Puketāpapa shade/shelter provision assessment

May 2019







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1 Introduction

1.1 Project brief

The Puketāpapa Local Board has commissioned an assessment of existing and potential future provision of shade and shelter across the local board area. Provision of structures for shade and shelter within Puketāpapa parks and places is currently inconsistent, with only a few facilities provided across the network. This network assessment is intended to help the board to prioritise investment in shade or shelter provision for appropriate locations.

This report summarises the outcomes of a network assessment of shade and shelter provision across the local board area and provides guiding principles for future investment in shelter provision. It includes maps of current provision and opportunities for future investment.

2 Background information

A number of existing studies and planning documents produced by the Puketāpapa Local Board, Auckland Council and other organisations provide a rationale for, or context to this shade/shelter assessment. These are discussed below.

2.1 Puketāpapa Local Board Plan 2017

The relevant objectives and key initiatives of the 2017 plan include the following:

- 1. Objective Our cultural diversity is valued and communities feel recognised and included.
 - Key initiative provide more space for communities to meet and work, including encouraging shared use of buildings eg. leased spaces.
 - Key initiative encourage and support a community-led approach to addressing local issues and developing neighbourhood identity eg. events, community gardens, and public art.
- 2. Objective An accessible network of open spaces that provides a variety of sports and recreational opportunities.
 - Key initiative Focus on filling gaps and increasing provision in the network of greenways and places to play.

2.2 Activating Parks for Diverse Cultural Communities in the Puketāpapa Local Board (June 2018)

In 2018, the Puketāpapa Local Board undertook research into how diverse cultural communities value and use local parks, with a focus on what the barriers to using parks are and what kind of one-off activities and ongoing programmes are needed so that Council can better serve these communities. Relevant to this shade/shelter provision assessment were the following comments within the report:

'When asked what was preventing people from using parks the most common theme was a lack of shelter and seating (particularly prominent with Chinese and Korean participants), more toilets (and cleaner), unleashed dogs and feeling unsafe at night. The Earth Action Trust interviewee also observed with increasing adverse weather events and effects of climate change there will be even more of a need for covered areas in parks.'

Recommendations following on from the outcomes of the research included the following relevant aspects:

- Facilitate free exercise classes in parks, especially zumba, yoga, tai chi and singing/dancing.
- Provide a solid (and ideally covered) surface for tai chi.
- Consider lighting of parks where appropriate to allow evening use.
- Invest in picnic and barbeque areas to accommodate large families and groups with amenities including shelter, tables and seating.
- Consider covering basketball courts so they can be used in all weather.

2.3 Tākaro – investing in play

Auckland Council is developing a high level plan for how it invests in play across the Auckland region. A discussion document was released in 2017 and public and stakeholder feedback on this was collated in February 2018.

The discussion document highlighted that shade over children's play equipment can be provided artificially with permanent or seasonal structures, or naturally with trees, but that artificial shade cannot be provided at every playground. It noted that the cost of personal sun protection is low compared with the public costs of artificial shade provision. The document promoted natural shade from trees as preferable to artificial shade.

Responses to this issue during consultation on the discussion document indicated that submitters felt that shade was important for play spaces, but the reasons given were diverse. They included overheating of children and equipment, the comfort of adults, as well as protection from ultraviolet radiation (UVR) and rain. There was no consensus on how shade should be provided, with shade sails, permanent structures, and planting more trees all identified as options.

The draft Tākaro – Investing in Play plan, to be released for consultation in April 2018, is intended to include guidance to support local board decision making on investment in ancillary infrastructure for play spaces, including fencing and artificial shade.

2.4 Auckland Sport & Recreation: Strategic Action Plan 2014-2024

The Strategic Action plan does not include any specific discussion about provision of covered outdoor recreation or provision of shelter to encourage recreation. The 18 actions within the plan do, however, include the following relevant goals:

- Auckland's diverse range of communities being more active *Encourage recreation* and sport opportunities that appeal to a diverse range of communities and bring communities together, particularly new migrants, older adults and people with disabilities.
- Accessible and activity friendly environments Develop and improve accessicility of open spaces, facilities, harbours and waterways to encourage physical activity as part of everyday life and provide for a range of safe recreation and sport uses.
- Fit-for-purpose network of facilities *Provide quality fit-for-purpose facilities at regional, sub-regional and local levels for information recreation and sport.*

2.5 Auckland Design Manual – buildings, shelters and toilets

The Auckland Design Manual does not provide any specific guidance on provision of shade and shelter in parks and other public places. It does however guidance on *how* built shelters should be planned and constructed:

- Consider the visual impact of shelters.
- Design structures that are sensitive to the surrounding landscape, in terms of built form, scale, materiality and location.
- Consider the Impact of a shelter in terms of increased vehicular and pedestrian use and whether additional paths, vehicle access or parking are required.
- Combine or cluster structures to minimise overall visual impacts and loss of open space.
- Ensure safe and legible access.
- Ensure that structures have multiple uses where possible.
- Ensure universal accessibility.
- Direct views from shelters towards the landscape to reinforce important vistas and view shafts.
- Consider sustainable design principles.

2.6 Under Cover. Guidelines for shade planning and design (Cancer Society of New Zealand, 2000)

The Cancer Society of New Zealand has produced guidelines for shade planning and design. These aim to highlight the importance of shade in reducing exposure to solar UVR and to encourage the provision of shade that is functionally, environmentally and aesthetically sympathetic to the surrounding area.

The publication highlights the importance of providing shade at the right place, at the right time of day and at the right time of year. In the Auckland region, UVR exposure is greatest in the summer months (September to April) between 11am and 4pm, when the sun is more

directly overhead. Indirect or diffuse UVR from the atmosphere (the visible sky) or reflected from smooth or light coloured surfaces (eg sand, new concrete or a light coloured wall) also contributes to UVR exposure. Protection from UVR is greatest at the centre of any natural or built shade area and decreases towards the edges where indirect UVR exposure is greater. For example an umbrella gives little protection from diffuse UVR.

Natural shade provided by trees is preferable in terms of environmental benefits, embodied energy and cost, but the effectiveness of trees in preventing UVR exposure depends on the density of foliage. Built shade can be either permanent, demountable, retractable or temporary. Often a combination of natural and built shade will provide the best solution for reducing UVR exposure and improving human comfort levels.

Key principles described for providing good quality shade include:

- Providing at least 94% protection from UVR.
- Creating an environment that is comfortable to use in both summer and winter (eg. cooling breezes in summer, protection from south-westerly winds, access to winter sun and passive heating from ground surfaces or walls).

3 Network assessment

3.1 Puketāpapa Local Board area

Only two existing permanent shade or shelter structures are included in Auckland Council's asset database for the Puketāpapa Local Board area (refer **Figure 1** in **Appendix A**). One is a pergola within Wahine Toa Park on the corner of Warren Avenue and Mt Albert Road and the other is a shelter attached to the public toilets in the carpark at Monte Cecelia Park (refer **Photograph 1** below). This shelter is a bespoke design that includes interpretive signage and two seats. Neither the GIS database nor site visits identified any playgrounds with permanent or temporary shade structures.

A new permanent fale structure, intended primarily for educational activities, is under construction in Walmsley Park as part of the Walmsley Underwood project (refer **Image 2** below).



Photograph 1: Shade/shelter structure at Monte Cecilia Park



Image 2: Artists impression of fale structure at Walmsley Park (Source: FilipeTohi and McCoy & Heine Architects)

3.2 Neighbouring local board areas & schools

There are a number of shade or shade/shelter structures within parks in adjacent local board areas. Most of these comprise shade sails over play areas or seating/picnic/BBQ areas, but there are also permanent shade/shelter structures for other activities at Olympic Park and Te Kotuitanga Park in Whau, Waterview Park and Potters Park in Albert/Eden, and at Cornwall Park (not under Auckland Council ownership). Examples are shown in the photographs below.

The Olympic Park shelter provides space for several families picnicking or up to about 20 people undertaking group fitness/recreation/dance activities. While other shelters have a smaller capacity, it appears that the Olympic Park, Potters Park, Te Kotuitanga Park and Cornwall Park shelters could cater for small events, as they have sufficient surrounding area for audience seating.

Large shade structures or waterproof shelters over basketball courts or other outdoor learning environments are present in some schools within the Puketāpapa area and adjacent areas. These include Three Kings School (refer **Photograph 9** below), Cornwall Park School, Gladstone Primary School, Western Springs College and Maungawhau School.



Photograph 3: Shade/shelter/stage structure at Olympic Park, New Lynn



Photograph 4: Shade/shelter structure at Te Kotuitanga Park, New Windsor



Photograph 5: Shade/shelter structure adjacent to the skate park at Sister Rene Shadbolt Park, New Lynn



Photograph 6: Fale sade/shelter structure at Waterview Park, Waterview



Photograph 7: Rotunda at Potters Park, Balmoral



Photograph 8: Shade/shelter/stage structure at Cornwall Park, Maungakiekie



Photograph 9: Shade/shelter structure at Three Kings School, Puketāpapa

4 Provision and design principles for shade & shelter

The following principles provide guidance on whether, where and how to invest in shade/shelter in Puketāpapa parks and places. The guidance applies to renewals as well as new projects. Guidance is provided separately for shade provision in play spaces and for other recreational facilities, and for shelter from sun and rain/wind, either permanently/seasonally or temporarily.

4.1 Shade for play spaces

Provision principles

Encourage personal/parental responsibility for protection from UVR, including use of hats, clothing, and sunblock, and avoidance of sun exposure during summer peak UVR exposure hours (11am to 4pm September to April)

Where possible locate new or upgraded play spaces where existing trees provide shade during summer peak UVR exposure hours.

Establish new large grade trees at existing, upgraded or new play spaces that will provide shade during summer peak UVR exposure hours for play equipment and caregiver seating

Prioritise shade provision for passive play areas (eg. sand or water play, toddler play areas) and caregiver seating over active play areas (eg. jumping/climbing equipment)

Minimise reflective UVR exposure be using non-reflective textured materials in and around play spaces

Consider providing temporary built shade structures in new destination play spaces until trees mature

Consider providing permanent or demountable built shade in addition to trees at destination play spaces where families typically stay for more than one hour



4.2 Shade for other recreational facilities

Provision principles

Encourage personal/parental responsibility for protection from UVR, including use of hats, clothing, and sunblock, and avoidance of sun exposure during summer peak UVR exposure hours (11am to 4pm September to April)

Where possible locate new facilities such as seating, picnic areas, BBQs, skateparks, basketball half courts and interpretive signage where existing trees provide shade during summer peak UVR exposure hours

Prioritise shade provision for informal recreation areas that are used continuously for an extended period of time and/or where use would be significantly enhanced by providing shade. These may include seating and picnic areas, BBQ areas, skateparks (particularly waiting or seating areas), spectator areas at sports facilities, interpretive signage areas (more than just a single sign) and outdoor areas for active recreation or events

Where shade rather than shelter from wind or rain is required, prioritise establishment of new large grade trees that will provide shade during summer peak UVR exposure hours

Chose and locate trees so that they do not compromise thermal comfort during cooler months (ie. consider use of high canopy or deciduous trees where appropriate)

Consider providing permanent or demountable built shade in locations that have the following characteristics

- A high level of use of children and adolescents (most at risk from UVR exposure)
- An average duration of use of one hour or greater
- Provision of natural shade is not feasible
- Provision of shade would significantly enhance recreational use

Provide temporary shade structures at community events

Consider providing temporary shade structures in key locations during the months of peak UVR exposure (eg. sports fields and picnic spots)



4.3 Significant shelters

Provision principles

Consider providing permanent significant shelter that:

- Accommodates multiple uses (eg. perimeter or moveable seating, picnics, small events, recreational activities for up to 30 people)
- Is located in a suburb park with existing adequate car parking provision
- Is co-located with other buildings and facilities (eg. community centre, hall or swimming pool)
- Is near an existing public toilet
- Has an adjacent area suitable for audience seating if used for events
- Includes provision of water and power
- Avoids nuisance effects for park neighbours and other park users

Consider trialling a temporary shelter to determine the level of use and appropriateness of location prior to investing in a permanent structure

In order to maximise use of any built shelter, ensure formal programming/booking by Council and/or a community group

As budgets allow, consider smaller permanent shelter structures in locations that have the following characteristics:

- A high level of use
- An average duration of use of one hour or greater
- Provision of shelter from sun and rain would significantly enhance recreational use

Work with local schools that have weatherproof covered outdoor recreation area to facilitate shared use outside school hours



4.4 Design principles for permanent or demountable built shade

Design principles

Provide shade to key areas of play spaces or informal recreation facilities during summer peak UVR exposure hours (11am to 4pm September to April)

Provide a protection factor or PF15 or greater, or use a shade material that blocks at least 85% of UVR

Provide shade that extends beyond the target areas to minimise diffuse UVR exposure (could be provided by trees or climbers)

Allow sufficient warm-coloured light penetration for ambience and thermal comfort

Ensure that structures minimise adverse visual impacts and are compatible with the landscape setting

Ensure universal accessibility

Ensure safety for users in terms of physical hazards and personal safety. Aspects to consider include:

- play space fall zones
- tripping hazards
- sharp edges
- clearance heights for climbing on structures
- hiding and entrapment spaces
- passive surveillance

Minimise potential for vandalism and undesirable activities

Consider maintenance (OPEX) costs and overall life span, as well as the costs of storage for demountable shade.

Consider sustainable design principles (eg. prioritising renewable materials and low embodied energy)



4.5 Design principles for built shelter

Design principles

Provide shade to the activity area during peak summer UVR exposure hours (11am to 4pm, September to April)

Provide shade that extends beyond the target area to minimise diffuse UVR exposure (could be provided by trees or climbers)

Provide shelter from the rain for the activity area

Provide shelter from cool south-westerly winds (could be achieved by planting or climbers) but allow cooling breezes in hotter months

Allow sufficient warm-coloured light penetration for ambience and thermal comfort

Provide a flat well-drained surface within the shelter

Ensure that structures minimise adverse visual impacts and are compatible with the landscape setting

Ensure universal accessibility

Ensure safety for users in terms of physical hazards and personal safety. Aspects to consider include:

- play space fall zones
- tripping hazards or sharp edges
- clearance heights for climbing on structures
- hiding and entrapment spaces
- passive surveillance

Minimise potential for vandalism and undesirable activities

Consider maintenance costs and overall life span

Consider sustainable design principles (eg. prioritising renewable materials and low embodied energy)



5.1 Play space shade

Desktop research and site visits indicate that the following play spaces (refer **Figure 2** in **Appendix A**) are significantly lacking in natural shade for play equipment and/or for caregiver seating and picnic tables:

Play space	Shade issues	Opportunities		
Harold Long/Fearon Park	Large grade trees have been planted at the new play space but will not provide adequate shade for the junior sand/water play area for many years. Some caregiver seating or picnic tables have no existing or newly planted trees nearby.	Temporary or permanent built shade over the junior play area Additional large grade tree planting to provide summer shade to caregiver seating		
Taylors Bay ReserveNo shade provided to equipment and highly reflective sand/sea environment. Some natural shade on bank for caregivers.		Large grade coastal tree planting to the north of play space		
Keith Hay Park	No shade at south-western play space	Provide informal or formal shade as part of playground renewal		
	One pohutukawa tree at central play space but no shade for caregiver seating	Additional large grade tree planting to provide shade for caregiver seating		
Molley Green Reserve	No shade available for play space or adjacent seating and picnic tables	Large grade tree planting to provide shade for play space and seating/picnic area		

The other play spaces investigated (refer **Figure 2** in **Appendix A**) have natural shade from trees nearby. However, some play spaces would benefit from additional tree planting.

Play space	Opportunities
Arthur Faulkner Reserve	Additional tree planting for shade to north of within play space
Arthur Richards Reserve	Sufficient shade
Buckley Reserve	Sufficient shade
John Moore Reserve	Sufficient shade
Lynfield Reserve	Additional tree planting for shade at skatebowl and within play space
Margaret Griffen Park	Additional tree planting for shade within play space
Quona Reserve	Additional tree planting for shade within or to the north of play space
Robinson Reserve	Sufficient shade
Turner Reserve	Existing trees and those planted as part of the play space upgrade will provide sufficient shade
Stranolar Reserve	Sufficient existing tree planting
Waikowhai Reserve	Additional tree planting for shade at picnic/seating area as part of play space renewal
Wairaki Stream Reserve	Additional tree planting for shade to north of play space
War Memorial Park	No additional shade needed at western play space
	Consider additional planting for shade as part of renewal of eastern play space
West Reserve	Sufficient shade

5.2 Significant permanent shelter

Potential locations for a larger permanent shelter sufficient for up to 30 people within Puketāpapa are at Keith Hay Park, Margaret Griffen Park, and War Memorial Park. A range of potential locations within these parks (refer to **Figure 3** and photographs in **Appendix A**) are analysed below in terms of the provision principles for shelter in Section 4.3 above. Concept plans for Margaret Griffen Park and War Memorial Park are currently under development and any potential permanent shelter should be considered as part of the concept plan development.

Location	Adequate car parking	Co-location with other facilities	Public toilet	Audience seating	Effects on neighbours/ other users
Margaret Griffen Park Basketball half court	Yes	Yes	120m	Yes	Yes – BB players

Comments

Central pole for the two basketball half courts could interfere with other uses. Site exposed to south-westerly winds. Little passive surveillance except during use of sports fields. Shelter would allow all weather basketball use.

Margaret Griffen					Yes –
Park	Yes	Yes	270m	Yes	neighbouring
North of leisure centre					properties

Comments

Site is poorly drained and would require drainage improvements. There is little passive surveillance of the site and activities could create nuisance for neighbouring private properties. Site aligns with possible development projects (including a BMX pump track) identified in the draft Margaret Griffen concept plan, which is currently in development.

Keith Hay Park					Yes – BB
Paved area & BB half court south east of Tristar gymnasium	Yes	Yes	5m	No	players & vehicle access to gymnasium

Comments

Existing gymnasium building provides shelter from westerly winds. Site is divided by bollards that allow vehicle access to the side doors of the gymnasium. Shelter would allow all weather basketball use.

Location	Adequate car parking	Co-location with other facilities	Public toilet	Audience seating	Effects on neighbours/ other users		
Keith Hay Park Paved area north of Three Kings United clubrooms	Yes	Yes	150m	Yes	Yes – impact on Three Kings United clubrooms		
means that shelter could	Comments Existing buildings provide shelter from south-westerly but not westerly winds. Close proximity to play space means that shelter could be beneficial for play space users. The future of the existing Three Kings United clubrooms is uncertain as the club has plans to construct a multi-use building further north on the park.						
Keith Hay Park East of central play space	Yes	Yes	150m	Yes	No		
Comments Currently limited shelter from winds. Earthworks would be required to provide a flat paved surface. Close proximity to play space means that shelter could be beneficial for play space users.							
War Memorial Park Paved area south-east of community centre	Yes	Yes – but under pressure at times	30m	Limited	Yes – vehicle access to open space for market & events		
Comments							

Space may not be sufficient for up to 30 people. Building provides shelter from westerly winds and existing afternoon shade but shelter could affect light access to the community centre. Space does not have high amenity as a result of proximity of entry road. Vehicle access for events and the Wesley markets occurs through the space. Potential locations for permanent shelter should be considered as part of the War Memorial Park Concept Plan, which is currently under development.

Location	Adequate car parking	Co-location with other facilities	Public toilet	Audience seating	Effects on neighbours/ other users	
War Memorial Park BB court adjacent to Roskill Youth Zone building	Yes	Yes – but under pressure at times	30m	Limited	Yes – BB players, market	
Comments Shelter over the court could affect light access to the Roskill Youth Zone (RYZ) building and would detract to some extent from the quality of the open space between RYZ and the community centre. Shelter would facilitate basketball games in all weathers. The community centre building provides some shelter from westerly and south-westerly winds. Potential locations for permanent shelter should be considered as part of the War Memorial Park Concept Plan, which is currently under development.						
War Memorial Park Area between May Rd car park and playground	Yes	Yes – but under pressure at times	30m	Yes	No	
Comments No existing shelter from westerly and south-westerly winds. Close proximity to play space means that shelter						

No existing shelter from westerly and south-westerly winds. Close proximity to play space means that shelter could be beneficial for play space users. Potential locations for permanent shelter should be considered as part of the War Memorial Park Concept Plan, which is currently under development.

5.3 Temporary shade/shelter

Local boards are currently only able to access temporary shade structures from the Auckland Council-wide pool and cannot guarantee a particular level of provision at any time. Commercial hire of shade structures is an option but involves access to OPEX funding for this purpose.

Should the local board decide to invest in a temporary shade/shelter structure, it is recommended that various locations for this structure be trialled to determine the level of use. It is also recommended that community programming (eg. Wesley Community Centre programmes, Out and About programme, Roskill Youth Zone activities) of any temporary structure be undertaken to increase its use.











6 Conclusions

There are currently few permanent built shade/shelter facilities provided within Puketāpapa parks and places, and no demountable shade structures for play spaces.

It is recommended that provision of shade and protection from UVR exposure should prioritise personal/parental responsibility, including use of sunblock and protective clothing, and provision of natural shade from trees where feasible. Where built shade is provided, it should be targeted to facilities or areas that have a high level of use by children and adolescents, are used continuously for more than one hour, and where provision of built shade would enhance recreational use. It is recommended that temporary or demountable built shade be considered for new destination play spaces, particularly for passive play areas and caregiver seating.

Any significant permanent built shelters should be co-located in suburb parks with other existing facilities, should accommodate multiple uses, and should ideally be programmed to maximise their use. A trial of a temporary shelter would assist in determining the level of use and the appropriateness of a particular location prior to investment in a permanent shelter. Temporary shade/shelter structures could also be provided in key locations such as sports fields and picnic spots during the months of peak UVR exposure.

The majority of play spaces within Puketāpapa parks currently have sufficient natural shade provision from trees, although additional planting is recommended in some locations. Natural shade for play equipment or caregiver seating/picnic tables is significantly lacking at the new Harold Long/Fearon Park play space, at the Taylors Bay Reserve play space, at the two play spaces within Keith Hay Park, and at the Molley Green Reserve play space.

Potential locations for a larger permanent shelter sufficient for up to 30 people have been identified at Keith Hay Park, Margaret Griffen Park and War Memorial Park.

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Appendix A

Map and photographs of existing and potential shade/shelter provision

Puketāpapa shade/shelter assessment

Auckland Council

Community Facilities - AMIS





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Figure 1: Existing and potential shade/shelter provision

Potential play space shade opportunities



Harold Long/Fearon Park junior play area



Keith Hay Park south-western play space



Taylors Bay Reserve play space



Keith Hay Park central play space

Puketāpapa shade/shelter assessment

Potential play space shade opportunities



Molley Green Reserve play space

Potential permanent shelter locations



Basketball half courts, Margaret Griffen Park



Paved area southwest of Tristar Gymnasium, Keith Hay Park



Grassed area north of leisure centre, Margaret Griffen Park



Paved area north of Three Kings United clubrooms, Keith Hay Park

Potential permanent shelter locations



Grassed area east of central playground, Keith Hay Park



Paved area east of community centre, War Memorial Park



Basketball court adjacent to Roskill Youth Zone, War Memorial Park



Grassed area between May Road carpark and play space, War Memorial Park

Appendix B

Eexamples of permanent, demountable and temporary shelters

Puketāpapa shade/shelter assessment





Brisbane Botanic Gardens, Queensland

Auckland Botanic Gardens, Manurewa





Urban Effects curved shelter

Sandspit, Waiuku





Street Furniture Byron seires

Stoddart proprietary shelter





Walker Park, Avondale BBQ shelter

Omaha Beach, BBQ shelter

Puketāpapa shade/shelter assessment



Batman Park, Brisbane



Rutter Park, Perth



Geelong Estate, Melbourne



Wattle Park, Melbourne



Pinehurst School, Auckland



Temporary container shelter





Auckland Council eco-structure for glamping, Orewa

Play area shade sails, Auckland



