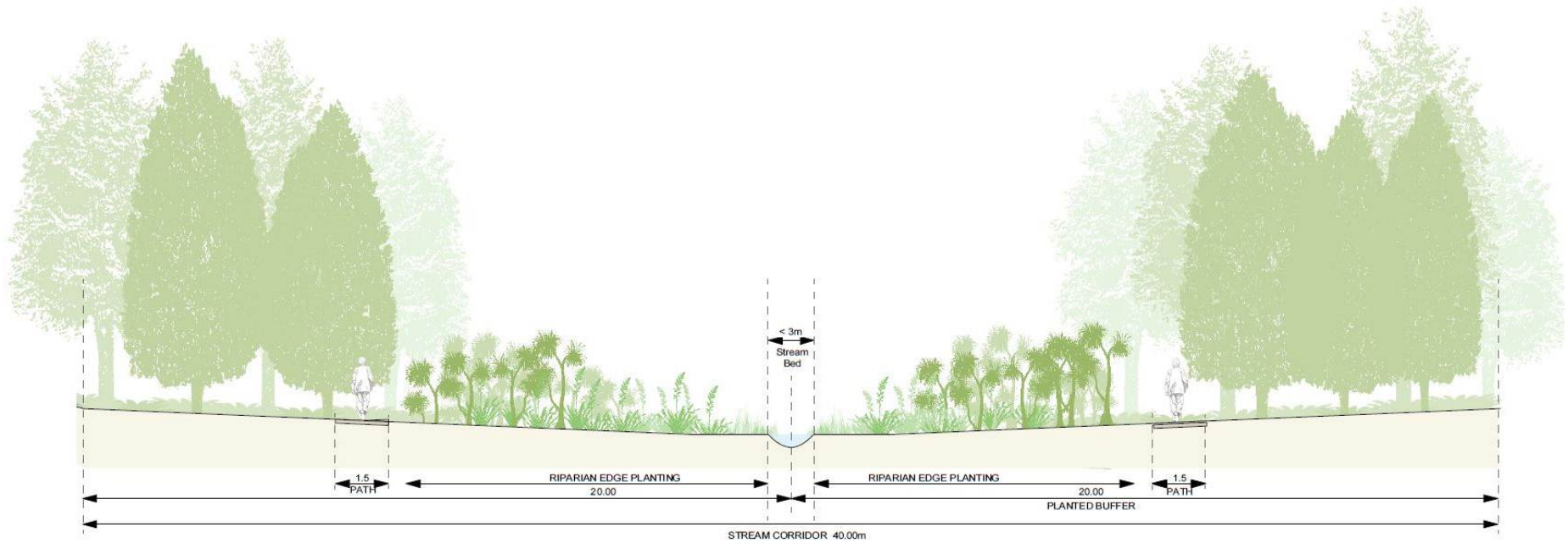
Attachment 2

Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections

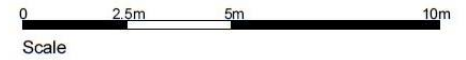
I410 Drury South Industrial Precinct Appendix

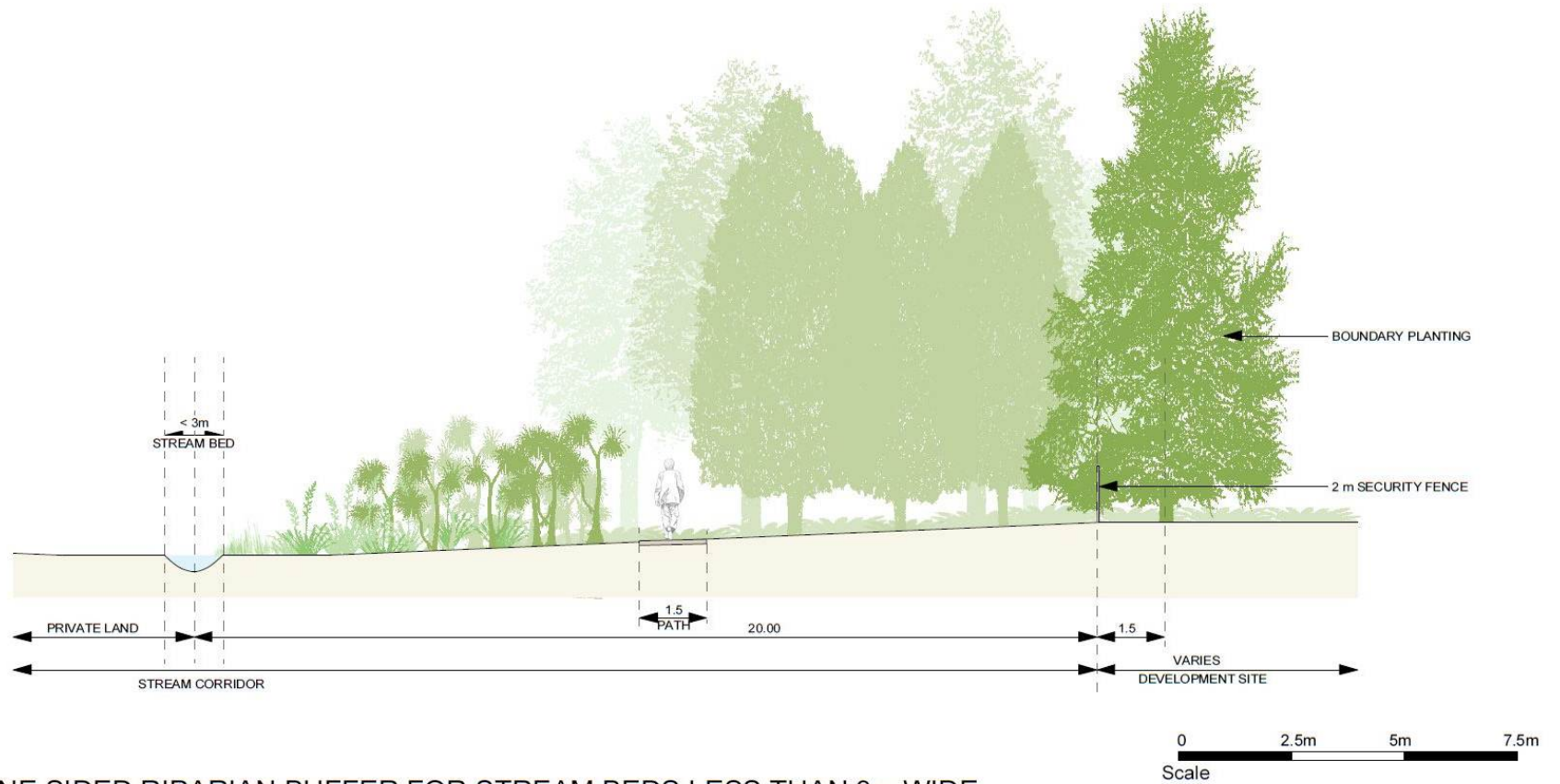


INDICATIVE WETLAND EDGE DETAIL

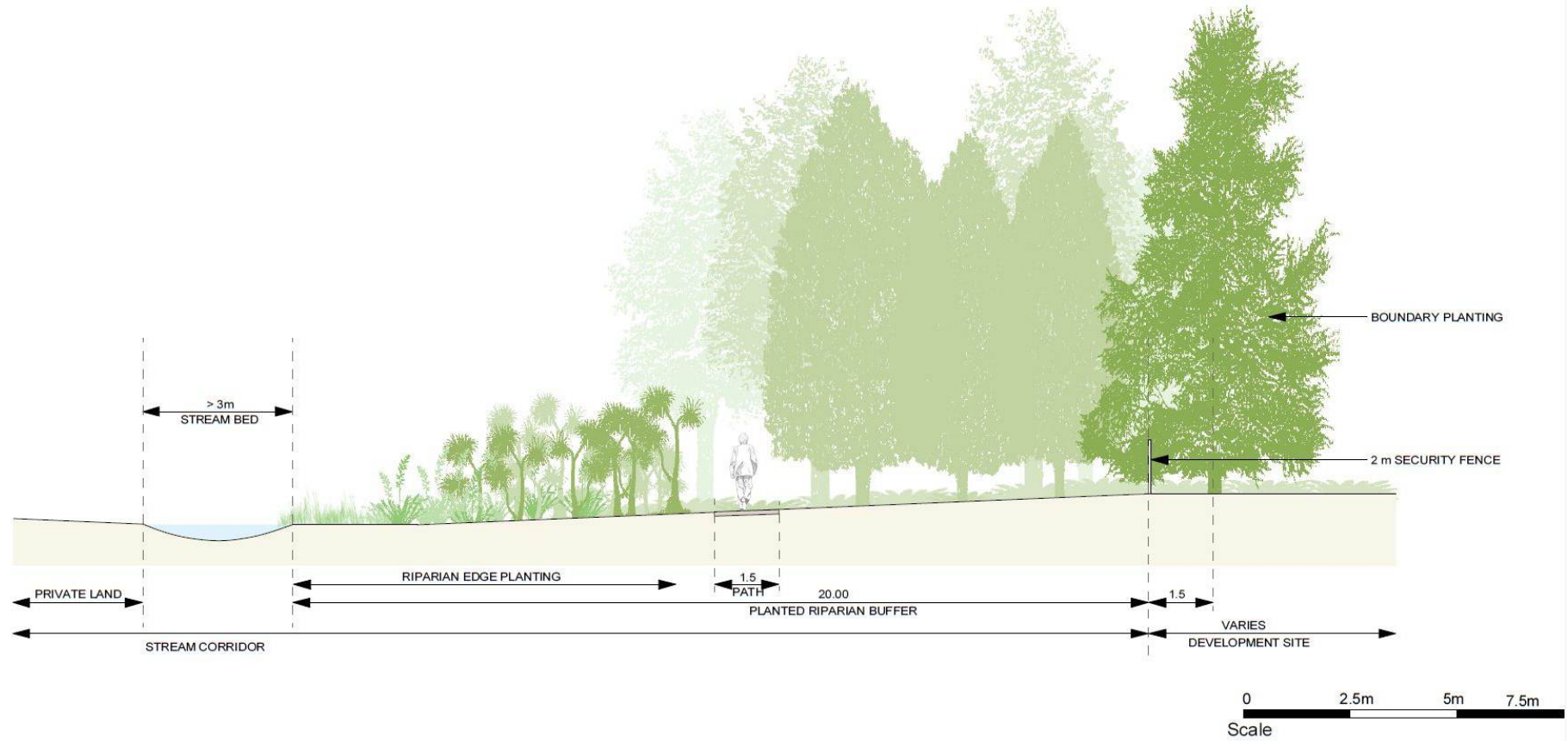


INDICATIVE 40m RIPARIAN BUFFER FOR STREAM BEDS LESS THAN 3m WIDE





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 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	Raupō
<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

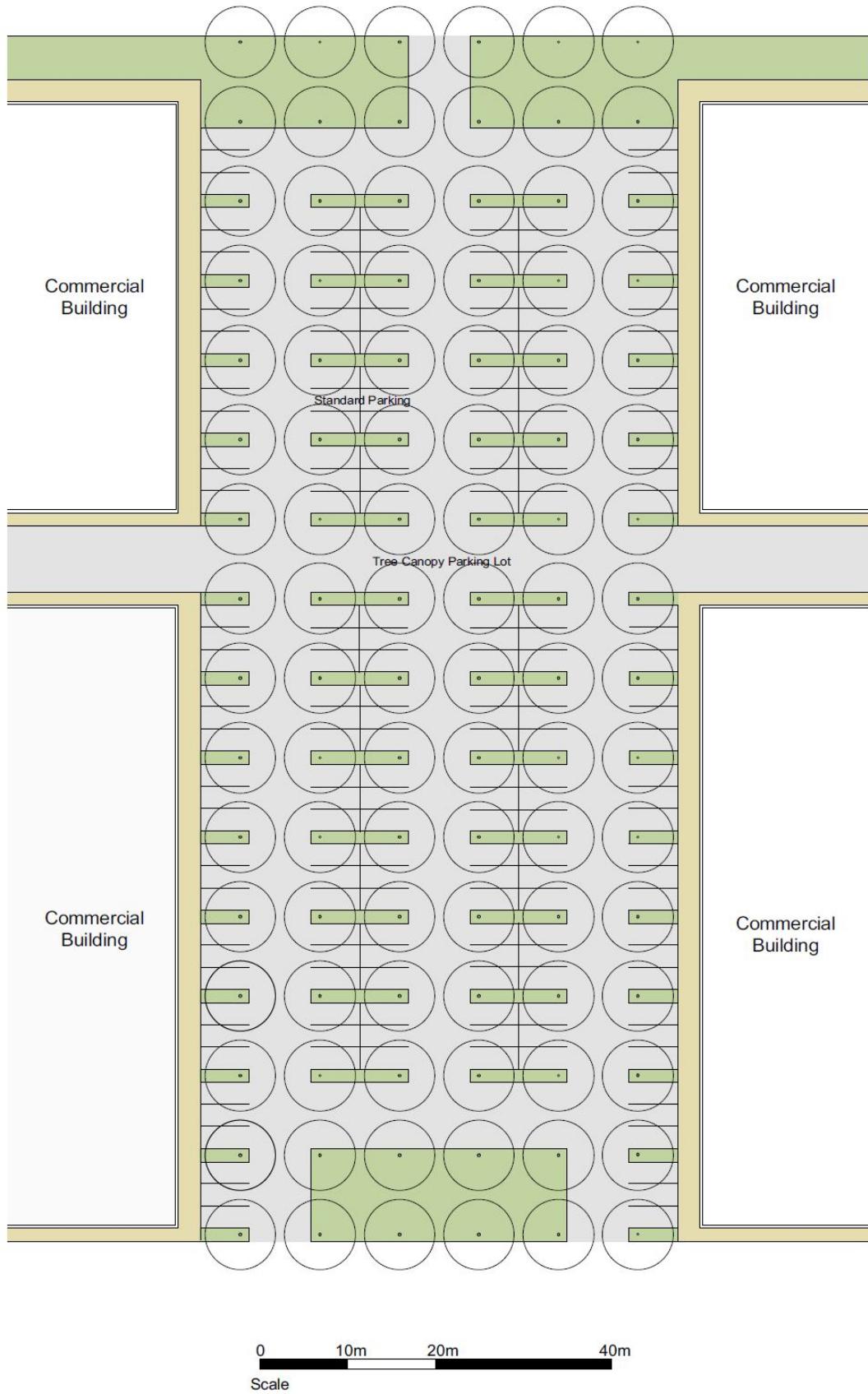
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Kunzea ericoides	Kanuka
Cordyline australis	Ti whanake
Dysoxylum spectabile	Kohekohe
Coprosma grandifolia	Kanono
<u>Streblus banksii</u>	Towai
Streblus microphylla	Turepo
<u>Myrsine divaricata</u>	Weeping matipo
<u>Marrattia salicina</u>	King fern

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 Precinct Access and Car Park Layout



TYPICAL COMMERCIAL LAYOUT