This specification is structured as follows;

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1. Introduction

This Environmental Specification contains detailed requirements relating to the documentation and implementation of the controls for Greenweb. This specification should be read in conjunction with Sutherland Shire Local Environmental Plan 2006 and the Sutherland Shire Development Control Plan 2006, where the Greenweb map is located. Applicants are advised to also consult the Sutherland Shire Tree and Bushland Vegetation Preservation Order (applies to Kurnell), Sutherland Shire Development Control Plan 2006 - Chapter 4 Natural Resource Management (Tree and Bushland Vegetation).

Parts of the Environmental Specification – Landscape also form part of this Specification, as follows:
- Environmental Specification – Landscape Part 1 Landscaping Guidelines
- Environmental Specification - Landscape Part 4 Plant Selection
- Environmental Specification - Landscape Part 5 Tree Protection on Building Sites

Part 4 - Plant Selection contains an extract from the Sutherland Shire Council publication, ‘Sutherland Shire Plants A Guide to Indigenous Plant Species Suitable for Landscape and Revegetation Projects’. This publication describes a system for selecting native plants for revegetation and landscaping. The plants have been classified according to their suitability for various urban environmental zones, their landscape uses and their individual characteristics.

Applicants are advised to also consult Sutherland Shire DA Guide and Council’s Urban Tree Policy 1991. The Urban Tree Policy identifies the range of tree species that are found within the public footpath area of different parts of the Shire. This policy is used by Council to select species for replacement or additional trees in footpath areas.

2. Basic Information about Greenweb

Sutherland Shire Council has identified key areas of bushland habitat and interconnecting linkages or corridors that can be established across the Shire. These selected areas have been categorised as Greenweb Core, Greenweb Support or Greenweb Restoration, as identified on the Greenweb Map in Chapter 4 of Sutherland Shire Development Control Plan 2006. The overriding goal is to connect currently fragmented areas of remnant bushland, by encouraging the undertaking of bush regeneration in certain degraded areas of bushland and in some places re-establishing endemic vegetation. Areas of bushland can act as important habitat areas and can ultimately be connected to form wildlife corridors, allowing for the migration of wildlife and native plant dispersal. The strategy aims to preserve biodiversity in the long term. The illustration below shows how vegetation can form wildlife corridors for a variety of wildlife species.
The Greenweb comprises:

2.1 Core

Core areas are of high significance to the sustainability of the Greenweb as they contain key habitat areas, key linkages, threatened species or endangered ecological communities. These key habitats are of a size that maintains their viability and are generally larger than 3.5 hectares.

2.2 Support

Support areas provide ancillary habitat areas or secondary linkages between habitats. They also contain lands that form a buffer between developments adjacent to key habitats and corridors.

2.3 Restoration

Restoration areas provide opportunities for the establishment and vegetation of corridors between core areas.

Landscaping in Core, Support and Restoration areas should support the objectives of the Greenweb strategy. In an area designated as Core Greenweb, any proposed landscaping must use indigenous plants.

In all these areas, the strategy requires that existing suitable trees and areas of native vegetation are retained and that habitat or corridor areas are revegetated. Revegetation, or even individual tree planting using appropriate plants, can enhance the ecological quality of the landscape and assist in reaching Greenweb objectives.

Sutherland Shire Council’s publication, Sutherland Shire Plants A Guide to Indigenous Plant Species Suitable for Landscape and Revegetation Projects contains further information, including a system for selecting native plants for revegetation and landscaping. The plants have been classified according to their suitability for various Urban Environmental Zones, their...
landscape uses and their individual characteristics. An extract from this booklet explaining this system and a table of plant species is included in Sutherland Shire 2006 Environmental Specification – Landscape Part 4 Plant Selection.

Landscaping of a residential development using indigenous plants from the list of plant species can also form part of the Basix requirement for a development.

3 Greenweb Landscaping Guidelines

3.1 Achieving Canopy Cover for Greenweb Areas– Plant Spacing

Planting density largely depends on the desired finished character of the project. If the creation of a natural landscape is required then closer spacings will give the effect of the local bushland, where plants compete for light and space, and the overall composition is an integrated unit. This will require plant species from all strata levels (i.e. upper, middle and lower canopy) to be represented.

In order to achieve a consistent canopy of trees, plant spacing is particularly important. By planting trees so that their canopies overlap a strong tree canopy is provided.

The following table is provided as a guide to assist in planting trees and shrubs so that canopy and understorey planting achieves the intended results.

**Planting Density Guide**

*This table should be read in conjunction with Plant Selection Table in Sutherland Shire 2006 Environmental Specification – Landscape Part 4.*

<table>
<thead>
<tr>
<th></th>
<th>Grasses &amp; Groundcovers (including climbers, ferns etc)</th>
<th>Shrubs</th>
<th>Trees</th>
</tr>
</thead>
<tbody>
<tr>
<td>All environmental zones</td>
<td>2 plants per m²</td>
<td>1 plant per m²</td>
<td>1 plant per 15 m²</td>
</tr>
<tr>
<td>Open drainage swales and saltmarsh</td>
<td>4 plants per m²</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The amount of maintenance a project needs will depend upon the harshness of the site. The prevailing weather conditions should also influence plant spacings. Expected plant fatalities are better compensated for in the original planting rather than resulting in an under planted landscape or necessitating subsequent follow up plantings that have to catch up.

Choosing the most appropriate initial plant size can greatly determine the outcome, as well as the process of a project. Smaller containers (forestry tubes ~ 0.24 litre containers) have proven to have many advantages over advanced plants, however on some projects a combination may work best.
Sutherland Shire Council

Shrubs and ground covers in tubes, with some strategically placed advanced specimens to give some initial impact, is an effective approach.

To ensure long-term viability of the tree planting and canopy it is also advisable to plant trees away from other structures including structures on adjoining properties.

Generally it is advised that large trees should not be planted within 1 metre of any dwellings or structures.

3.2 Greenweb Areas Weed Control

Generally a weed control program will be required. A weed control program can be divided into three stages. These are:

Primary Weed Control. This is the initial removal of weeds and there are various methods used. Weeding techniques vary from weed to weed and choosing the most appropriate method will ensure that control is efficient and successful. The techniques used should be those recognised by the Australian Association of Bush Regenerators.

Follow-up Weed Control. This involves the removal of mostly herbaceous weed species that have re-sprouted or weed seedlings that have germinated. This stage may require several follow up sessions depending on the species being controlled, weather conditions and soil seed bank.

Long Term Maintenance. Regular observation and control of rogue or persistent weeds will ensure previous efforts are not wasted and should be undertaken regularly at least once a month.