



# **Landscape Specification**

**Sekisui House  
Lot 1 Knight Street, Warriewood**

**May 2024**

## LANDSCAPE SPECIFICATION

This Landscape Specification shall cover all work to be accomplished and materials to be used in the landscape works. It is intended that this landscape specification be read in conjunction with the following documentation dated May 2024:

▪ Overall Landscape Plan	Dwg No.	02.24(23)/121
▪ Detail Landscape Plan 1	Dwg No.	02.24(23)/122
▪ Detail Landscape Plan 2	Dwg No.	02.24(23)/123
▪ Detail Landscape Plan 3	Dwg No.	02.24(23)/124
▪ Landscape Details 1	Dwg No.	02.24(23)/125
▪ Landscape Details 2	Dwg No.	02.24(23)/126

### 1. GENERAL CONDITIONS

#### 1.1 GENERAL CONDITIONS

Refer to main specification for all general conditions.

#### 1.2 STAGING OF WORKS

Any contractor asked to submit a tender for the landscape works must examine the program for the building works and develop a program to suit.

#### 1.3 DEFECTS LIABILITY PERIOD

The landscape contractor shall be held responsible for replacement of any work and/or materials which fail during the first twelve (12) months following the date of issue of a final occupation certificate.

Two (2) weeks before final completion an inspection shall be undertaken to ensure all works are in a satisfactory condition. The contractor shall give two (2) weeks notice of the date and time of this meeting. Any defects requiring rectification shall be issued in writing to the contractor.

A final meeting shall be held on the date of final completion and after a satisfactory inspection the project shall be handed over to the client. This shall be confirmed in writing.

## 2. LANDSCAPE WORKS

### 2.1 INTRODUCTION

This section of the specification shall cover all the works to be accomplished by the successful landscape contractor.

It is intended that this landscape specification be read in conjunction with the following documentation dated May 2024:

▪ Overall Landscape Plan	Dwg No.	02.24(23)/121
▪ Detail Landscape Plan 1	Dwg No.	02.24(23)/122
▪ Detail Landscape Plan 2	Dwg No.	02.24(23)/123
▪ Detail Landscape Plan 3	Dwg No.	02.24(23)/124
▪ Landscape Details 1	Dwg No.	02.24(23)/125
▪ Landscape Details 2	Dwg No.	02.24(23)/126

### 2.2 DEMOLITION WORKS

The following items are to be demolished and removed by the landscape contractor:

- Existing fencing as indicated.
- Existing timber stairs and decomposed granite pathways.
- Existing weeds/grass in proposed planting areas.

### 2.3 CONSTRUCTION ZONE FENCING

- The selected contractor is to liaise with the client to determine the extent of construction zone fencing required during the construction works.

### 2.4 SOIL AND WATER MANAGEMENT WORKS

**These works are to undertaken on an ongoing basis by the landscape contractor.**

#### 2.4.1 Generally

All soil and water management works shall be undertaken before the commencement of earthworks.

All works must be in accordance with industry standard practices for Soil and Water Management.

For the purposes of this specification soil and water management works include:-

- erosion and sediment control measures that minimise sediment pollution to downslope lands and waterways
- measures to avoid altering the drainage pattern in relation to adjoining land.

#### **2.4.2 Clearing**

The site is presently developed with adequate cover over all areas. Where possible this cover must be retained until the final turfing can commence.

All reasonable measures will be undertaken to protect all other vegetation on the site from damage during construction, including the erection of individual or group fencing.

#### **2.4.3 Land Disturbance**

Where practical, the soil erosion hazard on the site will be kept as low as possible. To this end works should be undertaken in the following sequence, if required.

Approved runoff and erosion controls will be installed before clearing site vegetation other than those associated with the construction of the controls.

A 'silt' fence shall be installed along the existing boundary fences below the site works and maintained for the duration of the works.

Topsoil will only be stripped from approved areas and will be stockpiled for later reuse during site rehabilitation and landscaping.

Stockpiles of topsoil, sand, aggregate, spoil or other material will be stored clear of any drainage line or easement, natural or artificial waterbody, footpath or road surface. They will have measures in place to prevent the movement of such material onto the areas mentioned.

Undertake site development works in accordance with the landscape plans. Where possible, phase development so that land disturbance is confined to areas of workable size.

Final site landscaping will be undertaken as soon as possible and within 15 days of completion of construction activities.

#### **2.4.4 Sedimentation Control**

Water will be prevented from entering the permanent drainage system unless it is relatively sediment free ie. the catchment areas has been filtered through an approved structure.

Temporary soil and water management structures will be removed only after the lands they are protecting are rehabilitated.

All disturbed lands will be rehabilitated promptly and effectively and within fifteen days of completion of work or other period as specified on the soil and water management plan.

Acceptable receptors will be provided for the concrete and mortar slurries, paints, acid washings, light weight waste materials and litter.

## **2.5 EXISTING TREES TO BE RETAINED**

### **2.5.1 Generally**

All existing trees which are shown on Drawings and/or specified to be retained, shall be adequately protected from damage as described hereafter.

**There are a number of existing trees on and around the site to be retained and protected.**

### **2.5.2 Tree roots**

During excavation for service or other excavation, tree roots in excess of 50mm diameter shall not be cut. Hand digging and tunnelling shall be carried out wherever necessary to avoid cutting roots and especially under the branch spread of trees. Where necessary tree roots shall be saw cut back to a clean cut and then treated with an approved bitumen emulsion dressing. Trenches dug under the branch spread of trees shall remain open for as short a time as possible. Backfilling shall remain open for as short a time as possible. Backfilling shall be carefully rammed and watered in around the roots to eliminate voids.

### **2.5.3 Around trees**

Disturbance to existing ground levels beneath branch spread, either by compaction, heavy machinery, piling up materials or cutting away soil, shall not take place unless so specified. If ground has been unavoidably compacted by heavy machinery, the soil shall be loosened by tyning.

Construction materials generally, and particularly oil, paints, waste concrete, cleanings or other deleterious materials shall not be stored or dumped under branch spread. Concrete mixers shall be sited in positions where the deposit of wind-blown cement on the trees is reduced to a minimum. No fires shall be lit under the branch spread or where damage to trees could result.

In the event that oil or other harmful material has been spilt under the trees on the sub-grade or topsoil to be retained, the affected soil is to be excavated and the damaged vegetation removed to the approval and under the direction of the clients representative. Dispose of soil and replace with soil as specified for mass planted areas.

### **2.5.4 Tree Pruning**

All works to be in accordance with AS 4373-1996 Pruning Amenity Trees, modern arboricultural practices and Workcover's Code of Practice: Amenity Tree Industry - 1998.

### **2.5.5 Damage**

The Contractor shall be responsible for damage to or destruction of any new or existing trees, unless such trees are cut or removed as specified or as directed in writing by the clients representative.

Partial damage to any tree shall be rectified immediately damage occurs at the Contractor's expense, as specified previously and under the direction of the clients representative.

In the case of total destruction of a tree or trees, damages shall be assessed by the clients representative and shall be calculated as the amount necessary to replace and establish in that position a similar tree of a similar species from within a radius of 150km.

## 2.6 EARTHWORKS

### 2.6.1 Base Levels

Major bulk excavations to be undertaken by main builder.

Excavate (cut or fill) to the following levels to accommodate the final surface treatments.

Item	Excavation Depth Below Finished Levels
Concrete paving	100mm
Concrete driveway paving	150mm
Concrete block walls	300mm
Sandstone block walls	200mm
Stepping stones	80mm
Mass planted areas	Deep rip to 300mm
Lawn areas	Deep rip to 300mm

**Landscape contractor is to provide a "Site Safety Management Plan" prior to the commencement of any works. A nominated access track to the construction site is to be determined on site by the contractor and client's representative. All access to and from the construction zone is to be within this track. Any damage outside this track will be repaired by the contractor at his expense.**

## 2.7 CONCRETE BLOCK WALL

### 2.7.1 Materials

Concrete - (for footings)	25mPa strength at 28 days
Concrete - (for core filling)	20mPa strength at 28 days
Reinforcing - Walls -	Refer to detail. Blocks to be standard masonry blocks 190 x 190 x 390 f <sub>uc</sub> = 12Mpa from Boral Besser or equal.
Mortar joints -	Clean fine sand & Portland cement Type A in a 4:1 ratio.
Render -	Render mix is one part cement, one part lime and six parts sand.
Paint -	Dulux Weathershield. Colour to be advised by client.
Waterproofing -	Single pack solvent impregnation liquid to form a water repellent barrier such as <b>Sikagard 700S or equal</b>

### 2.7.2 Installation

Construct wall in accordance with the details. Ensure minimum 100mm cover to all concrete footings.

All exposed surfaces of walls to be rendered. Paint walls in accordance with paint manufacturers directions.

## 2.8 SANDSTONE BLOCK WALLS

### 2.8.1 Materials

- Sandstone blocks - 'B Grade' sandstone blocks 500mm high x 500mm wide in 1000mm lengths.  
Filter fabric - Ausdrain standard filter fabric or equal.  
Mortar joints - Clean fine sand & Portland cement Type A in a 4:1 ratio

### 2.8.2 Installation

Install sandstone blocks atop minimum 200mm layer compacted road base. Install ag lines if required. Where sandstone blocks are retaining soil mix install filter fabric behind blocks to stop soil washing through gaps between blocks.

Where block walls are two blocks high install 10mm mortar joints between sandstone blocks to ensure blocks are secure.

## 2.9 CONCRETE PAVING

### 2.9.1 Materials

- Concrete - 25mPa strength at 28 days  
Colour concrete: to be CCS full depth coloured concrete  
Ph: 1800 077 744 or equal.  
Exposed aggregate concrete: to be Boral 'Twilight' Expose  
Ph: 1300 267 251 or equal.  
Reinforcing - SL82 steel mesh  
Expansion Joint - PE Polyethylene 30kg density 10mm x 100mm  
- Connolly or Danley key joint expansion joint in all coloured concrete pathways where there is a change of colour

### 2.9.2 General Installation

All concrete paving to be installed to a thickness of 100mm for pathways and 150mm (with additional reinforcing) for driveways and finished to levels as indicated on plan. It shall be generally installed atop or at existing levels. Where concrete adjoins pavements or walls ensure that a foam rubber expansion joint are placed between the different materials to allow for movement. Paving to have a broom finish.

#### **All proposed concrete paving to finish flush with adjoining surfaces.**

Pathways: Install contraction joints every 1200mm and expansion joints every 3600mm. Also install expansion joint between each panels and where they abut adjoining walls and pavements. Paving to have a broom finish.

Driveway: Install contraction joints every 3000mm and expansion joints every 6000mm. Also install expansion joint between each panels and where they abut adjoining walls and pavements. Paving to have a broom finish.

### 2.8.3 Exposed Aggregate Concrete Paving Installation

Concrete to be water etched to expose the aggregate. Expose of slurry in accordance with standard practices.

### 2.8.4 Concrete Step Installation

Install coloured finish concrete stairs to the areas indicated. Stairs to be 175mm risers x 300mm treads. Where concrete adjoins other concrete paving install a Connolly Expansion Joint to supplier's recommendations.

Stairs to be constructed with a 10mm bevel along the front edge. Stairs finished with a rough broom finish with no border, to provide grip for pedestrians. Lightly moisten and compact using a vibrating plate to 98% compaction. Steps to have a minimum throat thickness of 200mm.

## 2.9 DECOMPOSED GRANITE PAVING

### 2.9.1 Materials

Granite - Decomposed granite to be Deco-Granite from Australian native Landscapes or equal - pink colour.

Cement - Portland Type A.

**Paving is to be stabilised with 5% cement mixed into the granite.**

### 2.9.2 Installation

Install decomposed granite in a 75mm deep **machine compacted** layer to the areas indicated on plan. Compact road base to 98% compaction and lay with a minimum 1:75 cross fall to allow surface water drainage. Mix cement into surface at a rate of 1:20 (cement:granite) water well and compact. Paving to finish flush with adjoining surfaces.

## 2.10 SITE BOULDERS

### 2.10.1 Materials

Boulders - Random sized site boulders from excavation works. They should also be hard and durable.

**Sample to be shown to client's representative for approval prior to installation.**

### 2.10.2 Installation

Install boulders as per plan with a minimum 1/3 of each rock below finished ground levels for stability. Backfill between and behind boulders with soil as specified to allow for planting.



## 2.11 DRY CREEK

### 2.11.1 Materials

- Sandstone - Stone to be random sized boulders with 'flattish' tops and bottoms for stability and suitable for sitting upon. It should also be hard and durable.
- Concrete - Concrete to be 30 mPa with added hardener.  
Concrete to be specially mixed using 10-20mm river gravel (Western Gold) as the aggregate with a hardener added to ensure gravel is secured within the mix.
- Pebbles - Nepean river gravel random sizes up to 200mm. Available from Australian Native Landscapes or equal.

### 2.11.2 Installation

Install boulders as per plan with a minimum 1/3 of each rock below finished ground levels for stability. Backfill between and behind boulders with imported garden soil mix (as specified elsewhere) to provide for plants.

Shape base and form levels to accommodate minimum 100mm layer of concrete slurry to meet finished levels as indicated on plan.

Concrete to be specially mixed using 10-20mm river gravel as the aggregate with a hardener added to ensure gravel is secured within the mix.

Install larger pebbles into concrete in a **random pattern** predominantly towards the edges to create an appearance of a creek.

Remove top slurry layer of concrete with water pressure to expose the special aggregate. Expose of slurry in accordance with standard practices. Once concrete cures remove any loose pebbles.

Ensure any areas where water could pond are maximum 100mm in depth.

## 2.12 PLANTING PREPARATION

### 2.12.1 Materials

- Soil mix - 300mm imported premium quality soil mix  
Samples to be shown to client's representative for approval before installation. Also provide written breakdown of contents, pH and trace elements and suitability for improving existing soil. Soil mix to comply with AS 3743-2003: Potting mixes, AS 4419-2003: Soils for landscaping and garden use & AS 4454-2003: Composts, soil conditioners and mulches.

### 2.12.2 Installation

Destroy existing grass and weeds. Deep rip to a depth of 300mm (avoid existing tree roots) and apply Gypsum at a rate of 200g/m<sup>2</sup> as recommended by the supplier.

Install imported soil mix to a depth of 300mm in maximum 100mm layers and cultivate into the top 300mm of existing soil to ensure the materials integrate.

Where trees are to be installed in existing landscape areas excavate a hole minimum twice the depth and diameter of the plant container. Backfill with imported garden soil mix as specified. Mulched area to reduce in depth around plant stem to form a shallow watering dish.

## 2.13 PLANTS AND PLANTING

### 2.13.1 Materials

Plants - Shall be true to name and variety. Substitutes in size or variety shall not be made without the approval of the clients representative. Refer to Plant Schedule.  
All plants shall be true to size in well developed healthy condition, free from insects and diseases, with well established root systems. Sample of each species to be shown to clients representative for approval before installation.

### 2.13.2 Installation

The contractor is to rigidly observe planting positions as shown on plan. Planting shall not be carried out in dry soil or in extreme weather conditions.

The root system must be moist before planting to ensure turgidity. The plants shall be removed from their containers with as little disturbance as possible to the root system. Plants should be planted at the same depth as the plants were in the containers and allow for a shallow saucer of soil to be formed around the plant to aid penetration of water.

Avoid hilling up of top soil around young plant stems. Firm soil around the root ball and thoroughly soak the areas after planting. On completion, cultivate, rake and leave all garden areas in a neat and tidy condition. Remove old containers and plant labels from the site.

Fertilise with an approved nine months formulation general purpose slow release fertiliser such as 'Nutricote' or 'Osmocote' that is mixed into the prepared planting space just prior to planting. Fertiliser is to be applied at the rate as specified by the manufacturer for the plant size and type.

Maintain all plants and ties and provide adequate watering for the duration of the contract.

### Staking

Trees as indicated in the Schedule are to be staked with four 50 x 50mm x 1800mm long hardwood stakes secured in each corner of a 1000 x 1000mm square.

## 2.14 MULCHING

### 2.14.1 Materials

Mulch - Comprised of maximum 15mm fresh hardwood chips such as Forest Fines® from Australian Native Landscapes or equal. Samples to be shown to the clients representative for approval before installation. Mulch to comply with AS 4454-2003: Composts, soil conditioners and mulches.

### 2.14.2 Installation

Mulch shall be applied to all disturbed areas where bare earth is exposed indicated on plan. Following planting, rake all garden areas and tamp lightly to give an even graded surface. Spread 100mm layer mulch over the surface of all new garden beds. Care shall be taken not to mix soil and mulch together.

## 2.15 LAWN AREAS

### 2.15.1 Materials

Turf - Cultivated 'Couch' turf. It shall be weed and disease free.  
Topsoil - 100mm imported soil mix such as "Turf Underlay" from Australian Native Landscapes or equal.  
Imported topsoil mix to comply with AS 4419-2003: Soils for landscaping and garden use.

### 2.15.2 Installation

Deep rip existing ground to 300mm. Install imported soil mix as specified to a depth of 100mm. Level and lightly compact topsoil to ensure a smooth surface. Prior to final raking add fertiliser such as Dynamic Lifter to manufacturer's directions. Turf to finish flush with adjoining pavements and edgings. Topdress edges or low areas to ensure even surface.

## 2.16 STEPPING STONES

### 2.16.1 Materials

Stepping stones - Bluestone Stepper 700-1000x30mm from EcoOutdoor  
Ph: 1300 131 413  
Mortar - Clean fine sand & Portland cement Type A in a 4:1 ratio.

### 2.16.2 Installation

Install each stepping stone on a minimum 50mm thick mortar bed and space with maximum 200mm gaps. Stones to finish flush with adjoining levels. Fill gaps with soil mulch and plant as per plan.

**Ensure minimum 1:75 crossfalls are provided to drain.**

## 2.17 OPEN STYLE FENCING

### 2.17.1 Materials

**Specifications:**

<b>Fence Style &amp; Material:</b>	Blade Fin Style Fencing to be Marine Grade 6063 aluminium alloy
<b>Panel size:</b>	Maximum 2.4 meter lengths
<b>Height:</b>	1800mm
<b>Blades:</b>	50 x 10mm Fin vertical pickets
<b>Gaps:</b>	50mm wide between vertical pickets.
<b>Colour:</b>	Monument Grey

### 2.17.2 Installation

Install according to suppliers recommendations with all posts firmly fixed into place. Ensure gaps minimum of 150mm wide x 100mm high below fence at ground level and spaced at a minimum of 6m intervals. For Wildlife Passage (DA Condition). Also refer to Landscape Details.

## 2.18 PRACTICAL COMPLETION

Sweep down, clean up and remove all waste landscape material from the site. Hose down paved areas, fences, footpaths, etc. Notify clients' representative of progress and arrange inspection with client's representative. Following satisfactory completion of initial installations and/or rectification of defects, the client's representative shall issue notice of practical completion.