



# HORNBY LIBRARY, SERVICE CENTRE AND SW LEISURE CENTRE KYLE PARK

## Preliminary CPTED Review

Christchurch City Council

6 March 2019

Revision B: For circulation.



Kyle Park.

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## 1.0 EXECUTIVE SUMMARY

The proposed Hornby Library, Service Centre and SW Leisure Centre (the centre) was originally proposed to be located within Denton Park. However following public submissions, Council have since approved the north eastern most corner of Kyle Park as the preferred location for the centre.

The purpose of this review is to provide an overview of potential Crime Prevention through Environmental Design (CPTED) matters, building on the CPTED and Safety Audits which have already been prepared for Kyle Park and Denton Park<sup>1</sup> and more recent crime statistics for the Kyle Park area. This CPTED review should be read in conjunction with the appended Kyle Park South West Leisure Centre Landscape and Visual Assessment and the Kyle Park Tree Survey.

This review has found that the proposal to locate the new centre within the north-eastern most corner of Kyle Park is generally supported from a CPTED perspective. Key findings are that the proposed location at the corner of Waterloo and Smarts Road is a prominent corner with high visibility; that passing traffic on Waterloo Road provides movement and activity and "eyes on the street"; that existing activity in the Park creates a reasonably high level of surveillance across the site; that the Park is well used, particularly by walkers making their way south to the railway underpass; and the area would experience even higher usage during the school term. This review also found that the addition of the proposed new centre would contribute to the level of use and activity and the general safety of the area. The centre would also provide surveillance into the other areas of Kyle Park.

In addition to area specific guidance, site wide guidance notes are summarised in Appendix 1 of this review. Layout and design of the building, surrounding car park, and landscape areas in accordance with this guidance and CPTED principles will ensure the safety of the users of the facility. Preparation and implementation of site-wide lighting and signage strategies will add to the safety of the wider environment. Engagement with local communities and schools will encourage a sense of ownership and care, as will embedding CPTED practice during all phases of the design and construction of the facility.

## 2.0 INTRODUCTION

### A. BACKGROUND

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<sup>1</sup> (Boffa Miskell, 2018)

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Through the Council's Long Term Plan 2015-2025 funds were set aside to build a community facility to fill a need in the southwest area of Christchurch which has seen significant population growth.

The proposed Hornby Library, Service Centre and SW Leisure Centre was originally proposed to be located within Denton Park. However following public submissions, Council have since approved the north eastern most corner of Kyle Park as the preferred location for the centre.

Boffa Miskell was engaged in March 2018 to provide a Comprehensive Safety Audit of the receiving environment around Denton Park and Kyle Park, and key connections to the wider context, including a refined Safety Map, building upon previous reviews undertaken by Christchurch City Councils' Crime Prevention Team.

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## B. PURPOSE AND SCOPE

This review is also to provide an overview of potential Crime Prevention through Environmental Design (CPTED) matters, building on the CPTED and Safety Audits which have already been prepared for Kyle Park and Denton Park<sup>2</sup>. This review does not include Universal Access (UA) and Injury Prevention through Environmental Design (IPTED) considerations, unless these are specifically in relation to Crime Prevention. In addition, no recent night time audit has been undertaken as yet.

For the purposes of this review, the geographical extent of the site is the north eastern most corner of Kyle Park, bounded by Waterloo Road to the north (a collector road) and Smarts Road (a local Road) to the east.

This CPTED review should be read in conjunction with the Kyle Park South West Leisure Centre Landscape and Visual Assessment<sup>3</sup> and the Kyle Park Tree Survey<sup>4</sup> which has been prepared in tandem with this review.

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<sup>2</sup> (Boffa Miskell, 2018)

<sup>3</sup> (Christchurch City Council, 2019)

<sup>4</sup> (Arbor-Vitae, 2019)



Kyle Park site of new Hornby Library, Service Centre and SW Leisure Centre – Geographical extent

The following documents have been reviewed in preparation of this report;

- Southwest Library and Service Facility Supplementary CPTED Review, Christchurch City Council (February 2015).
- Hornby Library, Customer Services and South West Leisure Centre CPTED Comments, Christchurch City Council (January 2017).
- Hornby Library, Customer Service Centre and South West Leisure Centre CPTED Assessment Prepared for Christchurch City Council, Boffa Miskell (10 April 2018).
- Kyle Park Management Plan (April 1993), Christchurch City Council.
- Hornby Library and Customer Services, South West Leisure Consultation Document, Christchurch City Council (April 2017).

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### C. METHODOLOGY

The preparation of this CPTED review will be as follows;

- a. A desk top audit of the following all the relevant documents, plans, drawings, aerials and crime data for the area gathered from the NZ Police website;
- b. Discussions and consultation with relevant stakeholders;
- c. Day time (and night time if appropriate) visit of site and surrounding neighbourhood including the walking catchment, which includes the railway underpass.
- d. Identification of key design and mitigation proposals, and any further recommendations required to counter the more significant CPTED matters.

### 3.0 DESCRIPTION OF PROPOSAL

The proposed centre is to provide a library, community services, community governance services, and a recreation and sport centre (including swimming pools). The entrance to the centre is to be at street level, and will be designed as an attractive, inclusive and accessible space. The operational and service requirements of the swimming pools could potentially be accommodated by the portion of Kyle Park which is below surrounding street level, reducing the amount of excavation and fill required. The building footprint is to be approximately 3240m<sup>2</sup> and the total site area with car parking and landscaping is to be 15,200m<sup>2</sup>.

The intention is to design the centre to integrate into the existing landscape character of the park, while also providing a safe and attractive environment. The centre is also to provide a good relationship to the street, and will enclose an important corner which sits opposite the Hornby High School and Hornby Primary School. Existing road boundary trees are to be retained where possible, as well as the trees on the shared internal boundaries. The interface of the centre with the remainder of Kyle Park will be considered carefully to maximise the benefits of the adjacent attractive green space.

Car parking will be provided for up to approximately 210 vehicles, parking for scooters and cycles, and charging stations for electric vehicles. Safe vehicle access into the car park area will be provided from the surrounding road network. The car park area will also allow for significant tree planting, and areas of landscaped stormwater swales. Pedestrian connections will also be accommodated within the landscaped areas.

The existing Kyle Park path network will be enhanced to provide safe connections to the new centre, and ultimately to join into the major cycleway network. Following a CPTED review, improvements are planned for the pedestrian railway underpass to provide for safer movement south to the Hornby Hub shopping centre.



Kyle Park viewed from the north-eastern corner.

#### 4.0 CPTED BACKGROUND

The National Guidelines for CPTED (2005) prepared by the Ministry of Justice refer to CPTED as

*“A crime prevention philosophy based on proper design and effective use of the build environment leading to a reduction in the incidence and fear of crime, as well as an improvement in the quality of life.”*

CPTED is an important tool in managing the physical environment and is directly applicable to the security, site constraints and challenges that affect the site.

This review has been prepared in the context of the following guidance documents and polices:

a. National Guidelines for CPTED (2005) – These guidelines promote best practice design through the application of CPTED principles. The four overlapping principles are:

1. Surveillance – people are present and can see what is going on;
2. Access management – methods are used to attract people and vehicles in some places and restrict them from others;
3. Territorial reinforcement – clear boundaries encourage community ‘ownership’ of the space;  
and
4. Quality environments – good quality, well maintained places attract people and support surveillance.

b. Christchurch City Council Safer Christchurch Strategy 2016-2021 (2016)

The Safer Christchurch Strategy 2016-2021, Priority Area 5: Building in safety - refers to CPTED as playing an important role in enhancing safety in our communities:

*“Applying first and second generation crime prevention through environmental design (also referred to as CPTED) principles to the way we plan, design and manage our built environment will increase community usage, improve perceptions of public places, achieve connection and integration of streets and public places, and reduce the incidence of injury and opportunities for crime and antisocial behaviour.”*

**5.0 CRIME STATISTICS**

The following crime data for recorded public place offences for the calendar year of 2018 at Kyle Park was received from the NZ Police Intelligence Analyst on 30 January 2019. The data is not refined enough to indicate exactly where these offences took place.

Date	Time	Type Code	Location
18/01/2018	17:26:11	1C - Car/Person Acting Suspiciously	WATERLOO RD HORNBY
30/07/2018	15:50:29	5120 - Wilful Damage	23 SMARTS RD HORNBY
10/09/2018	21:33:20	1C - Car/Person Acting Suspiciously	WATERLOO RD HORNBY
26/09/2018	16:11:19	2210 - Sexual Affronts	WATERLOO RD HORNBY
6/12/2018	20:23:13	5110 - Arson	WATERLOO RD HORNBY

In addition, the following tables retrieved from the NZ Police website<sup>5</sup> show crime trends for the Hornby North area for a two year period from 1 November 2016 to 1 November 2018, and more specifically for the Kyle Park meshblock for the same time period. The tables show trends for all victimisations which

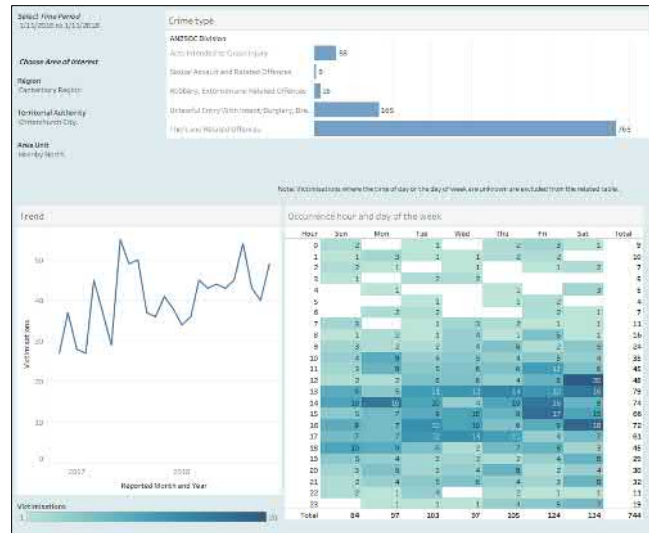
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<sup>5</sup> (New Zealand Police, 2018)



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includes assaults, robbery and break-ins and car related offences. An analysis of the crime data shows that rates of offending vary throughout the year, and are generally on the rise. The 2018 CPTED assessment for Denton Park<sup>6</sup> noted that the closure of a nearby bar (Snafu Bar) resulted in a drop in reported victimisations.



Crime Trends Hornby North.



Crime Trends Map Meshblock Kyle Park.

<sup>6</sup> (Boffa Miskell, 2018)

## 6.0 KEY FINDINGS AND CPTED OBSERVATIONS

### KEY FINDINGS

- The proposed location at the corner of Waterloo and Smarts Road is a prominent corner with high visibility.
- Passing traffic on Waterloo Road provides movement and activity and "eyes on the street".
- Existing activity in the Park creates a reasonably high level of surveillance across the site.
- The park is well used, particularly by walkers making their way south to the railway underpass. The area would experience even higher usage during the school term.
- The addition of a new centre would contribute to the level of use and activity and the general safety of the area. The centre will also provide surveillance into the other areas of Kyle Park.

### KYLE PARK CPTED OBSERVATIONS

There has not been a recent night time audit of Kyle Park. These observations include only a daytime audit of the proposed site of the new centre, and not the remainder of Kyle Park.

There is currently reasonably good views into the Kyle Park site from the surrounding road network, the Kyle Park path network, and the adjacent properties. Existing activity in the Park also creates a reasonably high level of surveillance across the site. However, the existing topography (i.e. the central depression which was the original quarry floor) makes it difficult to see the centre of the site from a distance, and necessitates close proximity to the site boundaries in order to see into the centre of the site.

During a site visit undertaken in January 2019, more recent observations include;

- a. The park is well used mid-week, particularly by walkers making their way south to the railway underpass. The area would experience even higher usage during the school term.
- b. There is a constant stream of traffic along Waterloo Road, creating activity and providing for intermittent surveillance of the site.
- c. The site appears well maintained and well cared for – the grass is mown and the trees are well pruned and vigorous.
- d. There is no access to the site from the Smarts Road frontage which is contained by low post and cable, however there is an opening at the Smarts Road/Waterloo Road corner.
- e. The gradient of the slopes down into the bottom of the site is approximately 1:3, so is not fully accessible.

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- f. There is low fencing enclosing an area on the southern boundary. It is possible that this fencing contains an area of contaminated fill.



Kyle Park view from eastern boundary.

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#### RAILWAY UNDERPASS CPTED OBSERVATIONS

A general CPTED observation within the 2018 CPTED review<sup>7</sup> was that there is no site-wide signage strategy in place, creating confusion over ownership and thresholds between public and private space. In addition, the northern area of Denton Park, leading to the underpass, displayed substandard levels of lighting and maintenance, and there was an obvious lack of investment in amenities, creating a low quality and un-cared for environment. The rugby/velodrome car park and route to the underpass seemed to be completely “un-maintained”.

During a site visit undertaken in January 2019, more recent observations include;

- a. The underpass was well used during the daylight hours of the site visit. At least 12 groups of people used the underpass in the 20-30 minutes that was spent observing. A chat with a local man revealed that he used the underpass every day and had never felt un-safe, however he observed that night time lighting could be improved, and the slotted drain at the northern end often became blocked with leaves, causing flooding. There was evidence of tagging.
- b. Southern approach;

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<sup>7</sup> (Boffa Miskell, 2018)

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- i. Difficulty in locating the southern approach without local knowledge. This is due to lack of signage, the length of the approach, and the tunnel entrance being obscured.
- ii. Sub-standard quality of the sealed area leading to the tunnel entrance.
- iii. Possibly sub-standard level of lighting on the approach and within the tunnel.
- iv. Complete absence of wayfinding signage.
- v. Security fence at car park on eastern boundary which reduces escape opportunities. This has presumably been constructed as a deterrent to illegitimate use of the car park area to the rear of the new adjacent commercial building.
- vi. Escape opportunities unclear to the west of the approach, behind the velodrome.



Railway underpass – southern approach.

- c. Northern approach;
  - i. Sightlines restricted by topography.
  - ii. Low wire netting fencing completely enclosing areas of grass and shrubs. I understand this was a measure taken to exclude public from contaminated areas. The maintenance of vegetation has since become severely restricted.
  - iii. Evidence of arson.
  - iv. Complete absence of way-finding signage.



Railway underpass – northern approach.

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#### DENTON PARK CPTED OBSERVATIONS

The 2018 CPTED review of Denton Park<sup>8</sup> did not extend to include the Kyle Park site. This review however included a level of consultation with the local Hornby Police, the HUB security team, the Hornby Rugby Club, the Canterbury Cycling Club and the CCC maintenance Team. The Crime Profile concluded that Denton Park and Hornby Mall experienced high rates of crime when compared to other mesh blocks nationally. A nearby bar (now closed) was believed to contribute to many of the drinking related offences. A number of serious assaults occurred in the car park area to the west and north of the rugby club building, and offending was also centred on the northern parts of the site, particularly around the railway underpass. It was noted that the underpass is difficult to patrol due to no vehicle access, and a long distance to escape routes.

#### 7.0 RECOMMENDATIONS

Also refer to Appendix 1: Hornby Library, Service Centre and SW Leisure Centre, Kyle Park - Landscape Effects and CPTED Matters.

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#### AREA SPECIFIC RECOMMENDATIONS

1. Kyle Park.
  - a. Ensure safe pedestrian connections are provided through the site and along the periphery of the site. Ensure the path network is well integrated into existing

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<sup>8</sup> (Boffa Miskell, 2018)

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- networks and the surrounding landscape, and that there are a series of exit route options for safe entry and exit.
- b. Ensure all car park areas are visible from the new centre and surrounding road network to ensure good surveillance. The car park area should be lit during the hours of building occupation.
  - c. Pedestrian connections should be separated from the vehicle areas so that illegitimate use of the car park is reduced.
  - d. Ensure all pedestrian paths are at a grade that are fully accessible.
  - e. Place seating areas close to entrances and the reception area to ensure good surveillance of these areas.
  - f. Ensure sightlines across the entire site are retained/provided for.
  - g. Also ensure that there are no blind corners, areas for concealment, or entrapment areas within the building or car park area.
  - h. Ensure all ground cover planting is no higher than 1.0m and tree canopies are at least 2.5m above ground level to allow for sightlines. This may need to be reviewed on-site to allow for slope gradients and changes in ground level.
  - i. Provide a quality edge with adjacent commercial developments. Encourage activation of the boundaries, use of permeable fencing, careful tree placements, and retention of sight-lines.
  - j. Provide cycle parks close to entrances and in view of reception for easy surveillance of the cycles. Provide parking also for E-bikes (larger) and scooters.
2. Railway Underpass (These recommendations are also based on recommendations within the 2018 CPTED document<sup>9</sup>).
- a. Improve lighting within the underpass and the two pathway approaches to the underpass. (Lighting should be LED 4000k warm lighting, and should be evenly spaced along the route with a gradual blend into the surrounding context – this may need to be confirmed).
  - b. Carry out earthworks to improve the sightlines to both side of the underpass, but particularly the northern approach. (There is an opportunity to retain the potentially contaminated spoil on site as fill in the proposed new car park area).

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<sup>9</sup> (Boffa Miskell, 2018)

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- c. Remove all fencing which is currently enclosing landscape areas on the northern approach to the underpass.
- d. Ensure all new paths are fully accessible.
- e. Consult with adjacent business owners regarding shortening the security fence which lines the southern approach.
- f. Investigate escape route opportunities for the southern approach.
- g. Re-evaluate and replace planting on both sides of the underpass with planting materials which have the following qualities
  - i. Fire resistant;
  - ii. Drought resistant and low maintenance;
  - iii. Grows to a maximum 1.0m in height at time of planting.
- h. Engage local community to develop a strategy for improving the visual quality of the underpass including lighting, community lead art projects, and higher quality material treatments.
- i. Monitor leaf litter and drainage within the underpass area to reduce incidence of surface flooding.



Path through Kyle Park looking north, cricket oval to the left.

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#### SITE WIDE RECOMMENDATIONS

1. Prepare and implement a site-wide lighting strategy. The centre will be an important destination, particularly for young people from the adjacent schools. The centre will be open during hours of darkness, and the environment should be made safe for night time use. The

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lighting of the centre should be integrated with other lighting elsewhere throughout the Park and the adjacent footpath and cycleway network.

2. Prepare and implement a site-wide signage strategy for place-naming, wayfinding and interpretation.
3. Engage local communities and schools in aspects of design and implementation to identify community requirements, and to encourage a sense of ownership and care.
4. Make use of materials that are of a high quality and provide a dis-incentive for vandalism and graffiti (e.g. graffiti proof paint systems). Also ensure a high level of maintenance and a prompt response to maintenance issues.
5. Embed CPTED practice during all phases of the design and implementation of the centre, and also post occupation at agreed intervals (e.g. 6 months, 12 months and 24 months post occupation).



## APPENDICES

**Appendix 1: Hornby Library, Service Centre and SW Leisure Centre, Kyle Park - Landscape Effects and CPTED Matters Summary Table.**

**Appendix 2: Kyle Park Tree Survey (2019)**

**Appendix 3: Hornby Library, Service Centre and SW Leisure Centre, Kyle Park, Landscape and Visual Assessment (2019).**

## REFERENCES

- Arbor-Vitae. (2019). *Kyle Park Tree Survey*. Christchurch: Christchurch City Council.
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## APPENDIX 1: Hornby Library, Service Centre and SW Leisure Centre, Kyle Park - Landscape Effects and CPTED Matters Summary Table.

Landscape and Visual Effects	Landscape Attribute	Effect	Planned Design and Mitigation Measures
	<p><u>Topography.</u> The proposed earthworks will change the existing landform and topography, and mask previous hydrological processes (formation of braided rivers).</p>	<ul style="list-style-type: none"> <li>• Topography returned in part to the original alluvial plains landform.</li> <li>• Historical associations with Smarts Pit are less legible.</li> </ul>	<ul style="list-style-type: none"> <li>• Retain some sense of level change by retaining car park area at a level below surrounding road network.</li> <li>• Opportunities for signage, interpretation and art works to reference past historical use of the site, and past formative processes.</li> </ul>
	<p><u>Open Space Character.</u> The development of the site and change in land use and activity would remove the open space character of the immediate area, however the remainder of Kyle Park will retain its open qualities.</p>	<ul style="list-style-type: none"> <li>• Sense of open space removed from the immediate area where the centre is to be located.</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunities for new centre to create a good interface with adjacent street. Also other benefits in terms of community hub, and positive relationships with nearby schools.</li> <li>• The remainder of adjacent green open space at Kyle Park and cricket oval area will remain undeveloped.</li> <li>• Opportunities to upgrade existing path network and cricket oval.</li> <li>• Increased surveillance and activity will provide a safer environment for park users.</li> </ul>
	<p><u>Land cover.</u> The existing open grassed area would be replaced by the building footprint and car park areas, with a resulting loss in grass and tree cover. However, the remainder of grassed areas within Kyle Park would remain unchanged.</p>	<ul style="list-style-type: none"> <li>• Some loss of grass cover and trees in the immediate site where the new centre is to be located.</li> </ul>	<ul style="list-style-type: none"> <li>• There will be over 5000m<sup>2</sup> remaining for landscaping.</li> <li>• A portion of landscaped area could be used for integrated stormwater treatment as well as for landscaped amenity areas.</li> <li>• Plant materials, tussocks and grassed areas could be specified to make a reference back to the pre-existing ground cover.</li> </ul>
	<p><u>Aesthetic Qualities.</u> The development of the site will affect people's aesthetic appreciation of the natural character of the green open space predominated by grass and trees.</p>	<ul style="list-style-type: none"> <li>• The degree of natural character, usually determined by the proportion of natural elements of grass and trees (and water), will be reduced by the development of the site.</li> </ul>	<ul style="list-style-type: none"> <li>• Quality design and build of the facility gives opportunities to integrate the building into the Kyle Park landscape.</li> <li>• The new development could potentially provide a new aesthetic quality to the site, while adding to the character of the neighbourhood.</li> </ul>
<b>Landscape Effects</b>	<p><u>Trees.</u> It is anticipated that there will be removal of a portion of the trees which are currently present on the site.</p>	<ul style="list-style-type: none"> <li>• The reduction in number of existing large trees will reduce the tree canopy and impact on the landscape character of the immediate area.</li> </ul>	<ul style="list-style-type: none"> <li>• A tree assessment has been completed and trees, and groups of trees, of particular significance identified.</li> <li>• There are also opportunities for further tree planting as follows; <ul style="list-style-type: none"> <li>○ The streetscape – Trees may be used to signify entrances, to mitigate building bulk, to frame views, or to generally add to the landscape character of the area.</li> <li>○ The internal boundary shared with the park – tree retention and new tree planting will aid in integration of the new facility into the park, framing views from the building into the park, reducing building bulk, and generally adding shade and amenity.</li> <li>○ Amenity areas within the site- tree retention and tree planting will add to the amenity on-site, create pleasant landscaped areas within the car park area and around the new facility.</li> <li>○ Stormwater swales within the car park area – tree planting within and around the swales for displaying on-site stormwater treatment.</li> <li>○ Car-park trees – tree planting for structure and way-finding within the car park area, for shade, and for general amenity in visually breaking up the large areas of sealed surface.</li> </ul> </li> </ul>
	<p><u>Visually prominent location.</u> The prominent corner site will still have clear visibility from its road boundaries, with the development of the site giving it further visual prominence.</p>	<ul style="list-style-type: none"> <li>• Development of this prominent corner site will activate this corner of Kyle Park and create a safer environment.</li> <li>• There will be a good general proximity to the Hornby community and will offer opportunity for reasonable outlook and integration with surrounding activities including the schools and park.</li> <li>• The proposed location is on the route of a proposed major cycleway, and it currently offers pedestrian access via the underpass to Denton Park to the bus interchange. The site is also located near schools, retail, healthcare and cultural activity centres, creating opportunities for multi-purpose trips.</li> <li>• There will be a reasonable level of visibility from passing traffic.</li> <li>• The location will provide relative ease of access for visitors as it will be possible to provide fully accessible entrances and car parking areas.</li> <li>• The prominent site, due to its high visibility, may promote membership and community participation levels.</li> <li>• There will be an opportunity to provide good views into the site, as well as from within the centre across the park and further afield.</li> </ul>	<ul style="list-style-type: none"> <li>• Carefully considered tree removals and tree planting will allow view-shafts into the site.</li> <li>• The lifting of the internal ground level of the car-park area by potentially up to 2.0m will improve visibility into the site.</li> </ul>

<b>Landscape Effects</b>	<p><u>Streetscape.</u> Currently the streetscape character is composed of open grass frontages interspersed with groupings and informal lines of trees.</p>	<ul style="list-style-type: none"> <li>The landscape character and visual amenity is likely to be changed by the construction of the new centre.</li> </ul>	<ul style="list-style-type: none"> <li>There is an opportunity here to provide a close relationship of the new building to the street.</li> <li>The finished floor level of the new centre is likely to be at (or just above) the street level, creating a direct relationship, and a universally accessible entrance.</li> <li>There is an opportunity to retain some of the existing mature trees on the road boundaries and integrate them into the building design and landscape treatment.</li> </ul>
	<p><u>Site Layout.</u> The extent of change will be determined by the chosen site layout. Options are</p> <ul style="list-style-type: none"> <li>To locate the new facility close to the street frontage or the corner of the site, with the carparking to the rear of the site.</li> <li>Locate the new facility to the rear of the site, with car parking to the front.</li> </ul>		<ul style="list-style-type: none"> <li>Locating the facility on the road frontage will have the advantage of creating a closer relationship of the building to the street, allowing close surveillance from the building to the street, and also giving a good view of the facility from the street. This will also allow for a closer relationship with the nearby schools.</li> <li>Locating the facility to the rear of the site will have the advantage of retaining an open frontage and allowing for further tree planting on the road boundaries. It would also allow for greater surveillance of the car park areas from the street.</li> </ul>
	<p><u>Interface with Park boundary.</u> The changing landscape character of the facility site will impact on the openness enjoyed by the park users.</p>	<ul style="list-style-type: none"> <li>Positive effect - the development of the facility and change in activity and use of the area provides opportunities to make the park a safer place. In addition, the existing path network already directs pedestrians to the site of the proposed new facility.</li> <li>Negative effect - the changing landscape character of the facility site will impact on the openness enjoyed by the park users.</li> </ul>	<ul style="list-style-type: none"> <li>Existing path network could be integrated easily into new major cycleway network.</li> <li>Enhancement of the existing path network and cricket oval, while also providing for enhanced park furniture and other elements.</li> <li>Glazing on the western most elevation of the building will give articulation to the built form, softening and enlivening the western side of the building, while providing increased surveillance of Kyle Park.</li> <li>Site layout and vehicle access will need to be considered carefully. A vehicle entry point at Waterloo Road could potentially create a physical barrier between the new facility and Kyle Park. Methods of alleviating this would include – a narrow (3.0-4.0m wide) one way vehicle access, high quality surfacing, safe crossing points, tree planting and amenity planting.</li> <li>Existing activities within the park will add to the general use and safety of the area.</li> </ul>
	<p><u>Vehicle Access.</u></p>	<ul style="list-style-type: none"> <li>Negative effect - associated effects of vehicle movements and car park areas.</li> <li>Negative effect. This area of Hornby is already an extremely busy hub. NZTA has a specific interest due to the proximity to State Highway 1 (a high volume national road) and the junction with Waterloo Road. The extra traffic generated by the facility would add to congestion when school is starting and finishing.</li> </ul>	<p>In terms of landscape character, the adverse effects of vehicle access ways can be mitigated by;</p> <ul style="list-style-type: none"> <li>Reducing the width of the access ways (where practicable).</li> <li>Providing for a high quality paved surface.</li> <li>Providing safe crossing points.</li> <li>Tree and amenity landscape planting.</li> <li>Street furniture where practicable.</li> <li>Lighting.</li> </ul>
<b>Visual Effects - Key View Points</b>	<p><u>Smarts Road.</u> Change in landscape composition from essentially a modified natural landscape of a grass covered hollow surrounded by well-established trees, to a developed site with the built form dominating the site.</p>	<ul style="list-style-type: none"> <li>Most affected will be adjacent commercially zoned premises and passing motorists.</li> </ul>	<ul style="list-style-type: none"> <li>The most immediate neighbours are commercially zoned and less sensitive to visual effects.</li> <li>Depending on the arrangement of the site layout, there will still be opportunities to provide for trees along this frontage, mitigating effects on visual amenity.</li> </ul>
	<p><u>Waterloo Road.</u> Similar to that for Smarts Road, however it is more likely that the site layout and building design will present the building frontage (front elevation) and main entrances to the Waterloo Road frontage. The modification of the site will be obvious to the viewer, however again, the perception of the change to the visual amenity will differ from viewer to viewer.</p>	<ul style="list-style-type: none"> <li>The most immediately affected viewers will be the two schools on the opposite side of Waterloo Road, and passing motorists who will have fleeting views of the facilities.</li> </ul>	<ul style="list-style-type: none"> <li>Building design - bulk, height and footprint compliant with District Plan rules.</li> <li>Building design - colours, cladding and glazing to relate to the street and the context of the area.</li> <li>Landscape treatment and tree planting along this frontage will aid in-mitigating potential adverse effects on visual amenity.</li> </ul>
	<p><u>Kyle Park Western Boundary.</u> Change in views from grass and trees to a developed site and sealed car park areas.</p>	<ul style="list-style-type: none"> <li>The most immediately affected viewers are the walkers and the cricket players and passing motorists (oblique view)</li> </ul>	<ul style="list-style-type: none"> <li>Retention of existing trees.</li> <li>Path and furniture enhancement.</li> <li>Building design, tree planting and landscape treatment to mitigate adverse visual effects.</li> </ul>
	<p><u>Southern Boundary.</u></p>		<ul style="list-style-type: none"> <li>Commercially zoned land, and generally less sensitive to change.</li> <li>Opportunity to enhance contaminated area.</li> <li>Tree plantings should be retained where practicable.</li> <li>View-shafts through trees for surveillance and for safety.</li> <li>Further visual mitigation planting may be required to screen commercial activities from the new facility.</li> </ul>

CPTED review location	Area	Discussion/Findings	Other guidance notes
Kyle Park		<ul style="list-style-type: none"> <li>The proposed location at the corner of Waterloo and Smarts Road is a prominent corner with high visibility.</li> <li>Passing traffic on Waterloo Road provides movement and activity and "eyes on the street".</li> <li>Existing activity in the Park creates a reasonably high level of surveillance across the site.</li> <li>The park is well used, particularly by walkers making their way south to the railway underpass. The area would experience even higher usage during the school term.</li> <li>The addition of a new facility would contribute to the level of use and activity and the general safety of the area. The facility will also provide surveillance into the other areas of Kyle Park.</li> <li>The site appears well maintained and well cared for – the grass is mown and the trees are well pruned and vigorous.</li> <li>The gradient of the slopes down into the bottom of the site is approximately 1:3, so is not fully accessible.</li> <li>The existing topography (i.e. the central depression which was the original quarry floor) makes it difficult to see the centre of the site from a distance.</li> <li>There is no access to the site from the Smarts Road frontage which is contained by low post and cable, however there is an opening at the Smarts Road/Waterloo Road corner.</li> <li>There is low fencing enclosing an area on the southern boundary. It is possible that this fencing is to contain an area of contaminated fill.</li> </ul>	<ol style="list-style-type: none"> <li>Ensure safe pedestrian connections are provided through the site and along the periphery of the site. Ensure the path network is well integrated into existing networks and the surrounding landscape, and that there are a series of exit route options for safe entry and exit.</li> <li>Ensure all car park areas are visible from the new facility and surrounding road network to ensure good surveillance. The car park area should be lit during the hours of building occupation.</li> <li>Pedestrian connections should be separated from the vehicle areas so that illegitimate use of the car park is reduced.</li> <li>Ensure all pedestrian paths are at a grade that are fully accessible.</li> <li>Place seating areas close to entrances and the reception area to ensure good surveillance of these areas.</li> <li>Ensure sightlines across the entire site are retained/provided for.</li> <li>Also ensure that there are no blind corners, areas for concealment, or entrapment areas within the building or car park area.</li> <li>Ensure all ground cover planting is no higher than 1.0m and tree canopies are at least 2.5m above ground level to allow for sightlines. This may need to be reviewed on-site to allow for slope gradients and changes in ground level.</li> <li>Provide a quality edge with adjacent commercial developments. Encourage activation of the boundaries, use of permeable fencing, careful tree placements, and retention of sight-lines.</li> <li>Provide cycle parks close to entrances and in view of reception for easy surveillance of the cycles. Provide parking also for E-bikes (larger) and scooters.</li> </ol>
Railway Underpass	General	<ul style="list-style-type: none"> <li>No site-wide signage strategy in place.</li> <li>The underpass was well used during the daylight hours of the site visit.</li> <li>Substandard levels of lighting and maintenance.</li> <li>Lack of investment in amenities.</li> <li>Low quality and un-cared for environment.</li> <li>Night time lighting could be improved, requires proper investigation.</li> <li>Slotted drain at the northern end often becomes blocked with leaves, causing flooding.</li> <li>Evidence of tagging.</li> </ul>	<ol style="list-style-type: none"> <li>Improve lighting within the underpass and the two pathway approaches to the underpass. (Lighting should be LED 4000k warm lighting, and should be even along the route with a gradual blend into the surrounding context – this may need to be confirmed).</li> <li>Carry out earthworks to improve the sightlines to both sides of the underpass, but particularly the northern approach. (There is an opportunity to retain the potentially contaminated spoil on site as fill in the proposed new car park area).</li> <li>Remove all fencing which is currently enclosing landscape areas on the northern approach to the underpass.</li> <li>Ensure all new paths are fully accessible.</li> <li>Consult with adjacent business owners regarding shortening the security fence which lines the southern approach.</li> <li>Investigate escape route opportunities for the southern approach.</li> <li>Re-evaluate and replace planting on both sides of the underpass with planting materials which have the following qualities               <ol style="list-style-type: none"> <li>Fire resistant;</li> <li>Drought resistant and low maintenance;</li> <li>Grows to a maximum 1.0m in height at time of planting.</li> </ol> </li> <li>Engage local community to develop a strategy for improving the visual quality of the underpass including lighting, community lead art projects, and higher quality material treatments.</li> <li>Monitor leaf litter and drainage within the underpass area to reduce incidence of surface flooding.</li> </ol>
	Northern Approach	<ul style="list-style-type: none"> <li>Low wire netting fence completely encloses areas of grass and shrubs. The maintenance of vegetation has since become severely restricted.</li> <li>Evidence of arson.</li> <li>Complete absence of way-finding signage.</li> <li>Sightlines restricted by topography.</li> <li>The slotted drain at the northern end often becomes blocked with leaves, causing flooding.</li> </ul>	
	Southern Approach	<ul style="list-style-type: none"> <li>The rugby/velodrome car park and route to the underpass seemed to be completely "un-maintained".</li> <li>Difficulty in locating the southern approach without local knowledge. This is due to lack of signage, the length of the approach, and the tunnel entrance being obscured.</li> <li>Sub-standard quality of the sealed area leading to the tunnel entrance.</li> <li>Possibly sub-standard level of lighting on the approach and within the tunnel.</li> <li>Complete absence of wayfinding signage.</li> <li>Security fence at carpark on eastern boundary which reduces escape opportunities.</li> <li>Escape opportunities unclear to the west of the approach, behind the velodrome.</li> </ul>	
Site Wide			<ol style="list-style-type: none"> <li>Prepare and implement a site-wide lighting strategy. The facility will be an important destination, particularly for young people from the adjacent schools. The facility will be open during hours of darkness, and the environment should be made safe for night time use. The lighting of the facility should be integrated with other lighting elsewhere throughout the path and the adjacent footpath and cycleway network.</li> <li>Prepare and implement a site-wide signage strategy for place-naming, wayfinding and interpretation.</li> <li>Engage local communities and schools in aspects of design and implementation to identify community requirements, and to encourage a sense of ownership and care.</li> <li>Make use of materials that are of a high quality and provide a dis-incentive for vandalism and graffiti (e.g. Graffiti proof paint systems). Also ensure a high level of maintenance and a prompt response to maintenance issues.</li> <li>Embed CPTED practice during all phases of the design and implementation of the facility, and also post occupation at agreed intervals (e.g. 6 months, 12 months and 24 months post occupation).</li> </ol>

## Kyle Park Tree Survey

This tree assessment was commissioned by Jennifer Dray, Senior Landscape Architect, Christchurch City Council. The assessment provides information relating to the existing trees within the eastern end of Kyle Park, to inform the design for the redevelopment of the site.

The site address is 197 Waterloo Road, Islington, and the tree survey area is shown in Figure 1 below.



Figure 1: Site and tree survey area.

The tree inspections for this assessment were carried out in February 2019, and included non-invasive visual tree assessment methods. All measurements are approximate, and trunk diameter measurements for multi-stemmed trees were taken at ground level.

The condition of each tree was scored using the Christchurch City Council tree assessment method (April 2017 version). Trees are scored as Very Good (1), Good (2), Fair (3), Poor (4) or Very Poor (5). This relates to the health and form/structural integrity of a tree. The overall condition rating provided is the worst score for either Health or Form (e.g. if a tree scores good for health and poor for form, the condition rating will be poor).

There were 77 trees within the survey area. The tree survey results are provided in tables (spreadsheet format), the approximate location and condition rating of each tree is shown on the tree survey map, and photographs of the trees are included below.

At the time of the tree survey the results included the following:

- 3 trees were found to be in good condition;
- 49 trees in fair condition;
- 22 trees in poor condition; and,
- 3 trees in very poor condition.

## Kyle Park Tree Survey

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The condition of the trees in poor and very poor condition related to a decline in tree health and/or structural integrity. Some of the trees in poor condition could be retained where maintenance pruning can improve the structural integrity of trees and where healthy growth is regenerating. The remaining trees in poor condition and the trees in very poor condition should be removed.

In relation to tree asset information:

- All except two of the existing trees had tree identification numbers. The trees without identification numbers are numbered 46 and 67 in this report; and,
- Two former trees (that no longer exist) within the site had tree identification numbers and asset information still listed within the asset database, including one with remaining stump regrowth. This included 93394 and 93419.

It may be possible to relocate (transplant) some of the trees within the site if required. This will depend upon existing ground conditions within the immediate vicinity of the trees, species characteristics, and seasonal constraints, and further investigations will be required to determine translating viability.

Tree maintenance is recommended within the survey area due to the structural condition of some trees.

**Laurie Gordon**  
**Arborist**

Tree Survey Map



## Kyle Park Tree Survey

### Tree Assessment Results

Survey Number	Tree ID	Species	Common Name	Height	Canopy Spread	DBH	Tree Health	Tree Form	Overall Condition	Comments
1	93361	Arbutus unedo	Irish Strawberry Tree	3.0	5.0	0.30	2	3	3	Reasonably good foliage density, broken branch stub on southern side. Multiple stems near base, and canopy to near ground level.
2	93356	Arbutus unedo	Irish Strawberry Tree	5.0	7.0	0.35	2	3	3	Reasonably good foliage density, previous branch failures on western side. Multiple stems near base, and canopy to near ground level.
3	93360	Quercus cerris	Turkey Oak	6.0	7.0	0.2	2	3	3	Previous branch failures, and extensive decay.
4	93354	Arbutus unedo	Irish Strawberry Tree	4.0	5.0	0.3	2	3	3	Reasonably good foliage density, previous branch failures on the south-western side. Multiple stems near base, and canopy to near ground level.
5	93355	Arbutus unedo	Irish Strawberry Tree	5.0	6.0	0.45	2	3	3	Reasonably good foliage density. Multiple stems near base, and canopy to near ground level.
6	93359	Arbutus unedo	Irish Strawberry Tree	4.0	3.0	0.3	3	3	3	Areas of isolated dieback, with less than 30% foliage density loss overall. Previous branch failures on the south-western side.
7	93365	Casuarina cunninghamiana	She Oak	9.0	9.0	0.35	3	3	3	Slightly sparse crown density, and previous branch failures.
8	93368	Casuarina cunninghamiana	She Oak	8.0	9.0	0.3	3	3	3	Slightly sparse crown density, and previous branch failures.
9	93364	Arbutus unedo	Irish Strawberry Tree	4.0	4.0	0.18	3	4	4	Slightly sparse foliage density, less than 30% foliage density loss overall. Included unions and previous structural failures. Further structural failures likely.



## Kyle Park Tree Survey

Survey Number	Tree ID	Species	Common Name	Height	Canopy Spread	DBH	Tree Health	Tree Form	Overall Condition	Comments
10	93367	Eucalyptus gunnii	Cider Gum	10.0	14.0	0.8	2	3	3	Reasonably good foliage density, no significant structural defects. One dead branch over footpath.
11	93369	Arbutus unedo	Irish Strawberry Tree	3.5	4.0	0.2	3	3	3	Slightly sparse crown density, and previous branch failures.
12	93371	Eucalyptus gunnii	Cider Gum	7.0	8.0	0.4	2	3	3	Reasonably good foliage density, and minor deadwood. No significant structural defects.
13	93375	Arbutus unedo	Irish Strawberry Tree	3.0	4.0	0.2	2	3	3	Reasonably good foliage density. Previous branch failures on the south-western side.
14	93376	Quercus cerris	Turkey Oak	5.0	5.0	0.18	2	3	3	Reasonably good foliage density. Previous branch failures on the eastern side. Squat form due to crown suppression.
15	93377	Eucalyptus delegatensis	Alpine Ash	12.0	12.0	0.9	2	4	4	Three stems originating from the tree base with included unions. Decay present within the main stems. Multiple previous branch failures, further structural failures likely.
16	93380	Quercus cerris	Turkey Oak	8.0	8.0	0.28	2	3	3	Reasonably good foliage density. No significant structural defects. Minor mower damage to base.
17	93381	Acacia melanoxylon	Tasmanian Blackwood	7.0	6.0	0.2	2	3	3	Reasonably good foliage density. Included unions, and partial suppression.
18	93382	Populus nigra	Black Poplar	12.0	12.0	0.38	4	4	4	Sparse crown, more than 30% decline.
19	93385	Arbutus unedo	Irish Strawberry Tree	3.5	3.5	0.2	2	3	3	Reasonably good foliage density. Multiple stems near base, canopy to near ground level.
20	93384	Cedrus atlantica	Atlas Cedar	6.0	6.0	0.2	2	3	3	Reasonably good foliage density. Asymmetrical form. Minor bark wound, but no significant structural defects.

## Kyle Park Tree Survey

Survey Number	Tree ID	Species	Common Name	Height	Canopy Spread	DBH	Tree Health	Tree Form	Overall Condition	Comments
21	93391	Arbutus unedo	Irish Strawberry Tree	4.0	6.5	0.25	2	3	3	Reasonably good foliage density. Multiple stems near base, and canopy to near ground level.
22	93387	Cedrus atlantica	Atlas Cedar	9.5	6.0	0.3	2	2	2	Reasonably good condition.
23	93390	Cedrus atlantica Glauca	Blue Atlas Cedar	5.5	6.0	0.18	2	3	3	Reasonably good foliage density. Asymmetrical form. No significant structural defects.
24	93389	Cedrus atlantica Glauca	Blue Atlas Cedar	5.5	5.0	0.18	2	4	4	Reasonably good foliage density. Asymmetrical form. A large bark wound at the tree base on the eastern side, but no significant structural defects.
25	93393	Populus nigra Italica	Lombardy Poplar	9.5	2.0	0.18	2	2	2	Reasonably good foliage density. No significant structural defects.
26	93392	Quercus robur	English Oak	9.5	8.0	0.2	2	2	2	Reasonably good foliage density. No significant structural defects.
	93394	Quercus cerris	Turkey Oak							No tree.
27	93395	Cedrus deodara	Deodar Cedar	5.0	11.0	0.35	2	3	3	Reasonably good foliage density. Multiple stems from near ground level, and canopy to ground. No apical dominance. No significant structural defects.
28	93402	Casuarina cunninghamiana	She Oak	7.5	7.0	0.2	2	3	3	Reasonably good foliage density. Asymmetrical from. No significant structural defects.
29	93399	Casuarina cunninghamiana	She Oak	8.5	7.5	0.3	2	3	3	Reasonably good foliage density. Asymmetrical from. No significant structural defects.
30	93404	Casuarina cunninghamiana	She Oak	7.0	7.0	0.3	2	3	3	Reasonably good foliage density. Crown suppression, and asymmetrical from. No significant structural defects.

## Kyle Park Tree Survey

Survey Number	Tree ID	Species	Common Name	Height	Canopy Spread	DBH	Tree Health	Tree Form	Overall Condition	Comments
31	93412	Eucalyptus nicholii	Narrow-leaved Black Peppermint Gum	15.0	13.0	1.3	4	4	4	More than 30% decline. Potential for structural failures.
32	93416	Eucalyptus	Gum	13.0	12.0	0.4	4	4	4	Dieback in central leader, more than 30% decline.
33	93418	Eucalyptus saligna	Sydney Blue Gum	18.0	12.0	0.6	3	4	4	A large trunk wound from 1.5-3.5m above ground level, possible decay present. Canopy imbalance.
	93419	Eucalyptus nicholii	Narrow-leaved Black Peppermint Gum							Stump regrowth.
34	93423	Eucalyptus	Gum	16.0	8.0	0.7	4	4	4	Decline in central leader, more than 30% decline. Significant suppression on the southern side.
35	93425	Eucalyptus nicholii	Narrow-leaved Black Peppermint Gum	22.0	25.0	2.3	3	4	4	Five main stems originating from near ground level. Included stem and branch unions. Previous large stem failures and the potential for further significant structural failures.
36	93427	Eucalyptus	Gum	9.0	8.0	0.6	4	4	4	More than 30% decline. Multiple stems from 1m.
37	93428	Eucalyptus	Gum	10.0	11.0	0.7	4	3	4	Canopy becoming sparse, with possibly more than 30% foliage density loss. No significant structural defects.
38	93429	Quercus cerris	Turkey Oak	10.0	11.0	0.45	2	3	3	Reasonably good foliage density, included branch unions.
39	93430	Fraxinus americana	White Ash	6.5	9.0	0.2	2	3	3	Reasonably good foliage density. Multiple stems from 1.0m. Minor bark wound at the base and on one stem. No significant structural defects.

## Kyle Park Tree Survey

Survey Number	Tree ID	Species	Common Name	Height	Canopy Spread	DBH	Tree Health	Tree Form	Overall Condition	Comments
40	93432	Populus yunnanensis	Chinese Poplar	10.5	14.0	0.35	5	4	5	More than 70% decline.
41	93434	Eucalyptus	Gum	10.5	16.0	0.1	3	4	4	Isolated dieback, currently less than 30% of the canopy affected. Co-dominant near base. Previous and recent structural failures and further failures likely.
42	93437	Populus nigra Italica	Lombardy Poplar	11.5	2.5	0.25	4	3	4	More than 30% decline, but no significant structural defects.
43	93435	Eucalyptus	Gum	10.0	14.0	0.6	3	4	4	Foliage density becoming sparse on the southern side, currently less than 30% of the canopy affected. Co-dominant near base, with included unions. Previous structural failures, and further failures likely.
44	93436	Populus nigra Italica	Lombardy Poplar	4.5	0.5	0.1	5	5	5	Dead tree.
45	93442	Cedrus libani	Cedar of Lebanon	10.0	7.5	0.3	2	3	3	Reasonably good foliage density. Co-dominant from 4.0m with included unions.
46	46	Populus nigra Italica	Lombardy Poplar	8.0	2.0	0.1	3	3	3	Partial suppression, but fair condition overall.
47	93445	Populus nigra Italica	Lombardy Poplar	12.0	4.0	0.3	3	3	3	Sparse mid canopy. Basal wound on the western side, with possible decay. No significant structural defects.
48	93446	Cedrus deodara	Deodar Cedar	8.0	8.0	0.35	3	3	3	Slightly sparse lower canopy. Asymmetrical form due to suppression. No significant structural defects.
49	93447	Cedrus deodara	Deodar Cedar	5.5	4.0	0.18	3	3	3	Slightly sparse lower canopy. Asymmetrical form due to suppression. No significant structural defects.

## Kyle Park Tree Survey

Survey Number	Tree ID	Species	Common Name	Height	Canopy Spread	DBH	Tree Health	Tree Form	Overall Condition	Comments
50	93448	Cedrus deodara	Deodar Cedar	8.0	5.0	0.25	2	3	3	Some suppression on the north-western side of the canopy. No significant structural defects.
51	93444	Populus nigra	Black Poplar	14.5	11.0	0.45	3	3	3	Slightly sparse foliage density, currently less than 30% foliage density loss. Minor deadwood. Previous branch failures.
52	93443	Populus yunnanensis	Chinese Poplar	14.5	9.0	0.4	2	3	3	Reasonably good foliage density. Co-dominant from 2.0m with included unions.
53	93441	Cedrus Glauca atlantica	Blue Atlas Cedar	2.0	2.5	0.08	5	4	5	Small, stunted tree in very poor condition due to lack of live growth, a large bark wound at the trunk base, and multiple previous branch failures.
54	93439	Populus Italica nigra	Lombardy Poplar	13.0	2.0	0.18	3	3	3	Reasonably good foliage density, slight yellowing of leaves. No significant structural defects.
55	93440	Eucalyptus pulchella	White Peppermint Gum	11.0	10.0	0.55	3	4	4	Slightly sparse foliage density, but less than 30% decline. Multiple stems at 1.5m, and multiple included unions in main trunk and scaffold branches.
56	93426	Populus Italica nigra	Lombardy Poplar	11.0	2.5	0.3	2	3	3	Reasonably good foliage density. One-sided crown due to lateral suppression from an adjacent tree, but no significant structural defects.
57	93421	Cedrus Glauca atlantica	Blue Atlas Cedar	5.0	8.0	0.25	3	3	3	Slightly sparse foliage density, but less than 30% decline. A minor bark wound on lower trunk, but no significant structural defects.
58	93424	Populus Italica nigra	Lombardy Poplar	11.0	3.0	0.3	2	3	3	Reasonably good foliage density. One-sided crown due to lateral suppression from an adjacent tree, but no significant structural defects.

## Kyle Park Tree Survey

Survey Number	Tree ID	Species	Common Name	Height	Canopy Spread	DBH	Tree Health	Tree Form	Overall Condition	Comments
59	93422	Populus yunnanensis	Chinese Poplar	11.0	12.0	0.35	3	3	3	Reasonably good foliage density slightly sparse crown, but less than 30% decline. Minor lateral suppression on the western side.
60	93415	Populus nigra	Black Poplar	10.0	11.0	0.25	4	4	4	Sparse crown, approximately 50% decline, and an old basal wound with decay.
61	93413	Populus nigra	Black Poplar	10.0	11.0	0.3	4	3	4	Sparse crown, approximately 50% decline.
62	93411	Cedrus atlantica	Atlas Cedar	7.0	7.0	0.25	2	3	3	Reasonably good foliage density. Multiple stems from ground level and multiple girdling roots. Slight lateral suppression from an adjacent tree, but no significant structural defects.
63	93410	Cedrus atlantica	Atlas Cedar	2.5	9.0	0.2	2	4	4	Reasonably good foliage density, crown to ground level. Central leader lost, and heavily suppressed under adjacent trees.
64	93406	Cedrus atlantica	Atlas Cedar	7.0	10.0	0.35	2	3	3	Reasonably good foliage density. Multiple recent branch failures on the western side of the canopy.
65	93403	Cedrus atlantica	Atlas Cedar	3.5	5.0	0.2	3	4	4	Reasonably good foliage density. Central leader lost some time ago, and heavily suppressed by adjacent trees. Multiple previous branch failures.
66	93401	Cedrus atlantica	Atlas Cedar	6.0	8.0	0.4	2	3	3	Reasonably good foliage density. Asymmetrical form. No significant structural defects, but multiple branch failures in the lower crown.
67	67	Arbutus unedo	Irish Strawberry Tree	3.5	6.0	0.5	2	3	3	Reasonably good foliage density. Multiple stems from base, and canopy to near ground level. Broken branch stub on western side.

## Kyle Park Tree Survey

Survey Number	Tree ID	Species	Common Name	Height	Canopy Spread	DBH	Tree Health	Tree Form	Overall Condition	Comments
68	93408	Acacia melanoxylon	Tasmanian Blackwood	8.0	8.0	0.6	3	4	4	Multiple stems from ground level, multiple included unions. Several delaminated branches.
69	93409	Arbutus unedo	Irish Strawberry Tree	3.0	3.0	0.2	3	4	4	Reasonably good foliage density. Multiple stems near base, and canopy to near ground level. Heavily suppressed by adjacent trees.
70	93405	Arbutus unedo	Irish Strawberry Tree	3.0	4.0	0.35	2	3	3	Reasonably good foliage density. Multiple stems near base, and canopy to near ground level.
71	93400	Arbutus unedo	Irish Strawberry Tree	2.5	4.0	0.25	2	4	4	Reasonably good foliage density. Multiple stems near base, and canopy to near ground level. Previous branch failures in the mid canopy.
72	93397	Arbutus unedo	Irish Strawberry Tree	4.0	7.0	0.4	2	3	3	Reasonably good foliage density. Multiple stems near base, and canopy to near ground level. Previous branch failures on the north-western side and mid canopy.
73	93388	Arbutus unedo	Irish Strawberry Tree	4.0	6.0	0.45	2	3	3	Reasonably good foliage density. Multiple stems near base, and tree has had minor canopy lift.
74	93383	Arbutus unedo	Irish Strawberry Tree	4.5	7.0	0.35	3	3	3	Slightly sparse crown. Multiple stems near base, and tree has had minor canopy lift.
75	93374	Arbutus unedo	Irish Strawberry Tree	5.0	7.5	0.45	2	3	3	Reasonably good foliage density. Multiple stems near base, and canopy to near ground level. Delaminated limb in canopy, and several branches/stems have had bark removed but have good reactive growth.
76	93372	Arbutus unedo	Irish Strawberry Tree	4.0	6.5	0.4	2	3	3	Reasonably good foliage density. Multiple stems near base, and canopy to near ground level.
77	93370	Arbutus unedo	Irish Strawberry Tree	4.5	6.0	0.35	2	3	3	Reasonably good foliage density. Multiple stems near base, canopy to near ground level. Previous branch failures on the north-eastern side.

# Kyle Park Tree Survey

## Tree Survey Photographs



**01 - 93361**



**02 - 93356**



**03 - 93360**



**04 - 93354**



**05 - 93355**



**06 - 93359**



Kyle Park Tree Survey



**07 - 93365**



**08 - 93368**



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## Kyle Park Tree Survey

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Kyle Park Tree Survey



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Kyle Park Tree Survey



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Kyle Park Tree Survey



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Kyle Park Tree Survey



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Kyle Park Tree Survey



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# Kyle Park Tree Survey



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Kyle Park Tree Survey



**61 - 93413**



**62 - 93411**



**63 - 93410**



**64 - 93406**



**65 - 93403**



**66 - 93401**

Kyle Park Tree Survey



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68 - 93408



69 - 93409



70 - 93405



71 - 93400



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## Kyle Park Tree Survey

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**73 - 93388**



**74 - 93383**



**75 - 93374**



**76 - 93372**



**77 - 93370**