JANUARY 2022

PREPARED BY

OCULUS

SOUTHERN STABLING FACILITY DESIGN ADVOCACY REPORT

City of KINGSTON

Acknowledgment of Country

The City of Kingston proudly acknowledges the Bunurong People of the Kulin Nation as the Traditional Owners and Custodians of this land, and we pay our respect to their Elders, past and present and emerging.

Council acknowledges the Bunurong's continuing relationship to the land and waterways and respects that their connection and spiritual identify is maintained through ancient ceremonies, songlines, dance, art and living culture.

Council pays tribute to the invaluable contributions of the Bunurong and other Aboriginal and Torres Strait Island elders who have guided and continue to guide the work we do.

Executive Summary

This document outlines the City of Kingston's advocacy position on the proposed Suburban Rail Loop (SRL) Stabling Facility. The facility is to provide stabling and maintenance for all trains on SRL East, including an operational control centre and associated facilities such as a train wash and electrical substation. The proposed location for the facility is the Delta site, located within the Kingston local government area in the suburb of Heatherton. The site is adjacent to pockets of residential properties and recreational areas contained in Kingston's Green Wedge zoned land that forms the long-imagined Chain of Parks plan.

The Delta site has been earmarked as core parkland in the Sandbelt Open Space Chain of Parks project for more than two decades, which is a project that would turn several historic landfills areas into a series of linked parks that offer a wide range of recreational facilities and open space. During the 2018 election campaign the Victorian Labor Party promised $25 million to deliver the Chain of Parks project, which included delivery and funding for acquisition and establishment of a regional sporting facility.

Council has voted unanimously to 'absolutely reject' the Victorian Government's preferred location for the Suburban Rail Loop Stabling Facility in the heart of Kingston's Green Wedge and has called on the Minister to find a more suitable alternative site. Separate to Council's advocacy to government to find an alternative location, Council has also prepared an alternative design for the proposed Stabling Facility. The alternative advocacy design provides active transport links, maintains the Old Dandenong Road alignment and access, improves walking and cycling infrastructure, maintains the proposed Stabling Facility vehicle access, provides signalised/protected intersections and crossings, a new bus stop, an elevated protected pedestrian walkway, an upgraded and enhanced public reserve, a redeveloped play space and dog park, and inaccessible and accessible green roofs over the facility that would provide much needed open parkland and habitat.

Key benefits of the proposed alternative design include the maximising of green open space for current and future generations, its alignment with Council's and the State Government's climate adaptation declarations and plans, and that it works with the Chain of Parks concept to link current and future green open spaces. By re-conceiving the Stabling Facility as urban green infrastructure, the project could deliver a series of co-benefits including passive and active recreation, biodiversity and habitat provision, the minimisation of urban heat island effect and delivering integrated water management. The alternative design draws on international best practice and aligns with several of Council's strategic objectives.

The importance of this advocacy is to ensure that Council can maintain, where possible, the vision of the Green Wedge Chain of Parks Trail Masterplan, address community concerns and leverage the SRL's proposed transport infrastructure to deliver world-leading urban green infrastructure with a focus on social, cultural and ecological benefits.

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1.0 Background + Analysis

1.1 Local context

The City of Kingston, located 20 km south of Melbourne, is 90 square kilometres in size and incorporates 13 km of coastline and a broad mix of residential suburbs, commercial areas and industrial zones. Residents in Kingston have access to a range of open space assets on public land such as wetlands, waterways, beaches, natural resource areas, parks, playgrounds, sporting grounds and shared paths. There are also significant areas of open space on private land, most notably golf courses and market gardens in our Green Wedge.

Kingston is the tenth largest municipality in Melbourne and continues to grow. The population was approximately 157,000 in 2016, which is an increase of about 20,000 people over the past decade. The population is expected to continue to rise in the decades ahead, with the 2036 population projected to be about 190,000 people, which includes an additional 10,000 seniors. This will require an increase of between 14,000 and 18,000 dwellings1

Some major features of the municipality include Moorabbin Airport, Braeside Park, Edithvale Wetlands, Southland Shopping Centre, Moorabbin Oval, and the large Braeside Industrial Area. The Patterson River and Mordialloc Creek both run through the City.

STATUTORY CONTEXT

The subject site of the future Stabling Facility is currently zoned Green Wedge A Zone (GWAZ) with a number of overlays including Design and Development (DDO); Environmental Audit (EAO); Environmental Significance (ESO); Public Acquisition (PAO);and is also identified as an area of Aboriginal Cultural Heritage Sensitivity. The proposed land-use is permitted in the zone.

SITE HISTORY

The archaeological context of Kingston is predominantly sand dune fields. About 6,000 to 8,000 years ago, when the sea level stabilised at its current level, numerous small swamps began to form in the dune swales. This created the resource rich sandbelt that is located under parts of Kingston.

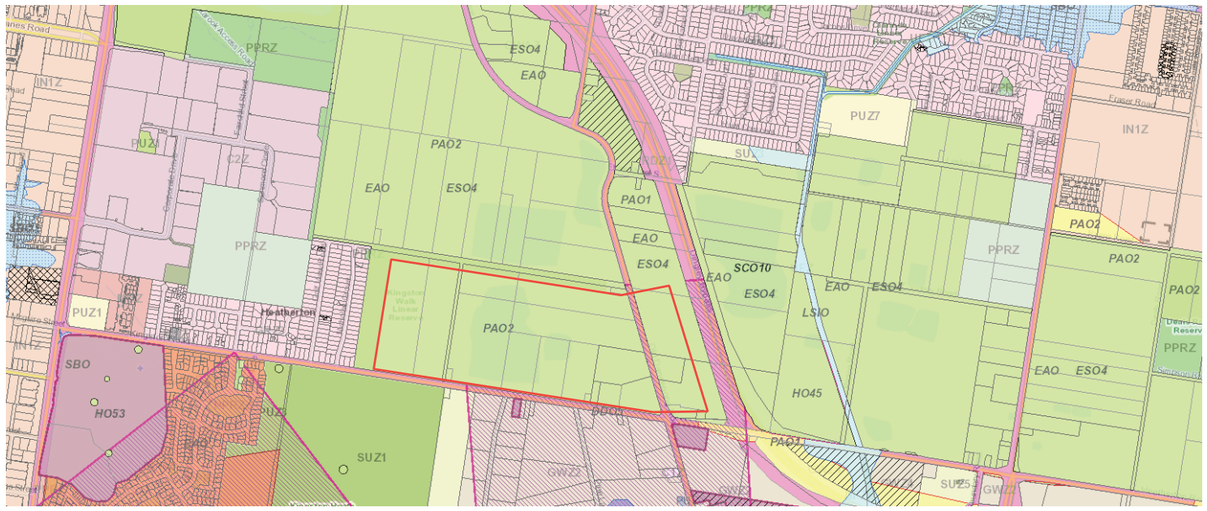
Kingston is located within the recognised claim area of the Bunurong People. The history of the Bunurong people dates back many thousands of years to a time when present day Melbourne extended right out to the ocean, prior to the formation of Port Phillip Bay between the end of the last Ice Age around 8000 BCE and around 6000 BCE. There is evidence of occupation dating at least 40,000 years ago.

The Bunurong Land Council is the Registered Aboriginal Party (RAP) for this site. Their traditional lands stretch along the Victorian coast from the Werribee River to Wilson's Promontory. The Bunurong people have occupied these lands for tens of thousands of years.

After European colonisation of Australia and the founding of Melbourne in 1835 the area around Kingston took on agricultural uses with grazing and the establishment of market gardens that dominated the landscape until the middle of the 20th Century when Melbourne's suburban growth reached the area. The sandbelt was extensively mined during the 20th Century, leaving large holes that were used as landfills for the region.

In the 1970's Green Wedges were introduced around Melbourne to protect non-urban areas from urban development, with the area around the Delta site included in the South East Green Wedge zone.

For more than the past 30 years, Kingston Council has advocated for changes to put an end to landfill in Kingston and replace them with much-needed parkland through the Chain of Parks plan, for the community to enjoy.



ABOVE. The subject site of the future Stabling Facility (highlighted in red) is currently zoned Green Wedge A Zone (GWAZ) with a number of overlays. Source: mapshare.vic.gov.au/vicplan/

> "Land use, resources, terrain, vegetation and habitat vary extensively throughout the non-urban areas. It is intended that the basic attributes and resources contained within the areas shall be preserved to a maximum degree, and that environment management policies shall be specifically oriented towards this objective."
>
> — Melbourne and Metropolitan Board of Works (1971)

ABOVE. Aerial photograph of the Delta site, 1945.

1.2 Site observations + landscape character

Currently the Delta site is in a highly disturbed and poor condition. The site is in the early stages of rehabilitation after the closure of the recycling facility.

The perimeter of the site hosts mature trees, namely Eucalyptus and Melaleuca species, with only the Kingston Road frontage hosting dense understorey plantings of native shrubs and strappy-leafed plantings.

A meandering gravel walking path runs along the northern edge of the site with timber post-and-rail gates at either end, creating a somewhat rural character along this spine.

Along the western boundary of the Delta site a sandy north-south pathway connects the pathway at the north to Kingston Road at the south, however it's currently a dead-end with no crossing, connecting path or footpath at Kingston Road. Vegetation blocks pedestrian movement along the northern side of Kingston Road and there is no protected bicycle lane on either side of the busy road.

The overall existing character of the site is of a disturbed post-industrial landscape that contains little to no public amenity with the exception of a small playground in poor condition and the poorly connected walking trails mentioned above.

The Southern Stabling Facility site extends eastward of the Delta site to the Dingley Bypass. Here it includes a wholesale plant nursery and commercially-operated dog park.









ABOVE. Site visit, June 2021.






ABOVE. Site details / landscape character analysis, June 2021.

1.3 Summary of Council advocacy

The City of Kingston has been very vocal with its concerns about the Victorian Government's decision to build a train stabling facility at the Delta site as part of the Suburban Rail Loop project.

The City of Kingston strongly rejects the plan and has written to the Premier, relevant ministers and the SRLA multiple times expressing its opposition to the stabling facility and asking the Government to deliver on its 2018 election promise of $25 million funding to realise the Chain of Parks project.

Council has actively sought an open and productive dialogue with the SRLA and has participated in a number of workshops, highlighting out concerns and contributing constructive feedback at every point.

Despite Council's opposition to the proposal, we are obliged to participate in the Environmental Effects Statement (ESS) process to advocate for the best possible outcome for Kingston.

Council is currently working with external specialist consultants to provide expert feedback to the SRLA on each technical report and draft ESS document they release in a timely manner.

We are also calling for the state government to find another 34-hectares elsewhere so that we can meet our growing open space needs.

This document is underpinned by all of Council's advocacy to date, with a comprehensive summary of the context, issues and opportunities and preferred design vision for the project that would maximise its value to the Kingston community.

City of KINGSTON

1 December 2020

Mr Tom Considine
Acting Chief Executive Officer
Suburban Rail Loop Authority
PO Box 4509
MELBOURNE VIC 3001

Email: tom.considine@ecodev.vic.gov.au

Dear Tom

Re: Suburban Rail Loop & Highett Gas Works – Major Projects Alignment

I write in relation to the Suburban Rail Loop Authority's recent announcement of the Cheltenham Suburban Rail Loop Station location in Sir William Fry Reserve and the strategic opportunities that this location presents.

To date our organisations have been collaborating to work towards a station precinct that is integrated within the local landscape to maximise the productivity, liveability and accessibility aspects of the project. Through these meetings, Council has also identified the strategic relationship between the SRL project and the work being progressed by Development Victoria for the State Government owned Highett Gasworks site.

As you would be aware, the Highett Gasworks site is located immediately north of Sir William Fry reserve and proposed SRLA project area. The site is owned by the Department of Treasury and Finance with Development Victoria currently preparing a Development Plan for the site which will seek to deliver a future high-density residential community providing in excess of 800 new dwellings. Noting the sites strategic relationship with the SRL Project, it is Council's view that an integrated and whole of precinct approach should be taken through the planning phase of both projects.

Such an approach would ensure that precinct scale consideration is given to critical matters ranging from open space provision to pedestrian/cycle connectivity and social and affordable housing in a manner that can appropriately identify and deliver on the opportunities presented by the State Government's lead role in both projects.

With Development Victoria currently undertaking initial community engagement to inform a Development Plan for the Highett Gasworks site and SRLA having now made public the proposed location of the Cheltenham Station, Council believes it is timely for all parties to meet and discuss the opportunities that exist to provide for an integrated and precinct wide response to these two strategically important State Government projects.

Given the pace at which both projects are moving, Council requests that a meeting is convened with some urgency between the SRLA, Development Victoria, Kingston City Council and Bayside City Council to further discuss.

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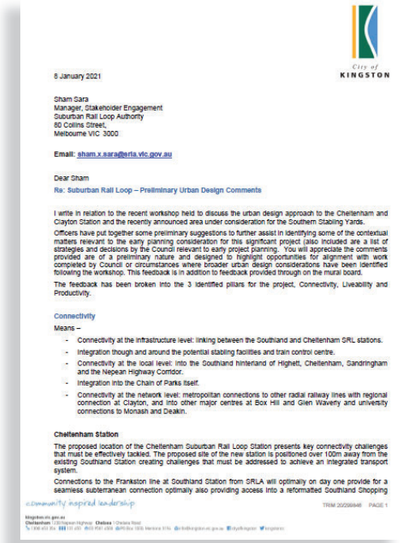

City of KINGSTON

8 January 2021

Sham Sara
Manager, Stakeholder Engagement
Suburban Rail Loop Authority
80 Collins Street,
Melbourne VIC 3000

Email: sham.x.sara@delta.vic.gov.au

Dear Sham

Re: Suburban Rail Loop – Preliminary Urban Design Comments

I write in relation to the recent workshop held to discuss the urban design approach to the Cheltenham and Clayton Station and the recently announced area under consideration for the Southern Stabling Yards.

Officers have put together some preliminary suggestions to further assist in identifying some of the contextual matters relevant to the early planning consideration for this significant project (also included are a list of strategies and decisions by the Council relevant to early project planning. You will appreciate the comments provided are of a preliminary nature and designed to highlight opportunities for alignment with work completed by Council or circumstances where broader urban design considerations have been identified following the workshop. This feedback is in addition to feedback provided through on the mural board.

The feedback has been broken into the 3 identified pillars for the project, Connectivity, Liveability and Productivity.

Connectivity

Means –

- Connectivity at the infrastructure level: linking between the Southland and Cheltenham SRL stations.
- Integration though and around the potential stabling facilities and train control centre.
- Connectivity at the local level: into the Southland hinterland of Highett, Cheltenham, Sandringham and the Nepean Highway Corridor.
- Integration into the Chain of Parks itself.
- Connectivity at the network level: metropolitan connections to other radial railway lines with regional connection at Clayton, and into other major centres at Box Hill and Glen Waverly and university connections to Monash and Deakin.

Cheltenham Station

The proposed location of the Cheltenham Suburban Rail Loop Station presents key connectivity challenges that must be effectively tackled. The proposed site of the new station is positioned over 100m away from the existing Southland Station creating challenges that must be addressed to achieve an integrated transport system.

Connections to the Frankston line at Southland Station from SRLA will optimally on day one provide for a seamless subterranean connection optimally also providing access into a reformatted Southland Shopping

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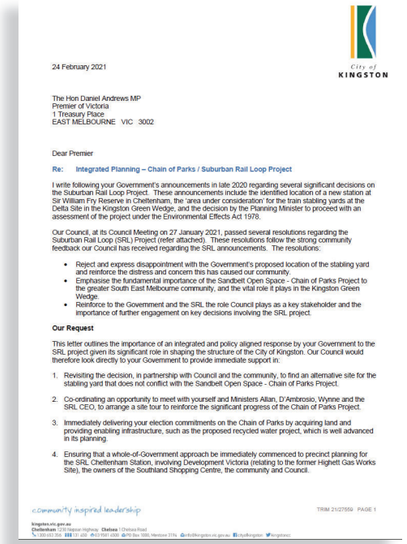

City of KINGSTON

24 February 2021

The Hon Daniel Andrews MP
Premier of Victoria
1 Treasury Place
EAST MELBOURNE VIC 3002

Dear Premier

Re: Integrated Planning – Chain of Parks / Suburban Rail Loop Project

I write following your Government's announcements in late 2020 regarding several significant decisions on the Suburban Rail Loop Project. These announcements include the identified location of a new station at Sir William Fry Reserve in Cheltenham, the 'area under consideration' for the train stabling yards at the Delta Site in the Kingston Green Wedge, and the decision by the Planning Minister to proceed with an assessment of the project under the Environmental Effects Act 1978.

Our Council, at its Council Meeting on 27 January 2021, passed several resolutions regarding the Suburban Rail Loop (SRL) Project (refer attached). These resolutions follow the strong community feedback our Council has received regarding the SRL announcements. The resolutions:

- Reject and express disappointment with the Government's proposed location of the stabling yard and reinforce the distress and concern this has caused our community.
- Emphasise the fundamental importance of the Sandbelt Open Space - Chain of Parks Project to the greater South East Melbourne community, and the vital role it plays in the Kingston Green Wedge.
- Reinforce to the Government and the SRL the role Council plays as a key stakeholder and the importance of further engagement on key decisions involving the SRL project.

Our Request

This letter outlines the importance of an integrated and policy aligned response by your Government to the SRL project given its significant role in shaping the structure of the City of Kingston. Our Council would therefore look directly to your Government to provide immediate support in:

1. Revisiting the decision, in partnership with Council and the community, to find an alternative site for the stabling yard that does not conflict with the Sandbelt Open Space - Chain of Parks Project.
2. Co-ordinating an opportunity to meet with yourself and Ministers Allan, D'Ambrosio, Wynne and the SRL CEO, to arrange a site tour to reinforce the significant progress of the Chain of Parks Project.
3. Immediately delivering your election commitments on the Chain of Parks by acquiring land and providing enabling infrastructure, such as the proposed recycled water project, which is well advanced in its planning.
4. Ensuring that a whole-of-Government approach be immediately commenced to precinct planning for the SRL Cheltenham Station, involving Development Victoria (relating to the former Highett Gas Works Site), the owners of the Southland Shopping Centre, the community and Council.

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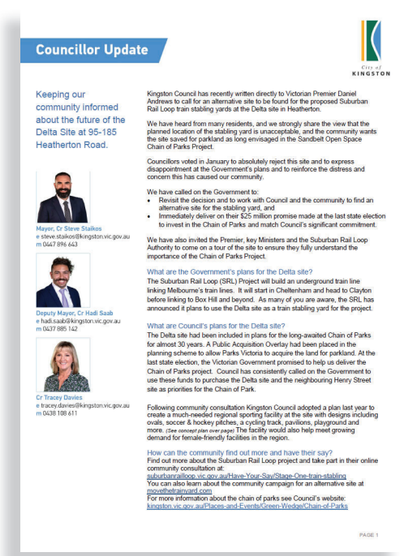


1.4 Summary of community feedback

In September 2021 Council sought feedback from the community on both, Council's opposition to the location selected for the for the Stabling Facility, and on design ideas to be explored through the development of the design advocacy and for consideration by the Victorian Government.

A total of 286 submissions were received following 977 visits to the Your Kingston Your Say engagement platform.

Council has also engaged with stakeholders including:

— Move the Trainyard
— Defenders of the Green Wedge
— Residents Against Inappropriate Development (Heatherton)
— Public Transport Users Association
— Victorian Transport Advocacy Group
— Melbourne Water
— Department of Transport
— Kingston Residents Association (KRA)

Key Themes

— Amenity impacts in operation
— Loss of open space and impacts on the Chain of Parks
— Active transport and impacts on local connections
— Precinct use and development
— Concerns about the surface rail alignment
— Construction impacts
— Environmental Impacts
— Impacts on and displacement of existing businesses

Feedback Summary

— 977 page visits
— 171 downloads
— 270 surveys complete
— 17 email submissions

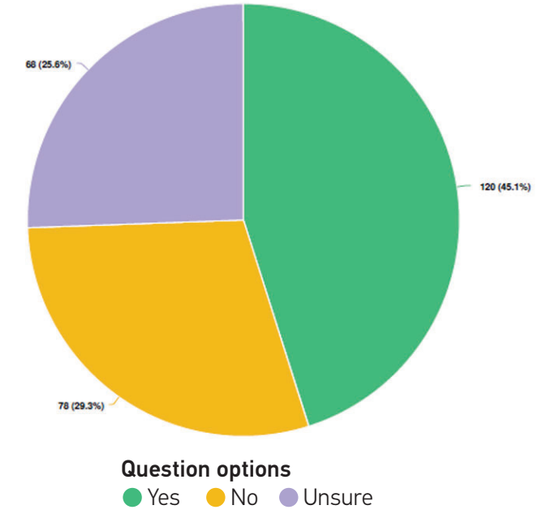
Ideas pack

Sample pages from the Community Engagement Ideas Information Pack.

Community feedback and ideas

Key themes and ideas from the community feedback process.

Do you support Council's ideas?

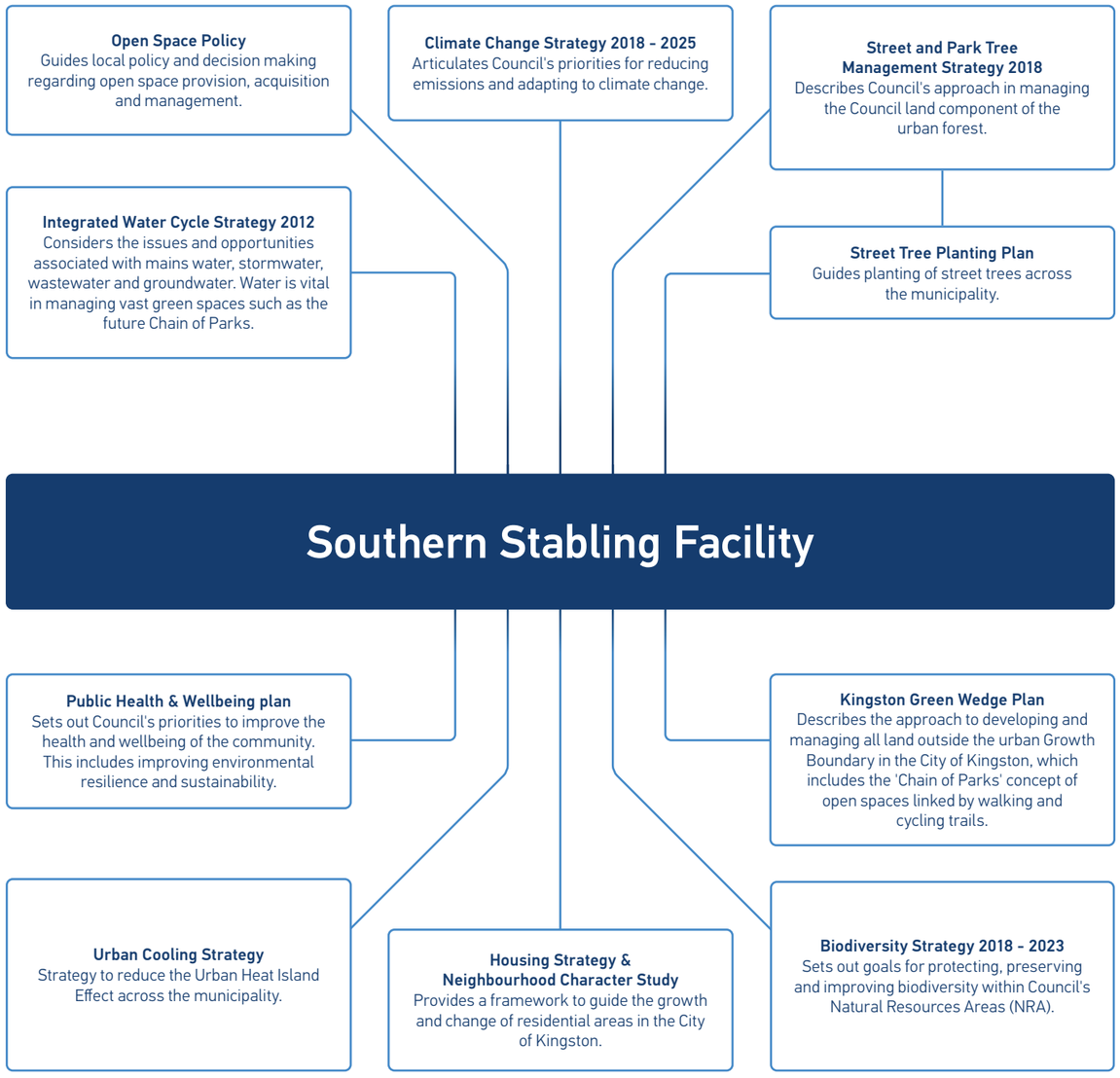


Community support for Council's ideas for the site.

1.5 Strategic context

It's important to approach the plans for the Southern Stabling Facility (SSF) in a holistic context, rather than in isolation. Council has multiple policies and strategies that are relevant to the Southern Stabling Facility's site and its future, and whilst they have for the most part been developed prior to the Suburban Rail Loop releasing its plans for the site, remain important to consider and align to if the project is to contribute positively to the City of Kingston.

The following diagram details the City of Kingston policies and strategies that are relevant to the site and its future planning and design.



ABOVE. Council strategies, plans and policies that are relevant to the planning and design of the Southern Stabling Facility.

1.6 SRL Draft Urban Design Strategy overview

The Draft Urban Design Strategy includes several pages dedicated to the Southern Stabling Facility. The introduction states:

"The Stabling Facility will be designed appropriately and present positively to the local area. Kingston Linear and Henry Street Reserves will be preserved and upgraded, contributing towards local biodiversity and extending pedestrian and cycling connectivity around the site to allow people and landscapes to link with broader open space, recreation and movement networks."

Outcome 01

A stabling facility that is well-integrated with the surrounding area and responsive to the emerging 'green' character of the 'Chain of Parks'.

1A Utilise landform and topography in combination with vegetated buffers to optimise screening of buildings and structures, mitigating negative visual impacts of the stabling facility.

1B Provide a landscape buffer within the Kingston Road site boundary to enhance the roadside character and manage negative visual impacts by filtering views towards the stabling facility and associated infrastructure from adjacent paths and contributing to amenity and comfort of the public realm where possible.

1C Maximise opportunities for a landscape buffer within the eastern site boundary to enhance the landscape character and mitigate views of the stabling facility and associated infrastructure.

1D Provide a landscape buffer within the western site boundary, to the immediate east of the Kingston Walk Linear Reserve, to:
- Mitigate visual impacts to the existing residential area to the west
- Optimise and extend the landscape values of the Kingston Walk Linear Reserve.

1E Provide a landscape buffer within the northern site boundary to filter views from existing and future open space and selectively screen rail infrastructure. Landscape planting is to complement the existing open space planting (refer to Kingston City Councils Green Wedge Chain of Parks - Trail Design, March 2020).

1F Provide integrated landscape and architectural treatments to enhance views towards the site from the intersection of Dingley Bypass and Kingston Road for road users.

1G Minimise the extent of fences, barriers and walls designing and optimally locating these within the landscape buffers to secure the site and to:
- Maximise integration and sensitively respond to the local context and the emerging surrounding parkland landscape character
- Ensure landscaping adjoins to an adjacent open space and is able to be accessed for maintenance by ultimate owner.

Outcome 02

Improved connectivity that responds to future area planning.

2A Provide a walking and cycling connection north south along Kingston Walk Linear Reserve, aligned to minimise impact on existing trees, formalising current usage and not precluding connections to future public open space to the north in line with the 'Chain of Parks' concept.

2B Enhance the east west Henry Street Recreational Trail for walking, cycling and horse riding in collaboration with relevant authorities. Consider providing wayfinding signage to Kingston Walking Trail and to Karkarook Park.

2C Do not preclude the potential for a pedestrian route (by others) along the western side of the Dingley Bypass (refer to Kingston City Councils Green Wedge Chain of Parks - Trail Design, March 2020), ensuring the project design supports good user experience of the adjacent public realm.

2D Provide a quality pedestrian connection along the southern site boundary on Kingston Road.

2E Provide a well-designed vehicle entry and vehicular crossing points that do not negatively impact the safety, accessibility and legibility of walking and cycling routes and do not disrupt the continuity of the Green Wedge character setting.

2F Do not preclude the potential future extension of the Henry Street walking and cycling paths to the Dingley Bypass and north to Elder Street South and ensure the design supports these future connections and provides a positive interface to the adjacent public realm.

Outcome 03

Demonstrated commitment to maximising environmental and community sustainability outcomes.

3A Retain trees, and maximise opportunities for the retention of other vegetation, located within Kingston Walk Linear Reserve and Henry Street Reserve.

3B Enhance the recreation, biodiversity and habitat value of the Kingston Walk Linear Reserve.

3C Enhance the interface with the Henry Street Recreational Reserve by:
- Retaining, reinstating and/or increasing existing planting for biodiversity and amenity including an attractive user experience that mitigates views toward rail infrastructure when using the trail and open space
- Ensuring works outside the Project Day One boundary are considered in collaboration with relevant authorities.

3D Include canopy vegetation wherever possible across the site to enhance environmental outcomes and visual amenity.

3E Provide new and enhance existing landscape corridors and links with appropriate plant species to enhance biodiversity and habitat corridors for fauna (both new and existing), allowing native fauna to move through the landscape. Vegetation species and types, and any other habitat enhancement opportunities (for example augmented nesting opportunities in dead / fallen tree specimens) are to be developed in accordance with ecological advice.

3F Minimise and consolidate areas of hard paving and maximise permeable surfaces to:
- Allow rainwater to infiltrate the soil for vegetation health and groundwater stores
- Maximise opportunity for planting to reduce the urban heat island effect.

3G Locate and design drainage and Water Sensitive Urban Design (WSUD) infrastructure (for example retarding basins, wetlands and permanent water bodies) to maximise recreational and environmental benefits. Integrate drainage infrastructure to visually blend into the surrounding landscape. Aquatic habitat to be developed in accordance with ecological advice.

3H Provide well-designed green spaces on any surplus land complementing the 'Chain of Parks'.

3I Provide noise mitigation measures (where required) that are designed to be sensitive to context and optimise integration of grading and landscape treatments.

Outcome 04

Well-designed buildings and structures that make a positive contribution to the local area, reflect the function of the site and mitigate negative impacts.

4A Provide well-designed buildings, structures and infrastructure elements that:
- Reflect the 'industrial' nature of the site's function
- Maximise the landscape treatment of the site and the surrounding emerging parkland context
- Acknowledge that some elements will be of a height that cannot be screened from view by landscape buffer planting and mounding.

4B Provide an attractive and appropriately sited portal structure that:
- Makes a positive contribution to the identity of the local area
- Minimises negative visual impacts on the surrounding context and particularly the residential area to the west
- Contributes to a positive experience for users of adjacent public realm and open space and for drivers using adjacent roads.

1.7 Landscape assets: existing and proposed

For more than 30 years the Delta site has been earmarked by Council as a future open space asset to form part of the wider Chain of Parks plan.

Chain of Parks

The "Chain of Parks" plan is a project to, over time, turn some historic landfills areas into a series of linked parks that offer a wide range of recreational facilities and open space. The land earmarked for the Chain of Parks is located within Kingston's Green Wedge. The Chain of Parks would deliver some 355-hectares (the size of about 150 MCGs) of public open space to the City of Kingston and act as a regional attraction.

Successive councils and state governments, and the community have supported the concept of a Chain of Parks since it was first suggested and the recent development of Karkarook Park was an important catalyst project.

Delta Site Concept Design 2018

A concept design for the Delta site was produced in 2018, envisioning an active sports park that was focused on increasing female participation in sports. The design contained multiple ovals, two soccer pitches, a criterium circuit, adventure playground, sporting club pavilions and a multi-purpose synthetic pitch, along with car-parking and a wetland reserve.

This design remains Council's preferred vision for the site.

Other assets

The area surrounding the subject site hosts several golf courses, with Kingston Heath Golf Club located to the south of the site, as well as a well-utilised pedestrian trail network including the Henry Street Reserve Walk and Kingston Linear Walk. Elder St South Reserve is also nearby, currently under construction.

ABOVE. Council's original plan for the Delta site produced in 2019 proposed a regionally significant sporting hub focused on increasing female participation in sports.

ABOVE. Aerial perspective from the Chain of Parks Concept Plan, 2018, showing view toward the Dandenongs. The yellow line denotes the proposed perimeter of the Chain of Parks .

1.8 Architectural + infrastructural assets: existing and proposed

Existing built assets

A number of structures currently exist on the site, mainly at the intersection of Old Dandenong Road and Kingston Road. Several sheds, greenhouses and tanks relate to a plant nursery. A couple of houses (and associated sheds) front Old Dandenong Road, with one appearing to be from the early 20th Century (1930s or 40s) and two others from the late 20th Century (1970s or 80s). The dwelling at 241-301 Kingston Road, Clarinda is within a heritage overlay (HO45).

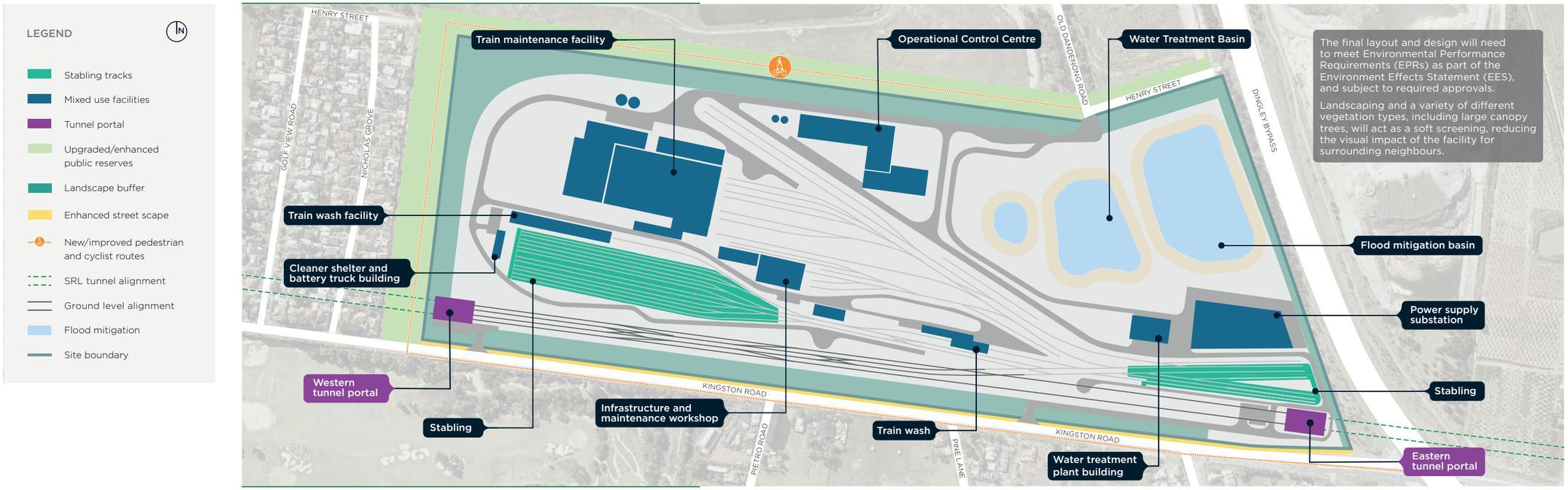
Proposed built assets

The proposed SSF site includes a number of significant structures related to the function of the site. Building on EES Place Specific Guidelines, the new structures must be responsive to their use and minimise their impact on the surrounding area.

Where possible, large structures should integrate urban greening to enable them to integrate with the emerging parkland landscape.

Finally, key inhabited structures should be designed with the wellbeing of workers in mind.

ABOVE. Oblique Aerial photograph showing existing buildings. Source: Nearmap 2020.



ABOVE. Indicative site layout of the Southern Stabling Facility. Source: Suburban Rail Authority.

1.9 Case study: Sydney Metro HQ

Sydney Metro's main stabling facility and headquarters are located at Rouse Hill NSW in a facility that is comparable to the proposed Southern Stabling Facility at Heatherton.

The Sydney Metro project currently under construction in Sydney will deliver 31 metro stations and more than 66 kilometres of new metro rail around the city. Much like Melbourne's Suburban Rail Loop, Sydney Metro has its own fleet of trains that cannot interchange with the existing rail network, meaning it requires its own supporting infrastructure such as train stabling facilities. The largest stabling facility on the new network is co-located with Sydney Metro's headquarters in the northern suburb of Rouse Hill. This facility is an interesting case study for the proposed Southern Stabling Facility in Heatherton as it is likely to share many of the same operational requirements, offering a glimpse of what the SSF could look like.

KEY

1. Operational control centre
2. Train maintenance facilities
3. Workshops
4. Bio wash
5. Stabling yard
6. Security fencing
7. Substation
8. Security gate / entry
9. Test track
10. Carparking
11. Internal landscaping
12. Road overpass
13. Water retention pond

ABOVE. Sydney Metro HQ in Rouse Hill, Sydney, NSW. The facility is likely to share many of the same operational requirements to the Southern Stabling Facility.

1.10 Architectural character

Given the site's location within the emerging 'Chain of Parks' it is essential that opportunities for urban greening are maximised to reduce urban heat island effect, increase biodiversity and minimise the visual impact of new buildings.

This site will be the workplace for a number of operational and maintenance staff, and will receive formal visitors and informal recreational visitors passing adjacent to the site. Opportunities to create a workplace that supports wellness and safety will be essential, and opportunities to educate visitors on the functionality of the site should be celebrated.

It is also important that built form is consistent with the Green Wedge Management Plan (Section 7.5), which includes the below general requirements:

— Design and orient all buildings and structures to utilise natural light and ensure optimal thermal performance.

— Utilise building materials that are muted in colour and finish, to best immerse built form within the semi-rural landscape (e.g. timber, render, low reflective glazing, stone, brick and iron roofing).

— Articulate building facades using design treatments such as:

  - Well considered placement of doors and windows.
  - Variations in surface texture, colours or materials.
  - Avoiding large expanses of blank walls.
  - Avoiding reflective glazing to the exterior of buildings.

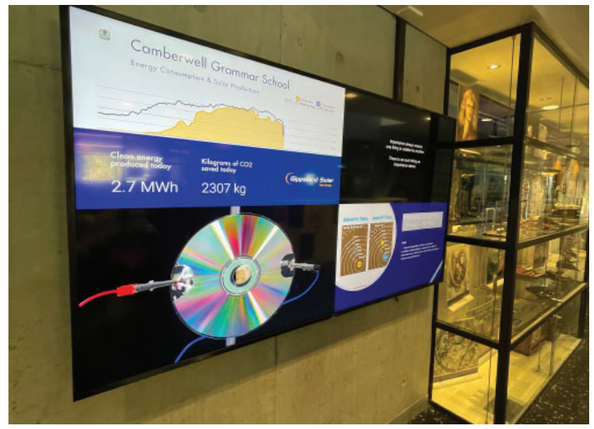
— Avoid bland, boxy, unarticulated building forms, including urban styles of residential development.

— Minimise the use of bold, bright materials, colours and finishes.

— Ensure development adopts best practice environmentally sustainable design and development principles.

ABOVE. The green roof at the Wonthaggi Desalinisation Plant, a Victorian Government project.

ABOVE. The Biesbosch Museum in the Netherlands is blanketed in lawn and appears to 'pop-out' of the ground.



ABOVE. Learning on display showing building sustainability at Camberwell Grammar School, 2021.

ABOVE. An example of an articulated facade that uses materials of a muted colour, in this case weathered steel - Fitzgibbon Community Centre by Kirk.

ABOVE. A visual connection between offices and construction at Victoria University Construction Futures by COX.

ABOVE. Simple robust building form that is highly reflective of its surroundings and veiled in planting - Parks Victoria HQ at Albert Park, by Archier and Openwork.

1.11 Transport networks: existing and proposed

EXISTING NETWORK

The current movement network, acts as an east west connection between Cheltenham and Clayton offering little amenity for transport modes other than the car. In facilitating future uses and encouraging active transport and recreation, there are numerous issues to overcome.

The existing precinct is built on either side of the key transport spine of Kingston Road, which provides east west connectivity between the key north south arterials roads of Warrigal Road, Old Dandenong Road and Dingley Bypass. While being the only east west distributor for the precinct, Kingston Road has developed primarily as a vehicular route, serving over 10,000 vehicles per day in each direction along its wide, 12m cross section. The road also provides east west connectivity for two bus services, connecting Clayton in the northeast with Cheltenham in the southwest.

Bounded by these key arterials to the east and west, the precinct offers limited infrastructure for any other form of transport besides the car. The footpath network is limited and fragmented, with dimly lit roads, limited amenity for public transport, and a lack of safe crossing opportunities or underpasses along the Dingley Bypass.

Acting primarily as an east west route, the precinct is also the main north south thoroughfare for pedestrians, cyclists and the occasional equestrian user. While unsealed walking trails are provided to the north of Kingston Road, the distributor acts a major barrier, with no infrastructure on either side of the road and no median refuge or safe crossing opportunity.

Summarised in the adjacent map, as a key linkage between the major centres of Cheltenham and Clayton, the existing transport network features numerous issues to overcome in facilitating future uses.

ABOVE. The Elder St underpass, while connecting to the Dingley Bypass route, provides no connectivity to the west and leads nowhere.

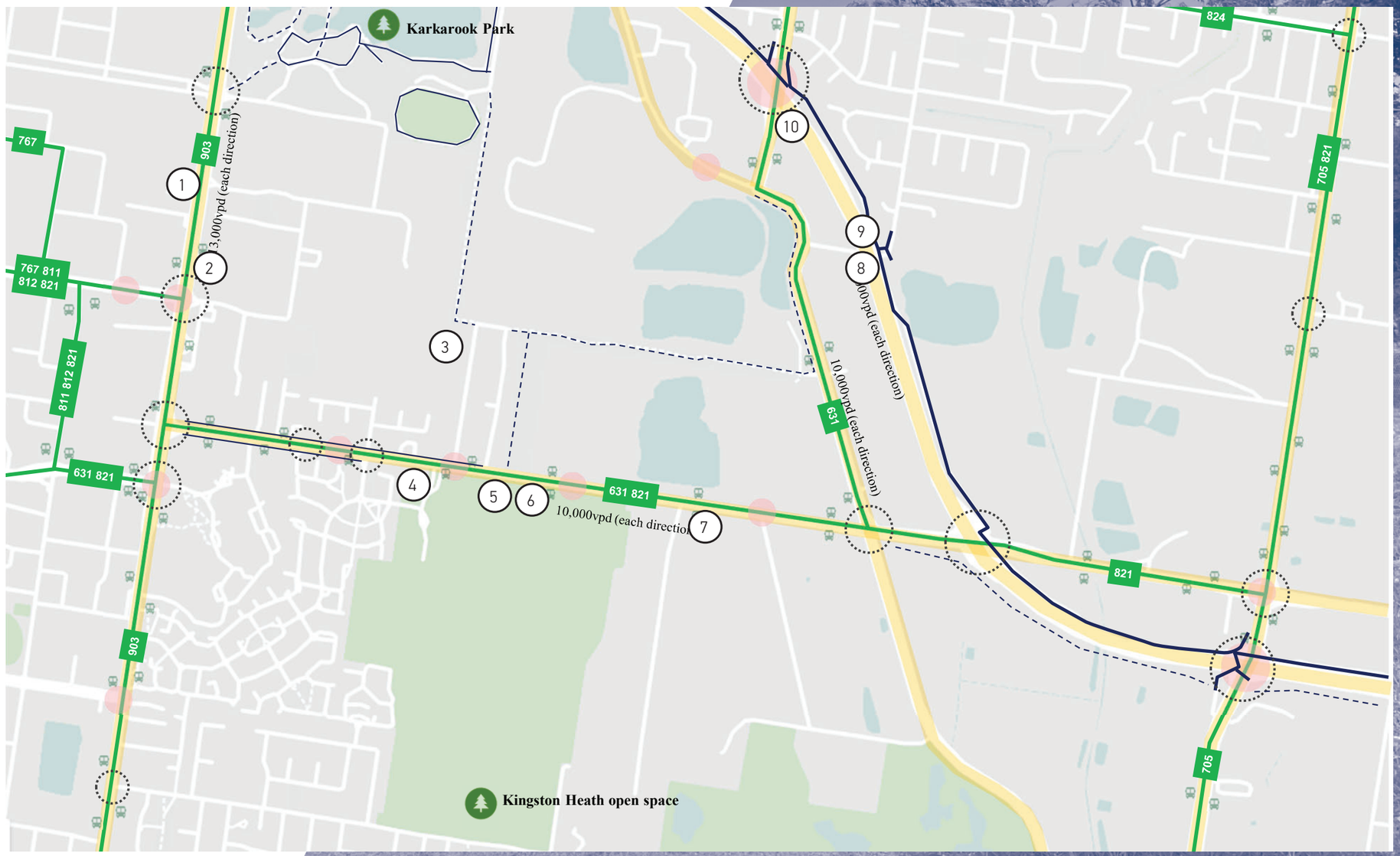
ABOVE. Kingston Road looking east at the south-west of the site. There are currently no footpaths along this stretch.

ABOVE. Looking west along Kingston Road. There are no footpaths or bike lanes at this point.

ABOVE. The existing Henry Street linear reserve is a popular walking and cycling route.

EXISTING NETWORK: ISSUES

1. Poor walking/cycling amenity on Warrigal Rd, footpaths 1-1.2m in width.
2. Warrigal Rd acts as a barrier to high quality active transport while also high vehicle volumes causes delays and reduces public transport efficiency.
3. All trails connecting Karkarook Park to the south are unsealed. Only viable route for peds north-south to avoid Heatherton industrial area.
4. No provisions of active transport infrastructure along or across Kingston Road connecting northern parks to southern parks.
5. Kingston Rd currently high volume, high midblock vehicle crashes and key route for B-doubles, poses dangerous environment for peds/cyclists/PT users boarding and alighting services.
6. Kingston Rd wide 12m cross section with no refuge for pedestrians/ cyclists crossing.
7. No amenity for boarding/alighting PT users (lack of shade, shelter, benches, footpath, lighting or security along full length), no clear method of accessing bus stops.
8. Vehicle underpass located at Elder St, with a shared path on the northern side. While the shared path connects to the Dingley Bypass path, it is fragmented from the rest of the network and fails to connect westbound.
9. High quality shared path provided on east side of Dingley Bypass only, with access from the west 1.5km apart.
10. Dingley Bypass acts as a major barrier to active transport both east-west and north-south with crossings only at Clarinda Road and Kingston Road.



PROPOSED NETWORK

The precinct is located along the proposed SRL Stage One passenger rail alignment between Cheltenham in the west and Clayton in the northeast, and is proposed to serve as the SRL's Southern Stabling Facility (SSF). Once completed, the stabling yard will provide a 24 hour service hub for trains, while being an employment hub for the area.

The proposed site of the SSF is not without challenges, and was situated as part of the City of Kingston's proposed 'Green Wedge' chain of parks system, envisaged to host playing fields and sporting clubs. The site also had an intended role facilitating movement along the chain of parks and linking access to other open spaces. The development will require the severing of Old Dandenong Road from vehicle and public transport access, further complicating the existing connectivity issues, while also limiting north south connectivity. While the site will no longer serve such uses, the site will still need to serve a function, and numerous opportunities to overcome the existing issues have been discussed. The need to link open spaces in the region remains a critical function for the site.

Beyond its transport infrastructural role, opportunities for the stabling facility to become a special use attraction for recreational pathways and viewing points along the 'Green Wedge' could be investigated. Opportunities to improve the surrounding active transport and equestrian network and link surrounding centres by alternative transport modes along the Principal Bicycle Network (PBN) could also be explored. Opportunities have been summarised below and on the adjacent map.

OPPORTUNITIES

1. Explore east west connectivity for active transport between Cheltenham Station, while linking into the PBN
2. Prioritise high quality shared paths north south between Karkarook Park and Kingston Heath open space, considering tie ins to the PBN
3. Ensure linkages between the existing trails on the north side of the SSF with proposed trails through the 'Green Wedge'.
4. Explore opportunities for additional active transport underpasses across Dingley Bypass to link with the high quality share path on the eastern side of the Bypass
5. Investigate a high quality north south active transport link between Super Transport Hub in Clayton and suburbs to the south (as part of the PBN)
6. Work with PTV to reroute Old Dandenong bus services to optimise the network and improve wider connectivity.
7. Investigate potential for proposed east west trails through the 'Green Wedge' to use the Elder St underpass for connections across the Dingley Bypass while also using the existing local path connection to connect to the Dingley Bypass shared path on the eastern side.
8. Investigate provision of active transport infrastructure on both sides of Kingston Road between the Dingley Bypass and Nicholas Grove.

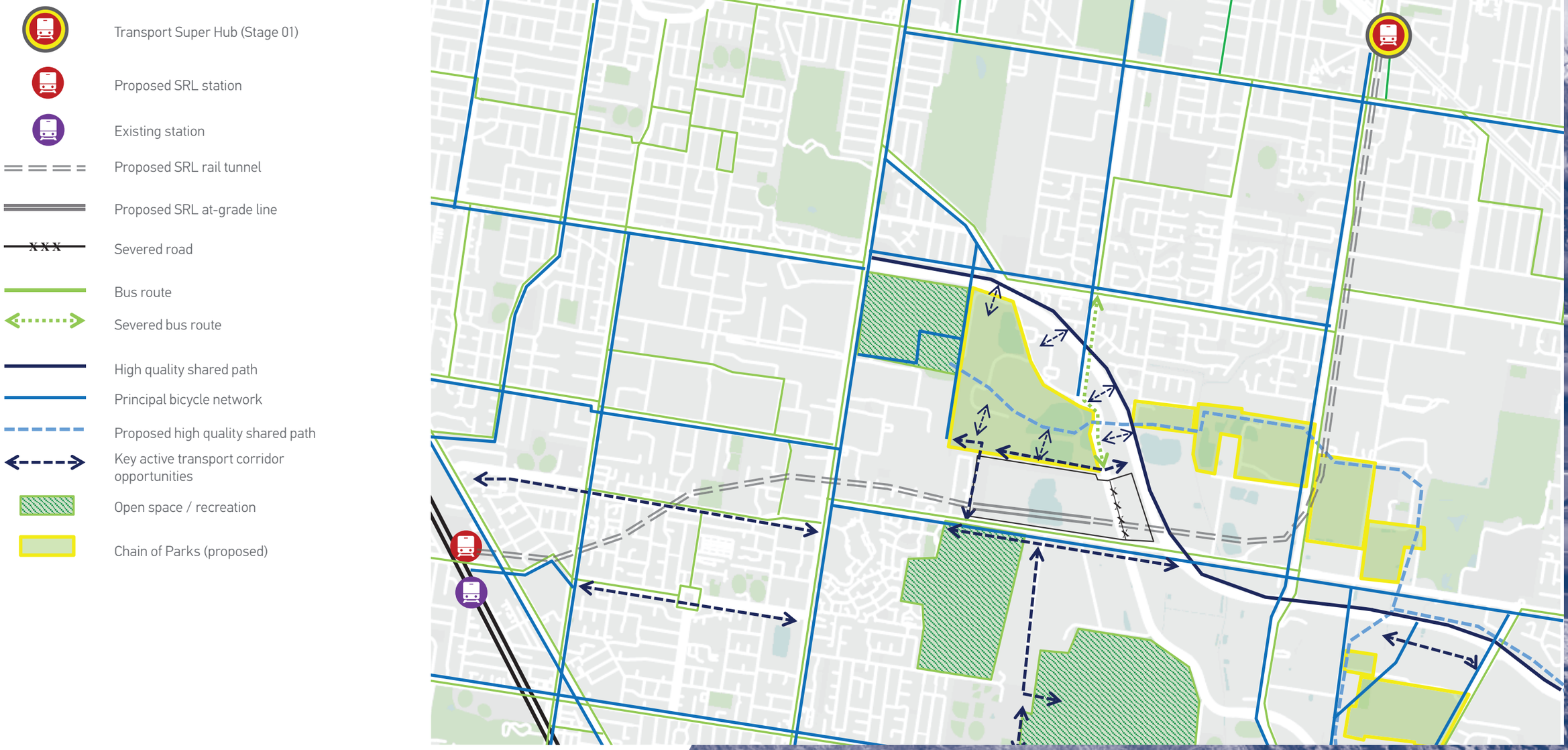
ABOVE. Bus services can be optimised to improve wider connectivity.

ABOVE. Explore opportunities for active transport infrastructure along Kingston Road.

ABOVE. Investigate potential for east-west trails through the Green Wedge zone to the Elder St underpass.

ABOVE. Explore opportunities for a north-south pedestrian and cycling bridge across the SSF site.

PROPOSED NETWORK



2.0 Issues + Opportunities

2.1 Issues + opportunities: key themes

COMMUNITY CONCERNS

Initial community concerns about the Suburban Rail Loop Authority's (SRLA) plans to build the Southern Stabling Facility at Heatherton can be summarised into the following key themes.

Under each of these key themes of concern, Council has identified a number of opportunities that we believe would help to mitigate the concern, and even turn a negative into a potential positive for the community.

These opportunities are explored further in the subsequent design options that Council is advocating to SRLA.

Opportunities:
— Green roofs
— Use of materials
— Vegetation / screening
— Landform manipulation

Opportunities:
— High efficiency LED lighting
— Reduce surface reflection
— Discreet light fittings

Opportunities:
— Elevated pathways or bridges
— Generous pathways around site

Opportunities:
— Compensate for loss by funding land acquisitions elsewhere for Council open space needs

Opportunities:
— Replace any trees minimum 3 for 1

Opportunities:
— Vegetation / screening
— Landform manipulation
— Noise deflecting security walls

2.2 Transport and connectivity

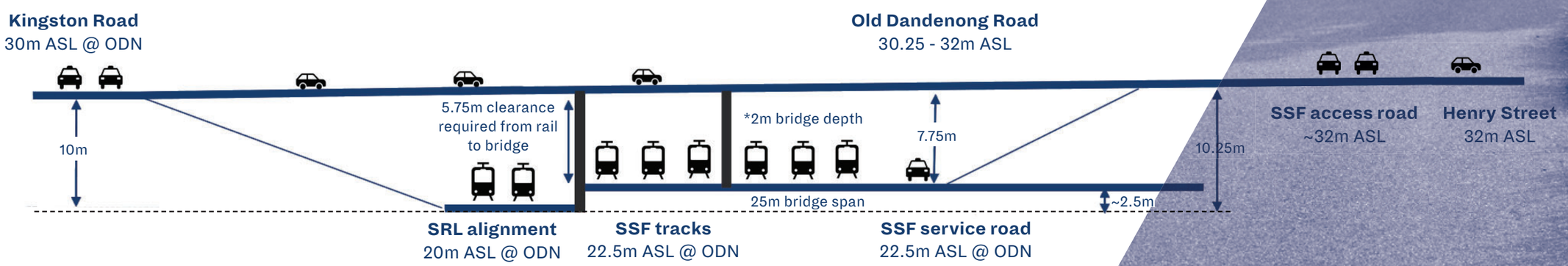
LOCAL OPPORTUNITIES

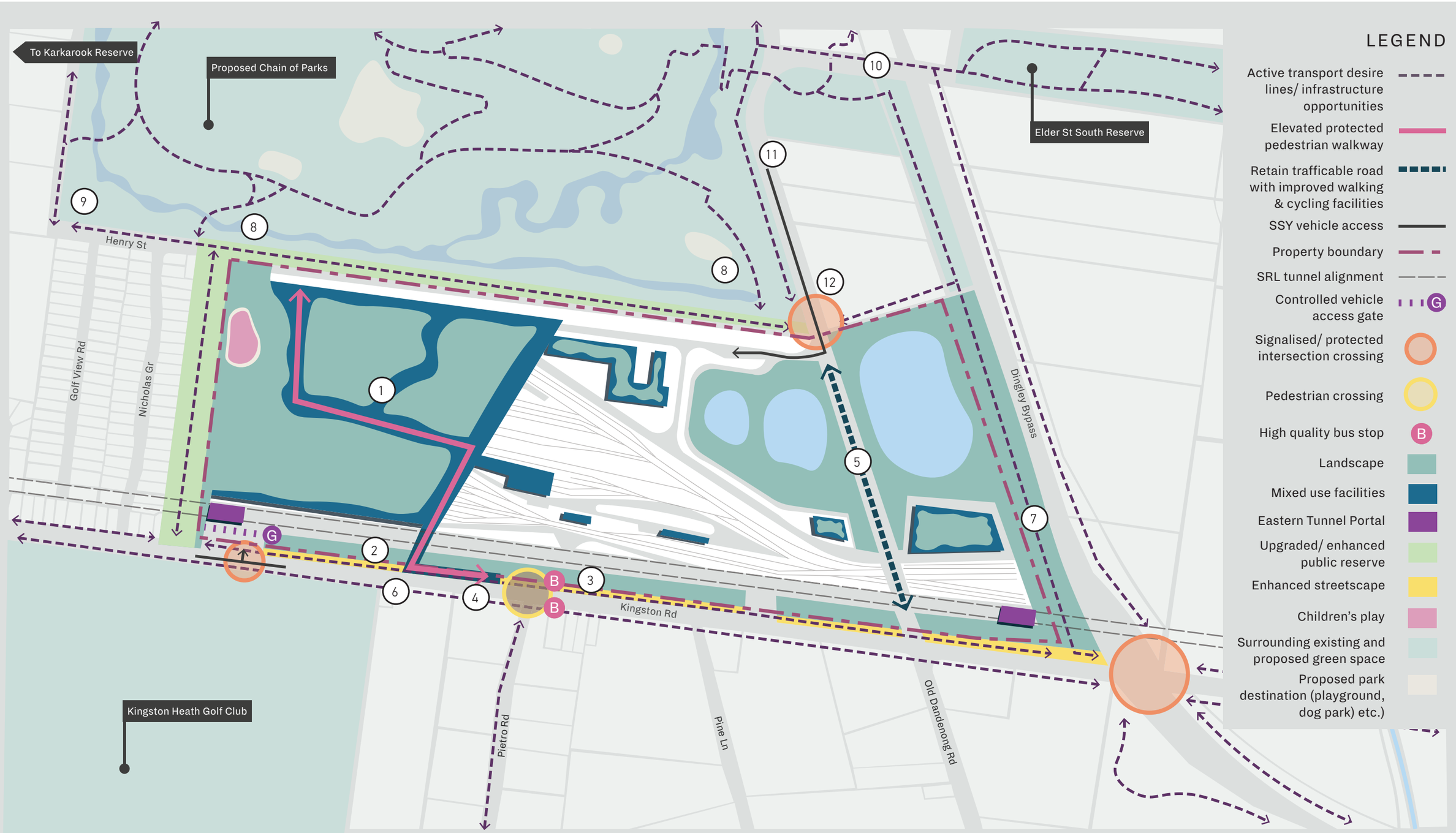
The development will be located within the 'Green Wedge' and will interface with the park north of Henry Street, residential areas on the west, Dingley Bypass on the east and Kingston Road on the south, leading towards the Kingston Heath open space. While the SSF will involve heavy industrial uses in association with rolling stock maintenance and cleaning, including kilometres of inaccessible track, opportunities to incorporate the site with the surrounding network have been discussed.

Summarised below and in the adjacent map, solutions could be explored that seek to activate the edges of the SSF, leverage off the supplied night-time lighting to increase safety, create an east-west 'country lane' active transport boulevard, improve north-south connectivity across Kingston Road and even elevate walkways through the SSF to provide interaction with the site.

1. Elevated pathways and bridges through and over the SSF could be investigated to both provide connectivity, recreation and an attraction for visitors to the area attraction for visitors to the area (bridges could explore opportunities to incorporate the tunnel portal and would need to consider requirements of the SSF and be enclosed, restricting access into the site).
2. The northern side of Kingston Road (southern edge of SSF) could be turned into a shared path 'country lane' route with trees on either side both to buffer the path from the SSF and Kingston Road (would need to avoid existing vegetation and additional clearing).
3. The wide buffer between Kingston Road and the SSF could be better utilised to provide refuges for waiting bus users with shelter and lighting, with the additional opportunity of consolidating bus stops along Kingston Road into fewer, but higher quality stops, closer to proposed pedestrian crossings.
4. Explore pedestrian and equestrian crossing treatments across Kingston Road to Pietro Road.
5. Old Dandenong Road could be retained (reinstated) to maintain this important north-south connection through the site.
6. 12m cross section of Kingston Road could allow a form of median treatment to provide a pedestrian refuge and separate traffic, improving road safety and amenity.
7. Leverage off the light provided by the SSF to filter onto adjacent paths. This will require consideration of vegetation/ screening to mitigate light spill onto surrounding residential areas, while being cognisant of potential impacts to nature and wildlife.
8. Consider opportunities to interface with the future park on the north of Henry Street and allow connections between the northern edge of the SSF.
9. Ensure a linkage between the western edge of the SSF and paths on Henry Street.
10. The existing east west path on Elder Street terminates on the western side of the Dingley Bypass, creating a discontinuous experience for pedestrians and cyclists (Figure 1). It is recommended to explore options of connecting this path to the proposed path along Henry Street, creating a continuous high quality active transport connection. To ensure an appropriate outcome, consideration of improved lighting, traffic protection and security is required, particularly within the underpass.
11. Explore opportunities to downgrade Old Dandenong Road to create a better outcome for pedestrians and cyclists, while being more reflective of less vehicle demand. Will need to investigate appropriate traffic calming and management measures to ensure safety at peak times when stabling yard staff access and egress the carpark.
12. Ensure safe and convenient crossing treatments for pedestrians and cyclists at vehicle entries to the SSF, particularly the main entrance to the SSF carpark proposed at Old Dandenong Road on the northern boundary of the site. Further investigation into the number of vehicles requiring access throughout the day/ form of controlled access gate and intersection treatment is recommended.

Old Dandenong Road cross section




To Karkarook Reserve
Proposed Chain of Parks
Elder St South Reserve
Henry St
Golf View Rd
Nicholas Gr
Dingley Bypass
Kingston Rd
Pietro Rd
Pine Ln
Old Dandenong Rd
Kingston Heath Golf Club
1
2
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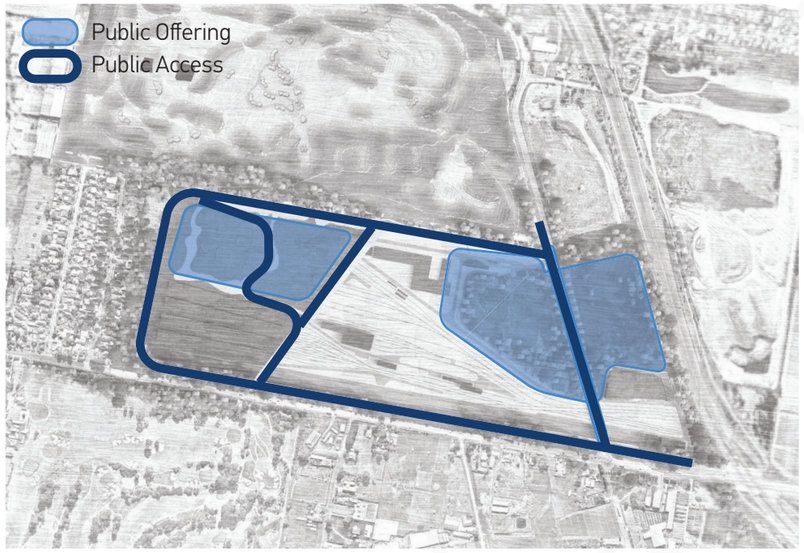
LEGEND
Active transport desire lines/ infrastructure opportunities
Elevated protected pedestrian walkway
Retain trafficable road with improved walking & cycling facilities
SSY vehicle access
Property boundary
SRL tunnel alignment
Controlled vehicle access gate
Signalised/ protected intersection crossing
Pedestrian crossing
High quality bus stop
Landscape
Mixed use facilities
Eastern Tunnel Portal
Upgraded/ enhanced public reserve
Enhanced streetscape
Children's play
Surrounding existing and proposed green space
Proposed park destination (playground, dog park) etc.)

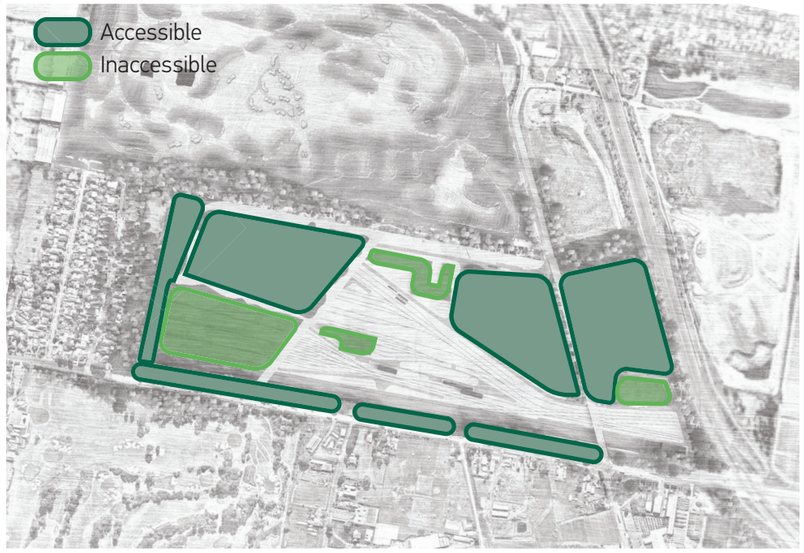
2.3 Key moves

Trail Network

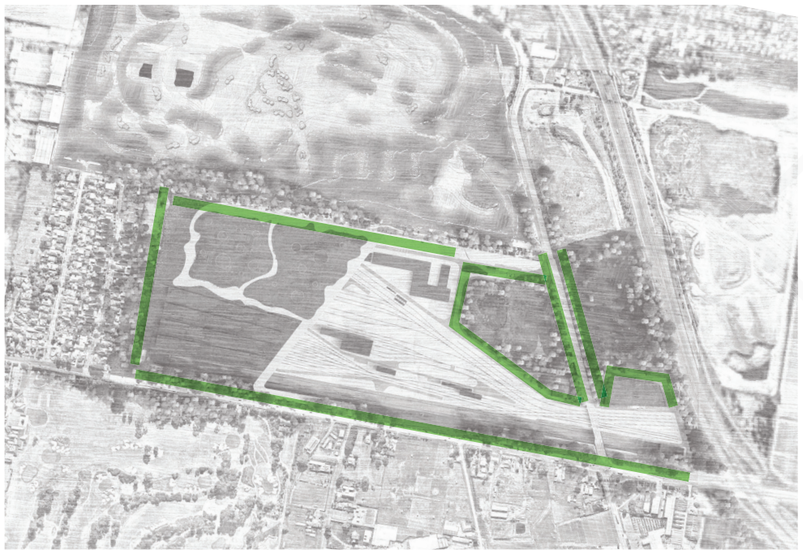
Public Offering / Public Access



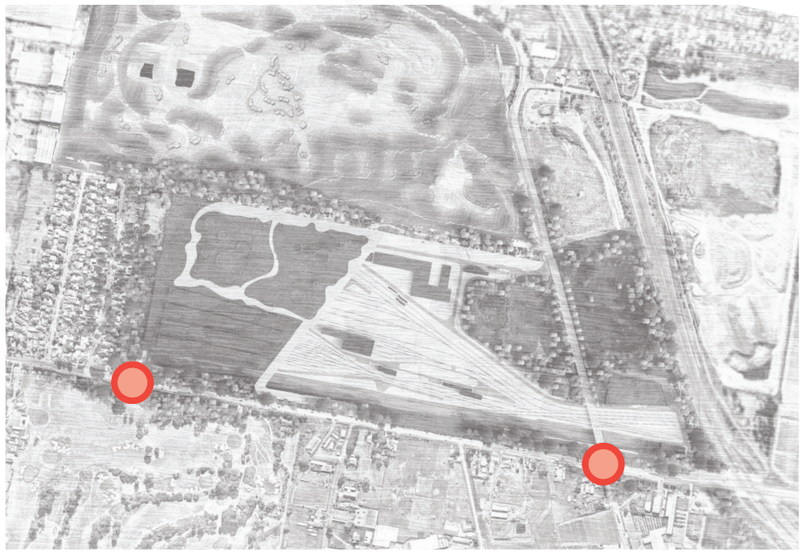
Green Space (accessible and non accessible)



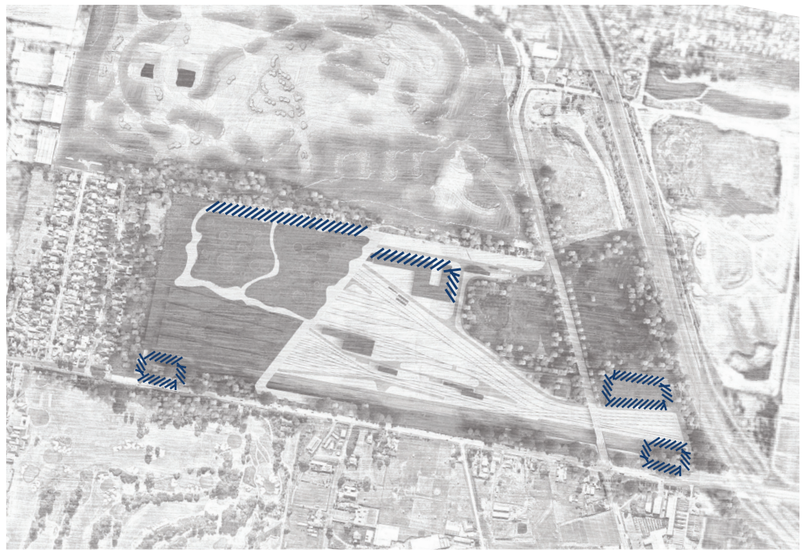
Landscape Buffer



New Pedestrian Crossings (surface with traffic lights)



High Quality Building Facades



2.4 Landscape opportunities

L1 Use landscaped mounding to deflect noise and conceal security fencing and views into stabling Facility

L2 Use vegetation and layered planting to screen security fencing and industrial buildings

L3 Use green roofs to soften the industrial nature of the SSF and create space for biodiversity

2.5 Community use + activation

C1 Tan-style cycle/equestrian/walking path

C2 An opportunity to view the workings of the SRL with didactic panels explaining the project and the engineering involved

C3 Potential bouldering wall / objects

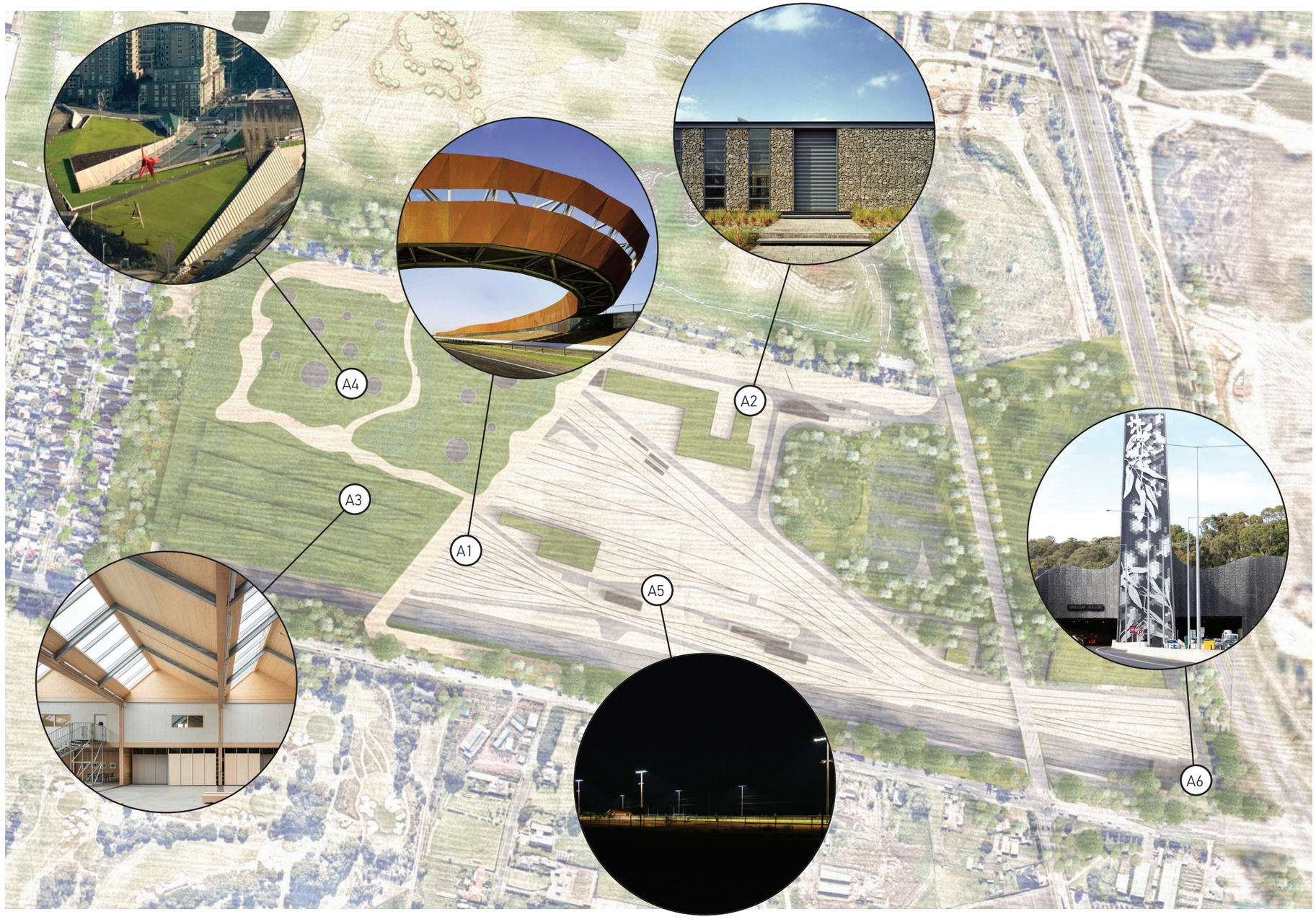
C4 Playground

C5 Potential pump track

C6 Bird hyde and wetland discovery trail

NOTE: Proposed recreational activities to be work-shopped with KCC officers to ensure alignment with Chain of Parks plan.

2.6 Architectural/infrastructural assets



A1 Iconic architectural footbridge

A2 Use high quality materials with recessive natural materials to reflect parkland character

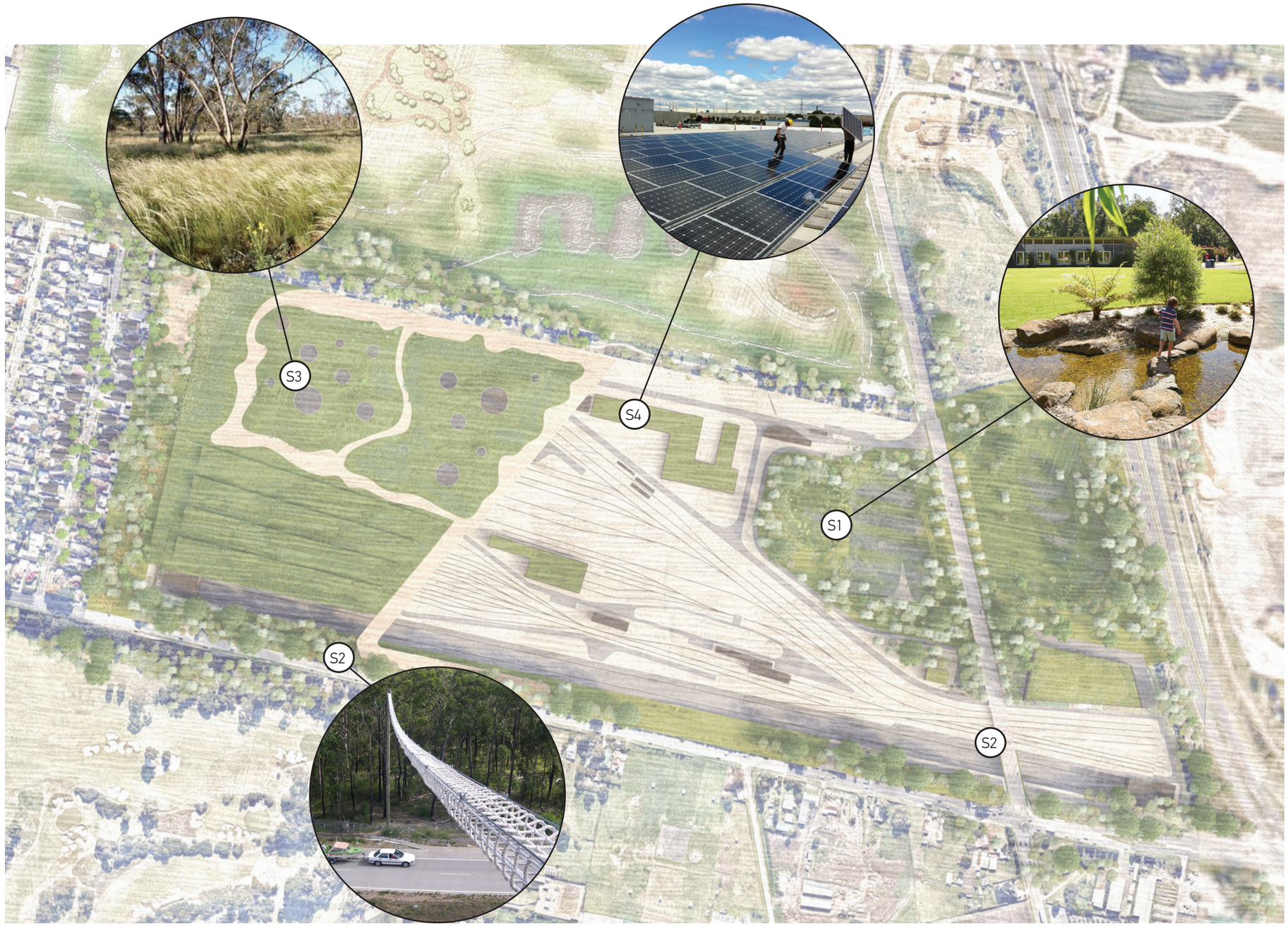
A3 Celebrating industrial scale and role of the built form through vernacular forms

A4 Blur the line between landscape, infrastructure and building at key edges to soften the SSF's presence in the Chain of Parks and make it a feature rather than an eyesore

A5 Minimise light spillage and glare through reducing reflective surfaces and using state-of-the-art LED lighting

A6 Iconic tunnel portal

2.7 Biodiversity + water



S1 Implement an Integrated Water Management strategy across site

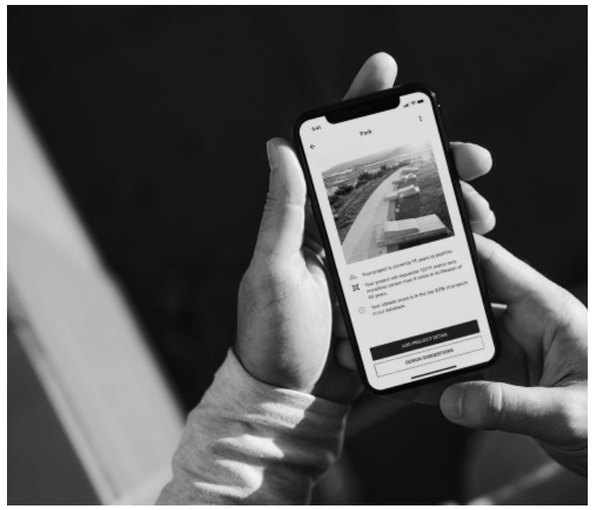
S2 Create strategic habitat linkages through use of fauna crossings and habitat structures

S3 Implement a planting strategy that reintroduces the local ecological vegetation class, 'grassy woodland'

S4 Incorporate solar and green roofs, 'bio-solar'

2.8 Sustainability principles

01
Carbon



The Pathfinder Tool assists in calculating carbon footprints of landscape architecture projects.

— Targeting improved environmental, social or economic conditions for SSF and the systems that connect into these sites.

— Assessing landscape performance in terms of benefits within and beyond a project's site boundaries.

— Seeking to reduce direct emissions, or those that occur on site within the site's boundaries;

— Seeking to reduce indirect emissions (those that occur outside the site's boundary); and

— Seeking to reduce other indirect emissions (includes upstream and downstream emissions, such as those resulting from raw material extraction or transportation)

02
Water + Stormwater

Trin Warren Tam-boore Wetland.

— Implement efficient potable water measures;

— Investigate a precinct wide recycled water network or other on site water harvesting and reuse systems;

— Develop a WSUD strategy;

— Consult with Traditional Owners to ensure that plans for sustainable water and biodiversity management within the development complement the objectives of connecting to country, reciprocating and giving back to the land; and

— Reviewing the criteria for stormwater management (e.g. nutrient removal and runoff requirements) and determine whether they are adequate to meet the developments needs. Giving particular consideration to future climate impacts and connecting to country.

03
Transport

Cycling through Tonsley Innovation District, Adelaide.

— Establishing a transport hierarchy that prioritizes public transport bicycle and pedestrian access;

— Establishing legible and efficient vehicle routes and optimising connections;

— Establishing commuter and social cycle paths; and

— Investigating and encouraging initiatives such as car share and bicycle share schemes.

04
Waste

This food composting facility transforms food waste into a valuable product.

— Encouraging waste reduction through design and procurement initiatives;

— Minimising waste during construction through on site waste management, reuse and recycling; and

— Minimising waste during operation by providing adequate facilities for recycling.

05
Materials

Gabian wall facade by architects Parque Humano.

— Specifying and using sustainable materials;
— Developing embodied carbon estimates and a preferred materials list;
— Early supply chain mapping with contractors, encouraging the use of recycled material and other initiatives;
— Minimising the use of products which deplete natural resources and create toxicity in either their manufacture, use or disposal; and
— Further reviewing potential reuse of items of heritage significance.

06
Biodiversity + Landscape

Flowering plants to support bees and insects.

— Demonstrating and integrating approaches to landscape, water and ecology;
— Encouraging greening of the site;
— Selecting waterwise vegetation where desirable;
— Promoting a healthier ecosystem, including potential for new aquatic life;
— Designing major pedestrian and bike thoroughfares with good shading and tree canopy to mitigate urban heat impacts;
— Developing criteria for identifying and prioritising the retention of trees with high existing value; and
— Consult with Traditional Owners on the sustainability vision, targets and broad delivery strategy to ensure that these measures align with the objectives of connecting to country and reciprocating and giving back to the land.

07
Soil

Healthy soils are essential for life on earth.

— Reusing soil to minimise the need to import soil;
— Minimising disposal to landfill; and
— Controlling surface runoff during demolition, re-mediation, construction and operation.

08
Increasing Awareness

Social participation in maintaining landscapes helps to connect people to their environment.

— The project offers an opportunity to communicate and showcase to the community the benefits and possibilities of sustainable infrastructure development.

3.0 Council's Alternative Design Concept

3.1 Concept design plan

1. Green and accessible edges
2. "Country lane" planted shared path along Kingston Road
3. Traffical road and bike path along alignment of Old Dandenong Road
4. Pedestrian bridge at centre-west of the site - both north-south and east-west connections
5. Accessible green roof concealing SRL Storage and Maintenance sheds
6. Inaccessible green roof above SRL train washing facility and stabling yard
7. Wetland with public access trail and captures water for SSF re-use
8. Ephemeral wetland with grassy woodland vegetation
9. Children's play

3.2 Bird's eye view (north)

3.3 Bird's eye view (south-west)

3.4 View north along Old Dandenong Rd

3.5 View to Maintenance Shed roof

3.7 Old Dandenong Rd shared user path

3.8 Play space

4.0 Urban Cooling and Impacts of Greening

The Suburban Rail Loop Authority's proposed plan includes a total of 74,420m^2 green coverage across the site.

Council's enhanced plan with green roofs, wetlands and green edges achieves a total of 230,320m^2 of green coverage.

This is an approximate **209% increase** in green coverage across the site.

Council has commissioned independent modeling that shows when the site includes our proposed irrigated trafficable green roof, irrigated bio-solar roof area and irrigated ground level landscaping (inclusive of trees and wetlands), urban cooling benefits are significantly improved.

When using urban cooling and sustainable practices, the following can be achieved:

— Average land surface temperature 7.6°C lower compared to open to sky stabling, buildings and unirrigated grassed areas.

— Average air temperature 1°C lower compared to open to sky stabling, buildings and unirrigated grassed areas.

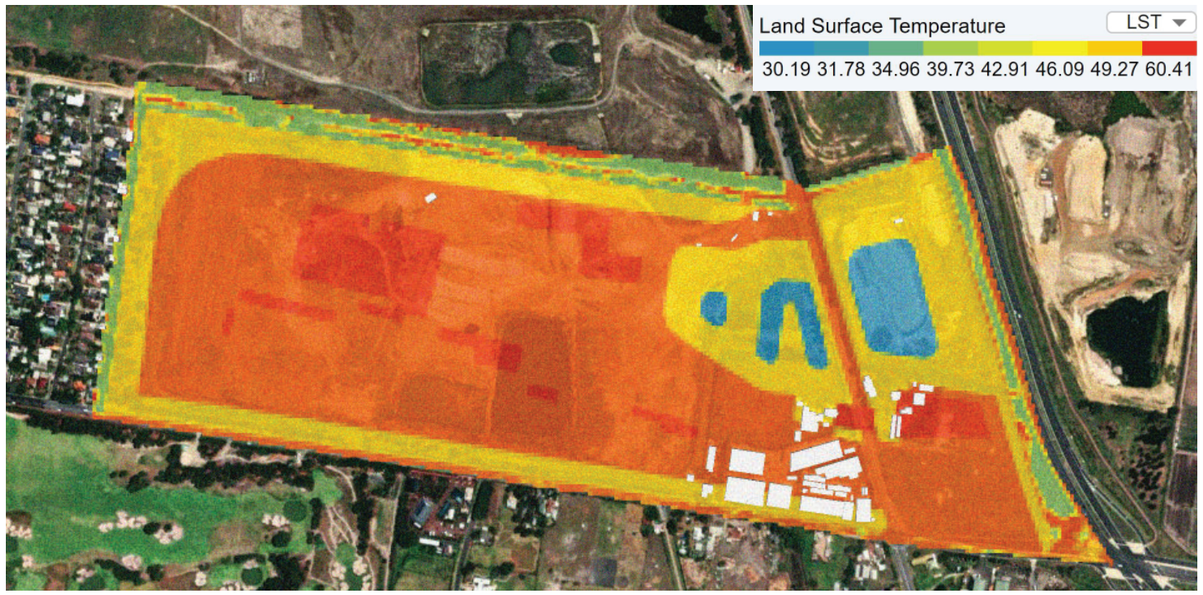
— 21.6% less impervious cover.

— 47.4% increase in irrigated vegetation.

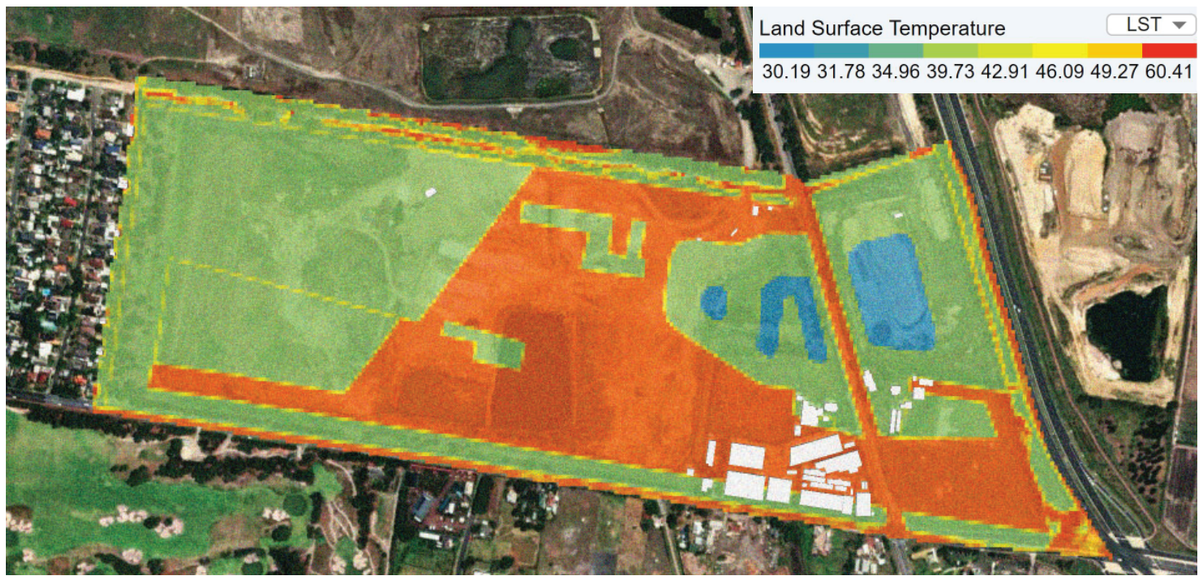
— 60.2 ML/year reduction in stormwater runoff generated from impervious areas.

— 38.1 ML/year recharge of soil moisture through infiltration.

Conventional site design



Urban cooling and sustainable practices



5.0 Early Initiatives

Early Initiatives	Timing	Logic/ Benefit
— Early planting of urban forest within the City of Kingston. — Limit the removal to when it is necessary — Include agreed timeframes for planting — Include agreed locations for planting	— Prior to the removal of vegetation — Staging should include a strategy for planting before any work commences and agreed timing as for planting. — Off-site locations should be planted prior to trees being removed. — Timing for on-site locations to be determined by impact of works	— Enables trees to grow through the construction period to offset the loss of canopy cover to achieve the KCC target of 30% and 3:1 replacement — Community is concerned about the loss of trees and vegetation — Replacement habitat is advanced ahead of the project completion
— Improvements to Henry Street and Kingston Walk including mounding and landscaping	— Post EES and prior to initial works. — Mounding along site edges to be constructed as part of Initial and Early Works to mitigate noise impacts	— Protecting the amenity of residents and trail users during construction through mounding structures — Offset vegetation removal — Key issue arising from engagement
— Suitable provision for playground facilities through construction — Interim play facilities at Henry Street Playground — Contribution to play facilities at Elder Street Reserve	— Prior to commencement of works	— Support continued use of existing playground through the construction period — Play facilities may need to be provided on another site due to noise impacts. Elder Street Reserve is proximate to the site and subject to connectivity could provide an alternative play opportunity.
— Playground upgrade (integrated as part of the final concept plan design)	— Develop staging plan to determine most appropriate time for delivery	— Continued provision and improvement of recreational play facilities
— Purple pipe and Integrated water management planning	— To considered as part of EES assessment — 3rd pipe to be integrated through the design phase — Participate in the lobbying to state for delivery of key pipeline infrastructure	— Provides opportunities for water reuse for irrigation, train washing etc considering a dryer climate — Funding, significant infrastructure and stakeholder engagement required to implement, requiring substantial lead times
— Continued vehicles access along Old Dandenong Road	— Development of staging plan prior to road closure — Provision of temporary road that could go around the site in the interim	— Ensure continuity of traffic flow before, during and after construction.
— Connect Elder Street South SUP to Old Dandenong Road	— Prior to commencement of works	— Provide short and long-term SUP connectivity and connection between Henry Street and Elder Street Reserves
— Shared user path on Kingston Road between St Andrews Drive and Dingley Bypass with crossing points at Pietro Road and Kingston Walk	— Staged approach. Provide SUP along the southern side of Kingston Road and crossing points prior to commencement of works — SUP on northern side of Kingston Road as part of main works	— Provide short and long-term SUP connectivity and delivery of chain of park connections. — Provide safe walking and cycling facilities through the lengthy construction period.
— Replacement Public Acquisition Overlay Land (Chain of Parks) — 91-185 Kingston Road, Heatherton (Delta Site)	— If the Stabling proceeds ensure that a suitable 34.4ha site(s) is secured and made available for a regional sporting facility to align with the purchase of the Delta Site	— Meet the government's commitment for the delivery of 355ha of open space as part of the chain of parks — Meet the recreation needs of the region including growth in female sports — Offset the loss of land for regional sport
— Provision of construction viewing spaces	— As part of initial and early works	— Enables engagement with the project. Prior infrastructure projects have attracted children and community members viewing large equipment
— Protection of native wildlife, including those of local significance	— In the EMF, ensure all native wildlife and habitat is identified and the implementation of protection and relocation strategies — Engage wildlife experts during construction to re-locate wildlife — Provide for alternative habitat opportunities	— Ensure that all native wildlife is protected and continue to support biodiversity through all stages of the project
— Provide appropriate traffic management measures to minimise local traffic congestion	— Consideration of issues through the EES — Ensure relevant stakeholders are engaged in the development of traffic management plans	— Minimise traffic impacts and ensure accessibility

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