

New Zealand Early Childhood Centre Outdoor Design for various ages and abilities



*Creative Spaces that Maximise Learning through Engagement
with the Natural Environment*

Presented by Jill Rice
Landscape Architect
jill@getoutside.co.nz
www.getoutside.co.nz



Tihei! Mauri Ora!

Overview

Intro – *a play space design practitioner's perspective*

Context – *the world, the presenter's home environment at Dilworth School Rural Campus (Te Haerenga) in rural NZ for boys age 13-14*

Why nature-rich play environments?

How can these environments empower and engage children of all abilities?

Case Study 1

- *Joyce Fisher Centre – Deaf Education for ages 0-5*

Case Study 2

- *BLENNZ - Blind / Low Vision Centre for ages 0-18*

Case Study 3

- *Experience Trail, Waitakere Transfer Station*
- *for groups aged 3-10*

Case Study 4:

- *Vintage Kids E.C. Centre, Greenlane, Auckland*

“We live in a beautiful world...yeah we do yeah we do”

Coldplay



We don't have to go far in NZ to find wild places to explore...

The world is a great place for adventures!



"But it's a cold and it's a broken Hallelujah"

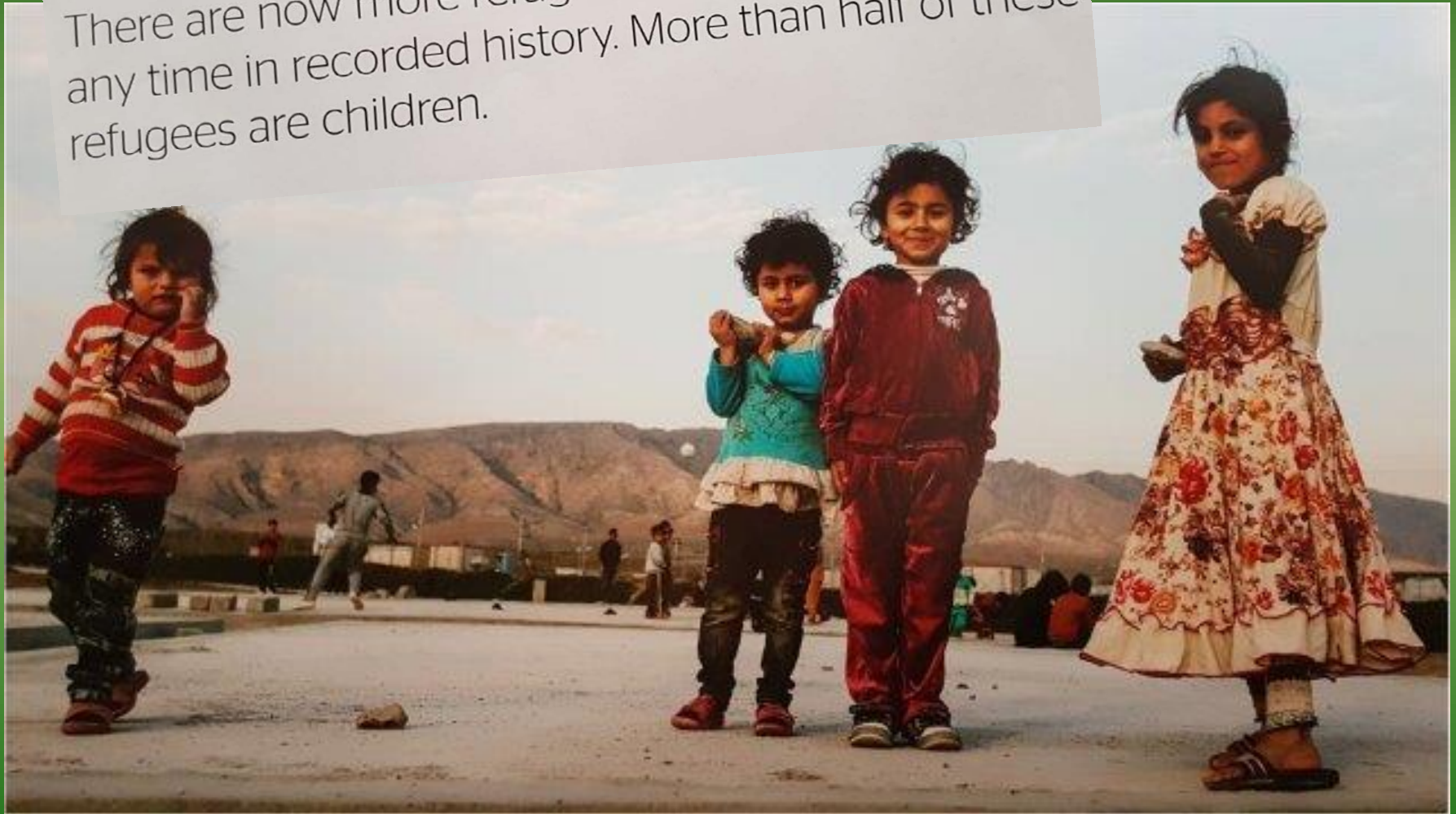
Leonard Cohen



Climate change is increasing the global burden of disease and in the year 2000 was responsible for > 150,000 deaths worldwide. Of this disease burden, 88% fell upon children.

More than 55 million people worldwide have been forcibly displaced

There are now more refugees in the world than at any time in recorded history. More than half of these refugees are children.



There are 21 Million people trapped in slavery today, more than ever before in history
4.5 Million people are in forced sexual exploitation = the population of New Zealand.
The vast majority are women and children.



The world is changing rapidly

...and it is as dangerous as it is wonderful.

How can we prepare our children for this real world?

How can the environments we provide help children to become ...

Resilient?

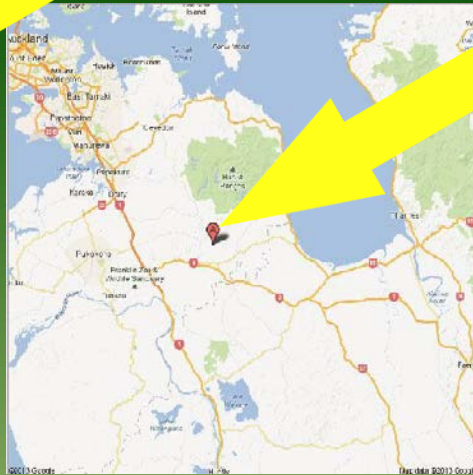
Creative problem-solvers?

Wise decision-makers?

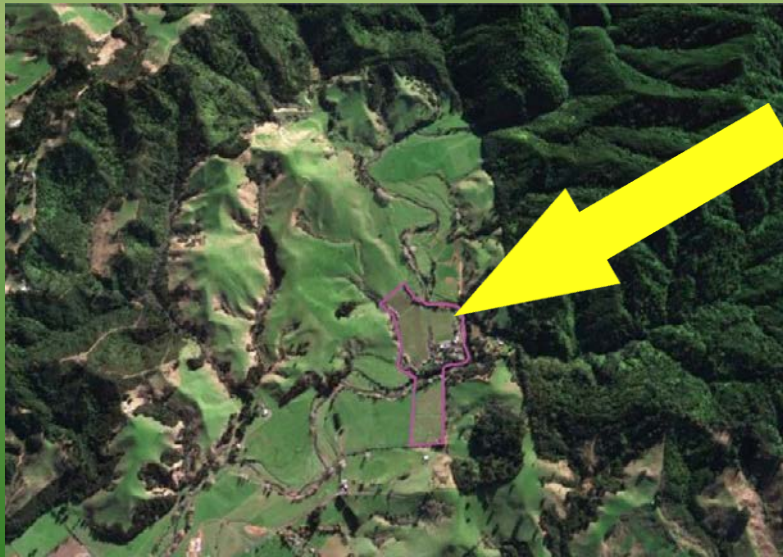
Key words

1. Connection

2. Empowerment



My home –
Dilworth School
Rural Campus/
Te Haerenga,
Mangatawhiri, North
Island, New Zealand





100 boys from disadvantaged backgrounds are given a holistic education in the unique environment of the school, bordered by a river, surrounded by rolling countryside with the Regional Forest of the Hunua Ranges as a backdrop.



The boys at Dilworth School Rural Campus

Our daughter, Emily, and the Mangatawhiri River



The school buildings were formerly the venue for a 4½ star hotel in the beautiful countryside of the north Waikato district



The gardens have been adapted to suit the learning environment of the school with hedges and mass plantings of low maintenance shrubs and groundcovers. The boys are involved in the stewardship of the grounds



Each week the boys have outdoor adventures, learn survival skills and develop environmental awareness through learning experiences outside





13 staff families also live at the school and use the outdoor environment as their playground.



Early Childhood Environments



Why ***natural*** play environments?



All children develop cognitively and physically through play - a growing body of research points to the important part that nature plays in that development



A lush green forest scene with sunlight filtering through the trees. The image shows a dense canopy of green leaves and branches, with a path or clearing visible in the center. The lighting is bright and natural, suggesting a sunny day.

“The environment is the curriculum” (Olds, 1982)

*“The environment is the child’s third teacher”
(Gandini, 1993)*

1. Nature facilitates learning

2. Nature connects us to the world around us



“Nature offers a well from which many draw a creative sense of pattern and connection.”

Richard Louv



“Positive outdoor experiences can foster happier, healthier, smarter, and more well-adjusted children and can create future stewards of the earth”

Sachs and Vincents; InformeDesign




3. Nature offers challenges that are open-ended, unpredictable and changing



3. Nature-rich spaces offer interesting environments that require careful negotiation and foster cooperation



A woman with long blonde hair, wearing sunglasses, a leopard print top with a black bow at the neck, white pants, and black sandals, is walking on a concrete ledge. She is smiling and looking towards the camera. The background shows a grassy area with trees and a clear blue sky. A green semi-transparent box is overlaid on the left side of the image, containing white text.

“I am convinced that standardised playgrounds are dangerous, just in another way. When the distance between all the rungs in a climbing net or a ladder is exactly the same, the child has no need to concentrate on where he puts his feet. Not so with all the knobbly and asymmetrical forms with which one is confronted throughout life”

Helle Nebelong
Danish landscape architect
Rangitoto College, Auckland

5. Nature offers risky play opportunities

Risky play promotes

- physical activity,
- independence
- cognitive and social development
- risk perception and management skills
- gradual mastery of challenges by progressive thrill-seeking

Can child injury prevention include healthy risk promotion? Injury Prevention 2015;21:344-347; Brussoni M, Brunelle S, Pike I, et al

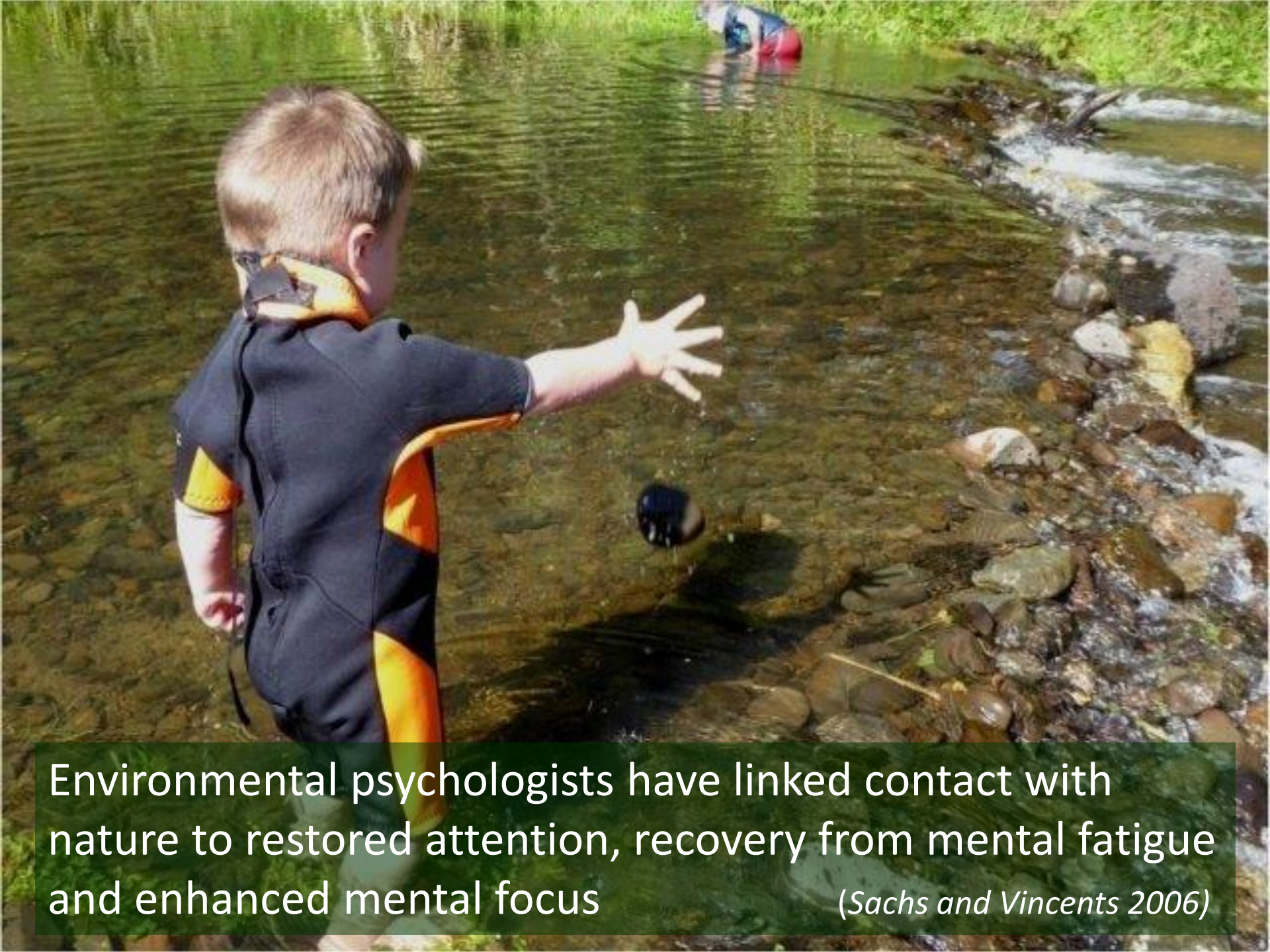


Risky play reduces

- mental illness and learning difficulties
- potential antiphobic effects of risky play (eg overcoming fear of heights).


Can child injury prevention include healthy risk promotion? Injury Prevention 2015;21:344-347; Brussoni M, Brunelle S, Pike I, et al





Environmental psychologists have linked contact with nature to restored attention, recovery from mental fatigue and enhanced mental focus

(Sachs and Vincents 2006)



Researchers conclude that children with ADD show greater ability to focus immediately after spending time in nature. The greener the environment for these and all children the better. (Faber, Taylor, 2004)

6. Nature calms

A well-ordered, nature-rich environment can better suit

- Children on the Autism spectrum
- Children who are visually impaired
- Children in wheel-chairs

Such an environment can be calming, attractive and multi-purpose and easy to negotiate

Children with ASD's are often also photosensitive.
Nature offers the best kind of shade and shelter.



7. Nature provides a comfortable environment



8. Nature is a healer



9. Natural settings are where life-long happy memories are made



Researcher Edith Cobb found
that the inventiveness and
imagination in all of the
creative people she studied
was rooted in their early
experiences in nature
“The Ecology of Imagination in Childhood”

10. Nature stimulates the imagination

Natural spaces and materials serve as the medium of inventiveness and creativity observable in almost any group of children playing in a natural setting



Multi-sensory experiences in nature stimulate the imagination by supplying the child with the free space and materials for what Robin Moore calls *“architecture and artifacts”*



11. Nature provides endless resources for play



So how can “natural” environments be designed to empower and engage children of all abilities?



Case Study 1: Joyce Fisher Centre, Auckland, for Hearing Impaired children with cochlear implants



Original playground to be replaced alongside new purpose-built Early Childhood Centre building

Learning objectives:

- Exploration
...of the natural environment
- Exposure to sensory experiences
...variety, imagination
- Relating to others
...listening, sharing, social skills
- Welcoming and friendly environment
...belonging
- Using language
...communicating

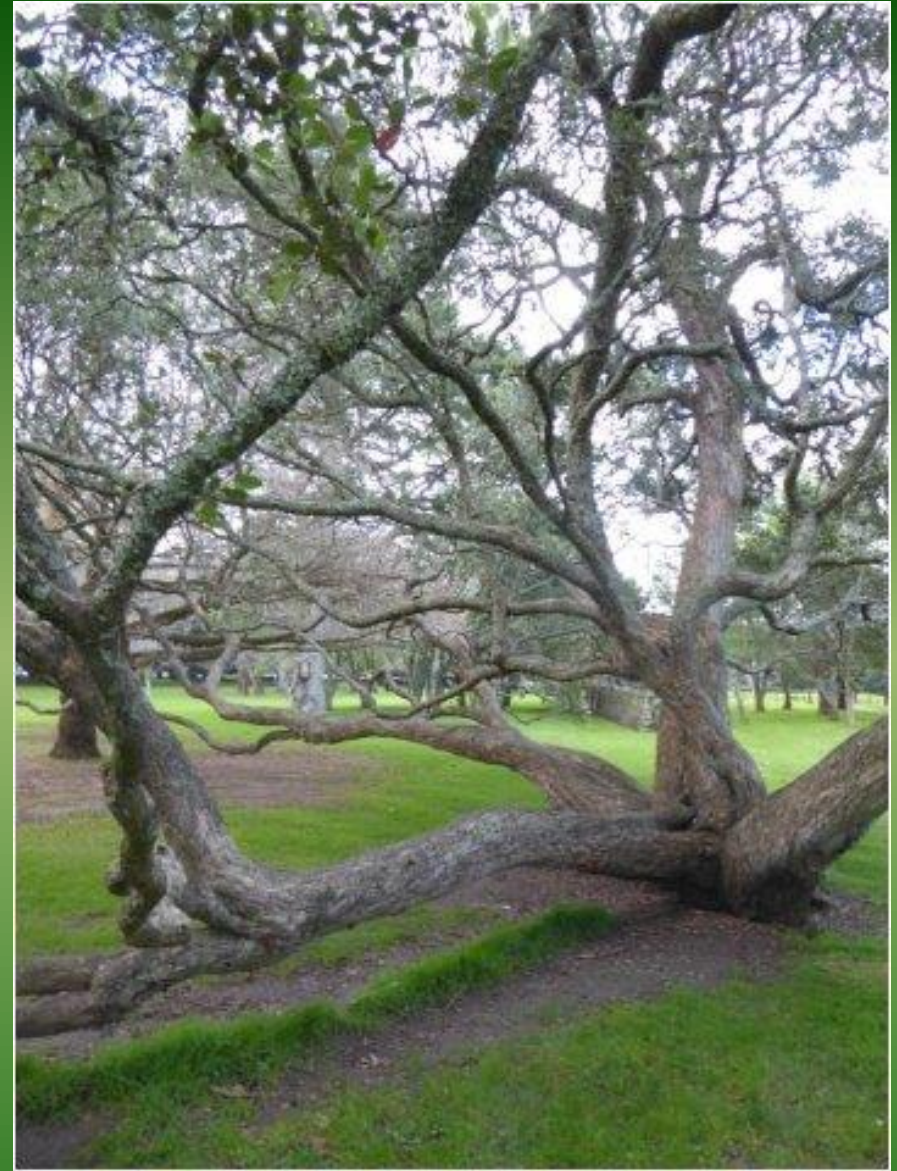
Cornwall Park, Auckland

Cornwall Park

Staff observed that the children, when playing in the natural environment of Cornwall Park were

- curious
- engaging in creative play
- less dependent on adult interaction
- problem solving
- collaborating
- verbalising their experiences, thoughts and feelings
- communicating socially with their peers
- having “conversations” with those around them

Kaye Annabelle, Head Teacher



Cornwall Park, Auckland



Concept Design for new play garden, by Get Outside

The site

...working with what is unique and with raw materials that are readily available, such as rocks, identified boggy areas, existing trees



Under Construction 2015, using natural materials



Artistically arranged
and interlinked spaces
invite exploration

Interesting natural materials
placed to inspire conversation
and creative play





Spaces organised to offer challenges, a variety of experiences including sand, mud and water play, with loose parts available and opportunities to explore



Natural materials provide a language-rich environment





A simple element like a well positioned log can provide ample physical challenge, allowing children to test and expand their capabilities...



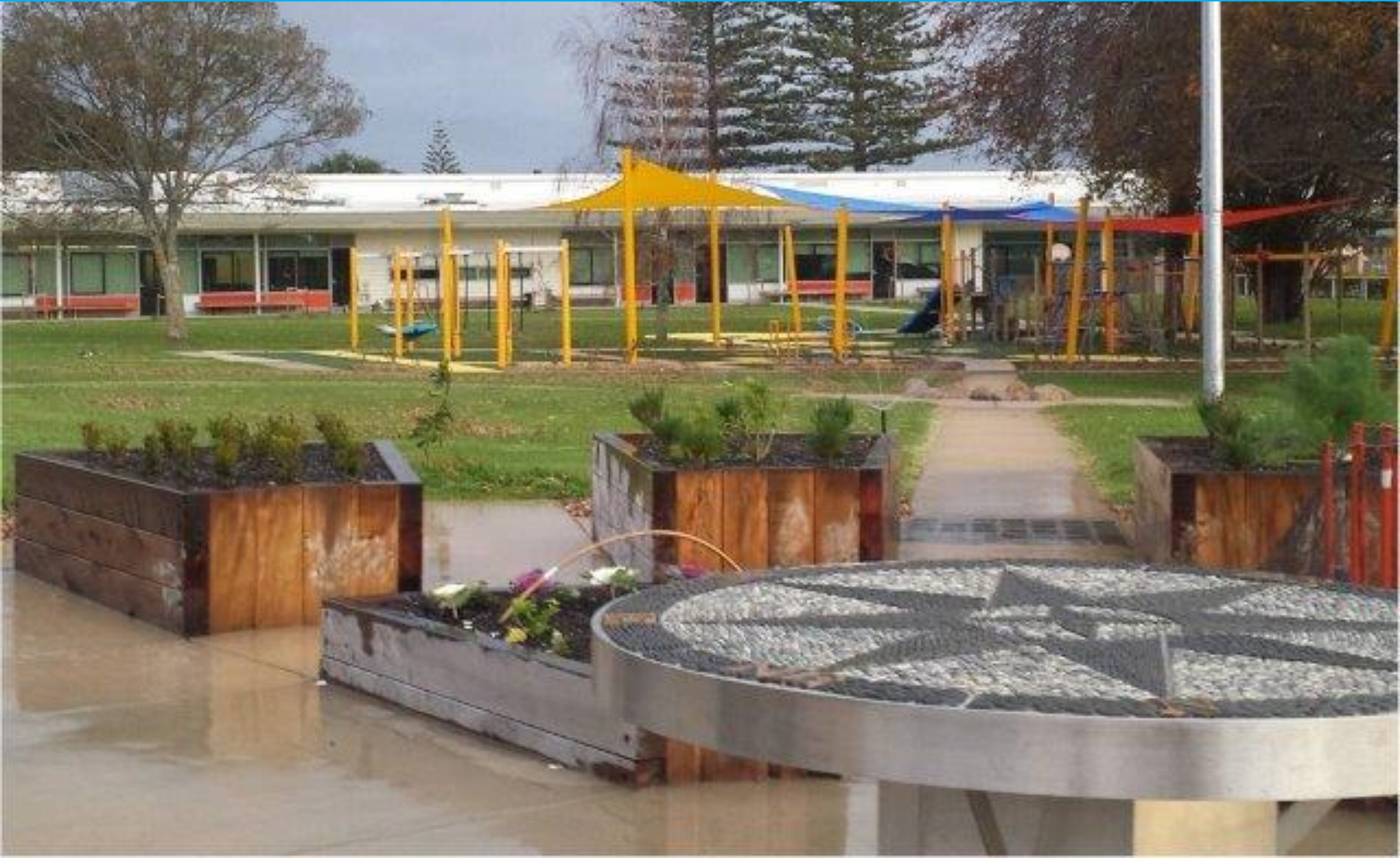
...and also stimulates their imaginations



The result – a much loved and cared for environment where teachers have noticed a high level of engagement , growing self-confidence and improved language development among the children

Case Study 2: Outdoor Learning Environment for BLENNZ

Homai Campus - the national hub of Blind and Low Vision Education Network, for ages 0-21





Mission: To provide quality education for the blind, deaf-blind or low vision children that they might reach their potential for *growth, independence, participation and success*

Older children



Early childhood



Existing play spaces



Outdoor Learning Environment - Overall Design by Get Outside



Paths with locational cues

- Texture changes
- Colour contrast
- Sequence of space
- Straight lines and corners
- Uncluttered paths
- Tactile markers



Destination spaces to pause and interact

- Places for sensory stimulation e.g. egg sound shell, compass
- Places for participation e.g. raised vege gardens, spinning egg shell



Story telling through the landscape

- Land art to referencing local stories e.g. terraced mound
- Places to pause and listen e.g. amphitheatre
- Remembrance garden



Provision for physical development and fitness

- Accessible equipment
- Yellow colour for low vision children to see
- Space for wheel chair access and support
- Even spacing
- Future braille signage



Provision for play, physical challenge and social learning

Colour contrast to negotiate space

Equipment for balance, vestibular development, fun!

Variety of real world experiences and challenges



Early Childhood Area

- a mini-version of the main play area to scaffold learning
- real world experiences
- greater independence
- participation and contribution
- belonging
- exploration





“Students are using and enjoying every little bit of the space”



Case Study 3: Waste Minimisation Learning Centre and Experience Trail - for visiting groups of Early Childhood and School age children



Before – original learning centre for children

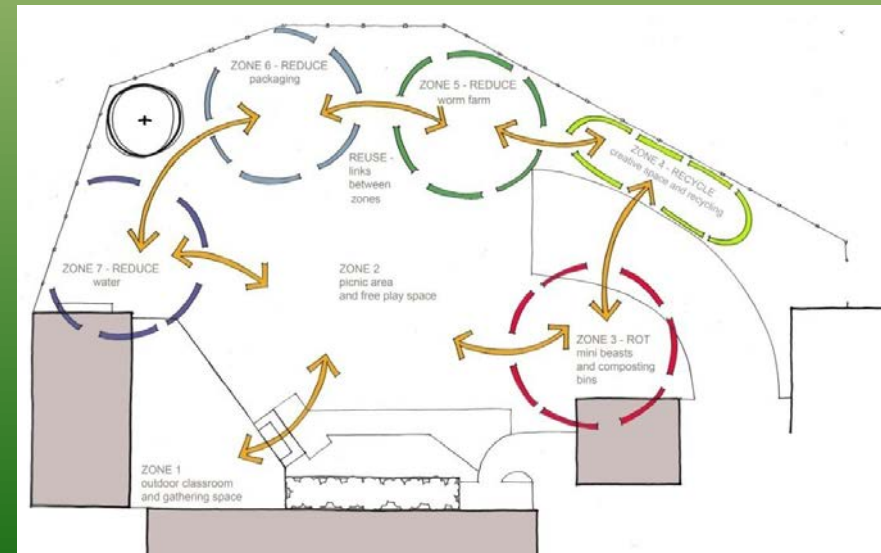


The Brief – getting the message across

- ✳ an interactive, engaging area to explore
- ✳ demonstration of sustainable waste practices including zones - reduce, reuse, recycle, rot/compost, grow and zero waste.
- ✳ links to the water and surrounding biodiversity
- ✳ interpretative signage, pathways, plants and outdoor furniture.

- sustainably sourced materials demonstrating rubbish as a resource, not waste

Initial concept design and flow plan





Waste Minimisation Learning Centre Learning Trail

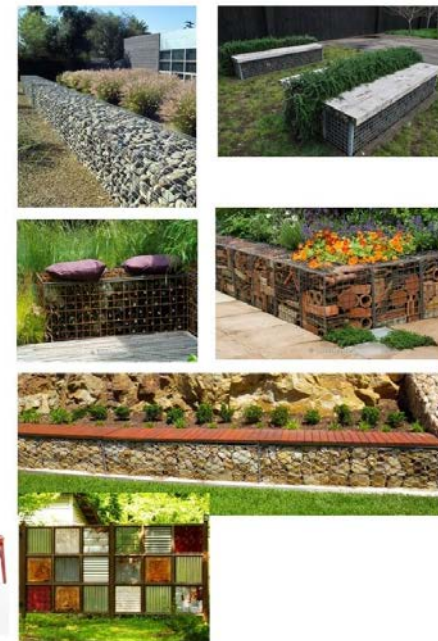
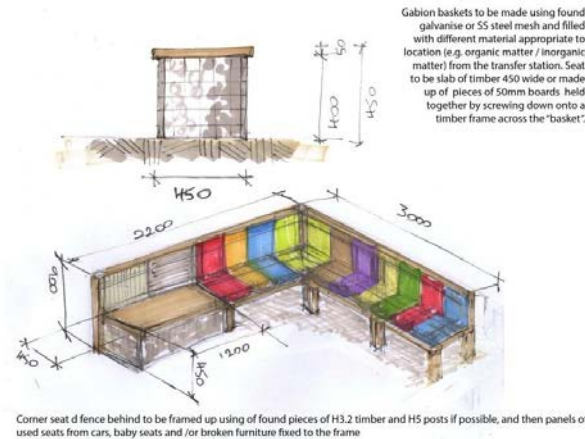
For Auckland Council Waste Minimisation Centre, The Concourse, Henderson

Gabion basket
benches and timber
pellet seats for social
interaction



Bug Hotel , worm
farms and
composting for
environmental
awareness

Concept ideas



Waste Minimisation Learning Centre Learning Trail

For Auckland Council Waste Minimisation Centre, The Concourse, Henderson

Gabion seat, corner seat and fence panels

Detailed Design
Scales as shown
24 March 2014
Job No 450.14
Drawing No D2-03

Experience Trail Developed Design by Get Outside



Key Design Considerations

Resources were sourced from the “dump” by this man, Adam!

- ★ Functionality
- ★ Flow
- ★ Context
- ★ Materiality
- ★ Aesthetic appeal
- ★ Fun!





Entry Appeal and Cultural Connection

- Entry “arch” made from trampoline frame and tent pole
- Tree sculptures using telegraph poles, CD’s, tennis balls
- Artwork by children from local schools



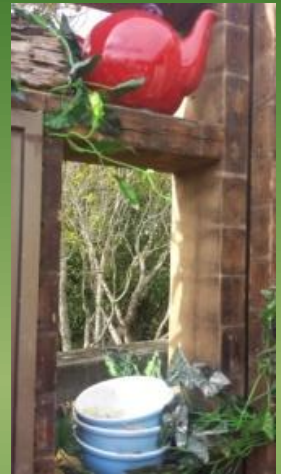
Areas for rest and social interaction



- “Gabion basket” benches with found objects
- Repurposed office chairs
- Timber pellet seats

Areas for developing for environmental awareness

- Bug Hotel
- Worm farms
- Composting



Water feature for fun!



- Exercycle for pedal power
- Repurposed gas bottle, muffler, watering can, soup bowl....





Interpretation

- minimal signage
- interactive and quirky





“Make Space”

- Tools, space and resources for children to get creative with...



Jill Rice 2015



After



The project was a creative collaboration between designer, contractor and Auckland Council project manager, and evolved as materials were “found” and incorporated into the garden

Completed Experience Trail, 2015

Embraced in this garden is the concept that materials, both organic and inorganic, are part of the cycle of life - they are formed from the earth's resources, they perform one task, they change over time, can be reused to perform a different task, and eventually they break down back into the earth from which they were formed





Over 5000 children use this space each year as a learning environment and take creative ideas and enthusiasm about repurposing and reducing waste back to their communities



Case Study 4: Vintage Kids E. C. Centre, Greenlane, Auckland



Landscape Concept Plan by Get Outside



The Neighbourhood Context

The design incorporates a variety of natural spaces for different activities

- Slide and mound for active play,
- Lawn area for free play
- Raised gardens, log and sleeper edges for gardening activities



Water play area and boulders

- hugely popular and stimulating for the children
- excellent for cooperative play





Different surfaces and textures,
for interest and different speeds
of movement

- central concrete path,
- brick paved area with stones and
water play
- log paving



Sand area

- log / block edges for sitting on and as balancing challenges





- Rope bridge
- Pull up rope
- Log tower and platform

Even in small spaces it is important to offer physical challenge and opportunities to develop upper body strength – natural materials can be used





**Creatively designed natural play environments empower
and engage children of all abilities**



Haere rā!



Jill Rice

Landscape Architect

jill@getoutside.co.nz

www.getoutside.co.nz