



Standard Technical Specifications
Part 7 Landscape Works

A. Planting

1. General

This section describes the work to be carried out to prepare planting sites and complete planting of trees, shrubs and groundcovers. It is to be read in conjunction with Planting Plans supplied and is supplementary to them. The drawings show the nature and extent of the work in sufficient detail to enable the works to be carried out.

All landscape planting within the road reserve shall be designed and implemented according to Volume 2, Part 7 – Landscape Works. All tree planting shall be implemented according to MPDC District Tree Strategy 2010 Part Two; Arboriculture - Operations Manual.

2. Site preparation

All irrigation and drainage works, utilities installation, signs and landscape structures shall be completely installed prior to planting.

Saw cutting of existing seal where required shall be undertaken between 250mm to 300mm from the back of the kerb. The cut line shall be parallel to the kerb lines wherever possible. Small radius curves shall be cut using a series of short incisions to approximate as best as possible the curve arc.

2.1. Excavation of Planting Areas

Excavation shall be carried out where necessary to achieve either of the following required soil profiles where depths indicated are post consolidation:

Landscape Bedding (refer to Figures 1 and 2 on page 5):

- 150mm settled base soil
- 150mm settled clean, disease and weed-free composite topsoil, being 70 % topsoil and 30% manure or compost incorporated (refer below)
- 75mm of settled bark or tree mulch (to be maximum of 25mm below top of kerb)
- Total depth of excavation 400mm below top of kerb.

Annual Bedding (refer to Figure 3):

- As per the Landscape Bedding profile
- Total depth of excavation 325 mm below top of kerb

All waste material shall be removed from site.

Exposed subgrade shall be trimmed and levelled so that no part of the subgrade shall be above the required depth of cut.

Figure 1. Option (A) Planting Area - Topsoil & Mulch Profile, post-consolidation, for slopes less than 1:3 gradient. (Refer to clauses 2.1 and 7.0.)

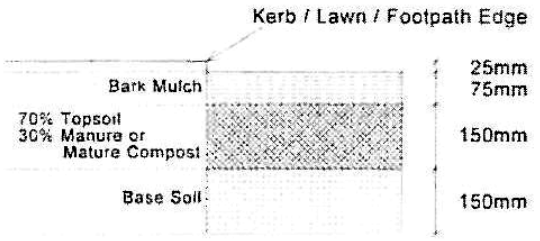


Figure 2. Option (A) Planting Area - Topsoil & Mulch Profile, post-consolidation, for slopes more than 1:3 gradient. (Refer to clauses 2.1 and 7.0.)

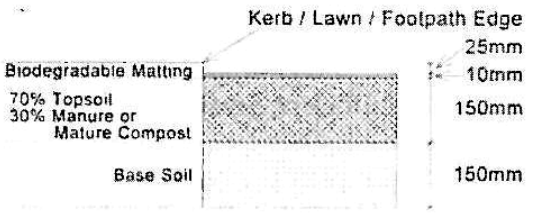
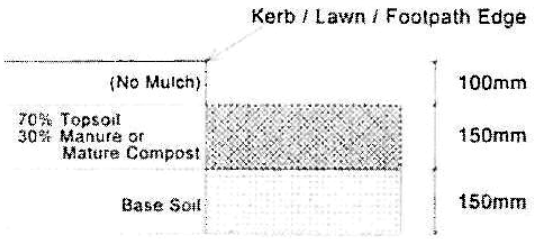


Figure 3. Option (B) Annual Bedding Planting Area - Topsoil Profile, post-consolidation. (Refer to clause 2.1.)



The subgrade of the proposed planting area shall be firm but free draining. If required by the Engineer the subgrade strata shall be made permeable by the insertion of vertical holes to permeable layers, by scarifying of the surface to ensure free draining through the underlying material, or by undercutting the existing subgrade to a greater depth than specified. In this case, the unsuitable material shall be removed and replaced by imported pit sand to top of subgrade level.

In areas of new planting, base soil (either 2nd grade topsoil or pit sand) shall be placed evenly over the prepared subgrade and consolidated to a depth of 150mm. The sand/soil shall be free of debris and perennial weeds. No sand/soil shall be placed without the Engineer's prior consent.

In all sites, except natural gully systems, where the slope gradient is steeper than 1:3, it is preferable that the embankment is either scarified or grooved on an angle to a depth of 200mm, from the top of the bank to the base. This assists topsoil adhesion and prevents separation of the top 150mm topsoil from the base material due to gravity and/or glazed/planning of base material.

Should site conditions, such as gradient or compaction, prevent scarifying, the embankment sub-base shall be benched to develop an adequate topsoil profile. The horizontal benching depth is dependant on the slope gradient.

2.2. Soil for Planting Areas

Topsoil, both imported and existing on site, shall be a loam soil of good quality, free draining, free of perennial weeds and debris and capable of sustaining the required

plant growth. All topsoil shall be inspected at its source and shall not be placed without the Engineer's consent.

Stockpiles of imported or site topsoil to be used in planting areas shall be left to grow vegetation and sprayed by the contractor to eliminate perennial weeds prior to their seeding and prior to the soil's use. A knock-down systemic herbicide without long term residues shall be used (see Clause 11.0). Treated soil shall not be placed without the Engineer's consent. If, after placing the topsoil and prior to any final cultivation, there is evidence of vegetation growth, the surface shall again be sprayed by the Contractor with a knock-down systemic herbicide. Areas so treated shall not be planted for at least two weeks.

All new planting areas on in-situ topsoil shall be deep ripped to 300mm prior to planting. Heavily compacted soils shall be deep ripped to 600mm. If in the Engineer's opinion, at time of planting, the soil has consolidated to a density unsuitable for planting out, re-cultivation of the soil to a depth of 150mm shall be undertaken by the contractor.

All new planting areas shall be filled with topsoil or excavated (as appropriate), to be 100mm below adjacent paving, kerbs or lawns after cultivation and reasonable consolidation.

Prior to planting, all planting areas shall be cleaned of rubbish, stones, unwanted vegetation and other debris.

At planting, all planting areas shall have a minimum uniform soil moisture level of greater than 50% to 200mm depth.

2.2.1. Soil Laboratory Testing

At the Council's discretion, when 2,500 or more shrubs and/or trees are to be planted, the topsoil shall require nutrient laboratory testing at the Contractor's expense. The minimum number of sample sites depends on the following criteria:

- If the topsoil has already been installed on site or existing in-situ topsoil is being used for planting, a minimum of 10 soil samples shall be taken throughout the site.
- If the topsoil has yet to be installed then a minimum of 3 soil samples shall be taken at its source, ensuring that the same topsoil tested is installed on the site after Council has approved its use.

Soil samples shall be taken as per sampling instructions provided by the soil testing laboratory.

The laboratory results and a plan indicating sample site locations shall be provided to Council prior to planting. Planting shall not proceed without Council's approval of soil

test. Council reserves the right to undertake further topsoil sample testing prior to soil test approval should it be deemed necessary.

Where sample results are beyond acceptable parameters, the topsoil shall be modified to ensure that it aligns within these parameters or another conforming topsoil source shall be identified to be used for planting. Soils with a high pH level may require Extractable Aluminum testing at Council's discretion.

The following soil testing is required per sample:

Soil Component	Acceptable Parameter	Unit measure
PH	5.8 – 6.3	(dependent on plant species requirement)
Phosphorus	30 – 80	µg/mL
Potassium	0.5 – 1.0	Me/100g
Calcium	6 – 12	Me/100g
Magnesium	1 – 3	Me/100g
Sodium	0 - .5	Me/100g
CEC	12 – 25	Me/100g
Base Saturation	50 – 85	%
Volume Weight	0.60 – 1.00	g/mL
Available Nitrogen (15 cm depth)	150 – 250	Kg/ha
Organic Matter	7 – 17	%
Total Nitrogen	0.2 – 0.5	%

When less than 2,500 shrubs and/or trees are to be installed the topsoil may, at Council's discretion, require laboratory testing as per above, at Contractor's expense.

3. Plant materials

All plants shall be supplied true to the species and grades specified on the approved landscape plans. Profile and Street Tree Selection Criteria are outlined in MPDC District Tree Strategy 2010 Appendix 3. Tree species included in Appendix 1 of the Strategy shall be excluded from road reserves due to their form and lack of long term sustainability. All street trees, unless specified otherwise, shall be of a minimum grade of 2.0m with a 30mm caliper. Other tree grades shall be supplied as follows:

1.5m - 2.5m specimens shall have a caliper of 30 - 50mm

2.5m - 3.5m specimens shall have a caliper of 50 - 70mm

3.5m - 5m specimens shall have a caliper of 70 - 100mm

All other stock shall be of minimum PB3 grade for groundcover and PB5 grade for shrubs.

All plants to be advanced specimens for their grade and to be well furnished and rooted relative to container size.

No substitution of species or grade shall be made without the written approval of the Engineer. If species or grades specified are unobtainable, the Engineer may approve alternatives. Smaller grades may require an increased planting density and numbers, which shall be at the Contractor's expense.

All plant material supplied shall be clearly labelled stating the plant's Latin name and the supplier's name, (one label per plant group planted). These labels shall be removed on completion of planting.

The Contractor shall give the Engineer not less than five days notice of dates upon which plants are to be delivered on site, so that arrangements can be made for quality inspection and confirmation of identification of plant material.

Plants shall be well branched, symmetrical and of typical habit for the species. All plants shall be nursery stock of good form, healthy and vigorous with strong fibrous root systems and free of all pests and diseases.

All trees shall be supplied with the central leader intact - no pruning of the central leader shall have taken place. All torn or damaged roots shall be pruned before dispatch. All stock shall be well rooted but not root bound. Open ground stock shall be well-wrenched. All root balls and containers shall be free of all weeds. Plants shall be well 'hardened –off' prior to supply.

The Contractor shall ensure that all plants and their roots shall be maintained in a moist environment, protected from adverse conditions such as drying winds, frost or water logging. All roots must be covered during transit and storage to prevent desiccation or damage.

4. Installation of plants

All of the planting shall normally be undertaken between April 1 and October 1. Planting of deciduous stock shall take place between 1 June and 15 September. Planting not undertaken in this period is subject to additional maintenance requirements.

All plants shall be planted on the day of delivery to the site. Plants shall be planted in the locations shown on the approved plans and in accordance with good horticultural practices (refer to MPDC District Tree Strategy 2010). Unless otherwise indicated on the plans all plants shall be planted in a random pattern at the densities specified.

Planting holes shall be excavated, a minimum of 150mm wider and 150mm deeper than the root ball. For large trees the planting holes' minimum dimensions shall be:

1.5 - 2.5m trees: 300 x 300 x 300

2.5 - 3.5m trees: 750 x 750 x 500

3.5 - 5.0m trees: 1m x 1 m x 500

The base of the planting hole shall be forked to a minimum depth of 100mm and any stones over 50mm diameter or poor quality soil shall be removed from the hole. The sides of the planting hole shall also be loosened, and the surrounding ground to two times the root ball diameter to be 'forked' over to reduce compaction.

Where topsoil is unsuitable for backfilling the Contractor shall use imported or modified top soil for backfilling. The imported topsoil shall be a free draining loam of a quality complying with that specified in Clause 2.0 and subject to inspection prior to placement.

Modified backfill soil shall consist of a homogenous mixture of the following:

- 7 parts by volume of good quality, friable topsoil from the site or imported.
- 3 parts by volume of approved compost e.g. that produced from the Hamilton Organic Recycling Centre
- 2 parts by volume of coarse river sand
- Appropriate levels of fertiliser where specified in Clause 7.0.

The Contractor shall not plant into waterlogged soil or holes that are full or part full with water. If the water table is high and the Contractor cannot disperse the water from the hole, the Contractor shall consult the Engineer as to whether planting can continue.

All plant containers or wrapping and if necessary any root bound roots shall be removed prior to planting. Leaves and branches shall be pruned to assist plant establishment if necessary. Generally, the nursery soil level is clearly identifiable on the main stem of the plant and replanting should not exceed this level.

The hole shall first be backfilled with 150mm of consolidated soil or soil mix, mounding the soil in the centre to aid even spread of the roots.

The plants shall be placed in the hole ensuring that the final soil level is equal to or not exceeding 10mm above the nursery soil level and at an appropriate depth to ensure sustained growth. Roots shall be spread evenly to their natural extent without

touching the sides of the hole, or being distorted in any way. Bare rooted material shall be shaken to ensure even root spread.

For trees, the hole shall be backfilled with topsoil or soil mix in 150mm layers, firming each layer. For container plants and shrubs, the hole shall be filled to half its depth and firmed and than completely filled and firmed again. Upon completion of backfilling the plants shall be well watered in.

All road reserve planting installation is to comply with Volume 2, Part 7 – Landscape Works, especially in respect to traffic islands, berms and roundabouts. Refer Standard Drawings DG 701, DG 702, DG 703, DG 704 and DG 705.

5. Location of street trees

Unless otherwise stated all Street Trees are to be centrally located within all road berms.

All trees are to be planted a minimum of:

- 3m from any driveway
- 8m from any light stand
- 6m from any intersection
- 5m from any bus stop or school speed sign

All reserve plantings shall be marked out by the Engineer prior to planting works commencing.

Planting of Traffic Control devices and other road reserves shall be in accordance with Part 7 Standard Drawings – Landscape Works DG 701, DG 702, DG 703, DG 704 and DG 705.

6. Irrigation

All trees shall be thoroughly watered prior to dispatch from the nursery and shall thoroughly watered-in after planting. During installation and establishment, the contractor shall ensure that soil in all planting areas is moist enough to maintain active plant growth throughout the growing season (September – May). To achieve a high level of site presentation or in areas of annual bedding display planting, irrigation systems may be required to achieve this.

Where an irrigation system is required to be installed, ‘Toro’ brand or a similar approved brand shall be used. The system shall be capable of providing a minimum soil moisture level of 50% to 200mm depth, throughout the planted areas or within the dripline of trees specified. It shall be capable of fully re-wetting the root zone to 200mm depth when the irrigation is applied; and shall be fully automated to operate between 1am and 6am when moisture levels drop below 50%.

Note: Exemption from this may apply where there is a Council imposed water restriction in place. Where this is the case, the Contractor shall consult with the Engineer to agree on an alternative watering strategy.

7. Fertiliser

Generally some form of fertiliser shall be applied to planting. For shrubs and trees, all fertiliser shall be well mixed with the backfilled soil. For bedding or groundcover all fertiliser shall be well mixed with the site topsoil prior to planting. Fertilisers shall be either an approved pelletised natural or organic fertiliser or an approved synthetic fertiliser.

The following synthetic fertilisers are acceptable unless alternatives have been approved:

For bedding or perennial (groundcover) planting – 'Nitrophoska Blue' at 100g/m2

For shrub planting – 'Mag Amp' at 40g/shrub

For tree planting – 'Mag Amp' at 80g/tree

An exception to these is for Proteaceous species and ferns which should on no account be fertilised with Phosphate (P) containing fertilisers.

8. Mulch

Where indicated in the schedule and on the plans, the Contractor shall provide mulching to newly planted areas. In addition, all individual trees including street trees shall be mulched to a radius of 500mm.

8.1. Flat Site Mulch

On sites flatter than 1:3, tree mulch shall be spread evenly to minimum depth of 75mm and maximum of 100mm except that around tree trunks a slight hollow shall be left. The mulch shall be either coarse or fine, untreated, shredded pine, and shall be approved by the Engineer prior to spreading. The tree mulch shall be clean and free of soil or sawdust. Coarse mulch should have an average diameter of 50mm and with no pieces longer than 100mm. Fine mulch should have no pieces longer than 40mm and be evenly graded. Coarse mulch is appropriate to most locations. Fine mulch may be specified by Council in Commercial zones, or for other specified locations.

All care shall be taken in placing the tree mulch so as to protect the plants and any irrigation system. All damage to the plants or irrigation system shall be rectified at the Contractor's expense.

8.2. Steep Site Mulch

On slopes steeper than 1:3, mulching for weed control shall consist of a MPDC approved matting with the following criteria:

- The matting consists of biodegradable mulching fabric or material without synthetic geonet or synthetic geotextile content.
- It shall be installed according to manufacturer's instructions prior to planting, ensuring that the mulch will not uplift due to inundation or wildlife exposure (from, for example, Pukeko birds).
- The mulching fabric shall have a minimum 24 month life expectancy and be fully biodegraded into soil within 6 years.

At the Engineers discretion, mat rounds may be used instead of matting. These shall be a minimum 500mm diameter and have the same characteristics as the matting.

On steep slopes with erosion issues that are receiving planting, biodegradable netting with no geotextile or geonet content shall be used at the Engineers discretion. The netting will have an expected lifespan of at least 36 months. This may be placed on top of the mulch matting and shall be installed according to manufacturer's instructions. The netting is not intended to suppress weeds and should be used in conjunction with mulch matting or rounds.

9. Staking and protection

Newly planted trees shall be firmly staked and tied as follows:

- 1.5 - 2.5m trees shall be staked with two 50 x 50 x 1.8m stakes with at least 1m exposed
- 2.5 – 5.0m trees shall be staked with two 75 x 75 x 2.4m stakes with at least 1.5m exposed, or with a system of ground anchors approved by the Engineer and specified in the landscape plans.

All street trees shall be staked with two 50 x 50 x 1.8m stakes. At the Engineer's discretion, trees may require 3 or four stakes depending on the size of tree and canopy size.

All stakes shall be rough sawn Pinus H5 treated. Stakes shall be placed with at least one third of their length in the ground.

Trees shall be tied to two stakes on opposite sides to the tree using biodegradable flexible ties made from either cloth or flax. The ties are to be positioned 1/3 up the tree's main stem and with enough give to move in the wind to ensure adequate trunk development. Ties shall be tensioned to avoid chafing of the tree against the stakes. All ties shall be fixed to the stakes. Ties shall be of a type approved by the Engineer prior to tying.

Newly planted areas shall be protected from any possible construction or other damage. To ensure protection for the duration of the site works, the Contractor shall if necessary, provide and maintain a 1m minimum height barrier around the plants.

Similarly, during planting, existing structures, turf, other planting, or irrigation system shall be protected by appropriate means from possible damage.

10. Pruning

Ongoing pruning during the maintenance period shall concentrate on producing good plant form, ground coverage, removal of spent flowers, healthy growth, preventing plants smothering other planting, keeping access ways clear of growth and maintaining visibility.

Trees shall be pruned up to provide good visibility for vehicles and pedestrians at all times. Long term, trees should have a clear stem to 2.4m. Pruning should be carried out in accordance with acceptable modern arboricultural practices.

Shrubs shall be pruned down to 450mm height maximum, for good visibility at intersection and other visibility splays.

Pruning of shrubs and groundcovers shall use techniques which maintain the natural form and habit of the plants. Pruning shall avoid “hedging” techniques which create strong visual lines and detract from the natural texture and form of the plants. Groundcover plants shall be pruned by undercutting at the edges.

Planting designed as hedges shall be clipped only after spring or autumn growth flushes. Hedges grown for flowers shall be clipped only after completion of flowering. Hedge trimming shall be carried out in a way that will promote even growth to the specified height and width.

All pruning material shall be removed from the planted areas and the site, to maintain these in a clean and tidy condition.

11. Chemical application (weed and pest control)

All chemical application on planted areas shall be carried out by qualified, trained personnel and according to the Growsafe Code of Practice for Safe Use of Pesticides and Herbicides; NZS 8409:2004 ‘The Agrichemical Users Code of Practice’ and any manufacturers’ directions.

All spraying operations shall be carried out in windless (less than 5m/s), dry conditions, when rain is not imminent for at least 12 hours and at times which minimise possible hazards or disruption to the public, animals or other beneficial fauna. All spraying operations must comply with notification requirements as required by the Waikato Regional Pest Management Strategy. Signage shall be in place at all times during chemical application spraying. Care shall be taken to prevent spray drifting onto non-target areas or plants. Any plants damaged by spray drift shall

be replaced by the Contractor at the Contractor's expense. The Contractor shall ensure that no spray enters any water body or watercourse.

Herbicides may be used to control weeds or excess grass growth over structures, surfaces or into planting areas. Approved herbicides are:

Glyphosate with Codacide oil or Pulse Penetrant for general use.

Glyphosate + "Versatil" for persistent perennial weeds.

Tordon Brushkiller or Escort for spot spraying of woody weeds only.

All use of any other herbicides shall be first approved by the Engineer.

All trees in grassed areas shall have a weed release spot spray applied between 4 and 6 months after planting. General weed control shall be carried out whenever necessary to maintain the planting weed-free.

Chemical weed control in planting areas shall be kept within the edge of the planting beds, within a maximum of 500mm of tree trunks, within 50mm of the edge of any undefined mulch surface, and within 50mm of any posts or the base of any landscape structures.

Pesticide use shall be affected to the minimum level required for healthy plant growth to be maintained. All pesticides shall be approved for use by the Engineer. Pesticides used shall be selected for the lowest oral and epidermal toxicity rating possible and shall be types which pose a minimum risk to bees or other beneficial insects.

12. Maintenance requirements

The Contractor (or Developer) shall be responsible for the routine maintenance of the landscape planting works including weeding, mulching, replacement of plants and watering during the defects liability period.

12.1. Defects Liability Period

The planting defects liability period shall be 12 months from completion and acceptance of the landscape planting works or upon release of any implementation bond held for uncompleted landscaping. When planting is carried out between 1 October and 30 April, the Defects Liability Period shall be extended for an additional 6 months.

During and at the end of the defects liability period, the following minimum standards are required:

- all topsoiled areas prior to planting and mulching shall be weed-free
- all planted areas shall be kept weed-free

- all planted areas including street trees shall be mulched with clean fabric, fibre or loose fill
- Mulch at a minimum settled depth of 75mm and maximum 100mm
- all trees and other planting shall be vigorous and healthy, free of disease and free of dead growth or dead flowers
- all planted areas shall be moist to at least 200mm depth
- planting is becoming well established. Any plants failing during this period shall be replaced to the specification, to ensure adequate establishment of the planting
- plant growth shall be trimmed to the extent and height required for any visibility splays
- all tree stakes and ties shall be intact and correctly installed

12.2. Weed Free Requirement

At the end of the defects liability period, no individual weed must be larger than 30mm x 30mmx 30mm high. Furthermore no weeds that are at least 10mm x 10mm x 10mm in size shall exceed more 5 per square metre. Furthermore, no perennial grass weeds will be accepted.

12.3. As-built Plans

The Contractor shall supply one copy of the as built plans recording any variation from the approved landscape plans and this specification. Refer Part 1 General Clause 7.0 Completed Works.

12.4. Pre-Defects Liability Period Inspection

The Contractor, after completing all proposed works, shall advise the Engineer, Matamata Piako District Council, at least 7 working days prior to the proposed commencement of the defects liability period and shall be available for a joint pre-defects liability period inspection (Checklist 7.1).

12.5. Defects Liability Period – Final Inspection

The Contractor at the end of the required defects liability period shall advise the Engineer, Matamata Piako District Council, at least 7 working days prior to the proposed commencement of Council acceptance of the asset and its ongoing maintenance and shall be available for a joint defects liability period final inspection (Checklist 7.2).

B. Grassing and Turfing

1. General

This section covers the preparation and sowing of any new grassed areas or those requiring reinstatement, or turfing of such areas. It includes berms, lawns and banks.

2. Site preparation for sowing or turfing

Grassing and fertilising shall be carried out over all existing grassed areas disturbed by contract activity and other specified areas which may require reinstatement. In existing grassed areas, excessive compaction of the subsoil shall be relieved by subsoiling or similar as required, to achieve satisfactory long term growing conditions.

All topsoil removed to permit contract works to be carried out shall be stockpiled for reuse.

All new grass areas shall be built on subgrades prepared to not less than 5 and no greater than 7. A minimum 75mm layer of clean, friable peat loam or sandy loam topsoil, free of all perennial weeds, stones and rubbish shall be placed on the subgrade. If the subgrade has been backfilled with sand or if the existing subgrade material is of a sandy nature then the 75mm topsoil shall be of a heavier silt loam.

The topsoil shall be lightly compacted or consolidated, and may be laid proud of adjoining features (such as kerb and channel, path, crossings etc) by not more than 25mm to allow for settlement, provided that it does not cause water to pond on any footpath or vehicle crossing area. All finished levels shall be those specified on the plans or to a 2-2.5% slope. New areas shall be neatly contoured into adjoining grassed areas. The top 25mm of topsoil shall have a loose tilth. No soil shall be cultivated or handled when the moisture content is at a level where soil structure damage will result.

Perennial weeds shall be sprayed with Glyphosate plus "Versatil", if clover, thistles, etc are a problem, according to manufacturer's instructions and at least 14 days before cultivation. Ensure that no spray enters any water body or watercourse. All stones, debris, rubbish and other foreign materials shall be removed from the areas to be grassed, and the whole area rotary hoed to a depth of 150mm or such lesser depth of topsoil as may be approved by the Engineer.

3. Fertilisers

All fertilisers shall be delivered to the site immediately before they are required for spreading and shall be thoroughly mixed on the site. The Engineer may prohibit the use of any fertilisers which have deteriorated because of interaction, wetting, etc. Fertilisers shall be lightly harrowed into the topsoil, 2-3 days prior to seed sowing, at the following rates:

30% Potassic Superphosphate	150 kg/ha (15g/m2)
Sulphate of Ammonia	50 kg/ha (5g/m2)

Total	200 kg/ha

This shall be followed one month after sowing, with an application of the following:

Di-ammonium Phosphate (DAP)	100 kg/ha

4. Sowing

With the exception of the New Zealand Browntop component, all seed shall be certified and less than 12 months old at the time of sowing. Ryegrass components shall be certified as having greater than 80% live endophyte content. The Engineer may prohibit the use of seed which has deteriorated because of wetting, fertiliser-burning, etc.

Seed mixture to be:

NZ Browntop	50 kg/ha
High endophyte Turf Rye	200 kg/ha

On large areas, the seed shall be "check" sown in at least two directions to ensure an even spread and covered by brush harrowing. The surface shall then be rolled with a suitable flat roller.

On small areas, grass seed shall be evenly applied to the prepared surface and raked thoroughly into the soil so that little seed remains exposed.

5. Establishment of sown areas

The Contractor shall ensure that the newly established grass is protected from damage by pedestrian and vehicular traffic until such time as the grass growth has reached a self-sustaining state.

The Contractor shall be responsible for watering the grassed areas as required, to achieve an efficient germination of the seed and maintain satisfactory growth throughout the Maintenance Period. Watering shall commence when root zone moisture is depleted to 50% and shall ensure full re-wetting of the root zone to 200mm depth.

During the establishment, the Contractor shall maintain the newly grassed areas as follows:

- Upon the grass reaching 100mm in height, it shall be cut to 50mm high.

- For subsequent mowings, the mowing frequency shall be governed by growth rate. Minimum grass height to be 20mm — maximum grass height to be 30mm.
- The turf shall be maintained free of all broadleaf weeds.
- Areas where there has been a poor strike of grass shall be either recultivated and resown or undersown at the Contractor's expense.
- Upon completion of mowing, all grass clippings shall be collected and removed from all sown grass areas except non kerb-and-channelled berms. All clippings shall be removed from adjacent hard surfaces.
- Edges of all sown grass adjoining cultivated gardens, borders, hand paving, sealed surfaces or landscape structures shall be trimmed to the edge or controlled by herbicide to within 25mm of flat surfaces or 50mm of vertical structures. Grass shall not be allowed to encroach over flat, sealed or paved surfaces by more than 25mm

6. Turfing

The turf shall be of good quality, free of weeds and pests and with an even thickness of approximately 200mm x 450mm wide and of a consistent length. The constituent grasses of the turf should include Browntop and Fescue to provide grass of a close texture of even density and green in colour, i.e. "Readylawn" or similar approved by the Engineer. The turf should be sufficiently fibrous for turves to hold together when handled but excess fibre or thatch is undesirable.

Turf should be packed to avoid drying out in transit. In hot weather it shall be sprayed with water and covered with hessian as required. Turf shall be delivered to the site within 24 hours of lifting and shall be off-loaded by hand unless arranged on pallets for mechanical handling. Any turf permitted to dry out shall be rejected when, in the opinion of the Engineer, its survival after placement is doubtful. All turf should be laid immediately after delivery to site. Where this is not possible, the turves shall be unloaded and stacked on clear ground to maximum height of one metre and suitably protected.

No turf shall be laid in exceptionally hot dry weather, or in exceptionally wet or frosty soil or weather conditions, nor shall any turf be laid until the topsoiling has been satisfactorily completed by being brought to an even tilth and firmness.

Turf shall be handled carefully to ensure minimum breakage to prevent soil dropping from the roots. The turf shall be laid from planks working over turves previously laid.

The turves must be thoroughly watered until the turf mat and top 50mm of soil is wet. After allowing a "soaking in" period the turves shall be lightly and evenly firmed with a wooden tamper so that the underside of the turf mat and the wet soil surface are thoroughly bonded.

The finished level of the turf shall conform to the levels indicated. Where the turf meets paths, mowing strips etc the finished level shall be 12mm above. Any inequalities in finished levels owing to variation in turf thickness or uneven

consolidation of soil shall be adjusted by raking and/or packing fine soil under the turf, not by topdressing the lawn surface.

7. Establishment of turf

During the establishment the Contractor shall maintain the turf as follows:

Prevent any pedestrian traffic until grass is well established and uniformly covered with a strong sward of grass.

Apply lawn fertiliser e.g. "Readylawn Food", at a rate according to manufacturer's instructions, at monthly intervals during the growing season.

Remove weeds and replace soil if necessary.

Water regularly: The turf shall not be allowed to dry out for at least three weeks after being laid. After which it shall be watered normally. ‘Normal’ watering shall commence when the root zone moisture is depleted to 50% and shall ensure full re-wetting of the root zone to 200mm depth. In summer this will require watering at least daily. Watering shall normally be carried out prior to 7am and shall not be done in hot sunny conditions.

Note: Exemption from this may apply where there is a Council imposed water restriction in place. Where this is the case, Contractor shall consult with the Engineer to agree on an alternative watering strategy.

Initial mowing shall be carried out when first growth is apparent, with blades set no lower than two-thirds of the height of the grass. Use roll-type mower for first cuts. Grass shall be in a reasonably dry condition.

All clippings shall be collected and removed from site. All clippings shall also be removed from adjacent hard surfaces.

Edges of all turf areas adjoining cultivated gardens, borders, hand paving, sealed surfaces or landscape structures shall be trimmed to the edge or controlled by herbicide to within 25mm of flat surfaces or 50mm of vertical structures. Grass shall not be allowed to encroach over flat paved or sealed surfaces by more than 25mm.

Areas of turf where there has been a poor establishment shall be re-laid at the Contractor's expense.

8. Chemical applications (weed and pest control)

All chemical weed and pest control shall be in accordance with Section A Clause 11.0. Weed control, apart from edge maintenance, shall be by manual not chemical means.

9. Maintenance liability

The Contractor (or Developer) shall be responsible for the routine maintenance of the landscape planting works including weeding, mulching, replacement of plants and watering during the defects liability period.

9.1. Defects liability period

After initial establishment, during and at the end of the defects liability period, the following minimum standards shall be maintained:

All kerb-and-channelled verges shall have grass growth no more than 50mm high, non kerb-and-channelled verges shall have grass growth no more than 200mm high and banks shall have grass growth not more than 250mm high.

The sward shall be maintained in a healthy, weed-and-disease free state without bare patches.

Trees and other plantings shall be protected from damage by maintenance or mowing operations and if damaged shall be reinstated within 1 week of the damage occurring.

Maintenance and mowing operations shall be carried out at times which minimize disruption to the public.

Maintenance and mowing operations shall be carried out only in conditions with equipment that ensures maintenance of good soil structure, minimum deformation of ground surfaces and ongoing establishment of the grass sward.

All litter and debris shall be removed prior to commencing maintenance or mowing operations. Highly visible shredded litter shall be removed following maintenance and mowing.

Grass clippings, when not required to be collected during mowing, shall be spread evenly over the sward.

C. Landscape structures installation

1. General

All landscape installations shall be constructed to the appropriate standards (including legal, national or Matamata-Piako District Council standards) and according to good practice within the relevant industry.

All installations shall use good quality, low maintenance materials.

At the completion of the work the site must be clean and free of debris.

2. Timber bollards, low level timber barriers and removable bollards

All bollards and barriers are to be constructed and installed in accordance with Drawings TS 334, 335 or 361 as appropriate, unless otherwise specified by the Engineer.

All painting of timber barriers is to be completed with two finish coats of water based commercial grade paint (colour to be specified by the Engineer). All dirt, grime and loose and flaky paint shall be removed from the surface prior to painting. It may be necessary to spot undercoat as required. All painting is to be carried out according to the manufacturers' specifications.

3. Steel bollards

Bollards are to be steel or aluminium tubing to the specified size.

All steel bollards and caps are to be galvanised and power-coated once all fabrication work is complete. Colour to be confirmed by Engineer.

Bollards are to be cast in concrete footing 250 x 250 x 350 deep.

Surrounding surfaces are to be reinstated to match existing. Bollard caps are to be of a dome style, powder coated to match bollard. Cap to be fastened to the bollard with a minimum of 4mm rivets.

4. Pedestrian barrier rails and handrails

Pedestrian barrier rails and handrails are to be constructed and installed in accordance with Drawings TS 336 or 337 as appropriate, unless otherwise specified by the Engineer.

5. Cycle barriers and racks

All cycle barriers and racks are to be constructed and installed in accordance with Drawings TS 337 and 338, unless otherwise specified by the Engineer.

6. Seats

Seats are to be from MPDC's list of approved suppliers and models. All steel work to be galvanised and powder-coated. Colour to be confirmed by Engineer. Seat posts are to be installed in 20 mpa concrete footing 500 x 500 x 600 deep. All surrounding surfaces are to be reinstated to match existing.

7. Litter bins

Bins are to be 60L domed St Louis bins, in the relevant colour of the town or reserve theme, installed in accordance with Drawing TS 364.

8. Miscellaneous street furniture

The design, style and positioning of all other street furniture and structures that are proposed for road reserves, parks, reserves or other public spaces shall be approved by the Engineer at the landscape plan approval stage. Installation of all street furniture is to be carried out in accordance with manufacturer's instructions, and shall comply with SNZ HB 8630:2004 where applicable.

9. Fencing

Disturbance of or inconvenience to existing farming activities caused by contract works or traffic shall be minimised at all times. In some cases this may require erection of suitable fencing. Gates, other fences, trees and other vegetation, existing structures, utilities and water supplies shall be protected from damage by contract activity and reinstated immediately if damaged.

Access of stock to water shall not be interrupted at any time.

The Contractor shall initiate discussion with Council's Engineer before commencing the fencing operation to clarify style, details, variations and the like.

Fencing is required for all work on esplanades.

9.1. Stockproof Fence

The stockproof fence shall be a durable fence which achieves the required purpose of preventing access of all livestock to the contract works area. Access of stock to water shall not be interrupted at any time.

At road frontages the fence shall meet the following minimum standard:

Strainers	No. 1	2.4m long with stay
Angles	No. 1	2.1m long with stays (if required) at fence line
Stays	No. 2	2.4m long
Posts	No. 2	1.8m long placed at 4.5m c/c max
Battens		50 x 40, equidistant placing, 0.8m maximum spacing
Wire		High tensile wire, 8 wires

The wires shall be facing the roadside with posts and battens behind.

Strainers shall be set to lean away from the angle of the fence to some extent or at worst be vertical upon completion of the tensioned fence.

In poor soil conditions or variable topography, longer posts, longer strainers and more substantial footings and stays shall be used where necessary to achieve a stable fence.

Additional works/materials due to poor soil conditions are a variation. Anchor or support posts required due to topography are not a variation.

All waste, particularly wire off cuts and the like shall be collected and removed from the site at completion of the fence.

9.2. Temporary Stockproof Fence

The temporary stockproof fence shall achieve the purpose of preventing access to all livestock as required by the adjacent land users, for the duration of the required fence, or the duration of the contract. Access of stock to water shall not be interrupted at any time.

At road frontages, no hot wires shall be used unless they are attached at 300mm inside a physical barrier.

The consequences of stock escaping due to inadequate fencing shall be the Contractor's responsibility.

Temporary fences shall be removed from the site at the completion of the contract.

10. Defects liability period

During and at the end of the defects liability period the following minimum standards shall be maintained:

All permanent or temporary landscape structures shall be structurally sound, safe, functional or operational and in a presentable finished form.

Paint work and other finishes shall be maintained in a clean and presentable finished form.

Bolts and other fixtures shall be maintained sound and without loose parts or rough edges.

All structures shall be free of litter, graffiti, grime, weeds and plant growth or any other foreign matter.

Borders, footing edges or paving shall be maintained so that no more than 25mm of grass or other vegetation is allowed to encroach. Vertical elements without mowing edges shall have vegetation maintained clear of the structure by no less than 25mm and no more than 75mm.

10.1. As-Built Plans

The Contractor shall supply one copy of the as built plans recording any variation from the approved landscape plans and this specification. Refer Part 1 General Clause 7.0 Completed Works.

D. Planted stormwater devices

1. General

This section covers the preparation, installation and maintenance of all new and existing engineered stormwater devices that have a designed landscape component (LESD). This includes, but is not restricted to, stormwater ponds, raingardens, vegetated filters and swales.

2. Standard landscape specifications

The specifications in this Section are supplementary to and take precedence over the Council Standard Technical Specifications Part 7 - Landscape Works, Sections A and B. In all other instances, the Council Standard Technical Specifications Part 7 - Landscape Works, Sections A and B are to be followed in the site preparation, establishment and maintenance of all LESDs. These specifications are to be implemented in conjunction with this Manual's Volume 1 Part 9 – Landscaping Engineered Stormwater Devices.

3. Mulch

All LESDs shall be mulched except for areas that are grassed or turfed. All mulch is to be approved by the Engineer prior to spreading. Where bark or aged woodchip mulch is used, mulch should be evenly spread at a settled depth of 75mm and maximum of 100mm except that around tree trunks a slight hollow shall be left. Specific LESD mulch applications are as follows:

3.1. Amenity Planting

Landscape planting between along the drainage reserve boundary to the Upper Bank Zone shall only be mulched with bark or aged woodchip mulch where there is no possibility of surface ponding, flooding or mulch travel. Where surface ponding, flooding and mulch travel is possible within this area, biodegradable weed matting shall be used for all landscape planting.

3.2. Stormwater Ponds

No synthetic geotextile weed matting is to be utilised in the installation of the landscaping portion of landscaping engineered stormwater devices. However, synthetic geotextiles and other materials may be used, as applicable, to meet functional engineering requirements; for example, for inlets, outlets and high velocity channels.

3.3. Upper Bank and Lower Bank Zone Mulching

All plants shall be mulched with Council approved 0.5 metre diameter biodegradable weed mat rounds that shall be secured around plants, allowing adequate room around the stem for future growth. Firmly secure fabric mulch with wooden or other biodegradable pegs as per the manufacturer's instructions so that the fabric mulch does not detach from the soil, during inundation and high winds.

3.4. Marginal Zone Mulching

Council approved biodegradable weed mat is to be laid in a manner that the mulch will not uplift during inundation. Ensure that plants have adequate room around the stems for future growth.

3.5. Wet Zone Mulching

No mulching is required within the Wet Zone.

3.6. Raingardens

Raingardens shall be mulched with Council approved biodegradable weed matting. River rocks (with a diameter of between 50mm and 150mm) in gabion mats (100mm to 300mm deep) may be permissible depending on stormwater engineering requirements and long-term maintenance requirements.

3.7. Swales

Roll-on turfed swales are not to be mulched.

Non-turfed swales are to be mulched according to the surface treatment and stormwater flow velocities, swale design, site location and long-term maintenance requirements. Mulching shall be installed as per manufacture's instructions.

Vegetated swales planted with New Zealand native Carex sedges shall be mulched with biodegradable weed mat or secure biodegradable mat rounds.

Swales mulched with river rocks shall either be constructed with:

- Loose 50-150mm diameter river rocks on biodegradable weed mat; or
- River rocks of 50-150mm diameter encased in gabion matting.

3.8. Vegetated Filters

Vegetated filters shall be mulched with biodegradable weed mat. Grassing and roll-on turfing does not require mulching.

4. Planting

All LESD landscaping shall be designed and installed according to the Council Development Manual, Volume 1: Part 9: Landscaping Engineered Stormwater Devices.

4.1. Grassing

All areas of engineered stormwater devices that are to be permanently grassed instead of vegetated with shrubs and/or trees shall be established according to Part 7 – Landscape Works, Section B: Grassing and Turfing specifications. With the exception of Stormwater Ponds and turfed Swales, the grass seed mix shall be as specified in Section B: Grassing and Turfing.

During establishment and maintenance, ensure that no grass debris enters any water body or watercourse.

4.2. Stormwater Pond Planting

Permanent stormwater ponds shall be planted up as soon as possible after the completion of civil works construction. Where site conditions such as unstable soil structures require a more rapid groundcover than shrubs and trees provide, pond slopes shall be stabilised with grassing first and a Staged Pond Planting is permitted as detailed in clause 4.3.

4.3. Staged Pond Planting

The staged pond planting shall be:

4.3.1. Stage 1: Grassing

Pond banks shall be prepared and sown with grass seed to establish rapid ground stabilisation, according Part 7 – Landscape Works, Section 2: Grassing and Turfing specifications.

Where ponds are to be established in nitrogen-deficient soils and at the Engineers discretion, the seed mixture shall be:

Annual Rye Grass	150 kg/ha
Sweet Clover	100 kg/ha

All seed shall be certified and less than 12 months old at the time of sowing. The Ryegrass component is to be certified as having greater than 80% live endophyte content. The Engineer may prohibit the use of seed that has deteriorated because of wetting, fertiliser-burning, etc.

Otherwise the standard landscaping grass seed specifications shall apply as per Part 7 – Landscape Works, Section B, Clause 4.0.

The site shall be grassed for at least 3 months and meet establishment requirements for sown areas prior to landscaping. Marginal Zone planting and mulching shall be established at Stage 1.

4.3.2. Stage 2: Landscape Planting

Stage 2 Planting shall occur within the Council planting season (1 April to 1 October) once Stage 1 sown grass has established. Ensure that no weed species exist throughout the site. Where weed species need to be eradicated either carefully spot spray and/or hand-pull in such a manner that erosion is minimised and surrounding groundcover remains undamaged. The sown grass groundcover shall be spot sprayed to 0.50m diameter for each location where individual plants are to be planted 4 weeks prior to planting, ensuring that the established grass between spot sprays remains undamaged. Maintain sprayed areas so that no new weed growth exists at time of planting. Install and establish planting and mulching as per Volume 2: Part 7 Standard Technical Specifications – Landscape Works, Sections A, B, C and D.

4.4. Raingardens and Vegetated Filters

Raingardens and Vegetated Filters are to be planted up according to Part 7 – Landscape Works, Section A.

4.5. Swales

Turfed swales shall be prepared, established and maintained as per the Part 7 – Landscape Works, Section B: Grassing and Turfing. Both during and post-establishment, the height of the turf shall be consistently maintained at least fortnightly to designed stormwater engineering requirements. Turf shall be of a drought-resistant hard-wearing rye-grass based variety with no weeds species.

Swales planted with New Zealand native Carex species shall be planted according to Part 7– Landscape Works, Sections A.

5. Chemical application (Weed and pest control)

Ensure that no spray enters any water body or watercourse. In respect to Stormwater Ponds, where weed species exist both on and within 2.5m adjacent to the normal standard waterline, weeds shall be controlled by either hand-pulling or weed-eating in such a manner that no debris enters any water body or watercourse.

6. Tree Staking and Protection

All trees shall be staked and tied according to Section A: Planting – 9.0 Staking and Protection. Trees shall be tied to two stakes on opposite sides to the tree using biodegradable flexible ties made from either cloth or flax. The ties are to be positioned 1/3 up the tree's main stem and with enough give to move in the wind to ensure adequate trunk development.

7. Maintenance liability

The Contractor (or Developer) shall be responsible for the routine maintenance of the landscape planting works including weeding, mulching, replacement of plants and watering during the defects liability period.

7.1. Defects Liability Period

The plating defects liability period for all LESD's, except Stormwater Ponds, shall be 12 months from practical completion and Council acceptance of landscape planting works or upon release of any implementation bond held for uncompleted landscaping, except when planting is carried out between October 1 and April 1 the defects liability shall be extended for an additional 6 months.

Where Stormwater Ponds are to be permanently grassed, the defects liability period is a minimum 12 months if sown between April 2 and September 30. If sown between October 1 and April 1 the period is extended for a further 6 months.

Where a Stormwater Pond is planted directly after completion of civil works construction, the landscaping defects liability period shall be a minimum 12 month period, except when planting is carried out between October 1 and April 1 the defects liability shall be extended for an additional 6 months.

The Stormwater Pond Stage 2 defects liability period shall be a minimum of 12 months, except when planning is carried out between October 1 and April 1 the defects liability shall be extended for an additional 6 months

The minimum standards required during and at the end of the defects liability period shall be as per this Part 7 – Landscape Works, Sections A and B and the Maintenance Schedule as detailed in Table 1.

7.2. Defects Liability Period Inspection

The Contractor, after completing all proposed works, shall advise the Engineer, Matamata Piako District Council, at least 7 working days prior to the proposed commencement of the defects liability period and shall be available for a joint pre-defects liability period inspection.

7.3. Defects Liability Period – Final Inspection

The Contractor at the end of the required defects liability period shall advise the Engineer, Matamata Piako District Council, at least 7 working days prior to the proposed commencement of Council acceptance of the asset and its ongoing maintenance.

7.4. As-Built Plans

The Contractor shall supply one copy of the as built plans recording any variation from the approved landscape plans and this specification. Refer Part 1 General Clause 7.0 Completed Works.

Table 1: Maintenance Schedule for Planted Stormwater Devices				
ITEM	REGIME	FREQUENCY	TERM	SEASON
Mulching in groundcover planting areas for Bark Mulch	Check that mulch has not deteriorated nor travelled, and replace where quality has diminished below specification requirements	Only once after planting	-	Winter - Spring
Swale Inspection for weed and pest control, channel and planting maintenance	Check for problem weeds, dead plants, pest damage, replacement and remediation needs. If turfed, mow to required height	Monthly	Up to 10 years	Late Spring or Early Autumn
Other LESD Inspections for weed and pest control, planting maintenance, tree maintenance	Check for problem weeds, dead plants, pest damage, pruning and replacement needs	6 monthly	Up to 10 years	Late Spring or Early Autumn
Annual LESD Inspections for weed and pest control, planting maintenance, tree maintenance.	Check for problem weeds, dead plants, pest damage, pruning and replacement needs	Annually	10 + years	Early Autumn
Compliance Inspections	Inspect that the planting scheme meets the design intentions (screen, views, etc) (See also 6 below)	Annually	The life of the planting scheme	Early Autumn
Weed Control	Manual removal of weeds or 'knock-down' herbicide. No spraying near waterways	6 monthly	The life of the planting scheme	Late Spring and Early Autumn if possible
Weed Control – Marginal and Wet Zones	Manual removal of weeds only ensuring minimal bank erosion and damage to existing planting occur. No spraying permitted. Ensure no debris enters waterways.	Annually	The life of the planting scheme	Late Spring or Early Autumn
Fertiliser (in planting areas)	'Nitrophoska Blue' at 100g/m2 on shrub planted areas of 100g/tree	Once only at start of second growing season or after replacement planting	-	Late Spring
Restacking trees	Replace damaged stakes and retie where ties are damaged	Annually	Up to 3 years from planning	Autumn
Plant Replacements	As per the planting plan	Annually	Up to 3 years	Winter
Plant Replacements	When plants are removed for any reasons, replanting options should be considered, taking into account the	Periodically as determined from inspections	From 3 years for the lift of the planting	Winter

	original design intent of the planting scheme or resource consent (See also 8 below) Species selected should be based on the existing species range		scheme	
Pruning Plants	Limb or trim only where necessary to maintain visibility to site or growth of other species. Maintenance of full ground cover is essential. Prune large specimen trees according to good arboricultural practice, maintaining their natural form. No topping of trees permitted	Periodically as determined by inspections	For the term of the planting scheme	Spring/Autumn
Plant removal (where necessary to retain visibility, reduce overcrowding or for replacement of over-mature trees or plants)	Complete removal is generally preferable. Avoid damage to other plants while undertaking the removal	Periodically as determined by implementation programme or inspection	For the life of the planting scheme	Autumn

Appendix 1

Checklist 7.1

Street trees and gardens pre-defects liability period inspection

Checklist 7.1: Street trees and gardens pre-defects liability period inspection

Pre-Meeting Tasks

Organisation	Action Required	Yes	No	N/A
Contractor	1) Complete all work indicated on drawings	☐	☐	☐
	2) Trees staked, tied and mulched	☐	☐	☐
	3) Mow grass	☐	☐	☐
	4) Gardens planted, barked and weed-free	☐	☐	☐
	5) Irrigation installed to specification	☐	☐	☐

Site meeting

MPDC Representative: _____

Developers Representative: _____

Contractor: _____

1)	Inspect site	☐	☐	☐
2)	Plans and specifications complied with	☐	☐	☐
3)	Check mowing	☐	☐	☐
4)	Acceptable standard agreed upon	☐	☐	☐

Defects liability period

12 months 18 months (circle one)

Start of Defects Liability Period: _____

End of Defects Liability Period: _____

Items to be Provided/Corrected

No	Action Required	Party to Action	Party to Accept	Acceptance Approved	Acceptance Date

Date: _____

_____ _____

Council representative Developer's representative

Appendix 2

Checklist 7.2

Street trees and gardens - defects liability period final inspection

Checklist 7.2: Final inspection - street trees and gardens

Pre-Meeting Tasks

Organisation	Action Required	Yes	No	N/A
Contractor	Make sure site complies with standards as agreed at pre-maintenance inspection	☐	☐	☐
	Soil compaction and drainage according to specifications	☐	☐	☐
	Trees staked, tied and mulched	☐	☐	☐
	Trees to be well established, and of good health and form	☐	☐	☐
	Dead and damaged trees and plants replaced	☐	☐	☐
	Grass to be well established	☐	☐	☐
	Mow grass to specified height	☐	☐	☐
	Gardens planted, established and of good health and form, mulched and weed-free	☐	☐	☐
	Irrigation in working order	☐	☐	☐
	All litter and debris removed from site	☐	☐	☐
	As-built records prepared for all assets to be vested in Council			

Site meeting

MPDC Representative:_____

Developers Representative: _____

Contractor: _____

Inspect site	☐	☐	☐
Soil compaction and drainage according to specifications	☐	☐	☐
Trees staked, tied and mulched	☐	☐	☐
Grass is well established and mowed			
Gardens barked and weed-free	☐	☐	☐
Gardens and planting meet agreed standards	☐	☐	☐
Dead and damaged plants replaced	☐	☐	☐
Irrigation working in accordance with specifications	☐	☐	☐
The site is free of any litter and debris	☐	☐	☐
As-built records submitted for all assets to be vested in Council	☐	☐	☐

Hand-over

Gardens and street trees now acceptable for hand-over to Council for ongoing maintenance

Council to take over maintenance as from _____

Date: _____

_____ _____

Council representative Developer's representative