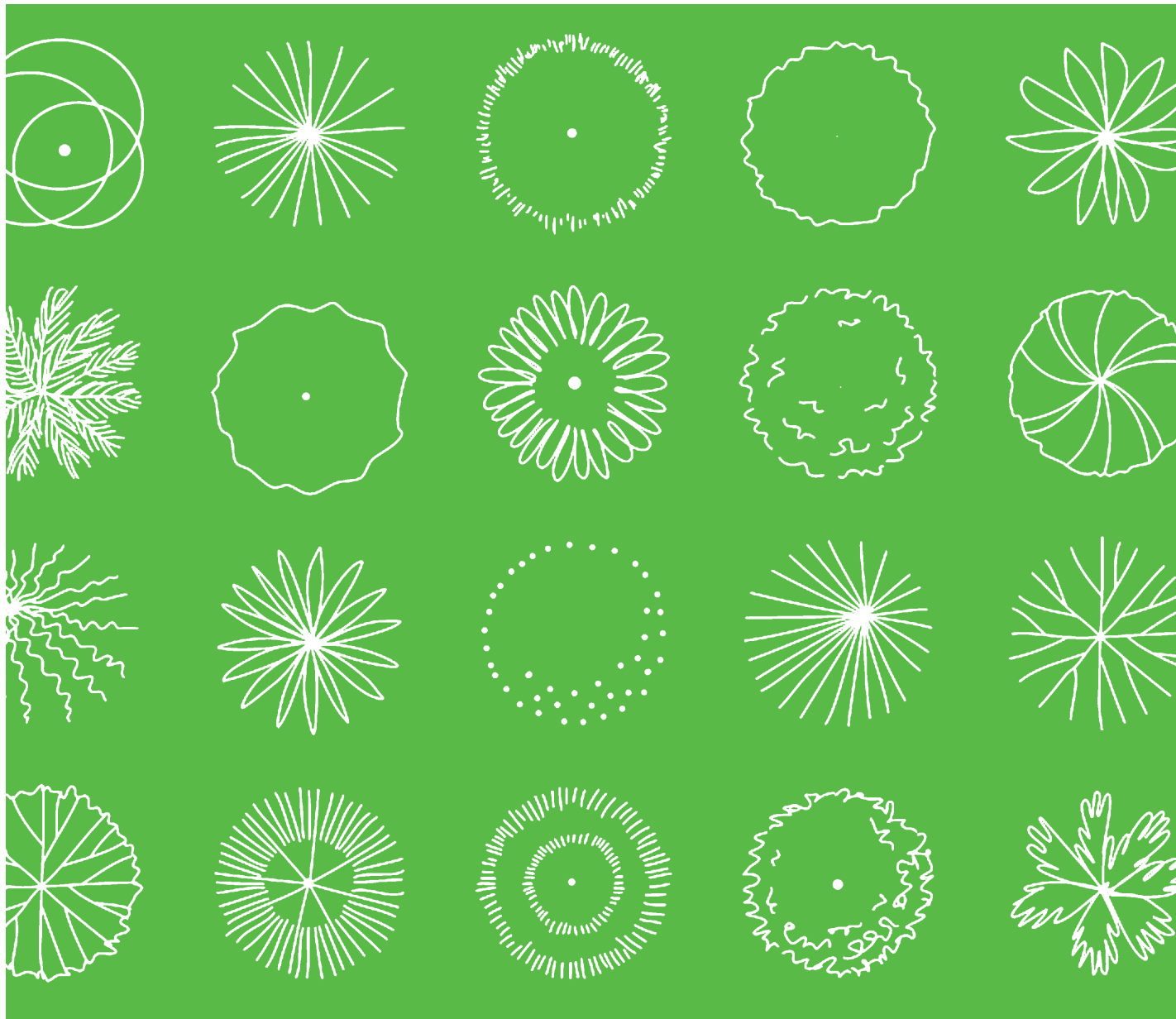


10 Landscape



Landscape Design Guidelines

The design guidelines have been developed to provide a greater level of certainty for all stakeholders when CIAL embark on developing a new commercial asset – the focus is to deliver on the three core pillars of our mission: enhancing people’s lives, fuelling economic prosperity and being great Kaitiaki of our planet.

This document outlines CIAL’s landscape design requirements for commercial projects with the aim of providing safe, compliant, sustainable, simple and cost effective outcomes for the landscape elements of a building asset.

PURPOSE

CHAMPIONING TE WAIPOUNAMU
THE SOUTH ISLAND AND
AOTEAROA NEW ZEALAND
FOR TODAY AND TOMORROW

MISSION

CHRISTCHURCH AIRPORT IS RECOGNISED FOR

ENHANCING
PEOPLE'S LIVES

Our team,
customers, partners,
communities



FUELLING
ECONOMIC
PROSPERITY

of the South Island
and New Zealand



GREAT KAITIAKI
OF OUR PLANET

Safety, security
and sustainability



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10.1 DISTRICT PLAN LANDSCAPING REQUIREMENTS

The District Plan includes requirements for landscaping on sites within the Special Purpose Airport Zone.

10.1.1 LANDSCAPING FOR OUTDOOR STORAGE AREAS

For sites with road frontages to Russley Road, Johns Road, McLeans Island Road, Jessons Road or Memorial Avenue, any outdoor storage areas (excluding areas for storing aircraft, hire vehicles or campervans) shall be screened by shrub planting capable of reaching a minimum 2m in height. The shrubs shall be spaced at a minimum of 3m (measured from centres), and gaps between shrubs shall not exceed 1m.

10.1.2 ROAD FRONTAGE LANDSCAPING AREAS

Sites that have frontage to roads are required to provide a landscaped area along the road frontage as follows:

- Russley Road, Johns Road and McLeans Island Road: Minimum depth of landscaping to be 20m (exclusive of any road widening required).
- Memorial Avenue: Landscaping area with an average depth of 10m and minimum depth of 5m, except for permitted access points.
- Jessons Road: Minimum depth of 45m, consisting of dense vegetation capable of reaching a minimum height of 1.8m.
- Any other public or private roads: Landscaping areas planted with grass and/or shrubs shall have an average depth of 3m and a minimum depth of 1.5m.

Landscaping is defined in the plan as the provision of predominantly trees and/or shrub plantings. It may include some ancillary areas of lawn or other amenity features. No more than 10% of any landscaping area shall be covered by impervious surfaces.

Where road frontage landscaping is directly adjacent to a carpark or roadway, wheel stop barriers shall be provided to protect against damage from vehicles.

Note: When calculating the average width of the road frontage landscaping, only landscaping that is located within the required road boundary setback should be included.

10.1.3 DEVELOPMENT PRECINCT SOUTHERN BOUNDARY

Along the southern boundary of the development precinct where it adjoins the rural urban fringe zone, an 8m wide landscaping area is required. It shall be planted with a mixture of exotic and native trees of a variety and height and form to screen buildings.

10.1.4 TREES

Sites with road frontages measuring 10m or more shall have trees planted along the road frontage in front of any buildings on the site. The trees can be planted within the landscaping strips described in section 10.1.2 above.

The number of trees required on a site is one plus one for every 10m of road frontage (e.g. a road frontage 10m long = two trees, 20m long = three trees etc.).

On sites that require three or more trees, the spacing between trees must be a minimum of 5m and a maximum of 15m.

In addition to the trees required along road frontages, one tree shall be planted for every five carparking spaces on the site. These trees shall be planted within or adjacent to the carparking areas.

Trees must be a minimum of 1.5m high at the time of planting and be a species capable of reaching a height of 8m at maturity.

The carpark trees shall be either located within a 1.5m wide landscape strip or have a planting protection area around each tree with a minimum diameter of 1.5m.

Where trees are located directly adjacent to or within carparks or adjacent to roads, wheel stop barriers shall be provided to prevent damage from vehicles.

10.1.5 AIRPORT PROTECTION SURFACES EXEMPTION

The District Plan tree planting requirements do not apply to sites or parts of sites that are affected by airport surface protection surfaces. Trees can still be planted within these areas however. The map in section 10.5 shows the area of land where tree heights are restricted to a maximum of 4m.

10.1.6 IMPROVING NATIVE REGENERATION AND BIODIVERSITY VALUES

CIAL is on a journey to improve its biodiversity footprint, which means regenerating native plant species wherever possible around campus. Within the context of the Landscape Design Guidelines, this means prioritising the use of the native tree species (10.2.1) and native plant species (10.2.2) over the use of exotic species. Exotic species ideally should not be used in landscape planning going forward. From 2022 onwards, CIAL's biodiversity footprint will be annually audited, with the ultimate goal of supporting native species across all our landscaping.

10.2 RECOMMENDED PLANT SPECIES

Tables within 10.2.1 to 10.2.4 list plant species that are considered to be suitable for the environmental conditions at the airport campus and that will not attract birds.

Please using the following guide when interpreting the tables:

- Trees marked as boulevard trees are considered suitable for planting within berms.
- Trees marked for use in a restricted tree height zone are likely to be suitable for areas where height restrictions apply. This is a guideline only. Please ensure that selected species do not have an average height exceeding 4m. The area where height restrictions apply is shown on the plan in section 10.5.
- Plant species for use as hedging plants are likely to be suitable to create a hedging affect.
- All other tree species are capable of reaching 8m in height at maturity and will meet the requirements in the District Plan landscaping rules.
- Native tree and plant species should not be planted in groups to avoid becoming bird attractants.

It is important that the suitability of species is considered in all landscape plans to ensure the plants' survival and long-term health. This means assessing the soil type, soil moisture, topography and localised climatic conditions. An observation of what species are already growing and thriving nearby can assist in this process.

10.2.1

NATIVE TREE SPECIES

NATIVE TREE SPECIES (NO GROUPINGS)	COMMON NAME	BOULEVARD TREE	USE IN RESTRICTED TREE HEIGHT ZONE
<i>Dicksonia fibrosa</i>	Fibrous Tree fern		✓
<i>Dicksonia squarrosa</i>	Rough Tree fern		✓
<i>Dodonaea viscosae</i>	Akeake		✓
<i>Hoheria</i> species	Lacebark		
<i>Kunzea ericoides</i>	Kānuka		
<i>Olearia paniculata</i>	Golden akeake		✓
<i>Pittosporum</i> species	New Zealand pittosporum		
<i>Plagianthus regius</i>	Ribbonwood	✓	✓
<i>Podocarpus totara</i> var.	New Zealand tōtara		
<i>Pseudopanax arboreus</i>	Five finger		✓
<i>Pseudopanax crassifolium</i>	Lancewood		
<i>Pseudopanax ferox</i>	Toothed lancewood		✓
<i>Pseudowintera colorata</i>	Pepper tree		✓
<i>Sophora</i> species	Kōwhai	✓	

10.2.2 NATIVE PLANT SPECIES

The native species in 10.2.1 and 10.2.2 should be prioritised in landscape design going forward. For reference, Tables 10.2.3 and 10.2.4 are the previously used exotic species lists, which may be referred to or used as an exception if particular use requirements exist, noting the exception

will need to be articulated and approval from a member of CIAL's Senior Leadership Team sought. The use of new exotics will also need to be explained within the biodiversity audit process.

NATIVE PLANT SPECIES	COMMON NAME	HEDGING PLANT
<i>Arthropodium cirratum</i>	Rengarenga, rock lily	
<i>Asplenium bulbiferum</i>	Hen and chicken fern	
<i>Astelia</i> species	Astelia	
<i>Blechnum discolor</i>	Crown fern	
<i>Blechnum novae-zelandiae</i>	Kiokio, palm leaf fern	
<i>Brachyglottis greyi</i> 'Sunshine'	Bright eyes	
<i>Chionochloa flavicans</i>	Miniature toetoe	
<i>Clianthus puniceus</i>	Kaka beak	
<i>Coprosma</i> species	Mirror plant	✓
<i>Corokia</i> species	Corokia	✓
<i>Dianella nigra</i>	New Zealand blueberry	
<i>Griselinia littoralis</i> var.	New Zealand broadleaf	✓
<i>Hebe</i> species	New Zealand lilac	✓
<i>Libertia</i> species	New Zealand iris	
<i>Lobelia angulata</i>	Pānakenake	
<i>Lophomyrtus obcordata</i>	New Zealand myrtle	✓
<i>Myosotidium hortensia</i>	Chatham Islands forget-me-not	
<i>Olearia paniculata</i>	Golden akeake	✓
<i>Pachystegia insignis</i>	Marlborough rock daisy	
<i>Phormium</i> var.	New Zealand flax	
<i>Pimelea prostrata</i>	New Zealand daphne	
<i>Pittosporum</i> species	New Zealand pittosporum	✓
<i>Pseudopanax lessonii</i> var.	Five finger	
<i>Pseudowintera colorata</i>	Pepper tree	✓

10.2.3 EXOTIC TREE SPECIES

EXOTIC TREE SPECIES	COMMON NAME	BOULEVARD TREE	USE IN RESTRICTED TREE HEIGHT ZONE
<i>Acer</i> species	Maple	✓	(Japanese)
<i>Aesculus hippocastanum</i>	Horse chestnut		
<i>Alnus</i> species	Alder	✓	
<i>Carpinus betulus</i> 'Fastigiata'	Upright hornbeam	✓	
<i>Cercis canadensis</i>	Forest pansy		
<i>Cornus</i> species	Dogwood		
<i>Fagus</i> species	Beech		
<i>Fraxinus</i> species	Ash	✓	
<i>Ginkgo biloba</i>	Maidenhair tree	✓	
<i>Liquidambar</i> var.	Sweet gum		
<i>Liriodendron</i> var.	Tulip tree	✓	
<i>Magnolia grandiflora</i>	Evergreen magnolia	✓	✓(Little Gem)
<i>Phebalium squameum</i>	Satin wood		✓
<i>Platanus</i> species	Plane	✓	
<i>Prunus</i> species	Flowering cherry	✓	✓
<i>Quercus</i> species	Oak	✓	
<i>Sorbus aria</i>	Whitebeam	✓	✓
<i>Tilia</i> species	Lime tree	✓	
<i>Ulmus</i> species	Elm tree	✓	
<i>Zelkova serrata</i>	Japanese elm	✓	✓

10.2.4: EXOTIC PLANT SPECIES

EXOTIC PLANT SPECIES	COMMON NAME	HEDGING PLANT
<i>Abelia grandiflora</i> var.	Glossy abelia	✓
<i>Agapanthus</i> (dwarf var.)	African lily	
<i>Ajuga reptans</i> var.	Carpet bugle	
<i>Arctotis</i> var.	African daisy	
<i>Argyranthemum frutescens</i>	Marguerite daisy	
<i>Aristea</i>	Blue iris	
<i>Armeria maritima</i>	Sea thrift	
<i>Aucuba japonica</i>	Japanese laurel	
<i>Azalea</i> species	Azalea	
<i>Bergenia</i>	Pig squeak	
<i>Buxus</i> species	Boxwood	
<i>Camellia</i> species	Camellia	✓
<i>Canna</i>	Bush lily	✓
<i>Choisya</i> species	Mexican orange blossom	✓
<i>Cistus</i> var.	Rock rose	
<i>Coleonema pulchellum</i> var.	Breath of heaven	
<i>Convolvulus cneorum</i>	Silverbush	
<i>Daphne odora</i> var.	Winter daphne	
<i>Dichroa versicolor</i>	Blue sapphire	
<i>Dietes grandiflora</i>	Wild iris	
<i>Erica carnea</i>	Winter heath	
<i>Euonymus japonicus</i>	Japanese spindle	✓
<i>Euphorbia</i>	Spurges	
<i>Euryops pectinatus</i>	Golden daisy bush	
<i>Felicia amelloides</i>	Blue marguerite	
<i>Gazania</i>	Treasure flower	
<i>Heuchera</i> var.	Coral bells	

EXOTIC PLANT SPECIES	COMMON NAME	HEDGING PLANT
<i>Hosta species</i>	Plantain lilies	
<i>Hypericum calycinum</i>	St John's wort	✓
<i>Iresine herbstii</i>	Blood leaf	✓
<i>Kalmia latifolia</i>	Mountain laurel	
<i>Laurus nobilis</i>	Bay laurel	✓
<i>Leucanthemum</i>	Shasta daisy	
<i>Leucadendron</i>	Cone bush	
<i>Leucospermum</i>	Pincushion	
<i>Ligustrum japonicum</i>	Japanese privet	
<i>Ligularia species</i>	Tractor seat	
<i>Liriope muscari</i>	Lily turf	
<i>Lomandra var.</i>	Mat rush	
<i>Loropetalum var.</i>	Chinese witch hazel	
<i>Nandina species</i>	Heavenly bamboo	
<i>Ophiopogon japonicus</i>	Mondo grass	
<i>Osmanthus fragrans</i>	Sweet olive	
<i>Photinia species</i>	Red leaf photinia	✓
<i>Pieris species</i>	Japanese andromeda	
<i>Prunus lusitanica</i>	Portuguese laurel	✓
<i>Raphiolepis species</i>	Indian hawthorn	
<i>Rhododendron species</i>	Rhododendron	
<i>Skimmia japonica</i>	Japanese skimmia	
<i>Viburnum tinus</i>	Laurustinus	✓
<i>Viburnum davidii</i>	David viburnum	

10.3 DAKOTA PARK PRECINCT GUIDELINES

10.3.1 STREET FRONTAGES

The following guidelines are recommended for all new builds to create a higher amenity streetscape throughout Dakota Park. These are proposed in addition to, and shall be read in conjunction with, the minimum standards set out by the Christchurch District Plan rules for the Specific Purpose (Airport) Zone.

1 / LANDSCAPE SETBACK ZONES

- | | |
|--|-----------|
| - Primary road frontages | Min. 3.0m |
| - Secondary road frontages | Min. 1.5m |
| - Boundaries of corner sites where rear yards extend along secondary roads | Min. 1.5m |

2 / SECURITY LINE/FENCING

The preferred location for security fencing is at the building line, or beyond the building setback to ensure a welcoming and open streetscape (FENCE LOCATION A).

If front yards must be made secure for the operation of the business, security fencing may be permitted at the rear of the landscape setbacks (FENCE LOCATION B) with landscape planting sitting outside the fencing towards the street.

In special circumstances, fencing may be permitted mid-way through the landscape setback area or a minimum of 1.5m back from the front lot boundary (FENCE LOCATION C) subject to CIAL approval.

3 / PLANTING

A consistent palette of planting throughout Dakota Park will help to create cohesion and consistency whilst still allowing for some individuality between lots.

Planting shall be predominantly low grasses, flax and/or shrubs under 800mm height, with some hedging acceptable to screen parking areas up to 1.0m height.

Specimen trees shall be min. 2.0m tall at the time of planting and be maintained to provide a clear trunk within 2.5m of finished ground level once mature.

Services boxes (e.g. Power, BFPs, etc.) should be within the landscape area at the corner of the lot boundaries.

4 / GARDEN EDGING

Ensure insitu concrete kerb edging or wheelstops are in place to all gardens adjacent to parking areas to prevent damage to planting by vehicle or trailer overhangs.

5 / INTERNAL LOT BOUNDARIES

The boundaries between neighbouring lots shall be planted back to the building setback line. Hedging and/or low shrub planting (capable of reaching 0.5m in height) shall be used to screen carparking or service areas between lots as required.

6 / SERVICE & STORAGE YARDS

All service and car storage yards shall be to the rear of lots and away from primary street frontages.

On corner lots, service areas shall be kept away from secondary street frontages also and carparking screened by a landscape setback zone as per item 1 above.

7 / BUILDING FACADES

Building frontages shall face and address the street frontage and have an element of architectural interest to ensure a vibrant and attractive street environment.



10.3.2
PLANTING PALETTE



STREET TREES
Character A (Ron Guthrie Road)
1. Sorbus aria (Whitebeam)
2. Magnolia grandiflora 'Little Gem'

STREET TREES
Character B (Other streets)
3. Fraxinus ausguistifolia 'Raywoodi'
4. Prunus sp. (Flowering Cherry)
5. Plagianthus regius (Ribbonwood)

SHRUBS and HEDGES
6. Pseudopanax arboreus
7. Viburnum davidii
8. Hebe wiri sp.
9. Griselinia littoralis

GROUND COVERS
10. Euphorbia martinii
11. Pimelea prostrata
12. Phormium cookianum (various)

FEATURE PLANTING
13. Pachystegia insignis
14. Ajuga reptans (various)
15. Heuchera (various)
16. Gazania rigens (various)



10.4 MUSTANG PARK

10.4.1 STREET FRONTAGES

The following guidelines are recommended for all new builds to create a higher amenity streetscape throughout Mustang Park. These are proposed in addition to, and shall be read in conjunction with, the minimum standards set out by the Christchurch District Plan rules for the Specific Purpose (Airport) Zone.

All planting plans shall be submitted for review and approval by Kamo Marsh Landscape Architects prior to commencing works.

1 / LANDSCAPE SETBACK ZONES

- Primary road frontages (e.g. Orchard Rd) Min. 3.0m
- Secondary road frontages (e.g. Sir Keith Park PI & Pathfinder PI) Min. 1.5m
- Boundaries of corner sites where rear yards extend along secondary roads (Sir Keith Park PI & Pathfinder PI). Min. 1.0m

2 / SECURITY LINE/FENCING

The preferred location for security fencing is at the building line, or beyond the building setback to ensure a welcoming and open streetscape (FENCE LOCATION A).

If front yards must be made secure for the operation of the business, security fencing may be permitted at the rear of the landscape setbacks (FENCE LOCATION B) with landscape planting sitting outside the fencing towards the street.

In special circumstances, fencing may be permitted mid-way through the landscape setback area or a minimum of 1.2m back from the front lot boundary (FENCE LOCATION C) subject to CIAL approval.

3 / PLANTING

A consistent palette of planting throughout Mustang Park will help to create cohesion and consistency whilst still allowing for some individuality between lots.

Planting shall be predominantly low grasses, flax and/or shrubs under 800mm height, with some hedging acceptable to screen parking areas up to 1.0m height. Specimen trees shall be min. 2.5m tall at the time of planting and be maintained to provide a clear trunk within 2.0m of finished ground level once mature.

Services boxes (e.g. Power, BFPs, etc.) should be within the landscape area at the corner of the lot boundaries.

4 / GARDEN EDGING

Ensure insitu concrete kerb edging or wheelstops are in place to all gardens adjacent to parking areas to prevent damage to planting by vehicle or trailer overhangs.

5 / INTERNAL LOT BOUNDARIES

The boundaries between neighbouring lots shall be planted back to the building setback line. Hedging and/or low shrub planting (capable of reaching min. 0.5m in height) shall be used to screen carparking or service areas between lots as required.

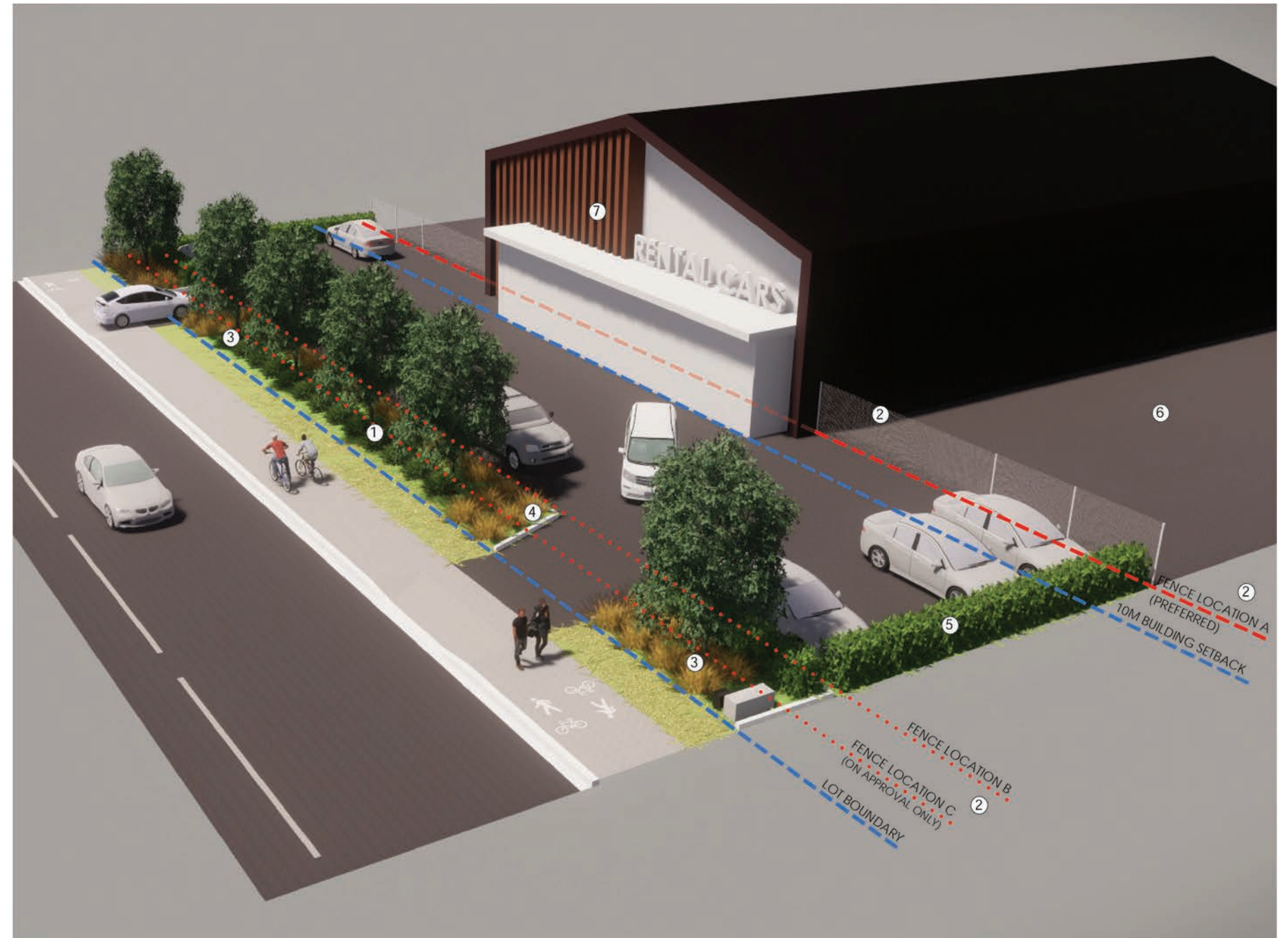
6 / SERVICE & STORAGE YARDS

All service and car storage yards shall be to the rear of lots and away from primary street frontages.

On corner lots, service areas shall be kept away from secondary street frontages also and carparking screened by a landscape setback zone as per item 1 above.

7 / BUILDING FACADES AND SIGNAGE

Building frontages shall face and address the street frontage and have an element of architectural interest to ensure a vibrant and attractive street environment.



10.3.2 PLANTING PALETTE

The planting along lot frontages shall be selected from plants in the condensed palette below. Selected varieties should include a maximum of 1x specimen tree, 1x hedging plant, 3x shrubs and grasses (with a mix of strappy/grass and shrubby foliage), and 1x groundcover. Generally, hedging should be to the rear of the garden bed when viewed from the street to allow the rest of the plants to be visible.



SPECIMEN TREES

1. *Quercus palustris*
2. *Sorbus aria* 'Lutescens'
3. *Prunus* sp. (To match existing on site)

HEDGING

4. *Griselinia littoralis* 'Broadway Mint'
5. *Corokia* 'Geentys Green'
6. *Coprosma* 'Karo Red'

SHRUBS

7. *Dietes grandiflora*
8. *Lomandra* 'Tanika'
9. *Phormium* var. (Green Dwarf or Evening Glow)

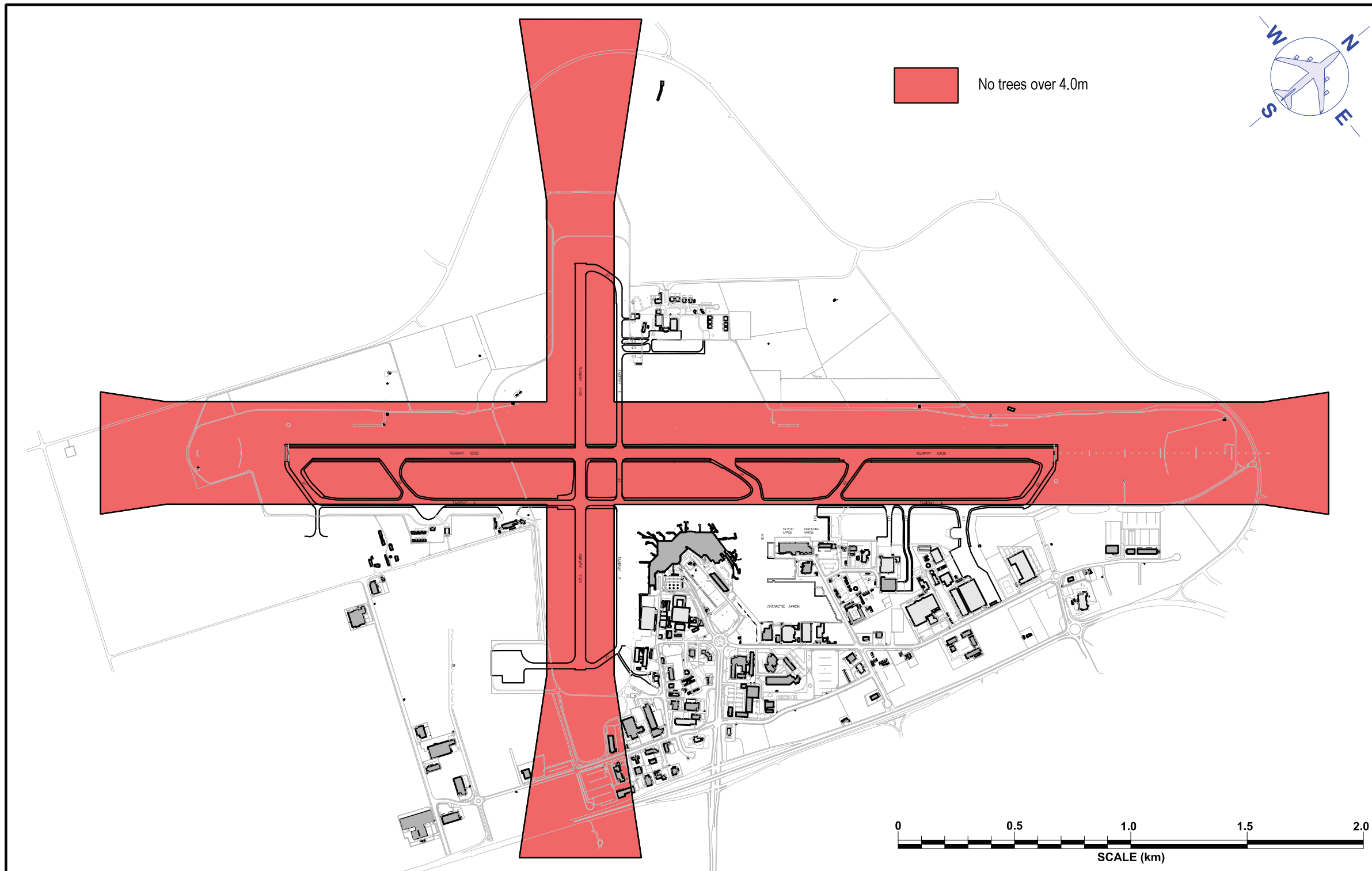
10. *Pachystegia insignis*
11. *Pittosporum* 'Golfball'
12. *Euphorbia martinii*

13. *Hebe* 'Wiri Mist'
14. *Myosotidum hortensia*
15. *Viburnum davidii*

GROUNDCOVERS

16. *Lobelia angulata*
17. *Coprosma acerosa* 'Hawera'
18. *Acaena inermis* 'Purpurea'

10.4 RESTRICTED TREE HEIGHT ZONE




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CHRISTCHURCH AIRPORT

REV	

TITLE
**CHRISTCHURCH INTERNATIONAL AIRPORT
RESTRICTED TREE HEIGHT ZONE**

DESIGN R. BOXALL	SCALE
DRAWN S.A. HOGGART	N.T.S.
DATE 15.03.17	SHEET 1 of 1
DWG No.	REV
ASI-1128	AB