

Browns Bay School Shade and Planting Project

Concept Plan

Browns Bay Primary School



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Version 1.1



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1. Introduction

Recreation Solutions Ltd has developed an initial concept plan as part of the process of identifying options for increased shade for Browns Bay School through the use of planted spaces (green zones).

An initial site visit on 23.5.18 identified areas of the school grounds where planting was possible, taking into account constraints that included future potential classroom sites and associated infrastructure, stormwater management, and access requirements.

This discussion identified nine (9) potential planting zones, which are outlined in figure 1 of this report as “green zones”. On the basis of these site visit discussions, different types of outdoor learning environments were identified for each of these zones.

As a followup to the initial site visit, technical advice was received around biodiversity considerations, including ecological benefits from each green zone and the appropriate plant species for each zone taking into account soil types, climate and landuse within the school.

Schedule 1 of this report outlines for each green zone:

- A description of each type of learning environment, and possible educational outcomes;
- Features and work requirements to develop the green zone (e.g. planting, infrastructure, maintenance);
- Plants required, their grade, and number.

This plan is not intended to be a detailed landscape design; instead it summarises ideas and concepts developed to date. If some or all of these green zones are endorsed by the school, options can be provided in the implementation of these initial concepts.

This would include:


- Developing more detailed landscape design plans where required;
- Outlining and pursuing funding options to develop green zones;
- Planning and organising events involving students, their families and the community in implementing planting and maintenance aspects of green zones.



Figure 1: Green Zones

KEY: Stormwater Drains - - - -

Appendix 1 Green Zones

Green Zone	Description
<p>Zone 1: Shaded Play</p>  <p><i>(Indicative photos)</i></p> <p>Plant name</p> <p>NONE REQUIRED</p>	<p>Create a play space amongst large pohutukawa, allowing for creative play in a shaded environment. This could include signage / interpretation designed by students to promote play i.e. "Climb me", "I was planted in 19?? by the founding students of BBS" etc.</p> <p>School Features & Work Requirements:</p> <ul style="list-style-type: none"> • Install play area props (e.g. large snaking ropes to balance and walk on, and large boulders/rocks to climb on) at ground level under the existing pohutukawa canopy adjacent to the sports fields. • Further mulching would require digging down next to new fence/retaining wall to catch mulch on down slope – may consider leaving ground surface as existing understory. • Keep play area within existing tree canopy zone to allow for future use of adjacent land for classroom sites if required. <p>Plant Grade</p> <p>Number</p>

Green Zone	Description
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Zone 2: Outdoor Classroom



(Indicative photos)

Create a space outdoors for teachers to utilise in class time for activities such as: reading, drama, art, science observation, discussion, buddy class activities, health and PE. Could also be a space used for student group meetings (student council). The space would create another area to be played in during morning tea and lunch, allowing for creative play designed by students. Students should feed into the design of the space and could add to year-on-year with art installations, written word, learning support equipment i.e. outdoor blackboard, signage designed by students etc.

School Features & Work Requirements:

- Trees planted in circular or koru shape, creating a canopy for an outdoor classroom setting.
- Could include portable stones/boulders/logs or log sections as seating, and associated teaching materials.
- Mulch rings/tree protectors could be used around trees.
- Tree species provide a spreading canopy (shade) as well as providing fruit as a food source for native birds.
- Located to avoid stormwater drains and to still allow access between 2 sports field areas.

Plant name	Plant Grade	Number
Puriri <i>Vitex lucens</i>	200L	10 – 12 (for Green Zone 2 & 3)

Green Zone	Description
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Zone 3: Avenue of Mature Trees



This area would create a natural division between the courts and sports fields while still allowing easy movement and line of sight for duty teachers etc. It would create natural shade and habitat for native birds and invertibrates.

School Features & Work Requirments:

- Trees planted in an avenue (straight line), along the boundary between the netball courts and the school fields, creating a canopy for shade.
- Avenue would link to Green Zone 2 (Outdoor Classroom) to form a koru shape.
- Spacing of trees to allow spreading canopy of each tree to create continuous shade along the avenue.
- Shaded area for seating, or viewing sports activities.

Plant name	Plant Grade	Number
<i>Puriri Vitex lucens</i>	200L	10 – 12 (for Green Zone 2 & 3)

Green Zone	Description
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Zone 4: Themed Area to Fence Height




(Indicative photos)

This area could become a 'wild play' zone once it is established. Students could create caves/huts amongst the planting. This type of area allows for creative play as students can create games and storylines. This area will also allow for learning outside the classroom in many curriculum areas i.e. science, the arts, math etc.

School Features & Work Requirements:

- Install a wild planted area, along the sloped bank adjacent to the sports field boundary and 1 Hyde Road.
- Species chosen so as not to grow significantly higher than the fenceline, and will not be planted closer to the entrance than the existing small pohutukawa so as not to obscure the entrance on Hyde Road.
- Chosen species can be put anywhere within the defined area.
- Mulching and cordoning off will be required to aid plant growth.

Plant name	Plant Grade	Number
<i>Cordyline australis</i>	0.5	20
<i>Coprosma crassifolia</i>	0.5	20
<i>Coprosma lucida</i>	0.5	10
<i>Coprosma robusta</i>	0.5	50
<i>Corokia cotoneaster</i>	0.5	5
<i>Hebe stricta</i>	0.5	20
<i>Leptospermum scoparium</i>	0.5	20
<i>Kunzea ericoides</i>	0.5	20
<i>Melicytus ramiflorus</i>	0.5	20
<i>Phormium tenax</i>	0.5	20
<i>Psuedopanax crassifolius</i>	0.5	6
<i>Sophora chatamica</i>	0.5	3
<i>Rhopalostylus sapids</i>	0.5	15

Green Zone		Description
Zone 5: Food Forest/Orchard	 <p><i>(Indicative photos)</i></p>	<p>Students can research and survey to pick selection of fruit trees that are suitable for the area and are liked by many. Trees should be chosen so there are fruit ripening at different times of the school year. Students could create signage / art installation to complement the area. Produce can be used in food technology etc and surplus could be sold to the community to provide an income to the gardening group.</p> <p>School Features & Work Requirements:</p> <ul style="list-style-type: none"> • Plant a row of fruit trees, along the sloped bank adjacent to the sports field boundary and 1B - 5 Hyde Road. • Mulching and cordoning off will be required to aid plant growth. • Located on banked area to avoid stormwater drains
Plant name	Plant Grade	Number
Various fruit trees picked with support from experts		20

Green Zone	Description
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Zone 6: Interactive Food Garden



(Indicative photos)

Create raised macrocarpa vegetable beds, composting area and shed/propagation to be overseen by the gardening / environmental student group. Produce can be used for cooking, food technology, selling, and classroom curriculum delivery. Students can complement area with art, signage etc.

School Features & Work Requirements:

- Plant a vegetable garden and propagation shed in the northeast corner of the sports fields.
- Mulching and cordoning off will be required to aid plant growth.
- Propagation shed will require a roofed area to harvest rainwater (utilising stands from Water Sensitive Design Yr 4 Project) .
- Located to avoid stormwater drains.

Plant name	Plant Grade	Number
Various species picked with support from experts		

Green Zone	Description
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Zone 7: Tree Tunnel



(Indicative photos)

Create a shaded area for play during play and lunch time. This area would also be another informal 'outdoor classroom' that teachers could access in the summer months for reading, small group work, art inspiration etc. Once established this area would be great for technology and using to build structures and huts as part of the outdoor education programme.

School Features & Work Requirements:

- Trees planted in an avenue (straight line), along the boundary between the school field boundary and 5A – 9A Miri Road, creating a tunnel for shade with the existing monkey apple (*syzygium smithii*) trees on the boundary.
- Existing monkey apple (*syzygium smithii*) could be removed over time as native trees grow.
- Tunnel would mirror species used in Green Zones 2 and 3 (Outdoor Classroom; Avenue of Mature Trees).
- Spacing of trees to allow spreading canopy of each tree to create a continuous shade along the tunnel.
- Located to avoid stormwater drains.

Plant name	Plant Grade	Number
<i>Puriri Vitex lucens</i>	200L	10 – 12

Green Zone	Description
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Zone 8: Pellet/Box Gardens



(Indicative photos)

Create sensory mini gardens for junior classes to use as part of curriculum delivery and to break up the concrete space. These could be shared and made moveable. Plants could be picked, planted and looked after by students to create habitat for butterflies and bees, flowers for pressing, rongoa maori (maori medicine), herbs for cooking or making tea, natural balms, old fashioned gifts i.e. lavender pouch etc. to support inquiry topics.

School Features & Work Requirements:

- Install pellet and box gardens at ground level on the existing concrete surface between classroom blocks rooms 1 – 7 and rooms 13 – 17.
- Other options include decking the soil area under the tree next to the sandpit to become another shaded seating area.
- Other options include providing shading and seating on the south side of classroom block rooms 13 – 17.
- Other options include allowing plants to grow out on the south side of classroom block rooms 13 – 17 to provide more shade.

Plant name

Various species picked with support from experts

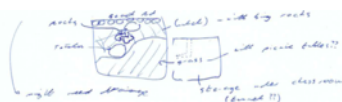
Plant Grade

Number

Green Zone

Description

Zone 9: Wild Play Area



(Indicative photos)

Create a shaded area of free wild play for junior school. This area could also include a Pa Harakeke to support the delivery of te ao maori as part of the NZ curriculum. There has been interest from the wider community with the skills and knowledge to support this idea.

School Features & work Requirements:

- Install wild play area adjacent to room 8.
- Create a Pa Harakeke (flax) which would also provide a screen on new fenceline running parallel with Browns Bay Road running from the corner of room 8 to 2A Browns Bay Road.
- The Pa Harakeke could be harvested and used as part of the school curriculum incorporating te ao Maori.
- Ground area a combination of mulch (under existing Totara trees) with large climbing boulders.
- Grassed area adjacent to room 8 with picnic tables or seats.
- Utilise area under room 8 as storage, or a tunnel and trapdoor.
- Mulching and drainage will be required to aid plant growth.
- Further detailed landscape plan would be required.

Plant name

As required according to more detailed landscape plan.

Plant Grade

Number