# Review process for landscape plans and design reports

Submission received

**Updated Submission**

Initial Screen

**HOLD POINT – request further information if required**

**Updated Submission**

Assess the Basics

**HOLD POINT – request further information if required**

Feedback from operational staff

Assess the Details

**Updated Submission**

Request for Further Information

Plan Acceptance

# Initial Screen

RMA Number, Subdivision Name (+ Stage if applicable)

Types of Assets

|  |  |
| --- | --- |
|  | Trees |
|  | Garden beds |
|  | Recreation Reserve |
|  | Local Purpose Utility Reserve - with drainage assets |
|  | Local Purpose Utility Reserve – access/other |
|  | Riparian planting of an existing waterway |
|  | Play Equipment |
|  | Engineered structures |

Design Report provided?

|  |  |
| --- | --- |
|  | Yes |
|  | No |

Planting Plan provided?

|  |  |
| --- | --- |
|  | Yes |
|  | No |

Check Conditions of Consent

|  |  |
| --- | --- |
|  | Standard landscaping/greenspace conditions |
|  | Management / Restoration Plan |
|  | Recreation Reserve with a Development Contributions offset |
|  | Establishment Period 24 months |
|  | Establishment Period 12 months |
|  | Consistency with a Landscape Concept Plan specified in the conditions |
|  | Approval or input required from land drainage planner and/or ecologist |
|  | Landscaping not being vested but requires design approval |
|  | Protection of existing trees or vegetation – report and/or TPMP |
|  | Other applicable conditions (*check stormwater and waterways conditions*) |

Has the Management or Restoration Plan been provided?

*Note - It is a good idea to set up a meeting with the ecologist, land drainage planner and utility parks operations team. If this meeting has not happened prior to plan submission, organise it now.*

|  |  |
| --- | --- |
|  | Not Applicable |
|  | Yes |
|  | No |
|  | Draft provided that requires landscape and ecology input |

Has a Report or Management Plan been provided for the retention/protection of existing trees/vegetation?

|  |  |
| --- | --- |
|  | Not Applicable |
|  | Yes |
|  | No |
|  | Draft provided that requires arboriculture or ecology input |

Has the cost schedule for a Recreation Reserve development contributions offset been provided?

*Note – the cost schedule must include: soft landscaping supply, planting and establishment; grass establishment (mowing only); and hard landscaping supply and installation.*

|  |  |
| --- | --- |
|  | Not Applicable |
|  | Yes |
|  | No |

Does the cost schedule exceed a total amount of $250,000?

|  |  |
| --- | --- |
|  | Yes |
|  | No |
|  | Yes, but the amount is quite close and could be met with minor design amendments. |

Is the design consistent with the referenced concept plan?

|  |  |
| --- | --- |
|  | Not Applicable |
|  | Yes |
|  | No |

## **HOLD POINT**

If any of the following circumstances apply:

* a design report has not been provided;
* a planting plan has not been provided, or does not have the required level of detail;
* a management or restoration plan is required and has not been provided;
* there are existing trees/vegetation to be retained on site or within an adjoining site and a report has not been provided;
* a cost schedule for a development contributions offset is required and has not been provided (or, far exceeds $250,000);
* there are fundamental departures from a concept plan referenced in a condition of consent; and/or
* there is another consent condition relevant to landscape design that they do not appear to comply with:

the submission is not accepted for processing. Email the submitter, (cc. the developer and subdivision engineer) to communicate this.

* Specify the information that is required and the consent condition/s that they must comply with.
* Refer them to the subdivision landscape approvals web page guidance.

Has the submission passed the initial screen?

|  |  |
| --- | --- |
|  | Yes – proceed to next section. |
|  | No. The submitter, developer and subdivision engineer have been notified via email. |

# Basic Requirements

## Plans

|  | Y | N | N/A | Comment |
| --- | --- | --- | --- | --- |
| North Point and a readable plan scale at A3 (1:100, 1:250 or 1:500) |  |  |  |  |
| A site location plan for the subdivision and relevant stages provided. |  |  |  |  |
| Plans are correctly labelled and cross-referenced and cite the correct RMA number. |  |  |  |  |
| Reserves are labelled with Lot number, size (m2) and proposed classification *(eg Recreation, Local Purpose Utility)*. |  |  |  |  |
| Key dimensions are shown on the plans (*eg berm widths where trees are located, utility service setbacks, 6m radius circle around light poles, pathway widths, garden bed dimensions).* |  |  |  |  |
| Area (m2) of garden beds and lawn areas are labelled or listed |  |  |  |  |
| Cross section details are provided *(eg basins, wetlands, waterways, street trees, landscape buffer strips).* |  |  |  |  |
| Topography: post-civil slopes and cross-sections are provided. |  |  |  |  |
| Any landscaping that is not being vested is indicated clearly on the plan *(eg with a note saying “Council approval required but not to be vested” or similar).* |  |  |  |  |
| TREES and PLANTS | | | | |
| Existing trees located on or directly adjacent to the site are identified, and their retention or removal is indicated. |  |  |  |  |
| Tree schedules are provided with species, quantity, grade, canopy shape and accurate dimensions at maturity. |  |  |  |  |
| Tree and tree pit cross sections and specifications are provided, with tree planting locations in relation to berm widths, proximity to services, and root barrier (if applicable). |  |  |  |  |
| Detailed plant set-out plans are provided for amenity planting areas (Recreation Reserve, Link Reserves, Road Landscaping, and areas where there are existing landscape features).  *\*Plant mixes are appropriate for areas of mass planting in riparian margins, wetlands/stormwater basins, and revegetation sites.* |  |  |  |  |
| Plant schedules are provided with species, quantity, spacing, and grade. |  |  |  |  |
| Any hatched areas of mass planting have notes on the plan that indicate the density and spacing of plants. *(Confirming compliance with a consent condition may require a sample area drawing showing the proposed layout)*. |  |  |  |  |
| No pest species are proposed. |  |  |  |  |
| WATERWAYS and DRAINAGE | | | | |
| Proposed works to existing waterways are shown clearly with slopes and contours, channel widths, depths, meander and ecological features, and water levels (low flow and flood levels). |  |  |  |  |
| New land drainage assets (stormwater basins, new drains and swales, constructed wetlands) are shown clearly with slopes and contours, channel widths and depths, meander and ecological features, and water levels (low flow and flood levels). |  |  |  |  |
| Planting profiles and vegetation zones are shown *(examples in WWDG Fig 11.3-11.5, IDS Pt 10 Appx I)* |  |  |  |  |
| Details are consistent with the consent conditions, Management / Restoration Plan where applicable, and engineering design. |  |  |  |  |
| HARD LANDSCAPING | | | | |
| Play equipment plans show equipment types and manufacturers, fall zones, safety and surface material, edge treatments and proposed drainage. *(This applies to both off-the-shelf and bespoke items).* |  |  |  |  |
| Engineered structures that require a building consent or exemption are identified and structural drawings are provided with the plan set. |  |  |  |  |
| Hard surfaces and structures (*eg paths, boundary fencing, bollards, furniture, gates, hand-rails*) - location, materials dimensions and elevations are shown. |  |  |  |  |

## Design Report

|  | Y | N | N/A | Comment |
| --- | --- | --- | --- | --- |
| BASELINE | | | | |
| Existing landform, trees/vegetation, waterbodies, and drainage patterns are described. |  |  |  |  |
| Characteristics, values (eg social, cultural, ecological, historic) and uses of the site are identified and described in relation to the design |  |  |  |  |
| Existing sub-soil characteristics and groundwater table are described. |  |  |  |  |
| CIVIL WORKS | | | | |
| Demonstrates how the engineering design and the landscape design are compatible:   * utility service locations allow for tree planting * cut and fill areas and depths, fill materials and methods * final levels, landform and slopes * drainage and overland flow paths * depth to groundwater * access and adequate structural loading for maintenance vehicles |  |  |  |  |
| EXISTING TREES/VEGETATION | | | | |
| Identifies all existing trees/vegetation within and adjacent to the site; which trees/vegetation will be removed; and which trees/vegetation will be retained and protected. |  |  |  |  |
| All trees and vegetation are assessed against the:   * District Plan (*regulates indigenous biodiversity, Significant Trees and other trees located in road reserves, parks and public open spaces)* * Tree Policy (*regulates trees on Council land);* and * CSS Part 1 Section 22.0 (*applies to all trees and vegetation).* |  |  |  |  |
| Demonstrates that any required resource consents and/or delegated authority approvals have been obtained. |  |  |  |  |
| For any existing trees to be retained within and adjacent to the site:   * an arboricultural assessment produced by a qualified arborist is provided *(required by IDS 10.4.2);* * a Tree Protection Management Plan (TPMP) prepared in accordance with the CSS Part 1 Section 22.3.2 is either: provided (*can be combined with report above*); or, the provision and certification of a TPMP is identified as a hold point prior to the commencement of works within the protection zones of the trees; and * the presence of a supervising arborist during the works is confirmed.   *(Note: IDS, CSS and Tree Policy requirements apply regardless of whether a resource consent is required).* |  |  |  |  |
| TREES and PLANTS | | | | |
| Demonstrates appropriate tree and plant use for the site, and compliance with consent conditions, IDS and WWDG. |  |  |  |  |
| Functional and aesthetic considerations are outlined. |  |  |  |  |
| Identifies the correct ecological district and described how eco-sourcing requirements will be implemented where applicable. *(Plants from outside of the ecological district need to be accepted by Council’s Biodiversity team).* |  |  |  |  |
| Potential effects on infrastructure, utilities, boundary encroachment, shading, site use and maintenance are identified in relation to tree/plant dimensions and shapes at maturity. |  |  |  |  |
| Confirms compliance with the IDS minimum setback distances for trees and plants (*eg kerb lines, paths, boundaries, etc*). |  |  |  |  |
| Tree pit designs described in detail, with reference to mitigations where required due to earthworks/soil conditions and groundwater tables. |  |  |  |  |
| Mulch types, grades and depths are identified. |  |  |  |  |
| Edge treatments are identified. |  |  |  |  |
| SAFETY and ACCESSIBILITY | | | | |
| The design is assessed against the principles and qualities of CPTED. |  |  |  |  |
| A safety audit is included; e.g. lighting, sightlines and surface treatments.  *(Note: at roundabouts and intersections tree locations and plant species must comply with visibility requirements when mature).* |  |  |  |  |
| Structures are demonstrated to be safe and accessible (*Parks and Waterways Access Policy*) |  |  |  |  |
| Pathway widths relate to the anticipated use, and mobility access has been provided. |  |  |  |  |
| For engineered structures that require a building consent or exemption, a PS1 Producer Statement is provided that confirms compliance with the Building Code. |  |  |  |  |
| Play equipment:   * Choice is justified – who will use it, why this particular equipment? * Confirms compliance with NZS 5828:2015 and the Parks and Waterways Access Policy. * For bespoke play equipment, NZS 5828:2015 design certification and PS1 Producer Statement are provided. |  |  |  |  |
| WATERWAYS and DRAINAGE | | | | |
| Confirmation that the proposed plant selections and locations are appropriate for the low flow and flood water levels. |  |  |  |  |
| Access to inlets/outlets/ scruffy domes has been provided for maintenance purposes, including for maintenance vehicles where applicable. |  |  |  |  |
| Demonstrates compliance with the consent conditions, IDS, CSS, WWDG and the Parks and Waterways Access Policy. |  |  |  |  |
| MAINTENANCE AND QUALITY ASSURANCE | | | | |
| Identifies and describes the hold points for supply and planting, including:   * Checks CSS Pt 7 ss. 4.3 & 4.4; * eco-sourcing (where applicable); * protections for existing trees/vegetation * garden beds and tree pit construction (correct tree pit soils and lightly compacted); * root barrier installation (where applicable) * planting checks – correct planting depth, mulch, stakes and ties |  |  |  |  |
| Describes the establishment maintenance activities, the required frequency and duration, and reporting processes. |  |  |  |  |
| Demonstrates that future maintenance requirements have been provided for in the design *(eg species choice, provision of maintenance access between trees and garden beds)* |  |  |  |  |

## **HOLD POINT**

If any of the following circumstances apply:

* There are waterways and land drainage assets, but information about anticipated water levels and flows (including flood events); and/or profiles are not provided as cross sections (including trees/planted areas). This information is required before the details check can be completed and before Council operations staff can be asked to comment;
* There are existing trees in a road reserve, park or public open space, and no information is provided about the requirements that apply. If a separate resource consent, tree protection management plan, and/or delegated authority approval is required, Council cannot accept the plans until all required approvals have been obtained;
* The berm widths, utility service locations, soil profile and groundwater tables are not identified. Council arborists will not be able to assess the suitability of proposed tree species and pit designs without this information;
* There are structures or bespoke play items, but the Building Code or playground certification requirements that apply have not been confirmed. This information is required before the submission can be sent onto a Council engineer (structures) or Parks Unit (playgrounds). Any engineered structures that require a consent or exemption under the Building Act 2004 must have structural drawings and a PS1 provided, sufficient to confirm compliance with the Building Code;

send a request for further information to the submitter (cc. developer and subdivision engineer). The processing is to be placed on hold until the information has been received.

Does the submission contain adequate basic information?

|  |  |
| --- | --- |
|  | Yes – proceed to next section. |
|  | No – the RFI has been sent. |

# The Details

Landscape plans and accompanying design reports that are submitted for acceptance must contain sufficient information to assess compliance with the relevant consent conditions, Infrastructure Design Standard (IDS), Construction Standard Specification (CSS), Waterways, Wetland and Drainage Guide (WWDG) where applicable, and the Parks and Waterways Access Policy.

The following table lists common (not all) requirements from the IDS, CSS, WWDG, and the Parks and Waterways Access Policy. It also identifies some of the common issues that arise with certain plant and tree species.

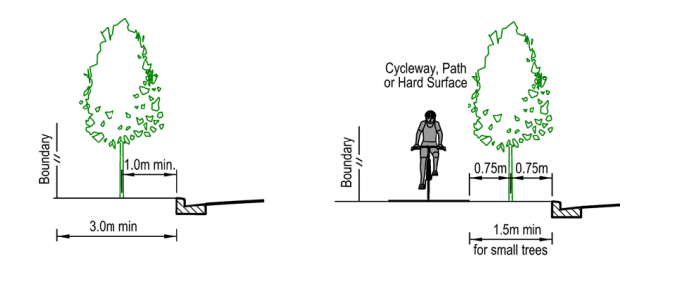
The use of this table by the landscape approvals team ensures that all potential issues are identified and communicated to the operations teams when submissions are sent to them for feedback.

The design report must explain and justify any non-compliances. A non-compliance may be confirmed to be acceptable following review by operations teams and ecologists; or they may suggest alternatives or mitigations.

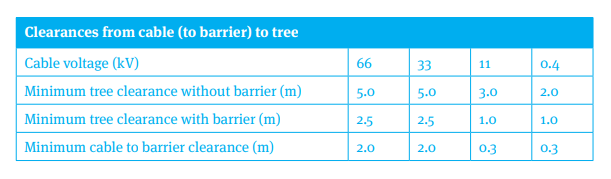
**References – Street Trees**

Street tree planting berm widths and setbacks (Planting Guide):

|  |  |  |  |
| --- | --- | --- | --- |
| Tree Size Class | Mature Tree Height (m) | Minimum berm / planting area width | Minimum distance from kerb / footpath to centre of tree |
| Small | 0 to 6 | 1.5m | 0.75m |
| Medium | 6 to 12 | 2.0m | 1.0m |
| Large | 12 to 20 | 2.5m | 1.25m |
| Very Large | 20+ | 3.0m | 1.5m |

IDS 10.9.11 Figure 3:

Clearance distances for trees and root barrier use where located near underground power cables (IDS 10.9.11 Table 1):



|  | | | | | Y | N | N/A | Comment |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TREES *\*with reference to the* [*Planting Guide*](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fccc.govt.nz%2Fassets%2FDocuments%2FEnvironment%2FTrees%2FTree-Planting-Guide-Species-list.xlsx&wdOrigin=BROWSELINK) | | | | | | | | |
| Berm widths and setbacks are sufficient for the proposed street trees(*Ref: Street tree planting berm widths and setbacks table above and IDS 10.9*). | | | | |  |  |  |  |
| Minimum distances between the proposed tree locations and back of kerbs / footpaths comply with the Planting Guide and IDS 10.9.11. | | | | |  |  |  |  |
| Street trees meet the minimum setbacks:   * 6.0m from light poles, pedestrian crossings and signs. * 1.5m from stormwater laterals. * power cables (IDS 10.9.11). * 1.0m from other utilities. * 3.0m from bus stops. * 3.0m on upstream side and 2.0m on downstream side of driveways, or 6.0m for driveways on collector and arterial roads. * Safe intersection sight distances (SISD). | | | | |  |  |  |  |
| Root barriers are only included if and where required (typically for power cables only). Root barrier clearances comply with IDS 10.9.11 Table 1 and be installed outside of tree pits as per SD704. (*Quality Assurance hold point identified in Design Report to confirm compliant installation*). | | | | |  |  |  |  |
| Park trees at maturity have adequate offsets from site boundaries, paths, structures, lighting and each other. | | | | |  |  |  |  |
| GARDEN BEDS | | | | | | | | |
|  | Not Applicable | | | | | | | |
| Garden beds have a minimum size of 8.0m2, a minimum width of 1.5m and minimum 300mm soil depth. | | | | |  |  |  |  |
| Street gardens – plants will not exceed a maximum height of 0.6m at maturity where traffic visibility is required. | | | | |  |  |  |  |
| No street gardens with tapered ends less than 700mm. Tapered ends of traffic islands less than 700mm width are hard surface, not planted. | | | | |  |  |  |  |
| Where areas between garden beds or garden beds and trees are grassed, at least 3.0m clearance is provided to allow for mowers. | | | | |  |  |  |  |
| Form / shape of garden beds – ends are square or rounded off with sufficient space for plants to grow to maturity *(no narrow angular ends)* | | | | |  |  |  |  |
| Planting on slopes – the gradient does not exceed 1:3 and has appropriate plant spacings for the site and species. | | | | |  |  |  |  |
| Plants in rain gardens are those listed in section 6 of the [Rain garden design, construction and maintenance manual .](https://ccc.govt.nz/assets/Documents/Environment/Water/Rain-garden-design-construction-and-maintenance-manual.pdf) | | | | |  |  |  |  |
| There are no planted service strips less than 300mm wide between footpaths and property boundaries. | | | | |  |  |  |  |
| ACCESS in RESERVES | | | | | | | | |
|  | | | Not Applicable | | | | | |
| Access to reserves with a minimum of 1.2m wide access points every 50m, demarcated using 1.1m bollards (must be higher than the fence) | | | | |  |  |  |  |
| Access to play equipment is at least 1.8m wide. | | | | |  |  |  |  |
| Adequate vehicle accessways provided to reserves to allow for maintenance and emergency vehicles, including formed vehicle crossings. | | | | |  |  |  |  |
| Removable barriers prevent unauthorised vehicles from entering reserves. | | | | |  |  |  |  |
| LAWNS in RESERVES | | | | | | | | |
|  | | | | Not Applicable | | | | |
| Lawns are not less than 2.0 metres width at any point. | | | | |  |  |  |  |
| Grassed slopes do not exceed a 1:4 gradient, and there is no significant change in grade that could cause scalping or missed areas by a mower. | | | | |  |  |  |  |
| Sufficient mower access provided, minimum 2.5m wide. *Think about how this will work in practice – the mower should not need to go through garden beds or drive back and forth for access.* | | | | |  |  |  |  |
| Sufficient drainage is confirmed as being provided and no areas will have ponding. *Flood levels, overland flow, grades, drainage, etc., are to be confirmed by the landscape designer with input from the developer’s engineer.* | | | | |  |  |  |  |
| PATHS and TRACKS in RESERVES | | | | | | | | |
|  | | | Not Applicable | | | | | |
| Pedestrian-only paths are 1.5-2m wide. | | | | |  |  |  |  |
| Confirmation that tracks for maintenance vehicles have adequate width for access and manoeuvring and are constructed to allow for maintenance vehicle weights.  *That the access tracks have been designed to cater to the anticipated loads is to be confirmed by the landscape designer with input from the developer’s engineer.* | | | | |  |  |  |  |
| Sufficient drainage is confirmed as being provided and no areas will have ponding. *Flood levels, overland flow, grades, drainage, etc., are to be confirmed by the landscape designer with input from the developer’s engineer.* | | | | |  |  |  |  |
| Paths that are more than 25mm above or below the surrounding ground surface have edging. If edging is used, it is 75mm high. | | | | |  |  |  |  |
| Cross-slopes on paths do not exceed 1:50. | | | | |  |  |  |  |
| Vegetation will not encroach onto the path. | | | | |  |  |  |  |
| Accessible tracks are at least 1.5m wide and have no abrupt changes in level more than 200mm. | | | | |  |  |  |  |
| Accessible tracks provide an average of five passing widths for every 100-metre length. Passing widths are at least 1.8m wide. | | | | |  |  |  |  |
| Any ramps on accessible tracks have a maximum gradient of 1:12. | | | | |  |  |  |  |
| Where the gradient of a ramp exceeds 1:20, landings of at least 1.2m length are provided every nine metres. | | | | |  |  |  |  |
| Where the gradient is between 1:33 and 1:20, landings of at least 1.2m length are provided every 18 metres. | | | | |  |  |  |  |
| Accessible piers and jetties are at least 1.8m wide. | | | | |  |  |  |  |
| Shared paths are at least 2.5m wide. *(This must be increased to at least 3m wide if expected to be high use)* | | | | |  |  |  |  |
| Any gradients that exceed 1:20 have handrails provided. | | | | |  |  |  |  |
| Handrails are fixed at between 840-900mm from the ground. They continue 300mm past the end of the ramp or stairway, and the ends are turned down so as not to form a hazard. | | | | |  |  |  |  |
| Boardwalks - boards are at a 90° angle to the direction of travel, with 6-10mm gaps. | | | | |  |  |  |  |
| Boardwalks that exceed a 1:33 slope are coated with a slip-resistant product. | | | | |  |  |  |  |
| Steps have a maximum rise of 180mm and a minimum tread of 310mm. There is a slight slope downwards (1%) to allow drainage. | | | | |  |  |  |  |
| FURNITURE and STRUCTURES | | | | | | | | |
|  | | | Not Applicable | | | | | |
| On a path less than 1km long, there is one seat provided every 100-200m. | | | | |  |  |  |  |
| On a path more than 1km long, there is one seat provided every 200-250m. | | | | |  |  |  |  |
| Seats can be 300-520mm high, but a height of 450mm is preferable. | | | | |  |  |  |  |
| Seats are set back at least 540mm from the edge of access routes to preserve pathway width. | | | | |  |  |  |  |
| There is a minimum 900mm wide surfaced accessible space next to each seat. | | | | |  |  |  |  |
| Seats have back rests and arms. | | | | |  |  |  |  |
| Tables are 755-775mm above ground level, with seats 280-320mm below the tabletop. There is a clear space between the ground and the table, at least 675mm high and 800mm wide. | | | | |  |  |  |  |
| There is a minimum 1500mm wide surfaced manoeuvring area at the end of tables. | | | | |  |  |  |  |
| Fences over 1.2m height are at least 80% open / transparent. | | | | |  |  |  |  |
| Bollards comply with SD714. | | | | |  |  |  |  |
| Bollards in lawns have a minimum 100mm wide (preferably 150mm wide) mow strip around the base to avoid mower damage. | | | | |  |  |  |  |
| Signs have a mounting height 700-1700mm from ground level. | | | | |  |  |  |  |
| Information boards are easy to look at for children, and adults both sitting and standing. | | | | |  |  |  |  |
| WATERWAYS and DRAINAGE (all) | | | | | | | | |
|  | | Not Applicable | | | | | | |
| Some areas are clear of high, dense vegetation to provide for maintenance and public access. | | | | |  |  |  |  |
| Outfalls that exceed one metre diameter have access for clearing by a truck with lifting gear. | | | | |  |  |  |  |
| All intakes and outlets are accessible for maintenance. | | | | |  |  |  |  |
| Specimen grade trees that require tree pits are not located within the flood zone. | | | | |  |  |  |  |
| Noble tree species within mass planting areas are a minimum grade of RX 2L. *(Smaller grades can be used only if the robustness of plants can be verified).* | | | | |  |  |  |  |
| Sufficient shade expected that will control algae and weed growth, with larger species concentrated on the northern sides. | | | | |  |  |  |  |
| *Cordyline spp.* are not located near intakes or outlets and are placed well away from grassed areas and property boundaries. | | | | |  |  |  |  |
| No *Carex* *spp*. are present within gravel low flow channels *(Carex virgata can be planted minimum 500mm from the edge of a low flow channel or first flush basin).* | | | | |  |  |  |  |
| *Carex secta* is planted at least 700mm from the water’s edge *(can grow to 1.5m wide and impede flows).* | | | | |  |  |  |  |
| *Phormium tenax* is located at least 1.5m from any banks, at least 2m from any grassed areas, and well away from any intakes or outlets *(can grow to 3m wide).* | | | | |  |  |  |  |
| *Libertia grandiflora* is not present. | | | | |  |  |  |  |
| *Juncus* s*pp*. is only used where there is sufficient space. J. *pallidus* and J. *sarophorus* are not located where they may impede flow. | | | | |  |  |  |  |
| Plants are consistent with the [Christchurch Ōtautahi Indigenous Ecosystems Plant List](https://experience.arcgis.com/experience/4a2df6a4560e42f6b91e42593da8630e). | | | | |  |  |  |  |
| No ornamental or pest varieties are present. | | | | |  |  |  |  |
| There are no hybrids that might hybridise further with other plants *(eg Hebe Emerald Green may hybridise with H. salicifolia).* | | | | |  |  |  |  |
| RIPARIAN ZONES | | | | | | | | |
|  | | | Not Applicable | | | | | |
| Trees are not located too low in the channel *(typically lower third of bank, but dependent on water levels)* | | | | |  |  |  |  |
| There is a variety of edge treatments and in-stream features for habitat. | | | | |  |  |  |  |
| Any rocks are sufficiently submerged when installed in the toe of the bank. | | | | |  |  |  |  |
| Large boulders are submerged, with random placement and nooks in between for habitat. | | | | |  |  |  |  |
| Rock is used only in small sections, not along the entire length. | | | | |  |  |  |  |
| Smaller gravels are used in the bed. There are no large cobbles that could impede flow. | | | | |  |  |  |  |
| Logs / tree stumps are well anchored down. | | | | |  |  |  |  |
| The first row of planting can grow up and overhang the edge for shade and a natural appearance. | | | | |  |  |  |  |
| Riparian planting has a minimum width of 3.0m. (*If less than 3m due to site constraints, more trees are required).* | | | | |  |  |  |  |
| All riparian margins are planted to the water’s edge, except where there are grassed areas required for access and maintenance. | | | | |  |  |  |  |
| BASINS and WETLANDS | | | | | | | | |
|  | | | Not Applicable | | | | | |
| Bank slopes are less than 1:6 where access is required. | | | | |  |  |  |  |
| Trees are a mixture of large and smaller fast-growing species – especially on the northern and western sides. | | | | |  |  |  |  |
| Trees are indigenous – no deciduous exotics are present. | | | | |  |  |  |  |
| Garden beds are curved to mimic nature. There are no geometric patterns. | | | | |  |  |  |  |
| All grassed areas are mowable – *confirm with engineers.* | | | | |  |  |  |  |