Scott Point Sustainable Sports Park

Master Plan Report

March 2018

SCOTT POINT SUSTAINABLE SPORTS PARK: MASTER PLAN REPORT

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Upper Harbour Local Board
Auckland Council Climate Resilience and Sustainability
Auckland Transport
Panuku Development Auckland
Hobsonville Community Trust
Hobsonville Land Company
Hobsonville Point Primary School
Hobsonville Point Residents Society
Hobsonville Point Secondary School
Hobsonville Settlers Church
Kaipatiki Project
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Auckland Cricket Association
Auckland Rugby League
North Harbour Rugby Union
North Harbour Sport
Northern Football Federation
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Upper Harbour Ecology Network
The Neil Group

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MIHI

Nga Maunga Whakahii o Kaipara Development Trust and Te Kawerau a Maki Tribal Authority are collaborating with Auckland Council to deliver the design for Scott Point Sustainable Sports Park. The following korero is offered by each iwi as a pepeha/introduction which links them and the project to their respective ancestors.

Nga Maunga Whakahii o Kaipara Development Trust

Ka hoki nga whakāro ki te tini kua wheturangitia nei, na ratou te tīkanga o te manāki, hei tauira mo enei ra, Ngāti Whatua he iwi rongonui mo te tikanga o te manaaki ki nga tangata katoa, ahakoa ko wai, ahakoa no hea.

Ko te mana o Apihai Te Kawau i noho tonu, ma runga te whenua

No reira ratou kia ratou,kua ea.

Tatou te hunga ora tena koutou, tena koutou,tena koutou katoa

My thoughts turn to those who have gone, and the example they left, Ngati Whatua famous for hospitality to all , wherever they were from, whoever they were.

The mana of Apihai Te Kawau still dwells in the land

Therefore those that have departed, we complete our debt to remember,

Those who remain, we greet you all as the living voices of our ancestors.

Te Kawerau a Maki Tribal Authority

Te Kawerau a Maki were one of the earliest tribes to settle within the wider Tamaki Makaurau/ Auckland region. Our origins arise from the first inhabitants of the land – the Terehu, to the arrival of the Tainui, Aotea, Tokomaru, Kahuitara, and Kurahaupo canoes in the 14th Century, and the Ngati Awa, Ngaoho, and Ngaiwi people who occupied the wider area prior to 1600.

Through the centuries, Te Kawerau maintained kainga on the western shores of the Upper Waitematā Harbour. The people of Te Kawerau a Maki are inextricably linked through ancestral rights and ahi kaa to the Hobsonville region. To Te Kawerau a Maki, this region is a cultural landscape that is reflected through the numerous place names, landmarks, and recorded archaeological sites that dominate the wider area.

In 2015, Te Kawerau a Maki settled their Treaty claims which resulted in a section of land at Te Onekiritea/Bomb Point being returned to Te Kawerau ownership for cultural redress. This land is intended to be developed in to a Marae where Te Kawerau peoples can gather and celebrate their cultural identity. Development that occurs in the surrounding area, such as the Scott Point Sustainable Park, will have direct and indirect effects on the proposed Marae site.

EXECUTIVE STATEMENT
Upper Harbour Local Board

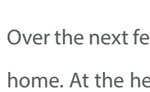
Over the next few years, 20,000 new residents are expected to call Scott Point and neighbouring Hobsonville home. At the heart of the new Scott Point development will be Scott Point Sustainable Sports Park (SPSSP), an Auckland Council initiative to build Aotearoa / New Zealand's first fully sustainable sports park.

We're proud to support the development of SPSSP and the benefits it offers to current and future generations of Aucklanders and New Zealanders. It supports both the community and visitors in their enjoyment of a wide range of sports and recreation activities, while restoring the park to the natural ecosystems that once thrived there.

Additionally, the fully sustainable park will not only be a flagship for the future sustainable provision of parks in Auckland (and wider New Zealand), it will also be a living park that we're positive the surrounding community will cherish and make their own.

The imagining of SPSSP couldn't have happened without engagement with iwi and key stakeholders in the community. This has informed a design that embodies Māori cultural values and aspirations, and ongoing involvement of stakeholders is critical to SPSSP's success.

To us, SPSSP truly embodies the realisation of Auckland Council's vision of an Auckland that celebrates our diversity and cultural richness, enhances and cares for our outstanding environment, and leverages our innovative nature.



Lisa Whyte

Upper Harbour Local Board Chair

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PART A | INTRODUCTION AT A GLANCE

Scott Point Sustainable Sports Park is part of Auckland Council's commitment to a sustainable future. The park will be the first fully sustainable sports park in Aotearoa/New Zealand and will provide a flagship and pilot for the future design of parks and public open space.

The overall vision for the park is to develop a leading edge, fully sustainable park that the community is proud of.

Today, cities around the world are at the forefront of a global transformation to a sustainable, energy resilient, low carbon future. Auckland Council is joining this shift.

The Infrastructure Sustainability Council of Australia (ISCA) Infrastructure Sustainability (IS) Rating Tool is being used to guide and measure sustainability throughout the design and delivery of the park. Key principles of the tool include consideration of resource reuse and consumption efficiencies, minimising waste, innovation, ecology, maintenance and governance and 'people and place' - which includes stakeholder participation.

Collaboration with Ngā Maunga Whakahii o Kaipara and Te Kawerau iwi Tribal Authority has been integral in the concept development to ensure that Māori values and principles are embedded in the project. Involving the community and other key stakeholders has ensured the needs, desires and aspirations of those who will grow to use and love this place are considered in the design outcomes.

Auckland Council's Service Principles have also informed the master plan. These include: resource sustainability; community equity and belonging; re-wilding; team and co-design, and standards and outcomes.

The 16.4 hectare park will comprise three main areas: an area for sports and active recreation, areas for informal recreation and areas of ecological restoration and conservation. Each of the areas is defined by the geography of the site. Natural landforms are retained and earthworks minimised. A brief synopsis of the three areas is as follows:

ECOLOGICAL RESTORATION - 46% (7.6ha):

A large proportion of the site will be restored to the natural ecosystem that once existed here with its abundant wildlife and diverse plant habitats. Most of the restored ecosystem will occupy the conservation area at the eastern end of the park.

SPORTS AND RECREATION 27% (4.4ha):

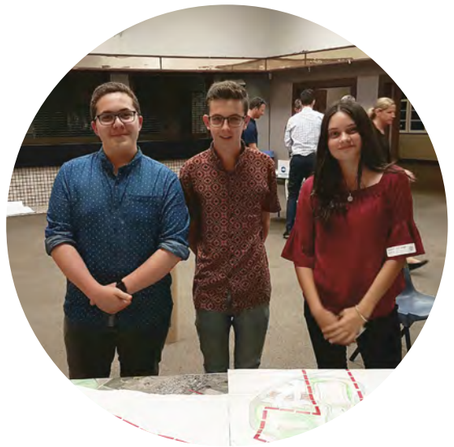
Natural and artificial turf playing fields, open-air and possibly covered courts, with supporting amenities, will offer a wide range of facilities to support active recreation within the community.

INFORMAL RECREATION - 27% (4.4ha):

An integrated network of informal recreation spaces, pathways and gathering points. Provides multiple opportunities for recreation use and enjoyment, linked to the surrounding residential and roading network.

Ecological restoration

Play trails



Community ambassadors

Non-motorised movement

Formal sports

Community events

THE PROJECT

"Once completed, the park will become a living landscape, the highly treasured heart of the community and a place for future generations to enjoy..."

Scott Point Sustainable Sports Park (SPSSP) is a 16.4ha area of land in the northwest of Auckland that is about to be transformed from a rural landscape to a public park to meet the needs of a brand-new community.

Development of this new park is no ordinary feat. Scott Point is set to become the first fully sustainable park in Aotearoa/New Zealand. Auckland Council is embarking on this project as a flagship for the future sustainable provision of parks. This project will help steer the future course of design, development, management and governance of parks across Auckland in a way that responds to the urgent needs of our planet for sustainable custodianship.

The process of imagining and projecting a flagship sustainable park has involved extensive engagement with Mana Whenua, key stakeholders and specialists.

IWI ENGAGEMENT

Involvement by Te Kawerau a Maki Tribal Authority and Nga Maunga Whakahii o Kaipara from early inception has informed a design that embodies Māori cultural values and aspirations.

Ongoing involvement by iwi will be crucial to the successful delivery of Māori cultural values and principles for the park.

STAKEHOLDER ENGAGEMENT

Community engagement has enabled the needs and aspirations of the future users of the park to be heard and taken into account in the design of the park.

Elected members and officers of Council have provided the policy framework and scope definition to ensure that the park meets the needs of a brand-new community for active and informal recreation uses while fulfilling the key objectives of sustainability.

INVESTIGATIONS

Comprehensive site investigations have been undertaken by a range of experts in order to understand the existing conditions and opportunities for sustainable development of the site.

INFRASTRUCTURE SUSTAINABILITY RATING

Council is using the Infrastructure Sustainability Council of Australia (ISCA) Infrastructure Sustainability (IS) Rating Tool to incorporate sustainability across the design and construction of the park. This is the first time the tool has been used in Aotearoa/New Zealand for a park project. Council is aiming for the highest "Leading" level of achievement under the rating tool. ISCA considers project performance across six themes: Management and Governance; Using Resources; Emissions, Pollution and Waste; Ecology; People and Place; and Innovation.

THE MASTER PLAN

The master plan is the first major milestone in the process of delivering SPSSP. The objectives of the master plan are to:

- Describe the overarching vision for a sustainable sports park at Scott Point
- Identify the process followed in developing the design of the park
- Show how the design of the park is responsive to iwi requirements and community wishes and aspirations
- Build an understanding of the potential of the park and its ability to catalayse benefits beyond the site itself
- Establish a blueprint to be taken through the next phases of the project

Once completed, the park will become a living landscape, the highly treasured heart of the community and a place for future generations to enjoy. 7.6ha (46%) will be restored to the natural ecosystems that once occupied the area with diverse wildlife and plant habitats. 4.4ha (27%) of the park will provide facilities for sports and active recreation, including natural and artificial turfs, and hardcourts (uncovered and possibly covered). The balance of approximately 4.4ha (27%) will be developed as a network of informal recreation spaces, trails and gathering spaces, car parks and paths where community and individuals can enjoy a wide range of activities from vigorous exercise and community events to respite and quiet contemplation.

THE PLACE

Scott Point Sustainable Sports Park occupies part of the Scott Point peninsula in the upper reaches of the Waitematā Harbour, northwest Auckland. The former Waitākere City Council acquired the land, in part, as an offset for loss of a portion of Hobsonville Domain land to enable SH18 to be built.

The Scott Point area is transforming from a peri-urban landscape to a new urban settlement. Together with the adjacent Hobsonville Point it is expected that the park will serve upwards of 20,000 people living in the area in the near future.

There is a network of green spaces in existence or being put in place as part of the urbanisation of the Hobsonville and Scott Point peninsula. These green spaces include reserves, schools, roads and the coastal walkways. A recently consented subdivision at Limburners Bay will provide coastal access from the south western end of Clark Road, within walking distance of the sports fields. SPSSP itself will be a major new contribution to this network.

The significance of Scott Point is deeply held in the historic, traditional, cultural and spiritual relationships of Mana Whenua to the area. Māori values and principles are covered more fully in the following section of this report.

The land has most recently been used for horticultural and grazing activities. Many of the landscape features relating to this use are still present on the site but will be removed to make way for the new park. Opportunities exist to retain and re-purpose some elements to provide a trace of past activity, contributing to an enhanced sense of place and sustainable use of resources.

The nationally critical, threatened plant species *Epilobium hirtigerum* is found on site. It is a robust colonising perennial species that thrives following disturbance to the land. The pest management regime of the wholesale plant nurseries on site has, albeit accidentally, enabled the survival of this particular habitat. It now forms a Significant Ecological Area under the Auckland Unitary Plan (Operative in Part).

Hobsonville Settlers Church

Endangered plant species, *Epilobium hirtigerum*

Drone photograph of the eastern extent of the site

Drone photograph of the western extent of the site

Diamond, John T. Dowden's brickyard, Hobsonville.
J.T Diamond Collection, Auckland Libraries.

Diamond, John T. Drainage pipe pieces on beach at Scott Point, Hobsonville, 1979.
J.T Diamond Collection, Auckland Libraries.

PART B | CREATING SCOTT POINT SUSTAINABLE SPORTS PARK: THE FRAMEWORK

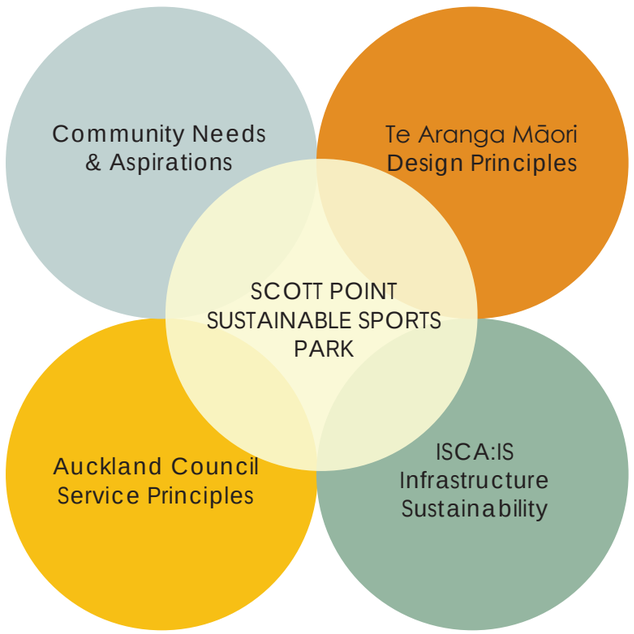
Overview

The development of SPSSP is underpinned by a number of separate but overlapping frameworks. These all contribute to ensure that SPSSP will be a flagship and will lead a transformational shift in the delivery of sustainable parks for Auckland.

Auckland Council is committed to the vision of becoming 'the world's most liveable City.' To achieve this against a background of unprecedented growth and development, sustainability and environmental protection and enhancement need to rate highly.

The Auckland Plan vision for 2040 identifies a number of key outcomes relevant to the framework of SPSSP, including:

- A fair, safe and healthy Auckland
- A green Auckland
- An Auckland of prosperity and opportunity
- A well connected and accessible Auckland
- A beautiful Auckland that is loved by its people
- A culturally rich and creative Auckland
- A Māori identity that is Auckland's point of difference in the world



Venn diagram depicting the overlapping frameworks that underpin SPSSP

Auckland Council Service Principles

Auckland Council has established a set of service principles, outcomes and objectives for SPSSP. These are underpinned by a number of initiatives including the Auckland Council Green Infrastructure Guidance Document for Sports Parks - 2016, Low Carbon Parks Research, ISCA:IS tool, Urban Forest Strategy, North-West Wildlink and management of the critically endangered *Epilobium hirtigerum* plant species.

OUTCOME

To create a leading edge sustainable sports park at Scott Point that the community is proud of.

OBJECTIVES

To plan, design and build a new park at Scott Point that:

- Is a model and flagship of sustainability
- Meets the Local Board, community and key stakeholder needs for active and passive recreational outcomes, including provision for organised sport, play, local paths, biodiversity protection and enhancement
- Is developed in collaboration with local iwi and reflects the views and aspirations of Mana Whenua.
- To use the ISCA:IS Rating Tool to incorporate and embed sustainability across the design and construction of the park

SERVICE PRINCIPLES

1. Resource Sustainability

- Low carbon/reduced carbon development and operation
- Model of resilience and climate change adaptation
- Creates sustainable multi-functional spaces. surfaces and facilities.
- Whole of life approach to asset management- includes choice of materials, longevity, utilises green engineering principles
- Aligns to 4 sustainability goals - economic, social, cultural and environment
- Gives effect to Council's sustainability goals
- Reduce amount of greenhouse gas emissions by 40% by 2040
- Reduce Council energy use by 40% by 2040
- Reduce council waste use by 20% by 2025
- Zero waste to landfill by 2040

2. Community Equity and Belonging

- Create a fun place
- Park as an educational tool
- Actively connecting community to nature
- Active (as opposed to passive) play opportunities
- Building sense of place
- Community empowerment, engagement and ownership
- Incorporate heritage and history context – seeing today as a place in a timeframe that includes yesterday and tomorrow
- Opportunity to re-interpret historical orchard use through community gardens and food production
- 'Reflect' community – people can 'see' self and community values
- Equality in passive and active space

3. Rewilding Inviting a Healthy Relationship with Nature

- 'Wild' spaces within the human living environment
- Ecological functionality for the provision of nature services
- Threatened species survival
- *Epilobium hirtigerum* (Hobsonville's kakapo) as a point of pride and identity
- Natural biodiversity protected and enhanced

4. Team and Co-design

- Partnerships with community, schools, Local Board
- Iwi involvement
- Integrated and collaborative team approach across departments and professional service providers
- Engage with all stakeholders

5. Standards and Outcomes

- Benchmark for the future
- Use the ISCA (Infrastructure Sustainability Council of Australia) rating tool
- Align and give effect to the Council's four sustainable goals
- Measure, monitor, analyse, report and take action
- Universal Design (Crime and Injury Prevention Through Environmental Design / Barrier Free Access)
- Plan well

TE ARANGA MĀORI DESIGN PRINCIPLES

Embedding Māori Cultural Values and Principles at Scott Point Sustainable Sports Park

Auckland Council and Mana Whenua, Te Kawerau a Maki Tribal Authority and Nga Maunga Whakahii o Kaipara, are following a collaborative design process for SPSSP. Through a hikoi and continued hui, Māori cultural values in relation to the park land and surrounding rohe became clear and have been integrated into the design plan.

Te Aranga Māori Design Principles have been adopted as the framework for embedding Māori cultural values at the park. These principles are founded on intrinsic Māori cultural values and designed to provide a framework for enhancing outcomes for the physical realm.

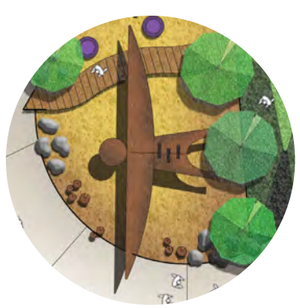
The seven principles were established in response to the shortfall in Māori engagement in the preparation of the Ministry for the Environment's Urban Design Protocol (UDP) 2005.

The principles aim to see a united 'pacific' identity reflected in the landscape and ensure greater Māori involvement in the decision making processes that concern the built environment. The principles are contained within the Auckland Design Manual, which can be found on the Auckland Design Manual website: www.aucklanddesignmanual.co.nz. The complete content of recommendations for SPSSP from Mana Whenua sit within the supporting documents fo this report.

Waitematā Harbour from near Scott Point coastal edge.

CORE MĀORI VALUES

Rangatiratanga	The right to exercise authority and self determination within ones own iwi / hapū realm
Kaitiakitanga	Managing and conserving the environment as part of a reciprocal relationship, based on the Māori world view that we as humans are part of the natural world
Mātauranga	Māori / Mana Whenua knowledge and understanding
Manaakitanga	The ethic of holistic hospitality whereby Mana Whenua have inherited obligations to be the best hosts they can be
Wairuatanga	The immutable spiritual connection between people and their environments
Whanaungatanga	A relationship through shared experiences and working together which provides people with a sense of belonging
Kotahitanga	Unity, cohesion and collaboration



Mahi toi - Cultural Markers

Mauri tu - Environmental enhancement

Mauri tu - Constructed nature

Taiao - The natural environment

Taiao - The natural environment

Pā Harakeke

Celebrating history

TE ARANGA MĀORI DESIGN PRINCIPLES

A number of key design moves have been integrated into the master plan to create a unique and rich Māori cultural landscape. Other Mana Whenua objectives do not have a physical manifestation in the design plans, such as the need for kaumatua and kuia (elders) to be present at important ceremonies. These requirements are identified in the table below and will need to be given effect through ongoing phases of the project.

The status of iwi and hapū as Mana Whenua is recognised and respected

Māori names are celebrated. The intergenerational lineage of ancestors is imbued into the fabric of the whenua. Names acknowledge events, activities and occupation

The natural environment is protected, restored and / or enhanced

Environmental health is protected, maintained and / or enhanced

Iwi / hapū narratives are captured and expressed creatively and appropriately

Mana Whenua significant sites and cultural landmarks are acknowledged

Iwi / hapū have a living and enduring presence and are secure and valued within their rohe

KEY MOVES	MANA	WHAKAPAPA	TAIAO	MAURI TU	MAHI TOI	TOHU	AHI KĀ
Auckland Council to meet their statutory obligation, follow guidelines related to development and that consent processes are adhered to [1]	•						
The development of public spaces subject to the cultural heritage and values [1]	•						
Inclusion of the people in the development of the project [1]	•						•
Familiarisation with the Ngati Whatua Settlement Act 2013 and the Deed of Settlement [1]	•	•					
Continue dialogue on ideas to recognise and celebrate the Māori heritage of the site, through design, art and names [1]		•			•		
Te Kawerau Iwi Tribal Authority are involved in the planning, design, and management of a community facility should be incorporated [2]	•	•					•
Te Kawerau Iwi Tribal Authority are given opportunity to name the proposed park and associated features [2]		•			•	•	
That native eco-sourced native vegetation is incorporated into the design as the default type of vegetation [1]			•				
Impacts to cultural heritage or cultural resources or elements should be avoided [2]	•	•	•	•	•	•	•
Te Kawerau Iwi Tribal Authority does not support the installation of a dog exercise area [2]			•	•	•	•	
Light pollution is carefully designed and managed [2]			•	•			
The principles of the North-West Wild Link are incorporated into the design [2]			•	•			
An ecological mitigation planting & environmental weed management plan should be developed [2]			•	•			
All earthworks to include robust sediment control to protect water quality and eliminate risk of contamination of waterways [1]				•			
That Auckland Council will adopt Te Aranga Design Principles [2]	•	•	•	•	•	•	•
Careful management of *Epilobium hirtigerum* to ensure its protection and survival [2]			•	•			
Lighting design primarily (if not solely) utilises solar panels as renewable energy [2]			•	•			
Auckland Council strives to significantly achieve higher levels of stormwater treatment [2]			•	•			
That Auckland Council continues to work with Te Kawerau Iwi Tribal Authority through the planning and design process [2]	•	•	•	•	•	•	•
Cultural mitigation can be partially (or in some circumstances fully) mitigated [2]	•	•			•		•
The current programme of archaeological survey is extended to testing and evaluating areas of suspected archaeology or cultural sites in collaboration with Te Kawerau Iwi Tribal Authority [2]	•	•			•		
That the known extent of midden/pit sites would be avoided by the development [1]						•	
An archaeological survey and investigation is undertaken [2]	•	•			•	•	
Cultural monitoring will be required for all invasive works within the project footprint [2]	•					•	
Te Kawerau Iwi Tribal Authority and Heritage NZ are to be notified should intact subsurface archaeological features or artifacts associated with Māori be exposed during any earthworks [2]	•					•	•
Te Kawerau Iwi Tribal Authority are involved in the future management and strategy of archaeological sites within the area[2]	•					•	•
In the event of an accident or significant health and safety breach on site Ngāti Whātua o Kaipara is willing to provide cultural ritual to address the issue [1]							•
Te Kawerau Iwi Tribal Authority expects that cultural offsetting will be agreed with Auckland Council to address any (potential) cultural harm, prior to any works commencing [2]	•						•

[1] Proposed by Nga Maunga Whakahii o Kaipara Development Trust [2] Proposed by Te Kawerau Iwi Tribal Authority

STAKEHOLDER ENGAGEMENT

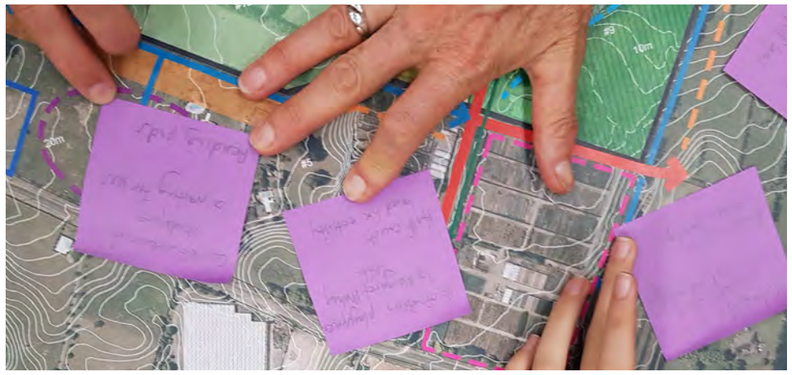
The development of a new sports park for Scott Point has generated a great deal of interest and enthusiasm over the early conceptual stage of the project.

Meaningful stakeholder and community participation is an important component of both Auckland Council's Service Principles and the ISCA Infrastructure Sustainability tool.

A stakeholder engagement and communication strategy was established during the early stages of the project, outlining who would be engaged, how stakeholders would be involved in decision making and how influences on design outcomes would be communicated.

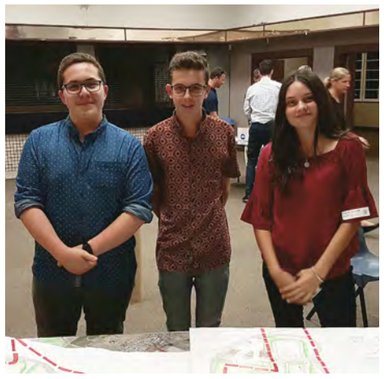
Key stakeholders engaged in the process include (but are not limited to) Mana Whenua, the Upper Harbour Local Board, Council Controlled Organisations, local schools, sports clubs, and community groups.

It is crucial to continue to engage with the public and key stakeholders throughout the following phases to ensure the park reflects the needs, desires and aspirations of the community who will grow to love this place.



'World Cafe' stakeholders workshop

Hikoi



Hobsonville Secondary School 'Epi-lovers' [1]

Outputs from iwi engagement

Concept presentation evening with stakeholders

Concept presentation evening with stakeholders

Word cloud of suggestions from the 'World Cafe' stakeholders workshop

STAKEHOLDER ENGAGEMENT PROCESS:

- A 'world cafe' - style stakeholder workshop was held in April 2017. Topics covered were: Cultural and Community Values; Access; Sports; Ecology; and Informal Recreation. Nearly 400 comments were received on 180 topics
- A design workshop with 'Epi-lovers' [1] was held to obtain inputs regarding the threatened native plant species, *Epilobium hirtigerum*
- A Climate Change Risk Assessment Workshop was held with Auckland Council's Sustainability and Resilience Specialists in October 2017 to identify high level risks and mitigation measures that could be integrated into the concept and subsequent design phases
- Presentations to the Upper Harbour Local Board were made at key milestones to gain support
- Engagement with other agencies and Council Controlled Organisations such as Auckland Transport and Panuku Development Auckland was undertaken.

SUMMARY OF STAKEHOLDER AND COMMUNITY NEEDS AND IDEAS

Stakeholders have expressed a strong desire for a broad mix of programmes for the park, with an emphasis on balancing the provision of active and passive recreation opportunities with restoring ecological vales to the park.

A synopsis of main themes advocated by stakeholders during the engagement is outlined below and illustrated in the 'word cloud' , opposite.

RECREATION

Provision for active sports codes such as baseball, football/soccer, cricket, volleyball, tennis and touch were suggested. Other recurring suggestions included an athletics track, public frisbee golf, play spaces, bike facilities such as pump tracks and a skatepark. More passive activities such as petanque and chess were also discussed.

COMMUNITY

Ways in which to bring residents together to promote a sense of community, not forgetting active and informal recreation facilities, included features such as a communal BBQ area and community gardens / orchard. Events such as night markets, outdoor movie nights and themed festivals / days were suggested. Opportunities to collaborate with local schools for community projects, an 'outdoor classroom' and creating a 'community hall' were also suggested.

ENVIRONMENT

Points raised included ways to enhance both flora and flora and ways in which to engage the community, including walkways with interpretation, planting days and days to promote the growth of the endangered plant species, *Epilobium hirtigerum*. Recurring suggestions included the use of composting toilets as a reserve facility, restricting the number of rubbish bins, a community facility for composting, green roofs, rainwater harvesting and solar energy.

CULTURE AND IDENTITY

There were a number of suggestions for expressing culture and heritage specific to the site through materials, sculpture, carvings, pou and other markers. Key ideas as to what makes 'Scott Point' unique include the site's horticultural past, pottery and brickworks, the *Epilobium hirtigerum* habitat and the values of Mana Whenua. The former air base nearby was also a recurring topic.

CONNECTIVITY

Issues and suggestions discussed included providing for multiple-modes of transport and sufficient and efficient car parking that is respectful to residents. Trails that prioritise pedestrian and cyclist safety and comfort respectively were discussed. There was also a strong desire for digital connectivity, including embracing and providing for growing technologies such as e-bikes and electric cars. There were common requests for USB charger ports and providing WiFi.

A PLACE FOR EVERYONE

Creating a space for all ages was a strong theme. Consideration of the older generation was expressed, particularly in respect to informal recreation and access between the proposed retirement village and town centre. Providing for the needs of teenagers, including 'youth hang out spaces' was a recurring topic. Dog exercise was discussed in depth, in particular spaces where dogs should be allowed, and whether this should be on-leash or off-leash.

HEALTH AND WELLBEING

Above and beyond active and informal recreation, other suggestions to promote healthy urban living were made, including having community gardens / allotments and orchards / fruit trees. There were suggestions orientated around both walking and cycling, including allocated / exclusive facilities for both modes. 'Fitness Trails' were suggested multiple times.

FLEXIBILITY

Getting the most out of spaces and catering for the greatest number of people was a recurring theme. Suggestions included multi-purposed sports fields (summer and winter codes) and flexible areas for informal recreation, including outdoor classrooms and an amphitheatre. A pavilion or clubhouse could double as a community hall. Partnerships with and sharing facilities with local schools to avoid unnecessary duplication was also suggested.

[1] Hobsonville Point Secondary School 'Epilobium Park' Design Students

ISCA:IS - INFRASTRUCTURE SUSTAINABILITY

Auckland Council has selected the Scott Point Sustainable Sports Park to be designed and built as a model “sustainable sports precinct”. This is a timely opportunity to embed sustainability outcomes in accordance with the Auckland Plan. These include green infrastructure, energy, water efficiency and low carbon design.

A framework to achieve the required sustainability outcomes will be the integration and use of the Infrastructure Sustainability Council of Australia (ISCA) Infrastructure Sustainability (IS) Rating Tool. The utilisation of this tool will be the first in New Zealand for a parks based project.

WHAT IS INFRASTRUCTURE SUSTAINABILITY?

Infrastructure Sustainability refers to infrastructure that is planned, designed, constructed and operated to optimise environmental, societal and economic outcomes over the long term.

Across the infrastructure lifecycle, there are three main ways that the IS Rating Tool is currently being used:

1. Planning phase support to apply the IS Rating Tool through various stages of infrastructure planning (project feasibility, development and procurement)

2. Registered use (Design, As Built, and Operation) to achieve a certified rating

3. Non-registered use (Planning Design, As Built and Operation) to assist benchmarking the sustainability performance of projects, assets and organisations, and with decision making for planning and delivery.

The process starts with the project manager undertaking self-assessment using the IS Rating Tool as they proceed through the relevant lifecycle phases. Submitted documentation is then reviewed by certified Assessors and Verifiers. Throughout the process, documentation for all claimed credits is saved, so that all documents reviewed during assessment, verification and certification stages can be shared between Assessor and Verifiers.

Infrastructure sustainability is assessed across six themes, and within each of these themes there are subcategories as illustrated below.

LEVEL OF ACHIEVEMENT

The ISCA: IS process enables a project to be assessed and accredited for increasing levels of achievement against a baseline of 'business as usual'. The highest level of achievement is "Leading", which is the aim for Scott Point Sustainable Sports Park.

PEOPLE + PLACE

- Community Health, Well-being and Safety
- Heritage
- Stakeholder Participation
- Urban and Landscape Design

USING RESOURCES

- Energy and Carbon
- Water
- Materials

EMISSIONS, POLLUTION + WASTE

- Discharges to Air, Land and Water
- Land
- Waste

ECOLOGY

- Ecology

INNOVATION

- Innovation

MANAGEMENT + GOVERNANCE

- Management systems
- Procurement and Purchasing
- Climate Change Adaptation

PART C | SITE ANALYSIS

Overview

Scott Point lies in the upper reaches of Auckland's Waitematā Harbour, northwest of Auckland City. The area was called Onekiritea by local iwi, named after the clay soils that made up the peninsula, which was at one time covered in kauri forest. A large portion of land was bought by the Crown and used for farming. Subsequently, in the mid 1800s part of the land, including Scott Point Sustainable Sports Park, was purchased by Rice Owen Clark who found the poor soils more conducive to providing clay for brickworks. A buzzing industry supplied much of the pipework for Auckland's city centre up until the 1930s. More recently, this relatively flat peninsula area has been used for agricultural and horticultural purposes. The tidal coastal edge, which is intermittently fringed by shellbanks, is abundant in native avifauna and kaimoana. Up until recently, the Hobsonville Airbase, which was built in the 1920s, sat to the north of Scott Point. This area is now being developed into the medium-density suburb Hobsonville Point. The current RNZAF Auckland Airbase at Whenuapai sits on the opposite side of State Highway 18 (Upper Harbour Motorway) from Scott Point.

Site

Oblique aerial view of Scott Point and its environs.

WIDER CONTEXT

The Scott Point and Hobsonville Point Peninsula is approximately 12 kilometres from Auckland's Central Business District, connected by the Upper Harbour, Northwest and Northern Motorways. The peninsula is also connected to the city by a ferry service that runs between the Auckland Downtown Ferry Terminal and the Hobsonville Ferry Terminal at 'The Landing'.

The Upper Harbour Local Board area, within which Scott Point is located, has seen fast population growth. Demographic data from Auckland Council shows a population increase of 83% between 1996 and 2006. The population of the Upper Harbour Local Board area is expected to increase by 64% from an estimated 58,500 in 2013 to more than 93,000 in 2033.[2]

Ecologically the coastal fringes of the Waitematā Harbour, including those around Scott Point, play a pivotal part in the 'North-west Wildlink' - the ecological corridor that spans between the islands in the Hauraki Gulf and the Waitākere Ranges.

[2] Upper Harbour Local Board Plan 2017

2km radius area of cultural significance to site, identified by Mana Whenua

Site

0 1 2 3 4 5km

LOCAL CONTEXT

The site is bounded by Squadron Drive Extension to the north, Clark Road to the west, and new urban areas to the south and reaching to the Waitematā Harbour to the east.

Until recently, Scott Point was a relatively undeveloped greenfields area, home to agricultural and horticultural landuses, and large lifestyle block properties.

With Scott Point primarily zoned in the Auckland Unitary Plan (Operative in Part) as Mixed Housing Urban and Mixed Housing Suburban, the landscape is already beginning to undergo significant change. Sites directly to the north, east and south of the Scott Point Sustainable Sports Park site are already being developed into medium-density subdivisions.

The site is well connected to Hobsonville and Hobsonville Point village centres via Clark and Scott Roads. The extension to Squadron Drive, which will border the sites northern edge, will provide a direct route to and from State Highway 18.

The upper reaches and tributary stream of Tahingamanu (Nimrod Inlet) extends into the site, connecting it with the Waitematā Harbour.

Site

0 200 400 600 800 1000 m

EXISTING SITE

The site is 16.4 hectares and is currently divided into two predominant land uses.

The western half of the site is mainly pasture bordered by shelterbelts (mostly exotic species), and is presently home to the Whenuapai Pony Club. A steel fabrication company operates in the northwest corner of the site.

The eastern half of the site is occupied by a horticultural nursery and the tributary stream that leads to Tahingamanu (Nimrod Inlet). The vegetation that borders the stream corridor is predominantly exotic and pest species. This eastern part of the site is also the habitat of the critically endangered plant species, *Epilobium hirtigerum.*

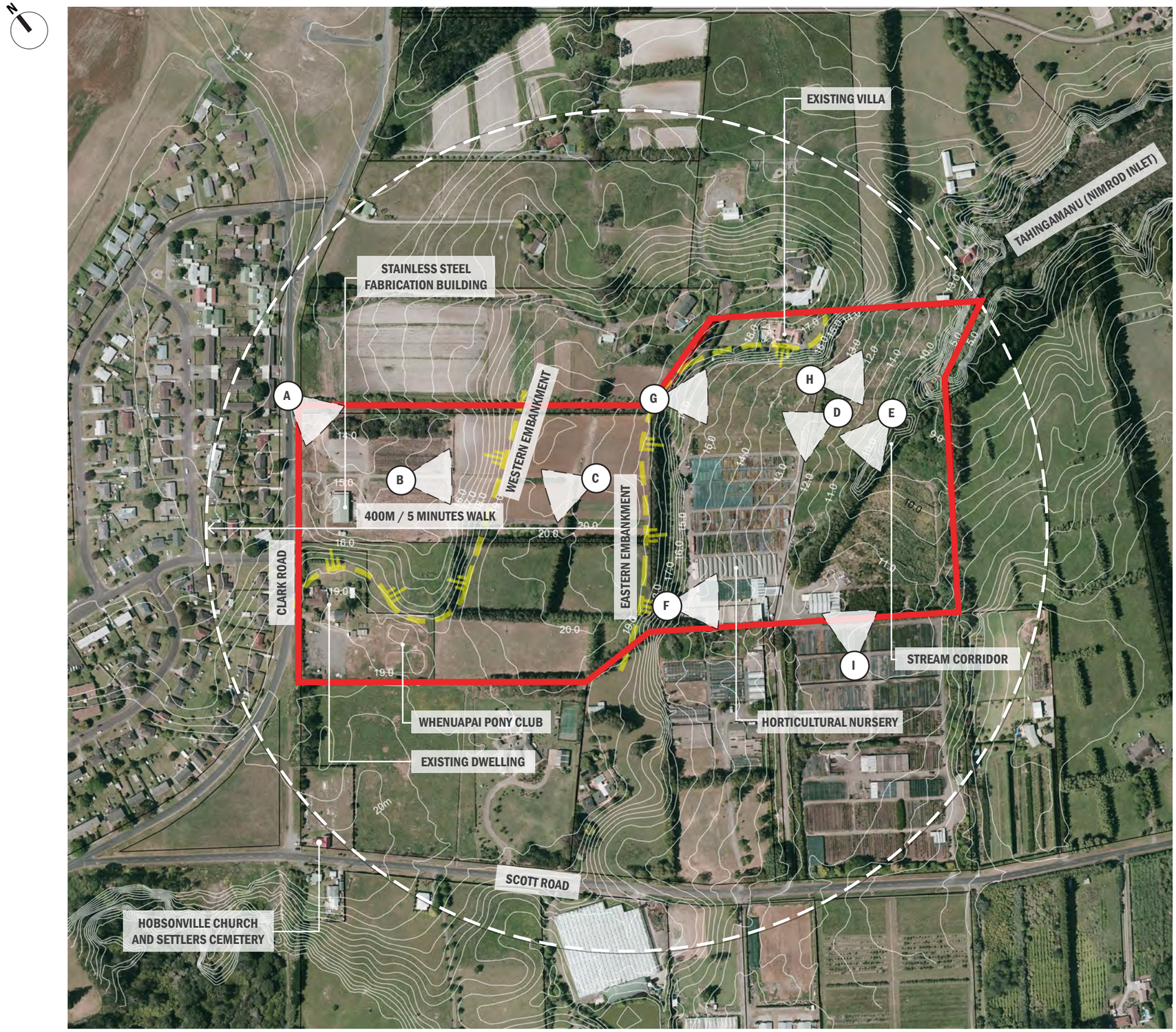
The park is divided more or less through the centre by the eastern embankment. Below the bank the land falls towards the Nimrod stream corridor which feeds into the Nimrod Inlet and the Waitematā Harbour. This area will be used for various informal recreation and ecological restoration.

Land to the northwest of the eastern embankment is elevated and reasonably flat. This area is most suited to large format sportsfields and hard courts. Further to the northwest there is a second western embankment, which faces north in a crescent shape. Below this bank the land is reasonably flat and is likewise more suited to sports field development.

A — Site photographs and view cones. Refer images on opposite page.

Site

Scale | 1:2000 (A1); 1: 4000 (A3) 0 50 100 150 200m



SITE PHOTOGRAPHS


A


B


C


D


E


F


G


H


I

A. Stainless Steel Fabrication site with western embankment in the background

B. Western embankment

C. Stainless Steel Fabrication building, existing dwelling and Hobsonville Point Secondary School in the background

D. Northern end of the eastern embankment (vegetated) and remnant horticultural windbreak posts

E. Horticultural nursery and southern end of eastern embankment

F. View towards Tahingamanu (Nimrod Inlet) stream corridor from the southern end of the eastern embankment

G. View across Significant Ecological Area from northern end of the eastern embankment

H. View across Significant Ecological Area towards the new development on opposite side of Tahingamanu (Nimrod Inlet)

I. Nursery windbreaks with (predominantly exotic) stream corridor vegetation behind

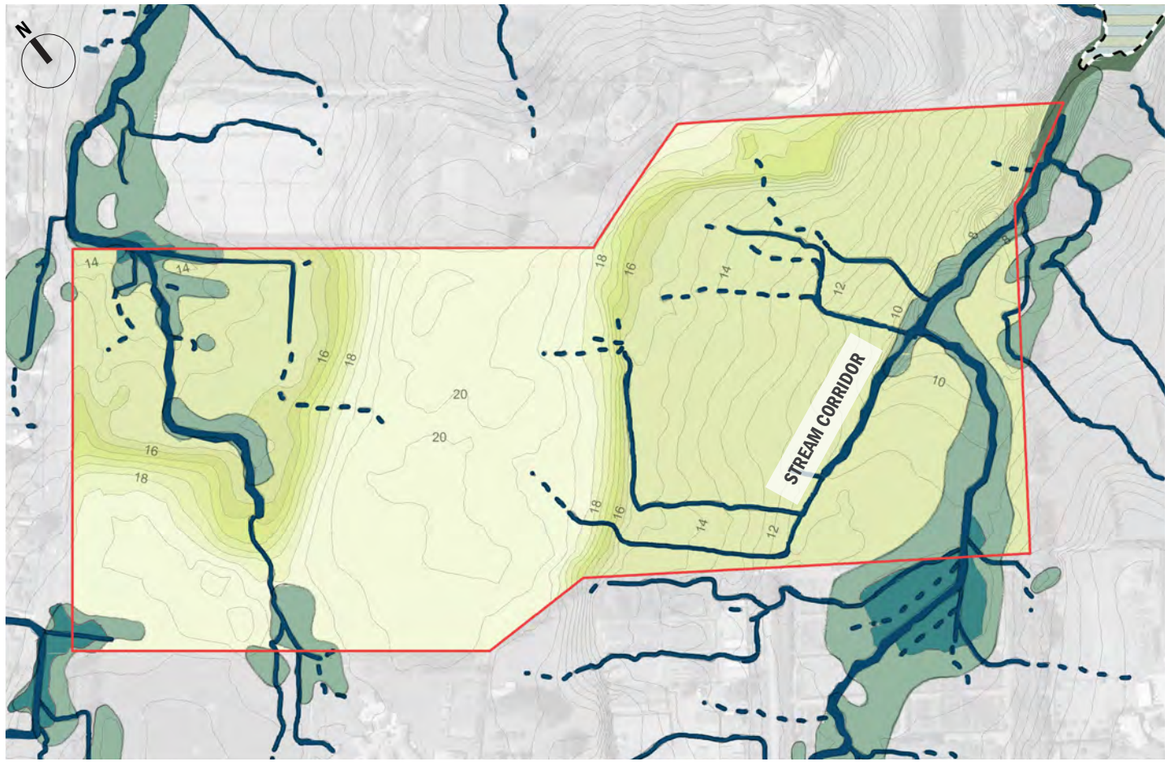
HYDROLOGY

The highest points of the site are on the central plateau. Overland Flow Paths (OFP) track from the embankments to the site's lowest areas to the east and west, with localised flood plain areas along the relative paths. The lowest point on the eastern side of the site is the Upper Nimrod stream. There is a small flood prone area along one of the OFP's that feeds into the stream corridor, in the south east corner of the site. A storm water outlet from the adjacent development discharges into the head of the stream corridor. There are two other small flood prone areas located at the low points of the northwest corner and the southeast corner of the site. Buildings and other structures will need to avoid flood plains and flood prone areas, and not obstruct Overland Flow Paths.

LEGEND

- Overland Flow Path
- Flood plain
- Flood prone areas
- Mean High Water Springs (MHWS)
- Coastal Marine Area (CMA)
- Coastal Inundation Zone (1% annual exceedance probability of coastal storm inundation event + 1m sea level rise)

(Source: Auckland Council Unitary Plan Operative in Part - Maps)



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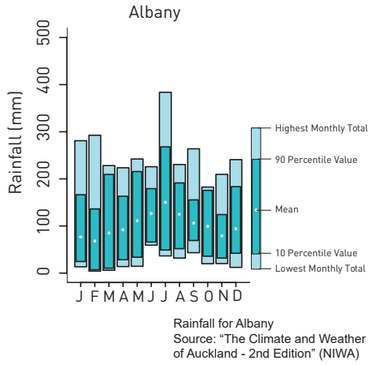
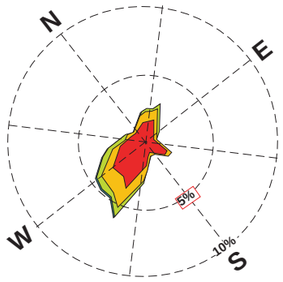
Rainfall



Rainfall for Albany
Source: "The Climate and Weather of Auckland - 2nd Edition" (NIWA)

Wind



- 1 - 20 km/hr
- 21 - 30 km/hr
- 31- 40 km/hr
- > 40 km/hr

Reinterpretation of wind rose from nearby Whenuapai Air Base. Source: "The Climate and Weather of Auckland - 2nd Edition" (NIWA)

CLIMATE AND ENERGY

There are a number of opportunities for harnessing renewable energy within the Sustainable Sports Park, however there are also a number of threats associated with climate change. Potential to harness energy from winds that predominant exist on the site perimeter and exposed high points. Warmer northeasterly winds could be passively cooled with bodies of water adjacent to buildings. There is potential to capture solar energy, and optimise the northerly aspect of the western embankment. The site sits over 1m above Mean High Water Springs (MHWS) and therefore inundation from Sea Level Rise is not an immediate threat. Increased flooding from extreme weather events could have impacts on the site.

LEGEND

WIND

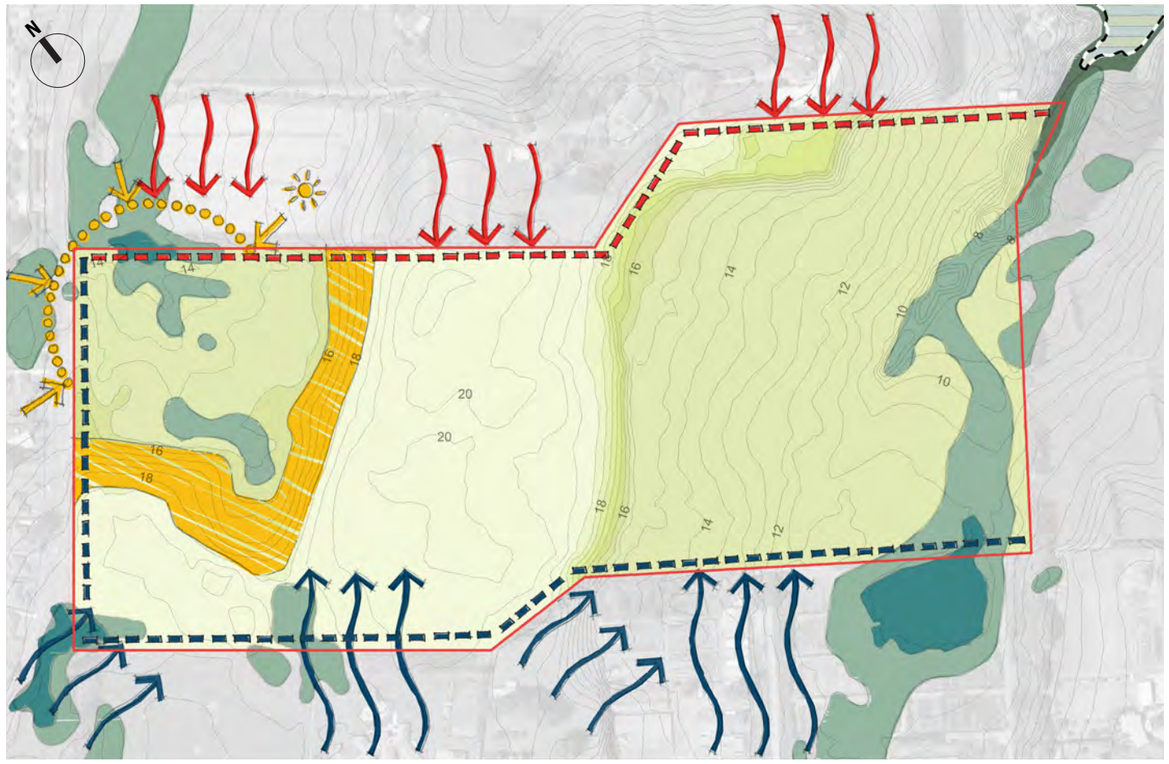
- Southwesterly (predominant) wind
- Westerly wind
- Northeasterly wind
- Edge of site exposed to strongest winds

SUN

- Sun Path (equinox depicted) and northerly aspect

AUCKLAND UNITARY PLAN HYDROLOGICAL DATA

- Mean High Water Springs (MHWS)
- Coastal Marine Area (CMA)
- Coastal Inundation Zone (Annual extremes + 1m future sea level rise)
- Flood plains
- Flood prone areas



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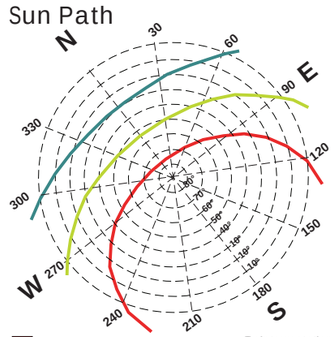
Sun Path



- December Solstice
- Equinox (March/September)
- June Solstice

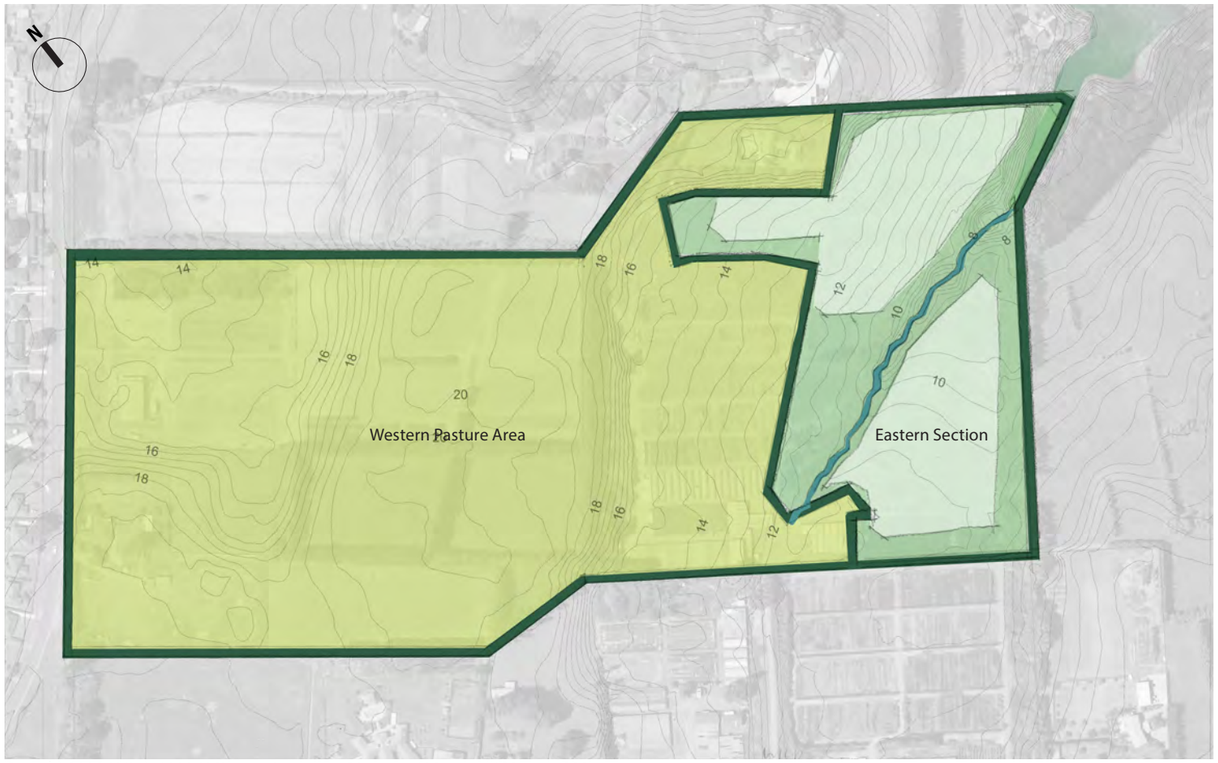
Reinterpretation of Auckland Sun Path Diagram. Source: www.gaisma.com

ECOLOGY

The site can be divided into two separate ecological areas. The western pasture area is of relatively low ecological value, providing habitat for common native and introduced birds and potentially the native copper skink. Threatened pied stilt and ornate skink may also be utilising the pasture area.

The eastern section is of higher ecological value due to the presence of the highly threatened plant *Epilobium hirtigerum.* A permanent stream with moderate ecological value runs down the centre of the Significant Ecological Area overlay under the Unitary Plan.

Source: 'Scott Point Sportsfield - Ecological Opportunities and Constraints' Report (Opus International Consultants Ltd. February 2017)



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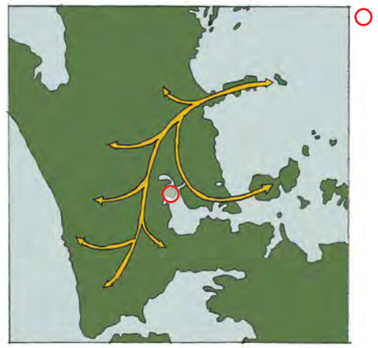
LEGEND

- Ecological Zones
- Permanent stream
- Terrestrial Significant Ecological Area (S.E.A)
- Approximate *Epilobium hirtigerum* area
- Area of low ecological value



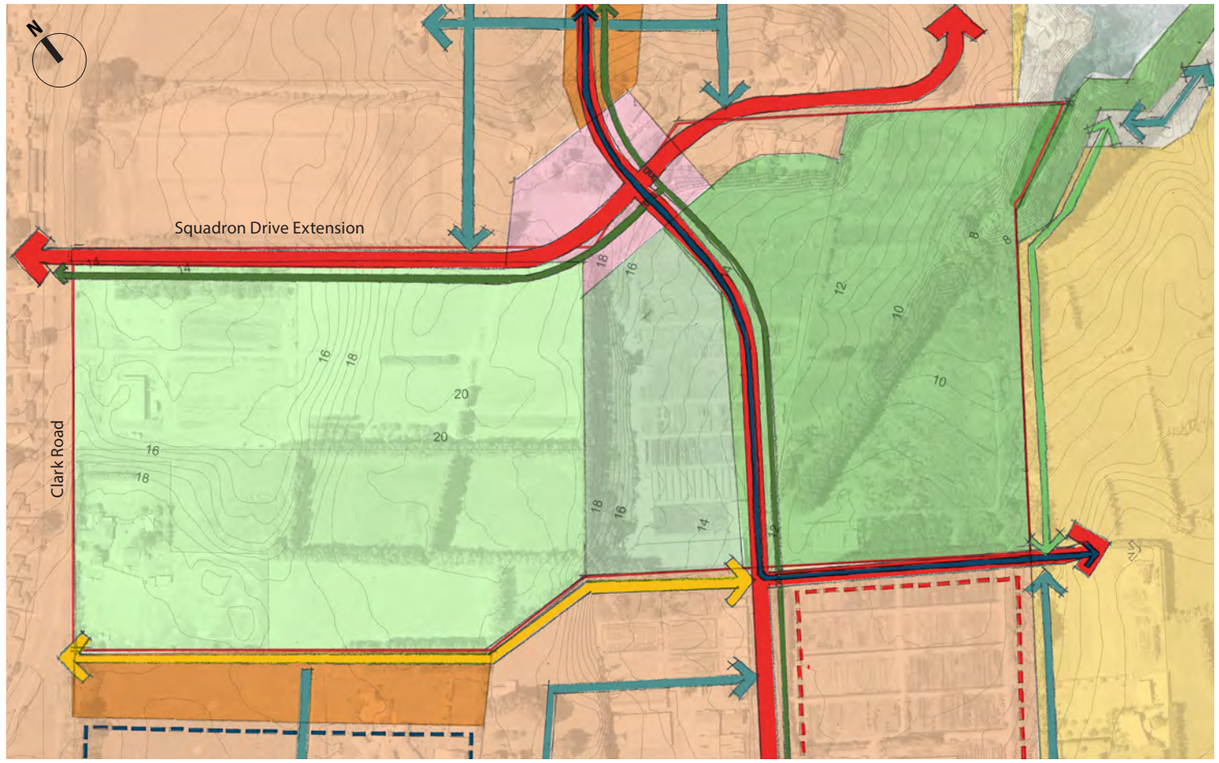
NORTH-WEST WILDLINK DIAGRAM

PLANNING FRAMEWORK

Most of the land comprising the reserve is zoned for recreation purposes under the AUP(OiP). The westernmost area is zoned for Sports and Active Recreation, the central part for Informal Recreation and the easternmost part for Conservation. The conservation area has a Significant Ecological Area overlay.

A hierarchy of roads surrounds the park and a new secondary road is planned to extend through the park, connecting Scott Point and Hobsonville.

A Neighbourhood Centre zoning is in place for the area at the intersection of Squadron Drive Extension and the future central road through the park. On the eastern edge of the neighbourhood centre is an area zoned for Mixed Housing. Together these two land uses will need to create an active interface with park activities.



Scale | 1:2000 (A1); 1: 4000 (A3) 0 50 100 150 200m

LEGEND

UNITARY PLAN ZONES

- Open Space - Sport and Active Recreation
- Open Space - Informal Recreation
- Open Space - Conservation
- Neighbourhood Centre Zone
- Mixed Housing Urban
- Terraced Housing and Apartment Buildings
- Mixed Housing Suburban
- Single House

SCOTT POINT STRUCTURE PLAN

- Secondary Road (20.0m)
- Critical Local Road (16.0m)
- Park Edge Road (16.0m)
- Cycle Metro Route
- Critical Pedestrian & Cycle Connection
- Proposed Bus Route

OTHER

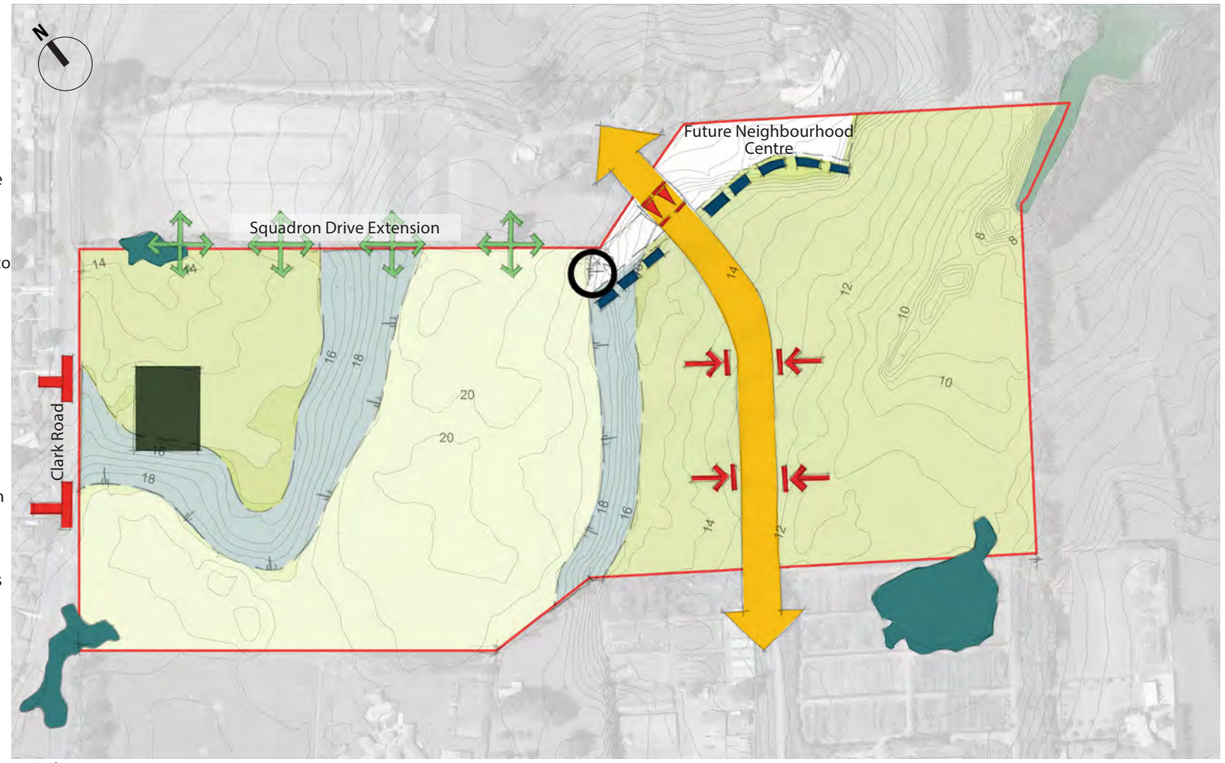
- Proposed Ministry of Education Primary School
- Future Retirement Village (Indicative)

CONSTRAINTS

The embankment gradients will constrain built form and large format playing fields, if earthworks are to be kept to a minimum with sustainability in mind. The proposed through road has the potential to divide the park in two. There is contaminated land surrounding the steel fabrication premise, which will need to be buried or removed to an approved disposal site. The Neighbourhood Centre Zone has an acute angle that may impact the spatial arrangement of the site, and there is the possibility that the Centre will address the street network and turn it's back on the park. Site access from Clark Rd is not advised, but it has been recommended that access on Squadron Drive Extension aligns with the intersections of the street network opposite.

LEGEND

- Proposed road designation separates park
- Contaminated land (nickel) must be left on site or disposed of to a managed fill site
- Potential for Neighbourhood Centre building to turn back onto reserve
- Corner of Neighbourhood Centre Zone cuts into site
- Park entrances from Clark Rd not advised
- Site access to align with development roads on opposite side of Squadron Drive Extension
- Sloped areas not conducive to flat sports fields
- Steep gradients along proposed road route
- Areas prone to flooding



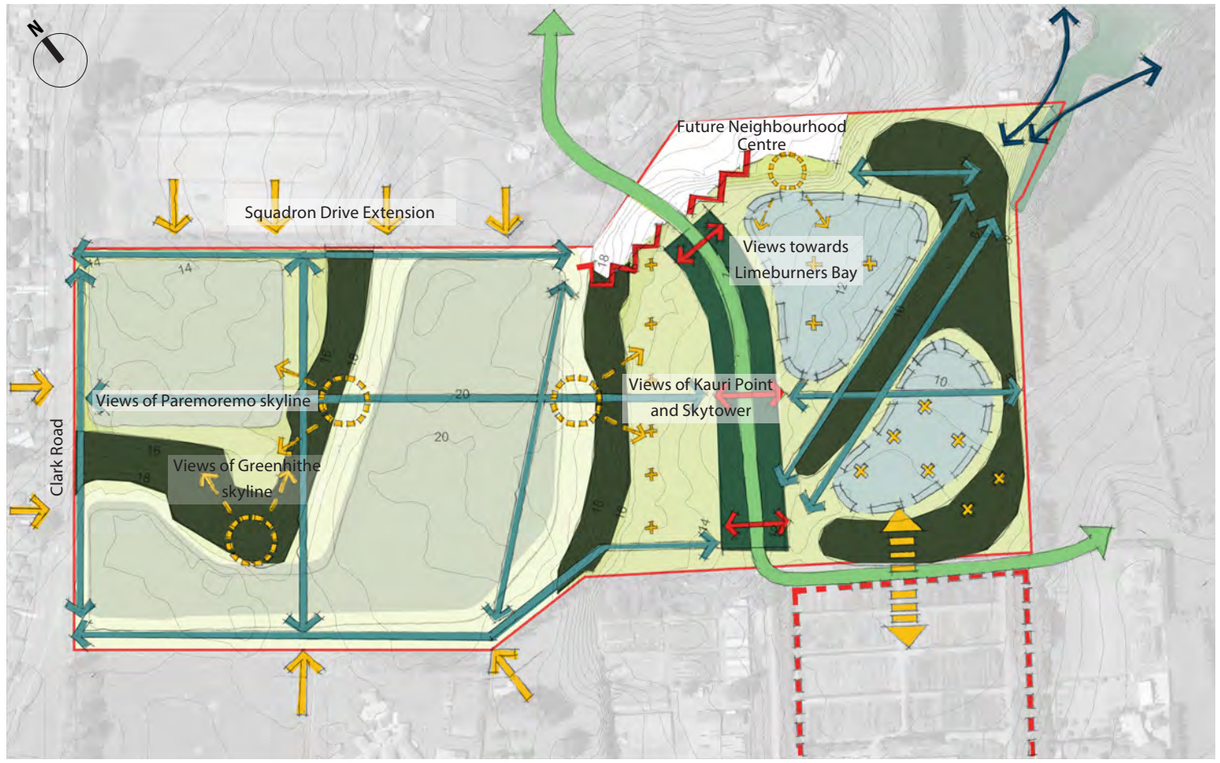
Scale | 1:2000 (A1); 1: 4000 (A3) 0 50 100 150 200m

OPPORTUNITIES

The naturally flat and open areas in the western half of the site lend themselves to large format sports uses without the need for major earthworks. The embankments provide an opportunity to create green corridors through the site and create a number of vantage points within the park. The proposed through-road has been identified as a bus route and 'Cycle Metro' link, providing sustainable means of traveling to and from the park. The southern edge of the Neighbourhood Centre Zone could be activated to maintain 'eyes' on the park and optimise views over the open space and native revegetation. The critically endangered *Epilobium hirtigerum* can be protected and celebrated through design measures. Existing nursery windbreak posts can be re-purposed as vertical 'markers' or pou.

LEGEND

- Connection with proposed bus route
- Connections with surrounding developments
- Connections with future school
- Connection to coastal esplanade reserves
- Non-motorised connections through park
- Views from key vantage points
- Activation of park-side edge of town centre
- Integration of road into park setting. Traffic calming measures for pedestrian safety
- Flat open areas - potential for sports fields
- Ecological restoration
- Protection and enhancement of *Epilobium*
- Open space
- Remnants of site's horticultural history



Scale | 1:2000 (A1); 1: 4000 (A3) 0 50 100 150 200m

CONCEPT DIAGRAM - KEY DESIGN MOVES

THE SITE PLAN:

The concept diagram shows the overall organisation of the park. The plan illustrates a framework that integrates the whole site into a coherent landscape which supports the vision to "create a fully sustainable sports park that the community are proud of".

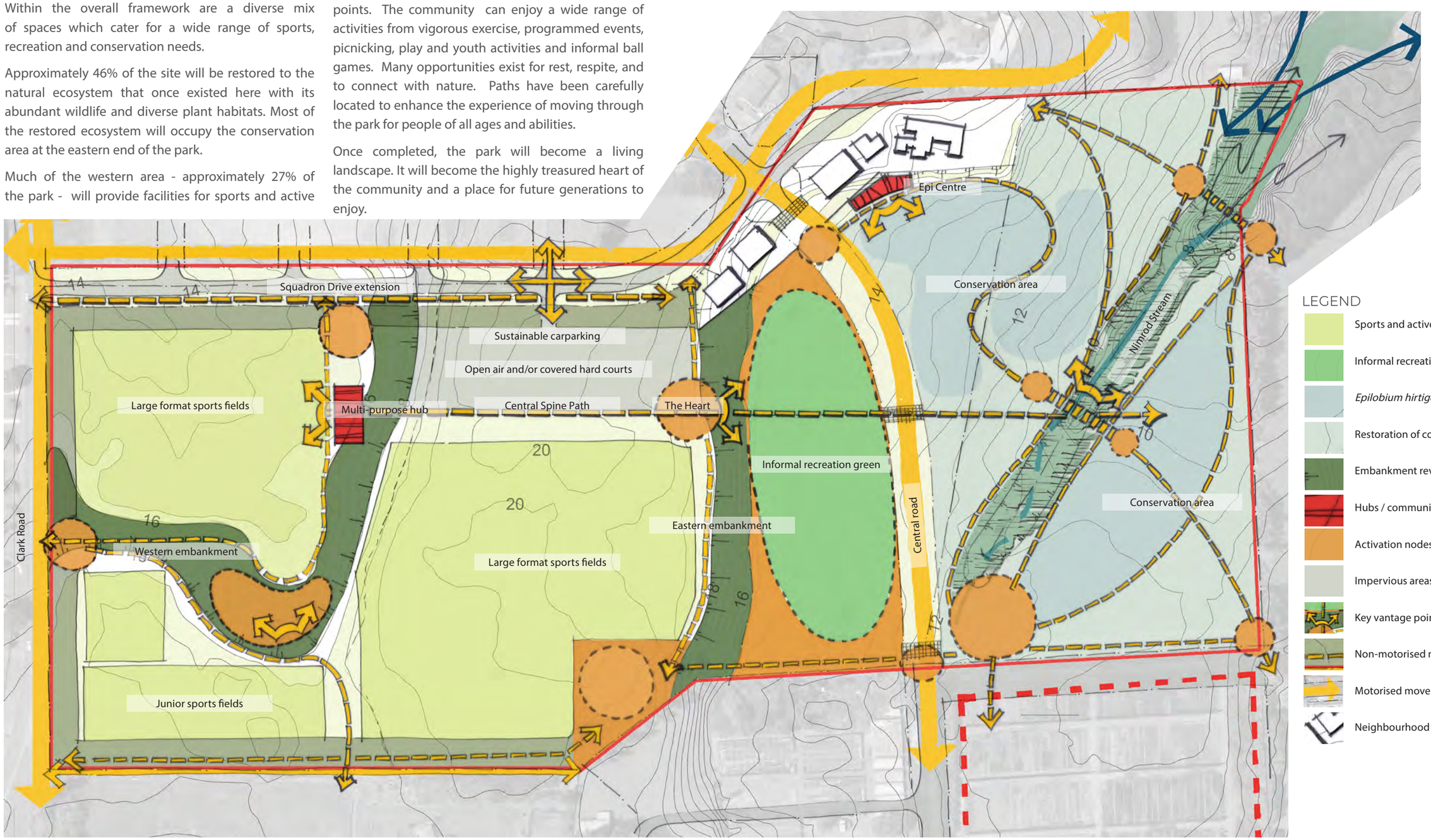
Within the overall framework are a diverse mix of spaces which cater for a wide range of sports, recreation and conservation needs.

Approximately 46% of the site will be restored to the natural ecosystem that once existed here with its abundant wildlife and diverse plant habitats. Most of the restored ecosystem will occupy the conservation area at the eastern end of the park.

Much of the western area - approximately 27% of the park - will provide facilities for sports and active recreation. Included in the mix are natural and artificial turfs, open-air hard-courts and possibly covered courts, offering a wide range of facilities for multiple sports.

Integrated throughout the park will be a network of informal recreation spaces, pathways and gathering points. The community can enjoy a wide range of activities from vigorous exercise, programmed events, picnicking, play and youth activities and informal ball games. Many opportunities exist for rest, respite, and to connect with nature. Paths have been carefully located to enhance the experience of moving through the park for people of all ages and abilities.

Once completed, the park will become a living landscape. It will become the highly treasured heart of the community and a place for future generations to enjoy.



Scale | 1:1000 (A1); 1: 2000 (A3)

0 25 50 75 100m

KEY DESIGN MOVES:

The park has three main areas: Sports and Active Recreation, Informal Recreation, and Conservation. Each of the areas is defined by the geography of the site and has a distinct landscape character and programming approach. The two main embankments are particularly important features for defining sub zones within the park, as is the Nimrod stream corridor and Nimrod Inlet with connections to the Waitematā Harbour.

The definition and programming of the park's areas has been informed by the overarching need to create a fully sustainable park. This has led to design decisions such as working with the natural landform rather than earth-working the embankments which would lead to greater negative environmental impacts. Stakeholder and iwi inputs, agency inputs, strategic outcomes and Local Board priorities have all informed the design.

Staging of the park's development has not been resolved at this concept stage. The greatest efficiencies and sustainability outcomes would be achieved by programming development across the whole park to tie in with wider developments such as the construction of the new school and the roading network adjacent to and through the park.

The key design moves for each geographic area are outlined in this section. Plan enlargements together with cross sections on the following pages are provided to give more focus to key features within the master plan. The next section illustrates how the master plan fulfills the sustainability objectives for the park. The ISCA:IS themes identified in the introductory section are used to categorise the sustainability features.

SPORTS AND ACTIVE RECREATION AREA

The western part of the park accommodates a wide array of sports and recreation facilities. This area lends itself to large sports platforms as there is ample flat land and earthworks can be minimised.

A flexible approach is taken to the provision of sports facilities. User groups will be encouraged to share resources rather than providing dedicated facilities for each code. Facilities include five artificial and natural sports fields, training areas, six hard courts - three of which may be covered - and a multi-use hub building which will provide for a myriad of groups and activities.

A wide array of informal recreation activities will be arranged along the embankment within a sweeping tract of vegetation. This co-location of formal and informal activities offers a great opportunity for park users to engage in a wide choice of activities.

Parking for 99 cars is located along the northern edge adjacent to Squadron Drive Extension, including provision for electric car charging and disability parking.

A central spine path forms a major pedestrian promenade between the western and eastern parts of the park. It is strategically aligned to create a high quality, connected park user experience.

Generous out-of-play spaces are provided around the periphery to accommodate rain gardens, amenity trees, wide cycle/pedestrian paths, play trails, amenity lighting, art and sculpture - all contributing to a high amenity, well integrated park setting.

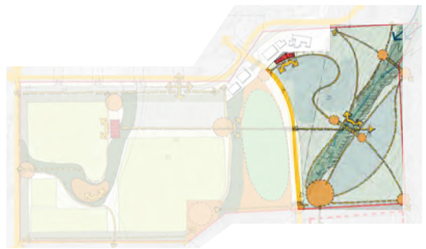
INFORMAL RECREATION AREA

Informal recreation areas are integrated throughout the park. The main dedicated space occupies the flat area to the west of the conservation zone. This area has been sized to host a wide array of informal activities including picnicking, informal team activities, play trails, market days and community events of a smaller scale.

The co-location of the informal area with the Town Centre provides a great opportunity to capitalise on the setting and the gravity created by the multiple activities concentrated in this area.

A road will be developed through the park between the informal recreation and conservation areas. The road is an important part of the wider movement network. It does however create challenges for the amenity and safety of park users. The plan is for this road to have a 'park road' character with a slow speed environment, central green median, wide, separated pedestrian and cycle paths and a high level of amenity.

CONSERVATION AREA



The eastern part of the park is devoted to conservation. It will be restored to its original habitat and will continue to host one of New Zealand's nationally critically endangered plant species, *Epilobium hirtigerum.*

Restoring nature within the park will deliver considerable benefits to the environment and people. Environmental benefits will include water polishing, air cleansing through carbon sequestration, restoration of natural habitat, cooling effects and improved connections to the wider terrestrial and marine systems to contribute to ecological enhancement of the wider northwest area.

The principles and patterns of biophilic design (people's innate biological connection with nature) have been employed to restore the human-nature connection. This approach will elicit a restorative response by providing opportunities within the park to de-stress and improve overall health and wellbeing.

The restored native forest will contribute to Auckland's urban forest and the North-West Wildlink initiatives.

A conservation centre is proposed as a place of advocacy, education and volunteer efforts.

In parts of the park the ecological restoration will take on a natural appearance while in other areas the ecological functions will be delivered in a more constructed way including green roofs and rain gardens.

THE MASTER PLAN

KEY

GENERAL FEATURES

- A Multi-purpose hub
- B *Epilobium hirtigerum* conservation area
- C 'Epi-Centre'
- D Central 'spine path'
- E Lookout featuring Māori art interpretation
- F Landmark energy-generating sculpture
- G Split carriageway central road with traffic calming measures
- H Sustainable car park area
- I Barbecue areas
- J Community orchard
- K Pā Harakeke (flax cultivation) area
- L Destination playground
- M Nature play scape
- N Amphitheatre for open-air movies and community events
- O Feature pedestrian footbridge

SPORTS PROVISION

1. Large format fields
2. Junior fields
3. Covered courts
4. Open aired courts
5. Informal recreation 'green'
6. Flexible plaza area for modular skate park / BMX pump track equipment
7. Petanque / Bowls / Kubb area

Enlargement areas

LEGEND

- Existing and protected *Epilobium hirtigerum* habitat
- Native re-vegetation
- Vegetated swales to capture & cleanse water from impervious surfaces
- Stream corridor restoration
- Turf sports field surfaces, with stormwater harvesting
- Grassed amenity areas
- Roof top solar panels
- No-fines permeable paving
- Permeable paving / asphalt falling to stormwater swales
- Permeable segmental paving
- Hoggin (compacted aggregate + lime)
- Play spaces
- Coastal Marine Area (CMA)

Scale | 1:1000 (A1); 1: 2000 (A3)

0 25 50 75 100m

PLAN ENLARGEMENT A: MULTI-PURPOSE HUB

The multi purpose hub forms the centre of the active recreation area. A multi-purpose green-star building is the centerpiece. Spaces within the building will host community and sports groups uses. Amenities including changing rooms and toilets will cater for sports users. The spaces around the building provide areas for outdoor activities, events, wānanga and casual gathering.

The building features a green roof which doubles as a spectator space for games on the #1 field. A central plaza southeast of the building acts as a central gathering space, connecting the building with the covered courts, car parking, informal recreation embankment and central spine path.

FEATURES

1 Entrance plaza
2 One-way vehicular entry
3 Terraced car parking
4 Multi-purpose green-star building
5 Covered courts
6 Covered courts entry
7 Covered courts atrium
8 Tenancies for concessions (i.e. e-bike hire)
9 Green roof with observation deck
10 Raingarden
11 Stormwater storage tank
12 Bridges
13 Plaza space for community events
14 Accessible ramps
15 Water rill for passive cooling of building
16 Outdoor seating
17 Stormwater swales
18 Bus stop
19 Entrance signage feature
20 Multi-use sports field

LEGEND

- Native re-vegetation
- Vegetated swales to capture & cleanse water from impervious surfaces
- Turf sports field surfaces with stormwater harvesting
- Grassed amenity areas
- Retaining walls utilising reclaimed building materials
- Green roofs
- Roof top solar panels
- Water rill for passive cooling
- Sustainably sourced timber decking
- Permeable segmental paving
- Hoggin (compacted aggregate + lime)
- No-fines permeable paving
- Permeable paving / asphalt falling to stormwater swales
- Removable bollards
- E — Electric vehicle charger
- Solar/wind powered amenity lighting
- LED sports field lighting

Scale | 1:200 (A1); 1: 400 (A3)

0 5 10 15 20m

Scale | 1:200 (A1); 1: 400 (A3)

0 5 10 15 20m

PLAN ENLARGEMENT B: THE HEART

The Heart is located at the geographic centre of the park. It sits at the intersection of the central spine path terminus, top of embankment, and connecting paths. Views to the east from this location connect park users with the wider harbour setting. In all, this space has significant gravity as a place to gather and experience the park in its widest context. It has also been recognised by Mana Whenua as having potency through visual connections to the wider cultural landscape.

The plan is to create a gathering area with seating, paths, a lookout, interpretation and judiciously placed trees to frame views and provide shelter.

The space is well suited to harnessing wind and solar energy. The opportunity exists to create a hallmark solar/wind sculpture in this space that celebrates the park and its sustainability focus.

LEGEND

- Native revegetation
- Raingardens to capture & cleanse water from impervious surfaces
- Retaining walls utilising reclaimed building materials
- Sustainably sourced timber decking
- Permeable segmental paving bands
- Hoggin (compacted aggregate + lime)
- No fines permeable concrete
- Sports field surfaces with stormwater harvesting
- Grassed amenity areas
- LED sports field lighting
- Solar/wind powered amenity lighting

FEATURES

1 Central 'spine' path
2 Lookout featuring Māori art and interpretation
3 Landmark energy-generating sculpture
4 Terraced plaza space with benches and seating walls
5 Informal recreation area
6 Accessible ramp
7 Perimeter path
8 Bridged access over raingardens to courts
9 Open aired courts
10 Multi-use sports field

PLAN ENLARGEMENT C: 'EPI-CENTRE'

A focus of the conservation area is a community centre for the advocacy of conservation and the protection of the nationally critically endangered plant species *Epilobium hirtigerum s*pecifically. The centre will include outdoor and indoor educational spaces and amenities. It is envisaged that *E. hirtigerum* will become the icon for a unique Scott Point community identity.

Outdoor spaces take advantage of the elevation, with an outdoor classroom and terraced seating focused on the conservation area. Connections are made to wider nature trails.

Remnant posts from the prior nursery activity are retained as a memory of the past and as a homage to the land use that accidentally contributed to the survival of *E. hirtigerum.*

Conservation-related events will be hosted in this area. A unique event can be built around scraping the ground to provide the (managed) disturbance that *E. hirtigerum* requires. Credit is given to the "Epi-lovers" - students of Hobsonville Point Secondary School - who came up with this idea, and who have steadfastly championed this species and its survival.

FEATURES

'EPI-CENTRE'

1 Educational zone
2 Lookout space
3 Composting toilet + conservation + maintenance zone
4 Solar panel roof structure
5 Central deck
6 Terraced embankment with outdoor classrooms

GENERAL

7 Retaining walls
8 Walls delineating protected *Epilobium* area
9 Seating eddies / outdoor classrooms
10 Retained plant nursery windbreak post markers / pou
11 Central Avenue
12 Adjacent Neighbourhood Centre Zone
13 Pathway connection to activated park edge of Neighbourhood Centre Zone
14 Adjacent Mixed Urban Zone
15 Pathway connection to Squadron Drive and Tahingamanu (Nimrod Inlet) coastal esplanade reserve

LEGEND

Epilobium hirtigerum habitat

Retaining walls utilising reclaimed building materials

Native re-vegetation - trees / bush

Native re-vegetation - shrubs and groundcovers

Green roofs

Hoggin (compacted aggregate + lime)

Sustainably sourced timber decking

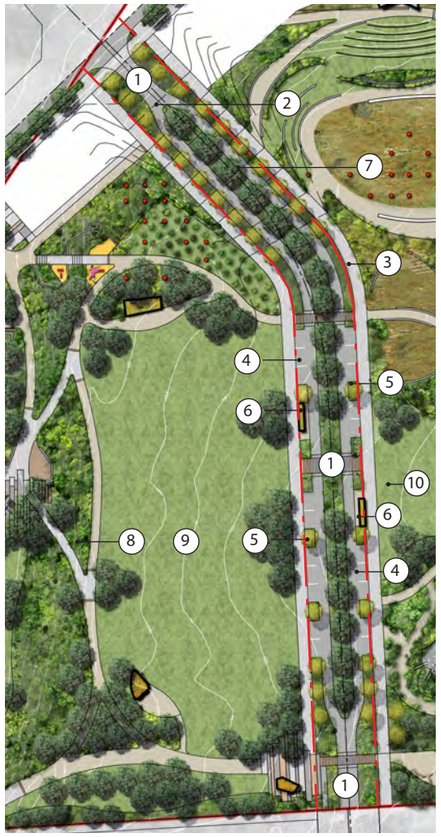
No-fines permeable paving

Solar/wind powered amenity lighting

Scale | 1:200 (A1); 1: 400 (A3)

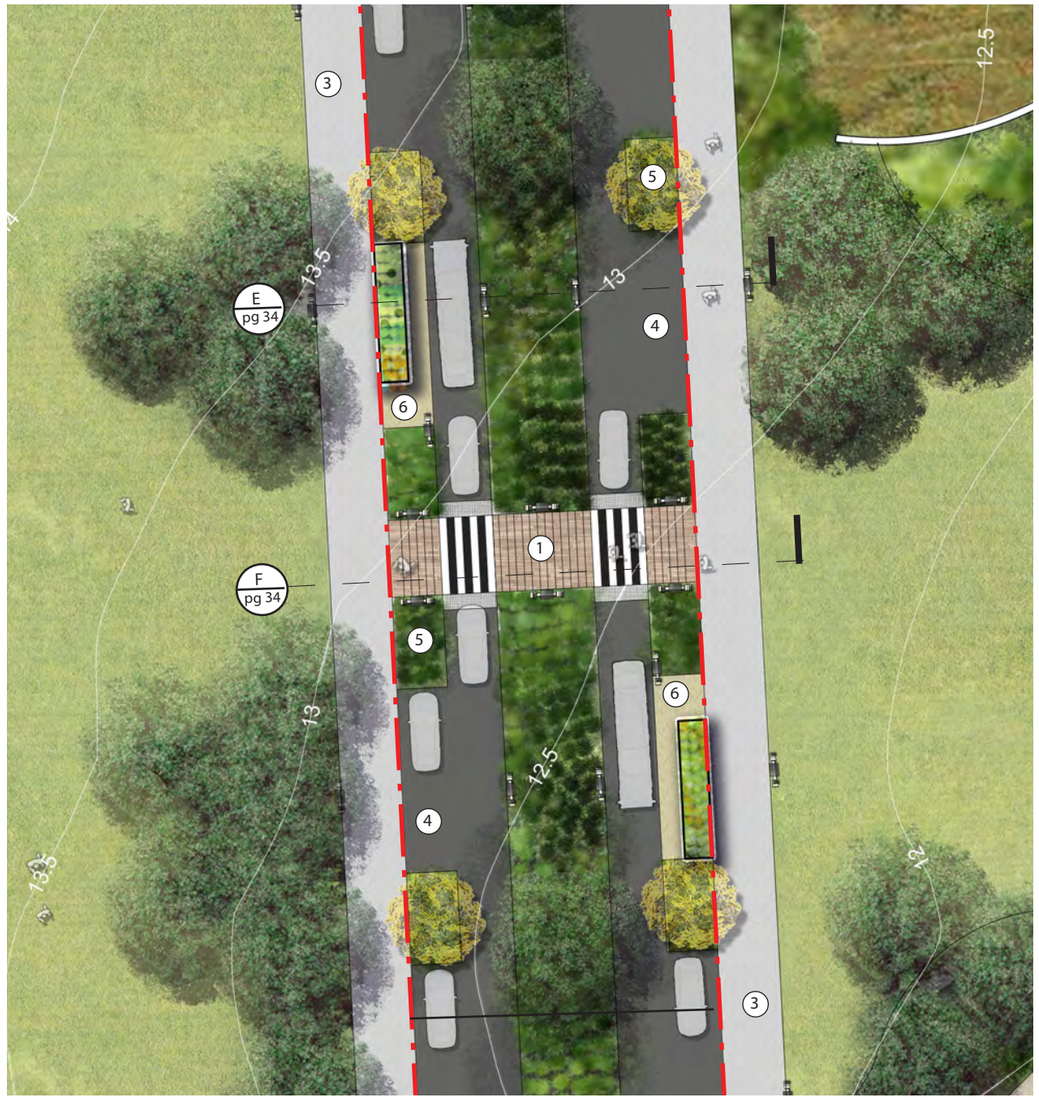
0 5 10 15 20m

CENTRAL AVENUE



Overview | Scale | 1:1000 (A1); 1: 2000 (A3)

0 25 50 75 100m



Typical Plan View | Scale | 1:200 (A1); 1: 400 (A3)

0 5 10 15 20m

Design precedent - Cornwall Park

KEY

1 Raised speed table and vegetated 'pinch-points' to slow traffic

2 Carriageway splits from two-way to one-way with vegetated central island / swale

3 Shared 'Cycle Metro' route and footpath

4 Parallel car parking

5 Intermittent raingardens

6 Bus stops after pedestrian crossing

7 1:17 maximum gradient for public transport and 'Cycle Metro' route

8 Vegetated bank

9 Informal recreation 'green'

10 Conservation zone

20m Road Corridor Boundaries

The central avenue runs through the site, connecting Scott Point to Hobsonville Point. The road has been designed to reduce traffic speed and give the road a more park-like quality, to ensure the road integrates with the park environment rather than divide it. A number of sustainability initiatives are also incorporated.

Traffic calming measures include splitting the carriageway into two one-way lanes separated by a 6.4m wide vegetated central island, 'pinch point' aprons and intermittent raingardens. Raised speed tables along with rough carriageway textures using segmental paving will assist in signaling to drivers that they are entering a pedestrian and cyclist dominant environment.

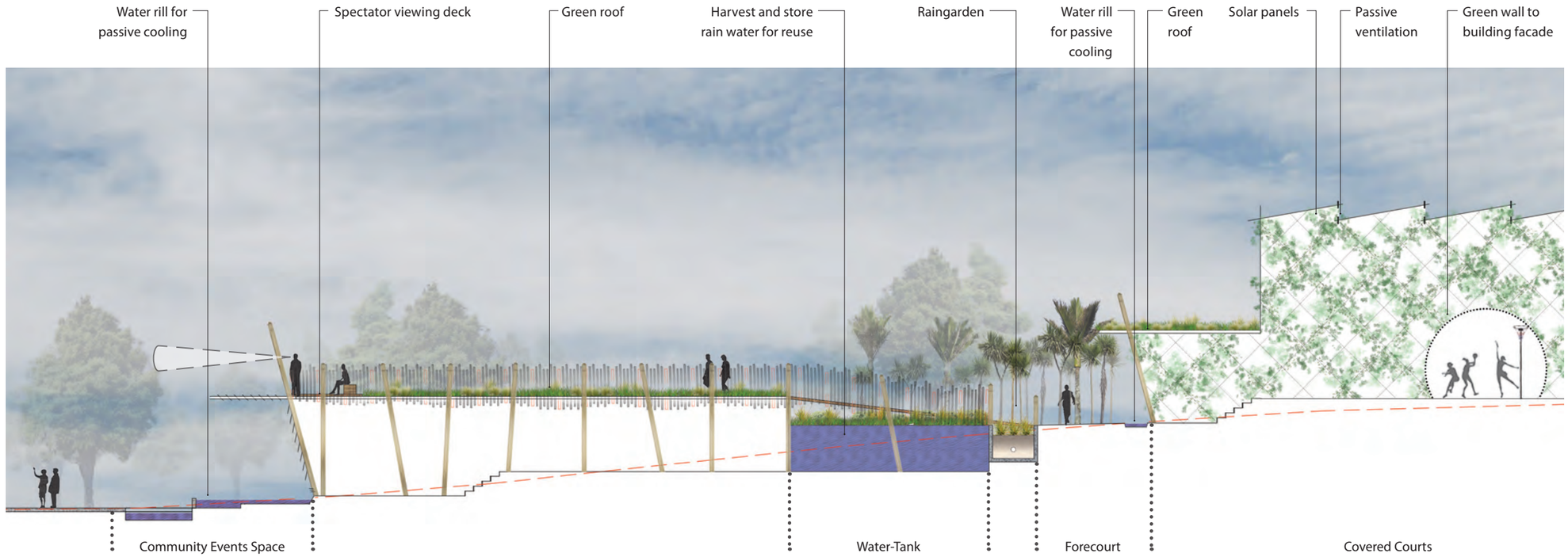
Intermittent raingardens break up extents of on-street parallel parking as well as treat stormwater runoff.

CROSS SECTIONS

This sectional elevation depicts the centrality of the multi-use hub and its connections to surrounding activities. The building takes advantage of the existing embankment to create a split level form that offers access to the roof while providing a high atrium space at the northern face. Sustainability features such as water cooling rills, green walls and roof, passive thermal control and water capture in underground tanks are all features of this green star building.

The central plaza connecting the multi-use building and the covered courts has the character of a forest setting within which the buildings are set, providing both environmental and biophilic human-nature benefits.

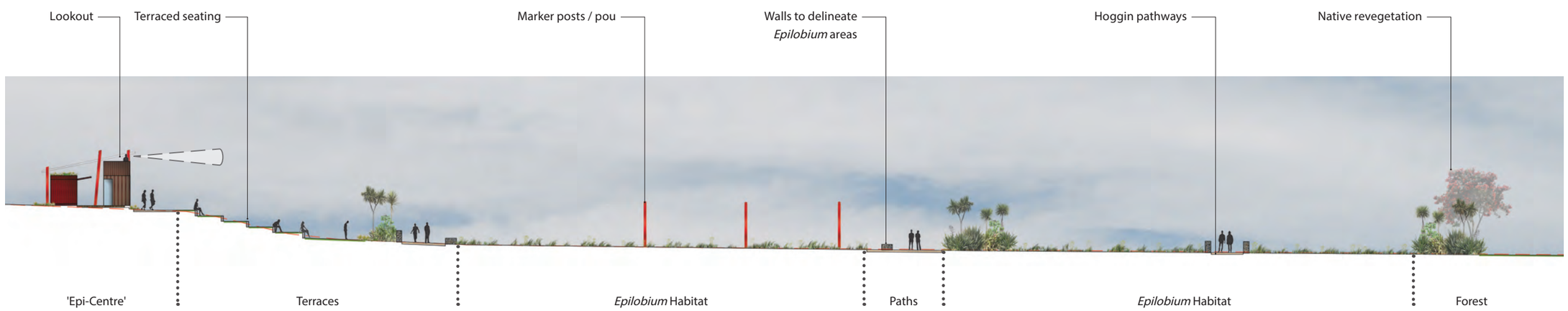
The covered courts harness solar energy, have green walls and passive thermal control.



Section A | Multi-purpose Hub with Covered Courts

Scale | 1:100 (A1); 1: 200 (A3)

0 2 4 6 8 10m

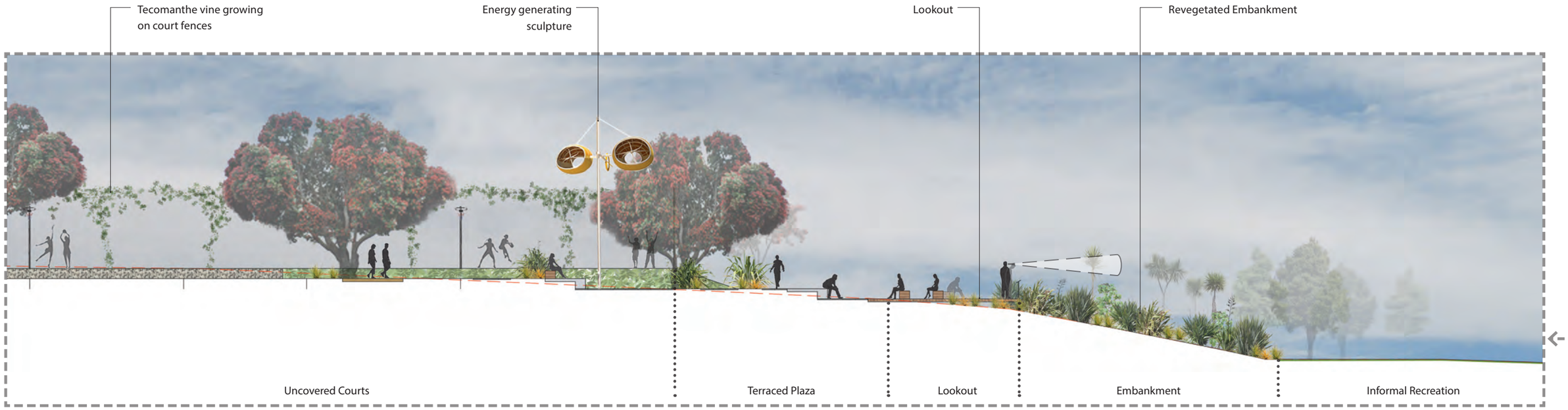


Section B | 'Epi Centre'

Scale | 1:200 (A1); 1: 400 (A3)

0 5 10 15 20m

CROSS SECTIONS

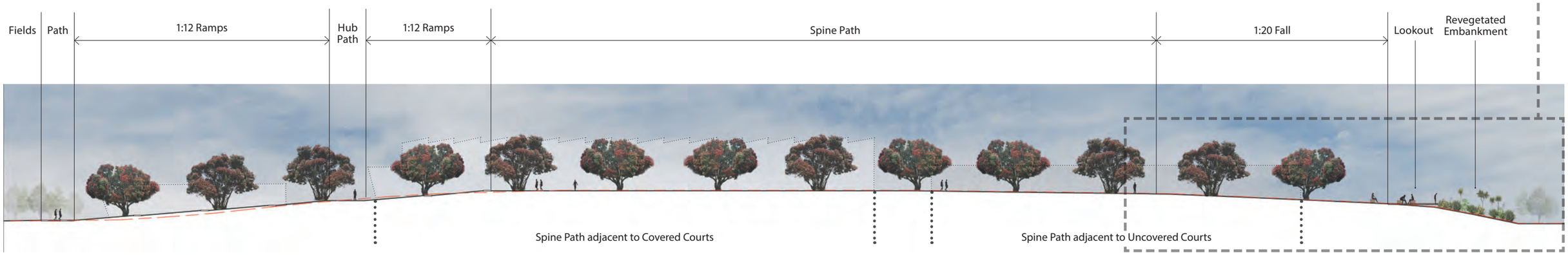


'Energy Generating Sculpture' courtesy of Suprafutures. A submission to the Land Art Generator Initiative 2010 competition. Redesigned for Pittsburgh by Suprafutures in partnership with LAGI.

Section C | The Heart

0 2 4 6 8 10m

Scale | 1:100 (A1); 1: 200 (A3)



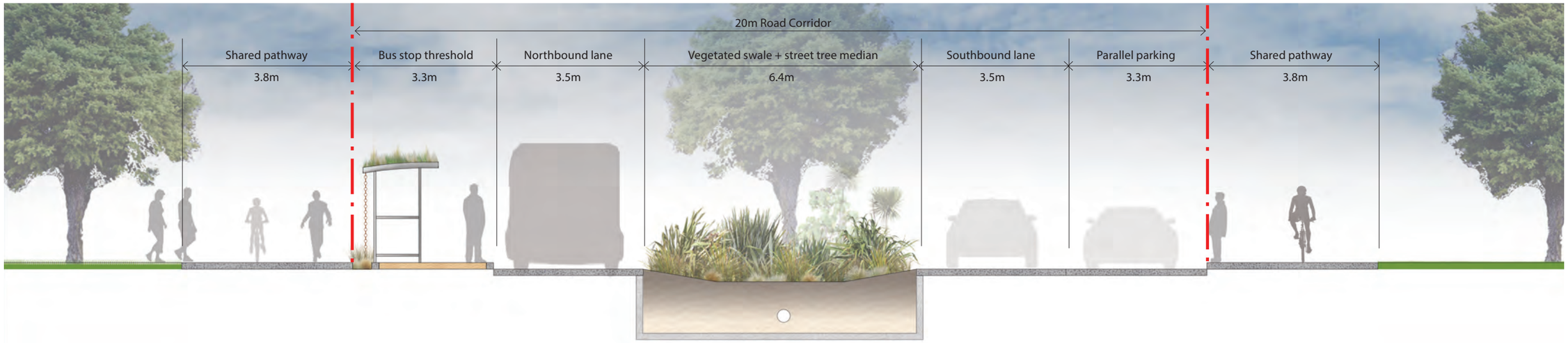
Refer to Master Plan on page 27.

Section D | Spine Path

0 5 10 15 20 25m

Scale | 1:250 (A1); 1: 500 (A3)

CROSS SECTIONS

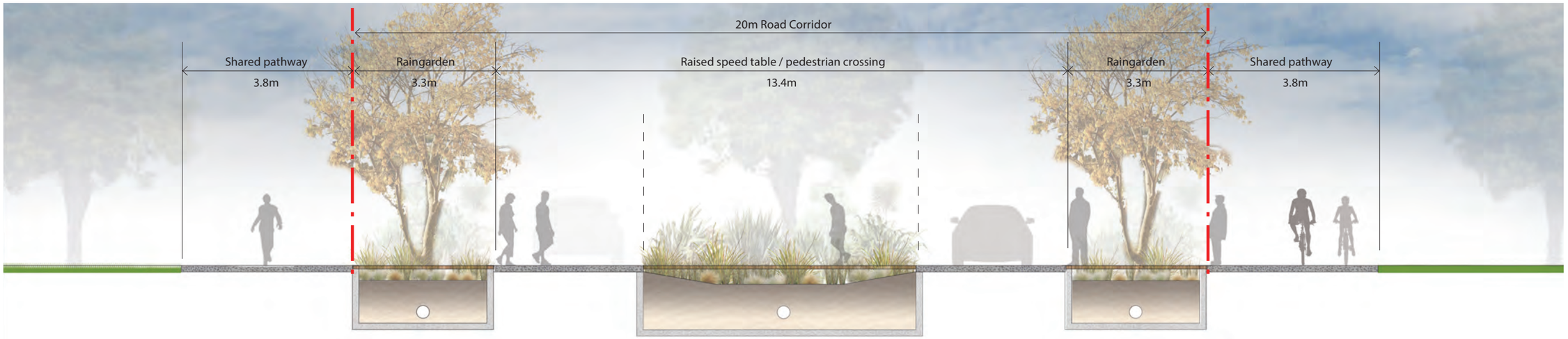


Refer to plan on page 31.

Section E | Central Avenue - Bus Stops and Parking Zones

0 1 2 3 4 5m

Scale | 1 : 100 @ A3



Refer to plan on page 31.

Section F | Central Avenue - Pedestrian Crossings

0 1 2 3 4 5m

Scale | 1 : 100 @ A3

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SUSTAINABILITY FEATURES OF THE THE MASTERPLAN

PEOPLE + PLACE

Scott Point Sustainable Sports Park will be the cherished heart of Scott Point, a place that builds community, creates a place of wellbeing and restores the uniqueness and beauty of the natural environment by:

- Recognising cultural values through the restoration of the mauri/wellbeing of the environment and portrayal of the stories of the people
- Establishing an integrated park that provides for active and informal recreation
- Connecting people with the natural environment and the wider landscape
- Revealing and celebrating the distinctive character and heritage of Scott Point
- Promoting community health and providing a safe place for gathering, interaction and enjoyment.

01 Multi-purpose hub

The central node for telling the Scott Point Sustainable Sports Park story. A community facility for sporting and non-sporting events.

02 The 'Heart' of the park

The lookout platform atop the eastern embankment will celebrate Māori heritage through bespoke cultural design and interpretation. Identified by Mana Whenua as a key location within the park, the platform will afford views over the informal recreation 'green', the stream corridor that connects to Tahingamanu (Nimrod Inlet) and the Waitematā Harbour. A renewable energy sculpture will create a hallmark feature for the Sustainable Sports Park.

03 Active and informal recreation provision

The Sustainable Sports Park will bring both the Scott Point community and visitors together through organised sport, informal games, events / organised activities and picnicking. Recreation provision also promotes community health and wellbeing.

04 Feature bridge

The design will celebrate Māori heritage through bespoke cultural design and interpretation. Tree locations and species within the informal recreation 'green' and conservation area will be positioned to ensure a visual connection between the lookout, feature bridge and harbour beyond.

05 Tākaro / Play Trail

A destination playspace, neighbourhood playspace and nature play trail will provide a network of spaces that will promote interaction, developmental skills and health and wellbeing within the youngest members of the community.

06 Skate park / BMX pump track plaza

Skate park and urban BMX pump track equipment will be provided in modular form to provide a flexible space for youth and the young at heart. Situated close to the street edge for crime prevention through environmental design (CPTED).

07 The 'Epi-Centre'

A community centre for the advocacy of conservation generally and the protection of the highly threatened species *Epilobium hirtigerum* specifically. The centre will include outdoor and indoor educational spaces, and amenities. It is envisaged that *E. hirtigerum* will become the icon for a unique Scott Point community identity.

08 Community orchard and cultural planting

Edible species and cultural plantings, as suggested by the community and Mana Whenua, includes a fruit and nut tree orchard and pā harakeke (flax cultivation) area.

09 Marker-posts and pou

Remnant horticultural nursery windbreak posts will provide markers throughout the landscape (in a similar manner to Hobsonville Point), with the opportunity for integration with cultural markers and interpretation.

10 East-west spine path

Provides a journey through the park, connecting the key spaces and offering interaction points and story telling opportunities along its length.

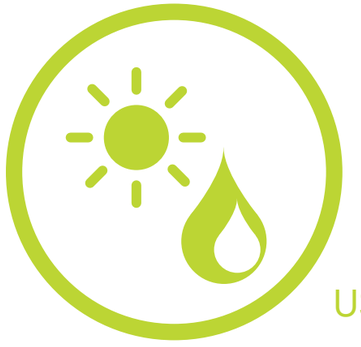
PEOPLE + PLACE

Scale | 1:1000 (A1); 1: 2000 (A3)

0 25 50 75 100m

Fitness Trail

Tākaro / Play Trail



USING RESOURCES

Scott Point Sustainable Sports Park will embrace sustainable technologies to promote renewable energy and minimise carbon emissions.

Renewable energy such as solar panels, wind turbines and kinetic energy will be fed into the energy supply for the function of the park. Provision for sustainable transportation to, from and around the site such as public transport, electric vehicles and e-bikes has been included.

Sports fields require a lot of water to be 'green' and playable. As such, best practices and innovative products for stormwater capture, treatment and reuse will minimise maintenance and use of potable water for irrigation.

The reuse of materials that exist on site, and specification of new materials with lower embodied energy, are also proposed.

01 Stormwater capture, storage and reuse

Stormwater capture from sports fields and impermeable surfaces such as roof tops will be cleansed, stored and reused to irrigate turf and planted areas. Implementation of under-pitch water storage cells and wicking technology to passively irrigate the #1 sports field.

02 Solar panels

Solar panels on roof tops will assist in self-sustaining power supply of the covered courts, the Epi-Centre and other park services.

03 E-bike and electric-vehicles provision

Electric-vehicles and E-bike charging stations will be located in strategic locations around the park. An e-bike hire concession within the covered courts building will facilitate navigation of the park and Sustainability Trail (see Innovation page) by e-bike.

04 Permeable segmental paving

The use of modular paving units will allow paving extents to be lifted and reused for future renewal projects.

05 Solar powered LED lighting

LED lights will be used for illuminating sports fields, and wind and solar energy light will be used for park amenity lighting.

06 Hoggin pathways

Hoggin (a compacted mixture of aggregate, lime and cement) will provide the predominant material for the pathway network. The material is permeable and contains significantly less cement content than concrete, and therefore has less embodied energy.

07 Permeable paving

Where hoggin is not feasible and hard paving is required, such as sloped pathways, no-fines permeable concrete will allow for the natural percolation of stormwater into the water table. Should permeable paving also be inappropriate, runoff from impermeable surfaces will be filtered using raingardens or vegetated swales before being utilised or discharged into stormwater infrastructure.

08 Composting Toilets.

09 Green roofs, raingardens and vegetated swales

Vegetated stormwater devices will cleanse runoff, negate the need for irrigation and also provide benefits with stormwater retention, evapotranspiration, habitat creation, increased biodiversity, and cooling functions.

10 Passive cooling of buildings

Measures such as water rills adjacent to buildings will cool warm summer air before entering buildings, reducing the need for air-conditioning.

11 Skate park and BMX pump track

Proprietary modular skate park and urban BMX pump track equipment will allow the spaces to be modified to create new courses, and potentially swapped with other sites around Auckland for greater diversity.

12 Partially re-use inert waste

Retaining and 'upcycling' existing site features such as the horticultural nursery windbreak posts will provide for historical and cultural features.

13 Recycling building materials

Utilising materials salvaged from the site, as well as recycling building materials salvaged from other building sites will divert from landfill and reduce the carbon footprint associated with new building materials.

USING RESOURCES

Scale | 1:1000 (A1); 1: 2000 (A3)

0 25 50 75 100m

Sustainability Trail

EMISSIONS, POLLUTION AND WASTE

Construction industry waste makes up a significant proportion of what goes to landfill. Ways to reduce construction waste in the creation of Scott Point Sustainable Sports Park include the efficient spatial layout of fields to work with the existing landform and mitigate the need for earthworks and re-using materials that exist on site. This not only reduces waste being disposed of elsewhere and the carbon emissions from moving the waste, but also reduces the need for new materials and the embodied energy associated with them.

Early contractor engagement will encourage the implementation of waste reducing initiatives and energy efficient construction techniques.

Energy efficient lighting and mimimisation of light pollution will be implemented.

01 Earthworks

A balance of cut and fill earthworks to minimise import or disposal of material and associated energy consumption has been achieved by locating large format land-uses on flatter areas of the site and smaller activities on slopes.

02 Contaminated soil

Contaminated soil concentrated on the existing steel fabrication premises on the site is proposed to be buried on site or removed to an approved disposal site.

03 Stormwater capture, storage and reuse

Stormwater capture from sports fields, and impermeable surfaces such as roof tops will be cleansed, stored and reused to irrigate turf and planted areas

04 Minimise impervious surfaces

No-fines permeable concrete and permeable segmental pavers are proposed where hard paving is required.

05 Green roofs, raingardens and swales

Vegetated stormwater devices will cleanse runoff, negate the need for irrigation also assist with evapotranspiration (transfer of water from soil and other surfaces into the atmosphere by plants).

06 Partially re-use inert waste

Retaining and 'upcycling' existing site features such as the horticultural nursery windbreak posts will provide for historical and cultural features.

07 Recycling building materials

Utilising materials salvaged from the site, as well as recycling building materials salvaged from other building sites will reduce the carbon footprint associated with new building materials.

08 Avoiding flooding - active recreation areas

Active recreation areas have been proposed largely on the upper plateau of the site, avoiding flood prone areas. Sufficient long and cross falls, as well as stormwater devices such as raingardens have been proposed adjacent to formal areas.

09 Controlling flooding - informal recreation areas

Informal areas will have less hard paved areas or permeable paving materials. Low impact stormwater devices such as vegetated swales have been proposed around and between informal areas, and overland flow paths will remain largely unimpeded.

10 Enhancement of topsoil productivity

Topsoil productivity to informal areas will be enhanced with the accumulation of organic matter within planted areas. It is anticipated that composting will be a key part of the ongoing maintenance of the park.

11 Reducing ongoing carbon emissions

Off-street car parking numbers are close to the minimum required to promote traveling to the park by more sustainable means. A network of paths for non-motorised pedestrian and cyclist movement connects all parts of the site. Charge stations for e-bikes and electric-vehicles and bus shelters along the proposed public transport routes will be provided.

12 Carbon sequestration

7.6 hectares of the 16.4 ha site will be re-vegetated, resulting in atmospheric carbon dioxide being stored long-term within 46% of the park.

EMISSIONS, POLLUTION AND WASTE

Scale | 1:1000 (A1); 1: 2000 (A3)

0 25 50 75 100m

Sustainability Trail

ECOLOGY

The development of the park represents a significant opportunity to restore the natural forest ecosystem. In time, the land will be transformed from its current degraded condition, which has resulted from successive agricultural practices, to a thriving living system supporting many sustainability outcomes including:

- Reinstatement of the cultural landscape
- Enhanced local endemism
- Increased native biodiversity
- Carbon sequestration
- Water capture, retention and polishing
- Air cooling

Furthermore, an environment of beauty and wonder will evolve as natural systems come back to life, supporting human health and wellbeing.

Some key ecological initiatives include:

- Protection of the nationally critically endangered plant species, *Epilobium hirtigerum*
- Restoration of the coastal forest ecosystem in large tracts throughout the park - mostly in the conservation area
- Predominant use of native species with limited areas of edibles and roof gardens hosting exotic species
- Linkages to the North-West Wildlink ecological corridor
- Contribution to Auckland's urban forest initiative and potential carbon credit gains

01 Use of native species

A native coastal forest ecosystem will be established throughout the site, principally in the conservation area to the southeast. Predominant use of native species for park specimen trees and planting areas.

02 Protection of *Epilobium hirtigerum*

Measures to educate the public, protect the habitat and raise awareness and advocacy for *Epilobium hirtigerum* include interpretive signage, delineation of habitat areas and creating the community 'Epi-Centre'. It is envisaged that *Epilobium hirtigerum* will become the icon for the identity of Scott Point.

03 Restoration of Nimrod Stream and Inlet

Riparian planting to filter runoff and create shade over the stream corridor to enhance the fauna and ecological value of the stream corridor and upper inlet.

04 Improve ecological value

Environmental enhancement through retention and protection of existing native vegetation from damage during construction, and planting native eco-sourced vegetation.

05 Low-maintenance grass areas

Low-maintenance mowing regimes for grass within informal recreation areas to minimise carbon emissions and promote the biodiversity of insects and invertebrates.

06 Low maintenance soft landscape works

Selection of plant species within amenity planting areas that require lower levels of maintenance to minimise carbon emissions and green waste.

07 Improve habitat connectivity

Improvements to local habitat connectivity include creating 'green corridors' through tree planting, raingardens, swales and green roof vegetation. Incorporation of the North-West Wildlink principles including providing fruiting plants for birds to enhance regional ecological connectivity.

08 Urban Forest Initiative

46% of the site comprises re-vegetation and green corridors, contributing to Auckland Council's Urban Forest initiative.

ECOLOGY

Scale | 1:1000 (A1); 1: 2000 (A3)

0 25 50 75 100m

INNOVATION

To create a truly sustainable sports park, lateral thinking that differs from 'standard' design and construction processes is required.

Scott Point Sustainable Sports Park will embrace sustainable technologies such as renewable kinetic energy and provision for electric vehicles and e-bikes.

The unique conditions that the critically endangered species *Epilobium hirtigerum* thrives in requires an equally unique response: managed disturbance through community 'earth scraping' days.

Sports fields require a lot of water to remain 'green' and playable. As such, best practices and innovative products for stormwater capture, treatment and reuse will minimise maintenance and use of potable water for irrigation.

A 'sustainability trail' made up of a network of educational spaces will help tell the Scott Point Sustainable Sports Park story.

01 Sustainability trail

A mapped route around the park with a number of learning 'nodes' to educate visitors about the sustainability story of Scott Point Sustainable Sports Park, it's design measures, technologies and iwi and community commitment. The route can be navigated using non-motorised movement including electric bikes to connect people with the sustainability message and Augmented Virtual Reality.

02 Protect and enhance *Epilobium spp.*

Measures to educate the public, protect the habitat and raise awareness and advocacy for *Epilobium hirtigerum* include interpretive signage, delineation of habitat areas and creating the community 'Epi-Centre' It is envisaged that *Epilobium hirtigerum* will become the icon for the identity of Scott Point.

03 Community 'scraping' days

Epilobium hirtigerum is a colonising species that thrives following a disturbance to the land. Annual community 'scraping' events will be a community building ritual that will promote the *Epilobium* habitat.

04 Landmark energy-generating sculpture

An energy-capturing sculpture will create a hallmark feature for the sustainable sports park.

05 Kinetic energy generation

Energy generation though movement. Human activated movement such as Pavegen (kinetic pavers) and dynamos attached to cycle and play equipment will be utilised to supply the park's energy needs, as well as potentially becoming a visitor attraction in it's own right.

06 E-bike and e-vehicles charging stations

Electric-vehicle charging stations will be provided in strategic locations around the park and along the Sustainability Trail. An e-bike hire concession within the hub will facilitate navigation of the park.

07 Use of Airlite paint

Airlite paint purifies air with a technology based on the photocatalytic oxidation effect of titanium dioxide (TiO2), which is activated by light.

08 Hybrid sports turfs

An optimum selection of natural and synthetic turfs ensures enduring pitches with lower levels of maintenance required.

09 Augmented Virtual play and events

Mobile device applications ('Apps') can be applied to the site to promote play and activation, creating another realm of interaction with the park with minimal material infrastructure and maintenance required.

10 Stormwater capture, storage and reuse

Stormwater capture from sports fields, and impermeable surfaces such as roof tops will be cleansed, stored and reused to irrigate turf and planted areas. Implementation of under-pitch water storage and wicking technology utilised to passively irrigate sports fields.

11 *Epilobium spp.* ambassadors

Fostering community ambassadors to champion the protection of the nationally critically endangered plant species.

INNOVATION

Scale | 1:1000 (A1); 1: 2000 (A3)

0 25 50 75 100m

Sustainability Trail

Sustainability Trail 'Nodes'

MANAGEMENT + GOVERNANCE

The sustainability measures and principles for Scott Point Sustainable Sports Park don't just end once it is designed and constructed.

Ongoing operational considerations, maintenance and community involvement will need to continue in a sustainable way to ensure the core sustainability principles and Māori cultural values established at the parks inception are adhered to.

A Climate Change Risk Assessment Workshop was held with Auckland Council's Sustainability and Resilience Advisors in October 2017 to identify high level risks and mitigation measures that could be integrated into the design, as well as the future operation of the park.

Subsequently, the ability to adapt to changes such as rising temperatures and sea level rise has been considered in the master plan, as identified within these 'Sustainability Features' pages. The park will also need to continue to respond to change as the years progress.

01 Dog restrictions near coastline

Mana Whenua have requested that dog exercising in proximity to the coast not be permitted to protect the local ecology.

02 Management of light pollution

Management of light pollution to protect bird flight paths, as recommended by Mana Whenua.

03 Continued engagement with Mana Whenua

Inclusion of Te Kawerau Iwi Tribal Authority and Nga Maunga Whakahii o Kaipara in subsequent design stages, procurement, construction and maintenance and operations of the site.

04 Naming and ceremonies

Guidance sought from Mana Whenua in the appropriate naming of places within the site, and inclusion of kaumatua and kuia in significant ceremonies.

CLIMATE CHANGE RESILIENCE MEASURES

<u>Extreme weather events</u>:

05 Impermeable surfaces kept to a minimum.

06 Stormwater devices such as raingardens and vegetated swales provide capacity for stormwater retention.

07 Stormwater capture and storage.

08 Provision of shelter from storm events.

09 Infrastructure built to withstand the effects of climate change.

<u>Drought and temperature rise:</u>

10 Reuse of captured stormwater, including under-pitch water storage and wicking technology utilised to passively irrigate #1 sports field.

11 Provision of shade.

12 Passive cooling measures to buildings.

<u>Sea Level Rise:</u>

13 Gradual succession of plant species within stream corridor may need to be succeeded by more saline-tolerant species to ensure ongoing coverage and ecological success.

14 *Epilobium hirtigerum* habitat may move if water table becomes gradually more saline. Ongoing monitoring essential.

CLIMATE CHANGE ADAPTION MEASURES

<u>Extreme weather events:</u>

15 Potential to provide capacity for retention of stormwater on site (i.e. within open fields) may need to be created on site, particularly if development within the stormwater catchment progressively intensifies over time.

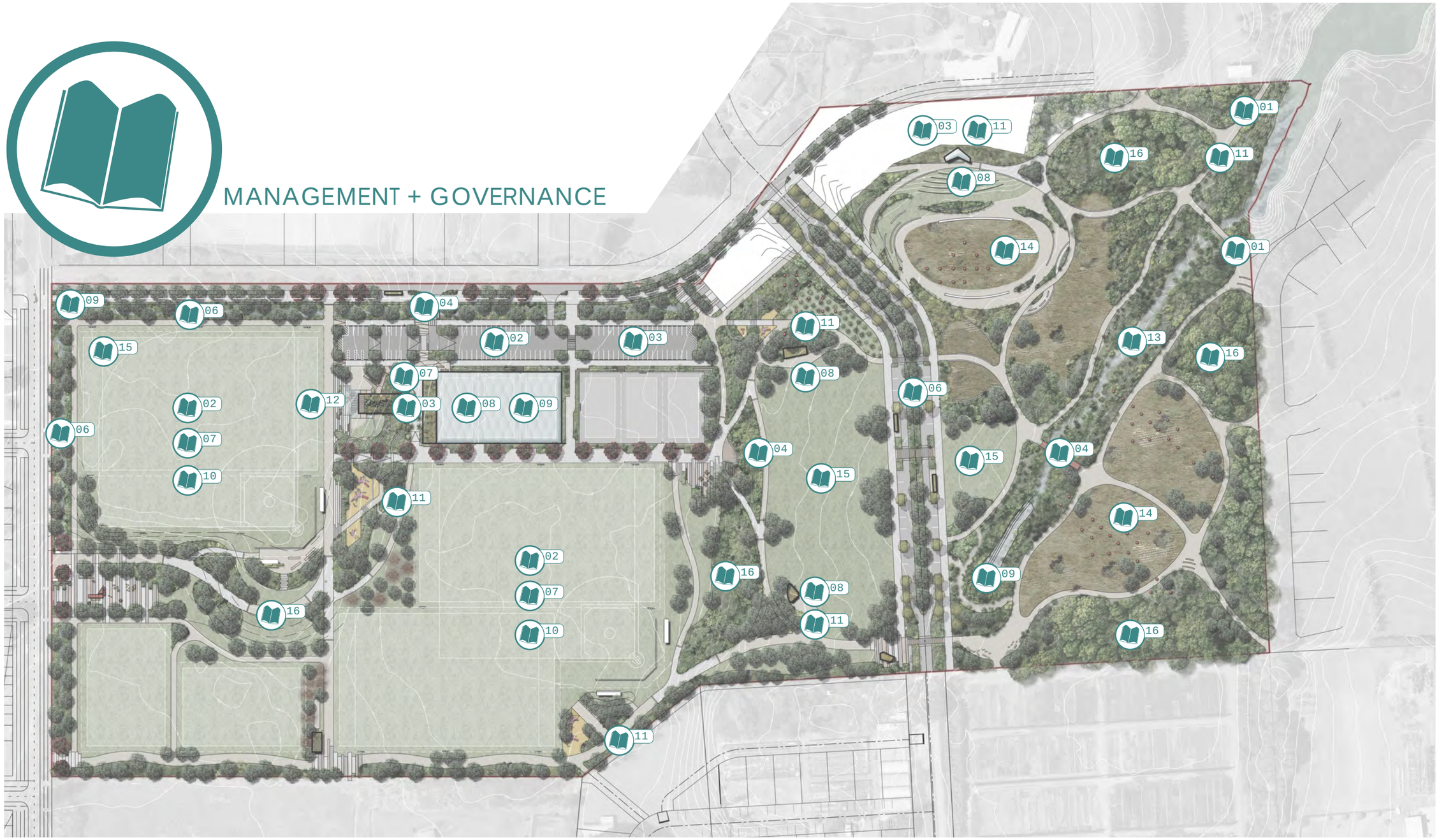
<u>Drought and temperature rise:</u>

16 Successional revegetation to more drought tolerant native species may be required in the long term.

<u>Sea Level Rise</u>

Refer numbers 13 and 14.

MANAGEMENT + GOVERNANCE



Scale | 1:1000 (A1); 1: 2000 (A3)

0 25 50 75 100m

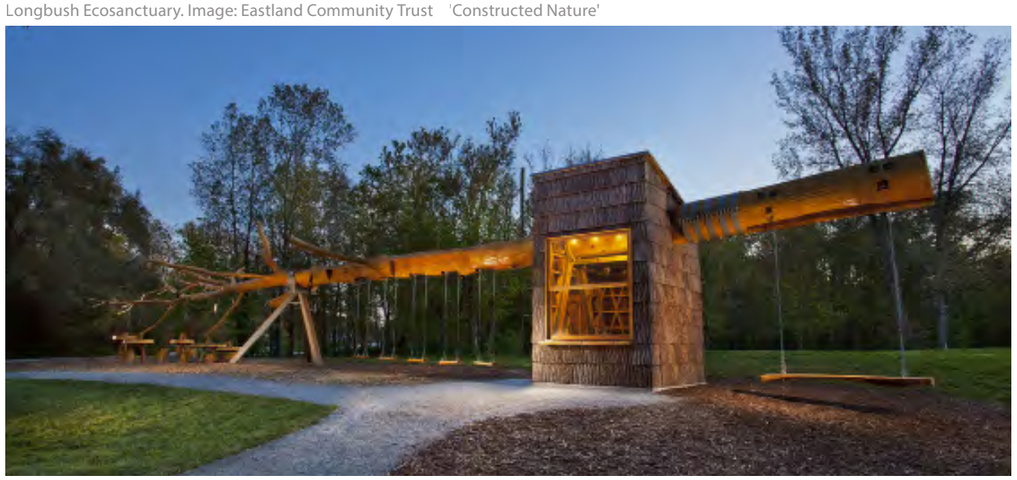
CHARACTER EXEMPLAR IMAGES

IMAGE 'A'

Landmark energy-generating sculpture

Longbush Ecosanctuary. Image: Eastland Community Trust

'Constructed Nature'



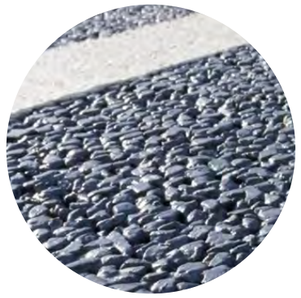
Integrating built form into the landscape, with use of green roofs

IMAGE 'A' COURTESY OF SUPRAFUTURES

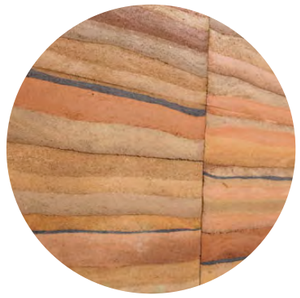
A submission to the Land Art Generator Initiative 2010 competition. Redesigned for Pittsburgh by Suprafutures in partnership with LAGI.

MATERIALS PALETTE

Timber



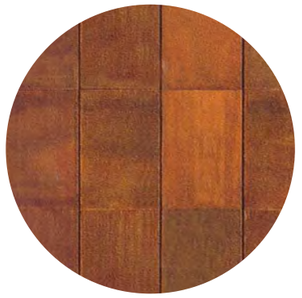
No-fines permeable concrete



Rammed Earth

Gabion Mesh Baskets

Hoggin (Compacted Aggregate + Lime)



Corten Steel

Combination of timber and corten steel

Wooten Road Reserve, Australia. Design: Glas Urban. Image: D. Echberg

Green Star rated buildings

Walls using stone filled gabion mesh baskets

PLANTING PALETTES

The majority of the following plant palettes include 90% and 10% planting mixes. 90% mixes comprise species which are most likely to thrive in the associated planting zone and build biodiversity by providing the conditions for other species that are appropriate for the ecosystem. 10% mixes are supporting species to assist with regeneration and reduce the chance for invasive species from establishing, and may be dependent on the establishment of other species.

Epilobium hirtigerum Habitat

Epilobium hirtigerum's natural occurrence on wetland edges may be attributed to the relatively low growing heights of native wetland species, allowing the *Epilobium spp.* to receive higher levels of light. As such, a selection of wetland species are proposed for the periphery of the *Epilobium* areas on site to minimise shade.

Swales and Raingardens

Swales and raingardens have multiple functions including treating stormwater, providing for human contact with nature and providing habitat corridors, particularly when paired with street trees. Stormwater runoff is treated and cleansed when it comes into contact with the vegetation. Higher levels of sun light promotes the dense growth of grasses and sedges, providing for greater vegetation contact with stormwater. Therefore, predominantly low growing species and tree species that allow higher sun penetration have been selected.

90% of Planting mix

Alternanthera denticulata
Lesser Joyweed

Centella uniflora
Centella

Cyperus ustulatus
Giant Umbrella Sedge

Epilobium hirtigerum

Juncus pallidus
Giant Rush or Wiwi

Haloragis erecta
Toatoa

10% of Planting mix

Carex virgata

Coprosma robusta
Karamu

Cordyline australis
Cabbage Tree

Kunzea linearis
Kanuka

Leptospermum scoparium
Mānuka

Phormium tenax
Harakeke

90% of Planting mix

Astelia trinervia
Kauri grass

Blechnum minus
Swamp Kiokio

Carex virgata

Doodia australis
Pukupuku

Juncus pallidus
Giant Rush or Wiwi

Machaerina juncea
Tussock Swamp Twig Rush

10% of Planting mix

Carex testacea

Cordyline australis
Cabbage Tree

Dianella haematica
Turutu

Muehlenbeckia complexa
Scrambling Pohuehue

Phormium cookianum
Mountain Flax

Plagianthus divaricatus
Fragrant Ribbonwood

PLANTING PALETTES

Riparian Margins

The riparian margin palette is a combination of swale species, which assists with treating stormwater, and Coastal Forest Ecosystem species (following page), which assist with creating shade over the watercourse to keep water temperatures down and contribute to the overall 'green corridor'. Swale species are predominantly concentrated in the 'shallows and lowland' zones of the watercourse, while the coastal forest species will be planted in the 'drier or higher' parts of the stream profile.

Shallows and Low Land

90% of Planting mix

Carex virgata

Juncus pallidus
Giant Rush or Wiwi

Machaerina juncea
Tussock Swamp Twig Rush

10% of Planting mix

Blechnum minus
Swamp Kiokio

Cyperus ustulatus
Giant Umbrella Sedge

Cordyline australis
Cabbage Tree

Dianella haematica
Turutu

Phormium tenax
Harakeke

Drier and Higher

90% of Planting mix

Carex virgata

Cordyline australis
Cabbage Tree

Coprosma robusta
Karamu

Kunzea linearis
Kanuka

Leptospermum scoparium
Mānuka

Melicytus ramiflorus
Mahoe

Phormium tenax
Harakeke

10% of Planting mix

Brachyglottis repanda
Rangiora

Dacrycarpus dacrydioides
Kahikatea

Knightia excelsa
Rewarewa

Metrosideros excelsa
Pōhutukawa

Podocarpus totara
Totara

Pseudopanax lessonii
Houpara

Sophora chathamica
Kōwhai

PLANTING PALETTES

Coastal Forest Ecosystem

The Coastal Forest Ecosystem palette is a selection of pioneer species from the 'Broadleaf' and 'Coastal Pohutukawa' ecosystems found near Hobsonville. This palette will be used for the revegetation of the conservation area and embankments through the site. This will contribute to bush corridors through the site and improve ecological connectivity for bush regeneration beyond the site boundaries.

90% of Planting mix

Cordyline australis
Cabbage Tree

Gahnia setifolia
Mapere

Hebe macrocarpa

Kunzea linearis
Kanuka

Melicytus ramiflorus
Mahoe

Phormium tenax
Harakeke

10% of Planting mix

Entelea arborescens
Whau or Corkwood

Knightia excelsa
Rewarewa

Metrosideros excelsa
Pōhutukawa

Muehlenbeckia complexa
Scrambling Pohuehue

Sophora chathamica
Kōwhai

Weinmannia silvicola
Tōwai or Tawhero

Green Roof Planting

Green roofs will be planted using low growing native species tolerant of sunny, dry conditions, as well as short periods of wet, similar to raingardens.

Coprosma acerosa
Sand Coprosma

Disphyma australe
New Zealand Iceplant

Libertia Peregrinans
New Zealand Iris

Acaena microphylla
New Zealand Bidibid

Festuca coxii
Native Tussock

Muehlenbeckia complexa
Scrambling Pohuehue

Pimelea prostrata
New Zealand Daphne

Signature Trees, Street Trees & Amenity Stands

The selection of native specimen trees, opposite, will be used to define various character areas within the park.

Corynocarpus laevigatus
Karaka
(Amenity Stands)

Dacrycarpus dacrydioides
Kahikatea
(Amenity Stands)

Knightia excelsa
Rewarewa
(Street Tree)

Metrosideros excelsa
Pōhutukawa
(Signature and Street Tree)

Podocarpus totara
Totara
(Amenity Stands)

Sophora chathamica
Kōwhai
(Signature Tree)

Vitex lucens
Puriri
(Amenity Stands)

PLANTING PALETTES

Rongoa and Pā Harakeke

Aristotelia serrata
Makomako or Wineberry

Myoporum laetum
Ngaio

Piper excelsum subsp. excelsum
Kawakawa

Pomaderris kumeraho
Kūmarahou

Phormium cookianum
Mountain Flax

Phormium tenax
Harakeke

Edibles

Acca spp.
Feijoa

Castanea sativa
Sweet Chestnut

Citrus spp.
Citrus

Juglans regia
Walnut

Malus domestica
Apple

Persea americana
Avocado

Heritage

Agathis australis
Kauri

Dacrycarpus dacrydioides
Kahikatea

Metrosideros excelsa
Pōhutukawa

Phyllocladus trichomanoides
Tanekaha

Pittosporum crassifolium
Karo

Cultural Planting

These plant selections are species chosen for their cultural significance. They include species used for cultural practices which are of significance to Mana Whenua, species for food production which were a desire of the local community, and also species that were historically or are currently present on site.

Rongoa are plants with medicinal properties. Pā Harakeke is the cultivation of flax for weaving and other uses.

Edible species include both fruit and nut trees which will provide the basis for a community orchard within the park.

Heritage trees include species which have been identified as being present in the area from historical documents, as well as present day native species that have been identified on site.

Other Amenity Planting

This palette comprises a selection of hardy native species for amenity planting areas, with the inclusion of other rare NZ plants such as Kākā Beak, Native Spurge and Tecomanthe.

Blechnum minus
Swamp Kiokio

Carex testacea

Carex virgata

Clianthus puniceus
Kākā Beak

Euphorbia glauca
Waiūatua or Native Spurge

Phormium cookianum
Mountain Flax

Tecomanthe speciosa
Native bignonia

APPENDICES


HAIL D5 and HAIL G5
121 Clark Rd
HAIL G5
129 Clark Rd
133 Clark Rd
131A Clark Rd
HAIL A10
125 Clark Rd
HAIL A10 and HAIL H
131 Clark Rd
HAIL G5
5A Scott Rd
9 Scott Rd
11 Scott Rd
Key
Scale @ A5
Auckland Council

The following text are summaries of the technical reports that informed the design process and resultant Masterplan.

GEOTECHNICAL:

Preliminary Geotechnical Appraisal report, October 2016, Opus, gs16/083, 1-C1514.00

A preliminary geotechnical appraisal was undertaken in order to describe the engineering geological settling and conditions of the site and to identify any geotechnical constraints associated with developing the site.

The PGA assessment included a desktop review of published geology, historical reports in the area, historical photographs, a site walkover inspection and limited hand auger testing to confirm the published geology.

THREE ZONES WERE IDENTIFIED BASED ON THE TERRAIN;

- Northern zone – mostly flat low lying terrain that is prone to localised ponding of surface water. It is proposed that this area will be used as a sports field. The soils are generally stiff, which would indicate settlement will not be an issue, however the grade level may need to be raised to facilitate adequate drainage.
- Central zone – a raised terrace that runs across the centre of the site that is elevated some 5m relative to the surrounding terrain. The slopes forming the flanks of the terrace feature range between 5˚-20˚ and there are no signs of slope instability. The top surface of the terrace is generally flat. The central zone is proposed to be mainly sports fields with a carpark, driveway access and a club room. No geotechnical constraints are anticipated with the proposed works.
- Southern zone – the southern portion of the site is generally flat to gently sloping and is dominated by a stream channel that leads to the nimrod coastal inlet. It is proposed that a through road, playgrounds, commercial neighbourhood centre, wetland and dog walking area be built in this area of the site. The geotechnical constraints are low subject to geotechnical design, with the exception of the stream banks that currently have areas of slumping. Based on terrain assessment banks <3m high can be 2h:1v and banks between 3m and 6m should be battered to be between 3h:1v and 4H:1V.

ARCHAEOLOGY:

Archaeological Assessment of Effects for Scott Point Sustainable Park,
June 2017, Opus. 1-C1514.00

An archaeological assessment was undertaken to assess the potential for archaeological values to be present within the proposed works area, the potential effects of the proposed works on archaeological values, and the magnitude or significance of those effects.
No known or recorded archaeological sites were identified within the boundary of the subject property. However, due to the location of the property within a relatively unknown archaeological landscape there is potential that buried archaeological sites may exist and will be affected by the proposed works.

RECOMMENDATIONS FOR MANAGEMENT OF ARCHAEOLOGICAL EFFECTS INCLUDE THE FOLLOWING;

- An addendum report assessing the effect of the proposed earthworks against the archaeological values should be completed once the final design and earthworks details become available.
- A pre-application meeting should be arranged with the Heritage New Zealand Pouhere Taonga Regional Archaeologist (as per HNZPT guidelines for applicants) to discuss the archaeological component of the project and to confirm legal archaeological requirements for the subject property.
- An archaeological authority application to Heritage New Zealand Pouhere Taonga should be made for a general Archaeological Authority, as per the direction of the Heritage New Zealand Pouhere Taonga Regional Archaeologist.
- An Archaeological Management Plan should be prepared to accompany the Archaeological Authority application.
- Consultation should be undertaken with tangata whenua in regards to archaeological authority applications to Heritage New Zealand Pouhere Taonga.

INFRASTRUCTURE:

Infrastructure Assessment Report,
February 2017, Opus, 1-C1514.00

An infrastructure assessment was carried out which reviewed the facilities and new service connections that would be likely required for the development and highlighted constraints impacting the development. Elements considered included water supply, wastewater disposal, stormwater drainage, power supply, telecommunication, and geotechnical advice and land contamination.
Details on the conclusions and recommendations can be found in the referenced report.

SCOTT POINT SUSTAINABLE PARK MASTER PLAN

GENERAL FEATURES

- A Multi-purpose hub
- B Epilobium hirtigerum conservation area
- C 'Epi-Centre'
- D Central 'spine path'
- E Lookout featuring Māori art interpretation
- F Landmark energy-generating sculpture
- G Split carriageway central road with traffic calming measures
- H Sustainable car park area
- I Barbecue areas
- J Community orchard
- K Pā Harakeke (flax cultivation) area
- L Destination playground
- M Nature play scape
- N Amphitheatre for open-air movies and community events
- O Feature pedestrian footbridge

SPORTS PROVISION

- 1 Large format fields
- 2 Junior fields
- 3 Covered courts
- 4 Open aired courts
- 5 Informal recreation 'green'
- 6 Flexible plaza area for modular skate park / BMX pump track equipment
- 7 Petanque / Bowls / Kubb area

Enlargement areas

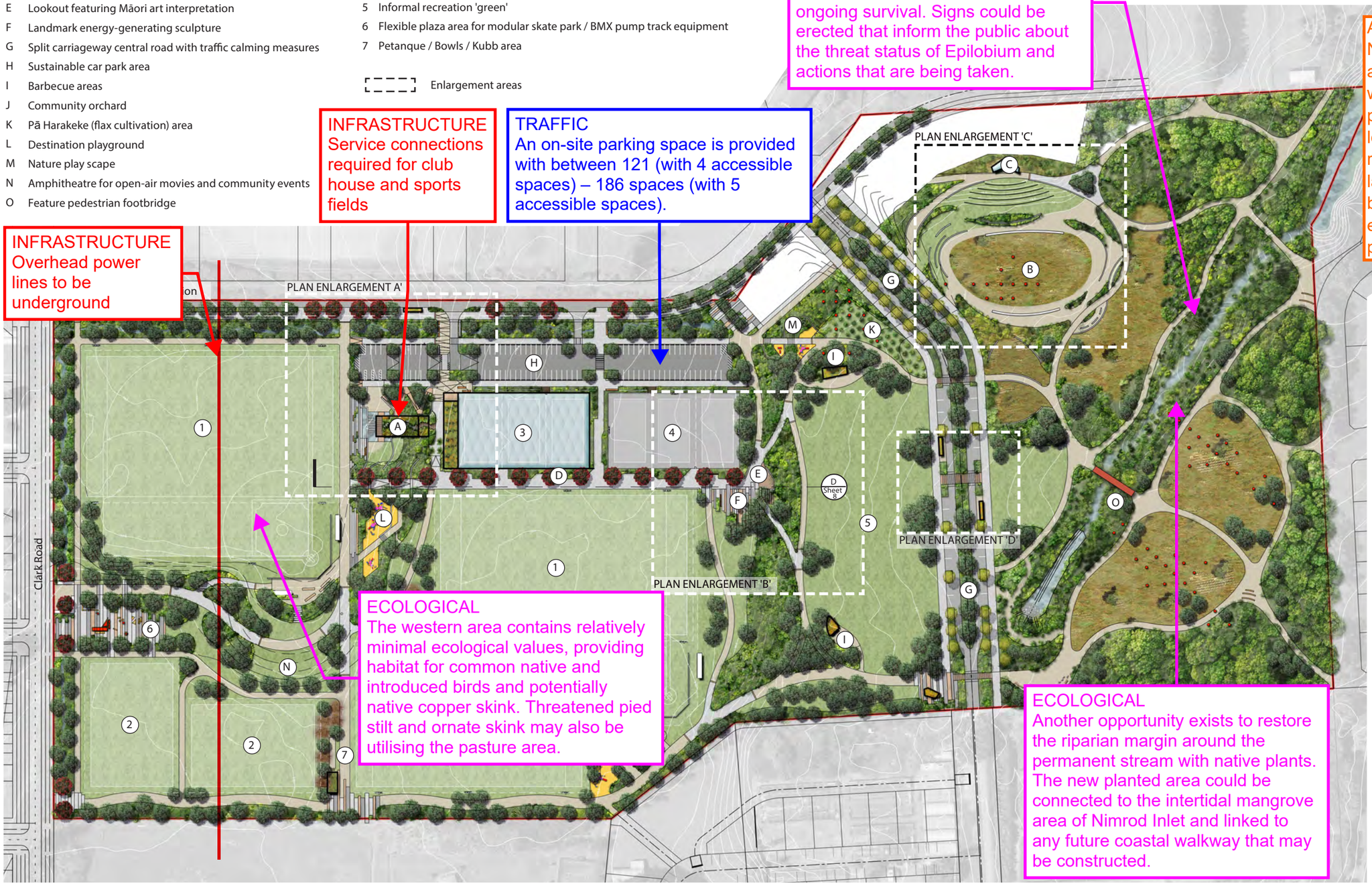
ECOLOGICAL
An opportunity exists to restore the Epilobium area with native sedges and herbs that are conducive to its ongoing survival. Signs could be erected that inform the public about the threat status of Epilobium and actions that are being taken.

ARCHAELOGICAL
No known or recorded archaeological sites were identified within the boundary of the subject property. However, due to the location of the property within a relatively unknown archaeological landscape there is potential that buried archaeological sites may exist and will be affected by the proposed works.

INFRASTRUCTURE
Service connections required for club house and sports fields

TRAFFIC
An on-site parking space is provided with between 121 (with 4 accessible spaces) – 186 spaces (with 5 accessible spaces).

INFRASTRUCTURE
Overhead power lines to be underground



ECOLOGICAL
The western area contains relatively minimal ecological values, providing habitat for common native and introduced birds and potentially native copper skink. Threatened pied stilt and ornate skink may also be utilising the pasture area.

ECOLOGICAL
Another opportunity exists to restore the riparian margin around the permanent stream with native plants. The new planted area could be connected to the intertidal mangrove area of Nimrod Inlet and linked to any future coastal walkway that may be constructed.

LEGEND

- Existing and protected Epilobium hirtigerum habitat
- Native revegetation
- Vegetated swales to capture & cleanse water from impervious surfaces
- Stream corridor restoration
- Turf sports field surfaces with stormwater harvesting
- Grassed amenity areas
- Roof top solar panels
- No-fines permeable paving
- Permeable paving / asphalt falling to stormwater swales
- Permeable segmental paving
- Hoggin (compacted aggregate + lime)
- Play spaces
- Coastal Marine Area (CMA)

0 25 50 75 100m

Scale | 1:1000 (A1); 1: 2000 (A3)

ECOLOGY:

Ecological Opportunities and Constraints, February 2017, Opus, 1-C1514.00

A preliminary ecological assessment looked to identify high level ecological values within the site and any connectivity that existed with the surrounding landscape, with the intention to take advantage of the key ecological opportunities.

THE ASSESSMENT DETERMINED THAT;

- The site can be divided into two separate ecological areas – west/east.
- The western area contains relatively minimal ecological values, providing habitat for common native and introduced birds and potentially native copper skink. Threatened pied stilt and ornate skink may also be utilising the pasture area.
- Ecological values of the eastern section of the site are higher due to the presence of the highly threatened plant *Epilobium hirtigerum.* A permanent stream with moderate ecological values is present within the eastern area.
- An opportunity exists to restore the *Epilobium* area with native sedges and herbs that are conducive to its ongoing survival. Signs could be erected that inform the public about the threat status of *Epilobium* and actions that are being taken.
- Another opportunity exists to restore the riparian margin around the permanent stream with native plants. The new planted area could be connected to the intertidal mangrove area of Nimrod Inlet and linked to any future coastal walkway that may be constructed.

FURTHER RECOMMENDATIONS INCLUDED;

- An ecological assessment of effects should be produced to support the consent application;
- Lizard management should occur during construction;
- *Epilobium* management should be incorporated into any future development.

TRAFFIC:

Traffic Impact Assessment, February 2017, Opus, 1-C1514.00/TRAFF

A Traffic Impact Assessment was prepared to address the impact of the development on the surrounding road network and focused on;

- The assessment of trip generation of the development and the impact on parking and public transport demand on the reserve during the peak Saturday period.
- Assessment of the on-site transport infrastructure against relevant planning rules, including parking, loading, walking and cycling facilities and accesses.

THE ASSESSMENT IDENTIFIED THAT;

- The effect on the local road network should be minor.
- Demand due to sport field use is expected to be between 210 and 375,
- Based on the level of demand above, and the expected number of on-street parks, an off-street parking facility at the site will need to be between 81 and 261 spaces.
- However, the Unitary Plan has provisions to minimise the amount of on-site parking provided by new developments and encourages the sharing of on-street parking between activities. With this understanding, 186 onsite parking spaces should be the maximum supplied on site (for 4 fields rugby fields in use), while 121 parking spaces for 4 fields would provide an acceptable number of parks based on 0.7 parks per 100m2.

RECOMMENDATIONS INCLUDE;

- An onsite parking space is provided with between 121 (with 4 accessible spaces) – 186 spaces (with 5 accessible spaces).
- The car park should be placed close to Squadron Drive extension to minimise motorised traffic through the site, and close to the clubrooms for ease of access. The car park should be built to dimensions given in the Unitary Plan.
- Access to the site should be developed with either a two-way single access point or a one-way system with entry to the east and exit to the west.

PLANNING:

Preliminary Planning Assessment,
November 2016, Opus, 1-C1514.00

A preliminary planning assessment was prepared in order to determine the likely resource consent requirements associated with the development. The report included an assessment of the project against the relevant planning legislation, which included:

- Requirements of the Resource Management Act (RMA);
- Proposed Auckland Unitary Plan Decision Version (PAUP DV); and
- The (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES Soil).

The assessment identified that the proposed development will require resource consent for a Discretionary Activity under the PAUP DV. Consent may also be required under the NES Soil as either a Controlled or Discretionary Activity following further investigation.

RECOMMENDATIONS INCLUDED;

- Engage engineering specialists identified in Table 2-2 to support the preparation of an AEE.
- Engage a contaminated land specialist to determine if there is a risk of contamination or a risk of historical activities contaminating the site.
- Engage in consultation with the landowners and stakeholders identified in Table 3-1 as soon as practicable.
- Engage iwi to determine if a cultural value assessments would be required.

CONTAMINATION:

Detailed Site Investigation for Land Contamination,
March 2017, Opus, GS 17/008

A detailed contamination assessment was undertaking involving intrusive sampling, testing and analyses of results in terms of statutory requirements and landfill acceptance criteria. An earlier preliminary site investigation (October 2016, GS16/059) determined that HAIL activities had occurred on the proposed development area and these activities had the potential to cause ground contamination.

The testing determined that;

- All soils within the proposed development area, down to a depth of 0.5m below ground level are of managed fill quality. Managed fill soils may be reused on site or disposed of to a managed fill site
- All soils within the proposed development area, below a depth of 0.5m (below 0.8m around stainless steel workshop) are of cleanfill quality. Cleanfill soils may remain in place, be re-used or disposed of to a cleanfill site.
- Soils down to a depth of 0.8m below ground level around the stainless steel workshop exceeded the nickel PA limits for environmental discharge under the Auckland Unitary plan and as result, may be left in place or disposed of to a managed fill site, but cannot be re-used.

RECOMMENDATIONS INCLUDED;

- Detailed design is required in order to assess whether the disturbance of soils within the site is a Permitted Activity or a Controlled Activity under the AUP.
- Testing and monitoring of groundwater, overland stormwater flow from a stormwater drain and surface water within Nimrod Inlet Creek to be undertaken.

STAKEHOLDER ENGAGEMENT:

Iwi, Stakeholder and Community Engagement Strategy and Communications Plan,
May 2017, Opus,

The purpose of the stakeholder and community engagement and communication plan was to ensure that those who have a direct or indirect interest in the future park were part of the decision-making process. To achieve this, stakeholders were engaged at key points throughout the process to ensure that their needs and aspirations were considered and, where possible, influence the design of the park.

This Plan:

- Provides a project overview
- Sets out the framework for engagement
- Sets out the scope of the decision making including what is negotiable and non-negotiable
- Details the purpose and objectives of the engagement and defines the tools and activities in conducting the consultation
- Identifies broadly the parties to be involved in the consultation and identifies the tools and activities proposed in conducting the consultation; and
- Identifies the tools and activities proposed in conducting the consultation.

EPILOBIUM REPORT :

The Epi Eco Park - The Objectives, Management Needs & Outstanding Opportunities,
September 2017, Opus,

Epilobium hirtigerum is a nationally critical, threatened species. While there are other ecological objectives for the new park in Hobsonville, both habitat and ecosystem service related, the presence and threat status of *E. hirtigerum* means there is one outstanding objective, that if not met, means New Zealand risks losing another species to extinction.

Design requirements:

- Site maps need to identify all suitable *E. hirtigerum* habitats, and …
- Retain all habitat areas than can host the *E. hirtigerum* colonies meta population, whether or not they currently have *E. hirtigerum* growing in them
- Access for machinery (and other active management) to allow rotational scraping of the soil surface
- Promote design features that can be undertaken without reducing the height of the water table; and explicitly require implementation works to be undertaken in a way that complies with this requirement
- Seek to engage the community in designing the park, and …
- Include design features that help build engagement with the park and *E. hirtigerum* as its point of difference

RELATED DESIGN SUGGESTIONS:

- Identify sites for ecological restoration that neighbour *E. hirtigerum* sites to create ecological sequences. It is suggested that these sites be restored to coastal forest ecosystem.

End of document.