Barrier Free
New Zealand Trust
Te Rōpu Tauārai Kore ki Niu Tireni

Client:

CANTERBURY EARTHQUAKE RECOVERY AUTHORITY

Te Mana Haumanu ki Waitaha

Project:

ACCESSIBILITY AUDIT VICTORIA SQUARE AVON RIVER CHRISTCHURCH

Stage:

EXISTING SQUARE SITE AUDIT

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ACCESSIBILITY AUDIT
VICTORIA SQUARE – EXISTING SITE AUDIT
AVON RIVER, CHRISTCHURCH

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ACCESSIBILITY AUDIT
VICTORIA SQUARE – EXISTING SITE AUDIT
AVON RIVER, CHRISTCHURCH

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1.0 EXECUTIVE SUMMARY

1.1 SCOPE

Barrier Free NZ Trust (BFNZT) was engaged by the Canterbury Earthquake Recovery Authority (CERA) to provide accessibility advisory and auditing services on the existing Victoria Square in Christchurch.

The scope of this Accessibility Audit is limited to Victoria Square itself, and any directly connected access points from the street side boundaries e.g. the main entry point's transition to the street side footpath.

This Accessibility Audit aims to:

- Identify any deficiencies/concerns identified onsite
- Make recommendations to correct these deficiencies/concerns where possible
- Make recommendations for best practice opportunities that may be identified (beyond minimum or core requirements)

The audit was based on the existing site as it was on the date of our audit 10/06/2015 and does not identify maintenance issues which are throughout the square such as uneven pavers, cracks and disjointed stairs etc. These maintenance items (largely related to earthquake ground movement) were identified within a separate consultants report provided to us by CERA.

1.2 SUMMARY OF ACCESS PROVISION

Overall the fundamental elements of the pedestrian routes found within the square are what would be expected for a public space of this age. Items such as the main pathways and circulation spaces typically had complaint grades/widths, with the ramps/stairs been mostly non-complaint due to their gradients and handrail provisions (or lack thereof).

Various other non-compliances and opportunities for improvement outside of the above were also identified, but it should be noted that the majority of these non-compliances including those aforementioned should for the most part be requiring only relativity simple (and subtle) alterations, reconstruction or landscape reshaping,

The above said, our findings indicate that there are not currently any 'compliant' Accessible Route/s (definition below) connecting the Southern areas of Victoria Square to the Northern areas. This largely as a result of the steeply ramped access points either side of the Hamish Hay Bridge.

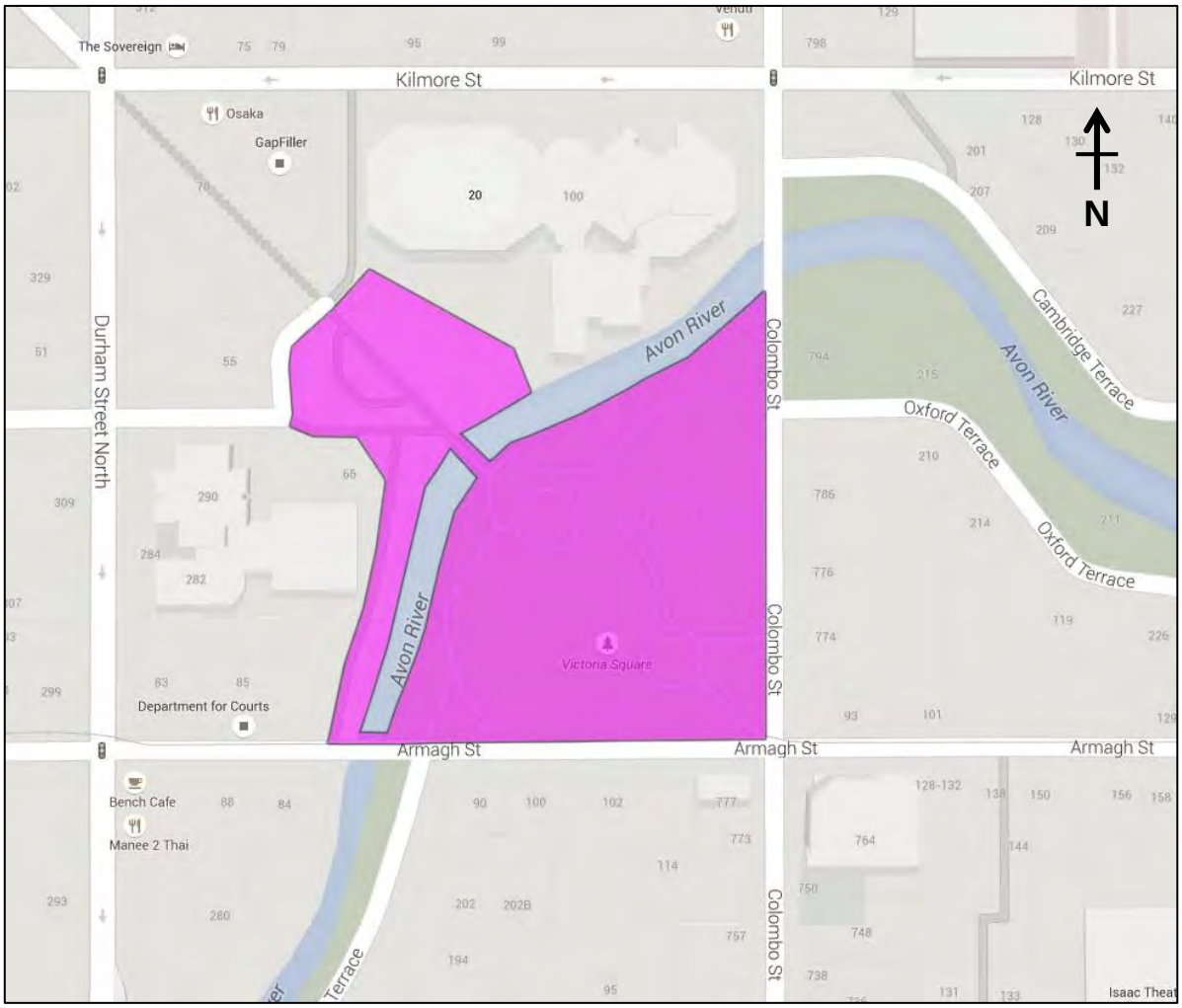
Accessible Route
"A route that is usable by people with disabilities. It shall be a continuous route that can be negotiated unaided by a wheelchair user, walking device or by a person with a guide dog. The route shall extend from street boundary and car-parking area to those spaces within the building required to be accessible to enable people with disabilities to carry out normal activities and processes within the building"

1.3 EFFECTS OF RECOMMENDATIONS

Ultimately undertaking any of the actions recommended in this audit report would give an improved experience in terms of accessibility for anyone passing through, undertaking activities at, or visiting Victoria Square

2.0 SCOPE

The scope of this Accessibility Audit is limited to Victoria Square itself, and any directly connected access points from the street side boundaries e.g. the main entry point's transition to the street side footpath. The extents of our scope are shaded pink on the map below.



Above: Location shaded in pink indicates the area included within our audit

3.0 REPORT PURPOSE

This Accessibility Audit aims to:

- Identify any deficiencies/concerns identified onsite
- Make recommendations to correct these deficiencies/concerns where possible
- Make recommendations for best practice opportunities that may be identified (beyond minimum or core requirements)

The audit was based on the existing site as it was on the date of our audit 10/06/2015 and does not identify maintenance issues which are throughout the square such as uneven pavers, cracks and disjointed stairs etc. These maintenance items (largely related to earthquake ground movement) were identified within a separate consultants report provided to us by Peter Matthews.

4.0 AUDIT METHODOLOGY

The methodology used for this accessibility audit report has been developed by the Barrier Free New Zealand Trust. Acceptable Solution NZS4121:2001 is used as the base line for accessibility compliance and the report makes recommendations targeted at providing *'reasonable and adequate'* levels of accessibility.

The principles of *Approachability, Accessibility and Usability* are also considered as part of the identification process throughout the Accessible Journey.

- ***Approachability*** ensures that people with impairments can get to a particular feature and is concerned with the exterior environment, including environmental factors and car parking.
- ***Accessibility*** ensures that people with impairments can enter and move about freely within a space or environment, without having to call for assistance.
- ***Usability*** means that the environment and its facilities are actually usable by persons with impairments.

These practical design principles relate the concept of the Accessible Journey to an individual component or space. In doing so, they connect the legislative requirements for accessibility to the specific compliance detail of the **Accessible Route** (refer section 6.2 of the report for a definition)

5.0 POINTS FOR CONSIDERATION

While reading this report and its recommendations and best practice advice consideration must be given to the fact that as of the 2014 disability survey it was recorded some 24% / 1 in 4 / 1.1 Million New Zealanders identify as having some form of disability.

In the age group of 65+ disability rates are currently at around 60%. Common disabilities to the 65+ age group are physical impairment, hearing loss, and vision loss. As our aging population curve moves into the year 2030 a staggering 25% of New Zealanders will be over 65 years old. It is speculated by this stage around 33% / 1 in 3 / 1.6 Million New Zealanders will identify as having some form of disability.

Something as simple as a water fountain, ground surface lip, or handrail not being correctly specified or designed with accessibility in mind can be the difference between a space or building being usable – or not, for a person with an impairment.

BFNZT advocate usability over aesthetics, but have proven on numerous occasions that both can be had with proper consultation and engagement during the early in the design phases.

6.0 RELEVANT LEGISLATION

The Building Act, Building Code and NZS4121 contain strict criteria around access provision for buildings and connected spaces, but they are not intended as complete solutions within open public spaces such as Victoria Square. However the requirements of the Human Rights Act around accessibility for the public is directly relevant to Victoria Square, and by combining the detail of NZS4121 alongside best practice advice the required outcomes for accessibility can be achieved.

6.1 HUMAN RIGHTS ACT 1993 (HRA)

Section (42) - Access by the public to places, vehicles, and facilities
It shall be unlawful for any person:

- To refuse to allow any other person access to or use of any place or vehicle which members of the public are entitled or allowed to enter or use; or
- To refuse any other person the use of any facilities in that place or vehicle which are available to members of the public; or
- To require any other person to leave or cease to use that place or vehicle or those facilities, - by reason of any of the prohibited grounds of discrimination.

Section (21) - Prohibited grounds of discrimination
"A disability is prohibited grounds for discrimination. The term disability is defined in the HRA as a: Physical disability or impairment, Physical illness, Psychiatric illness, Intellectual or psychological disability or impairment, Any other loss or abnormality of psychological / physiological / anatomical structure or function, Reliance on a guide dog/wheelchair/other remedial means, The presence in the body of organisms capable of causing illness"

6.2 NEW ZEALAND STANDARD 4121:2001 (NZS4121)

NZS4121 is an acceptable solution for the provision of access and facilities for persons with disabilities. The best practice definition of an Accessible Route is contained in NZS4121 and is as follows;

"A route that is usable by people with disabilities. It shall be a continuous route that can be negotiated unaided by a wheelchair user, walking device or by a person with a guide dog. The route shall extend from street boundary and car-parking area to those spaces within the building required to be accessible to enable people with disabilities to carry out normal activities and processes within the building"

6.3 NEW ZEALAND BUILDING ACT 2004 (NZBA)

The NZBA Section 118 states that:
"reasonable and adequate provision by way of access, parking provisions, and sanitary facilities must be made for persons with disabilities who may be expected to visit or work in that building; and carry out normal activities and processes in that building"

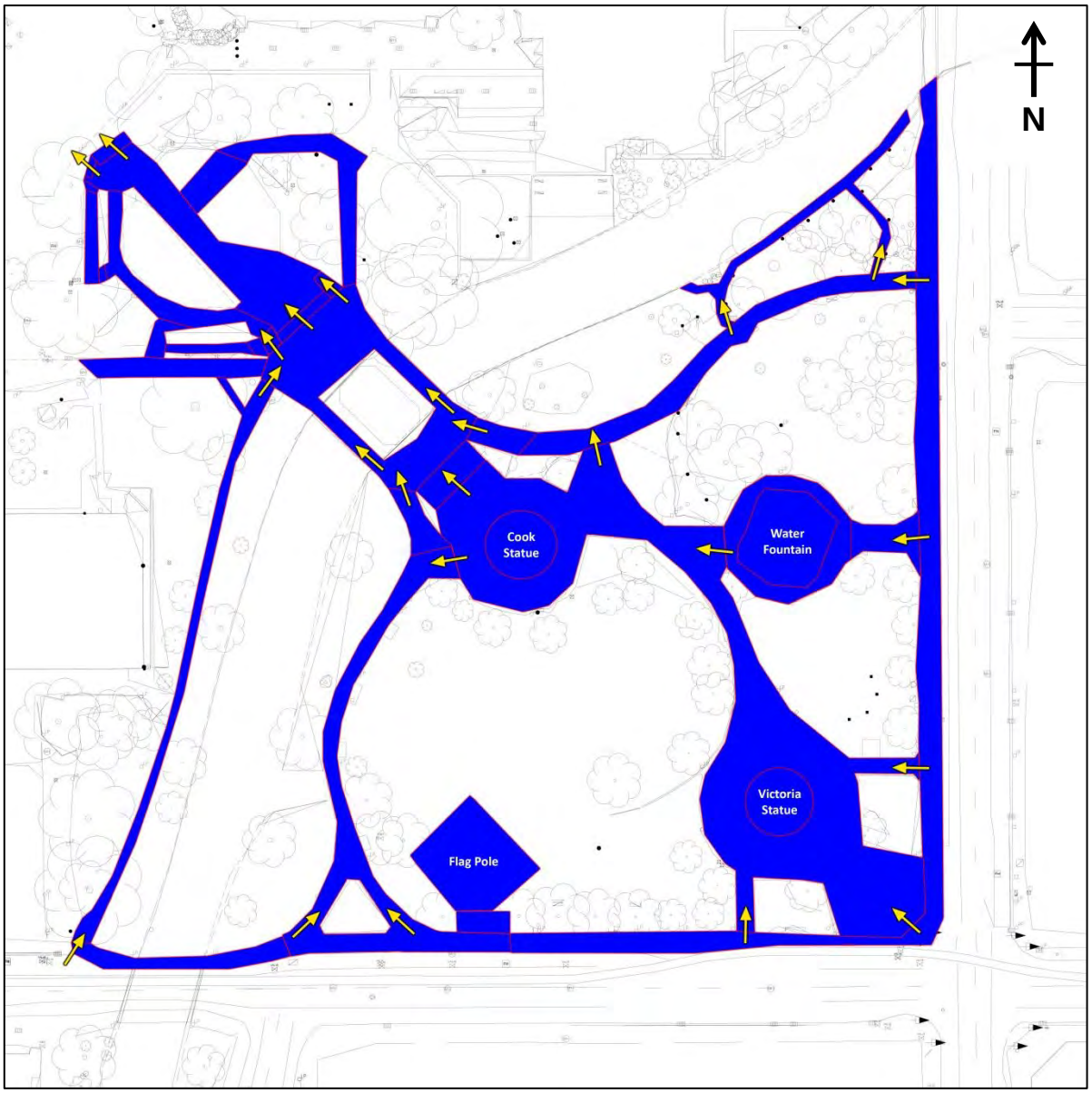
Under section 117 of the NZBA the term 'building' includes "parts of a building (including driveways, access ways, passages within and between complexes and developments, and associated landscaping (if any): and any premises or facilities".

6.4 NEW ZEALAND BUILDING CODE (NZBC)

The NZBC contains performance requirements and acceptable solutions for the provision of access and facilities for persons with disabilities.

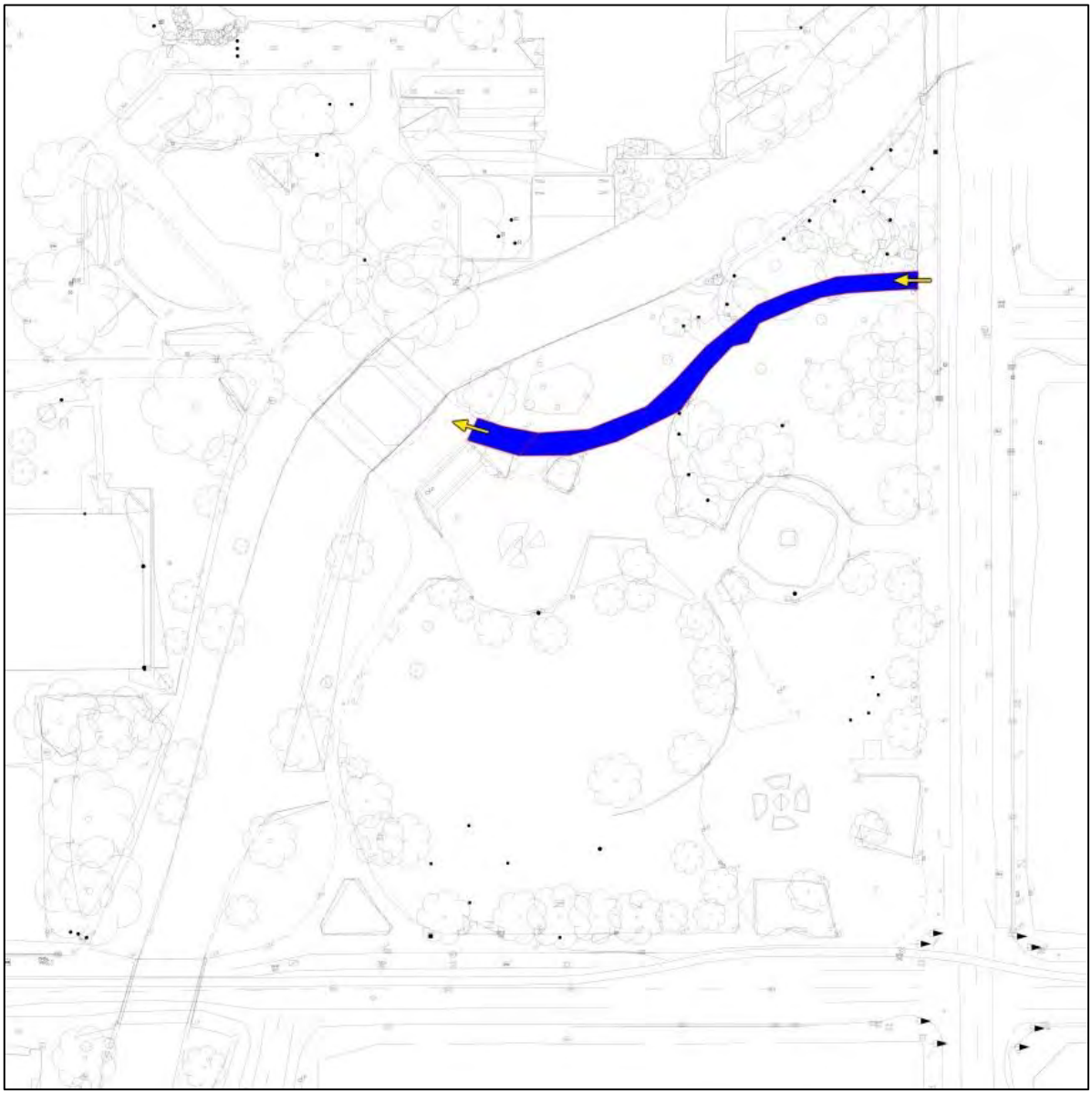
7.0 ROUTES WITHIN VICTORIA SQUARE

To make this report easier to follow we broke down Victoria Square into a series of routes and shared features. These are as shown below as one whole route map below, with each route separated out in the sections following on from here within the report.



Above: Identified pedestrian routes throughout Victoria Square

7.1 ROUTE 1 - COLOMBO STREET TO HAMISH HAY BRIDGE



Route 1 runs along the Avon River in an easterly direction from Colombo Street, before connecting via a ramped pathway to the Hamish Hay Bridge.

7.1.1 ENTRANCE

7.1.1.1 POSITIVE

- The width of the entrance was 2.7m wide, with a gradient of 1:30
- The surface was asphalt, and would give adequate slip resistance when wet.

7.1.1.2 NEGATIVE

- Nil.

7.1.1.3 RECOMMENDATIONS

- Consider increasing the width of the entrance pathway to create further opportunities for accessible seating and refuge areas, provide increased space to manoeuvre for both pedestrians and cyclists, and reduce/eliminate the effect of parked service vehicles blocking the pathway as noted in other sections of this report.

7.1.2 PATHWAY BEGINNING

7.1.2.1 POSITIVE

- The average width of this pathway was 2.7m wide, with a gradient of 1:24
- The surface was asphalt, and would give adequate slip resistance when wet.

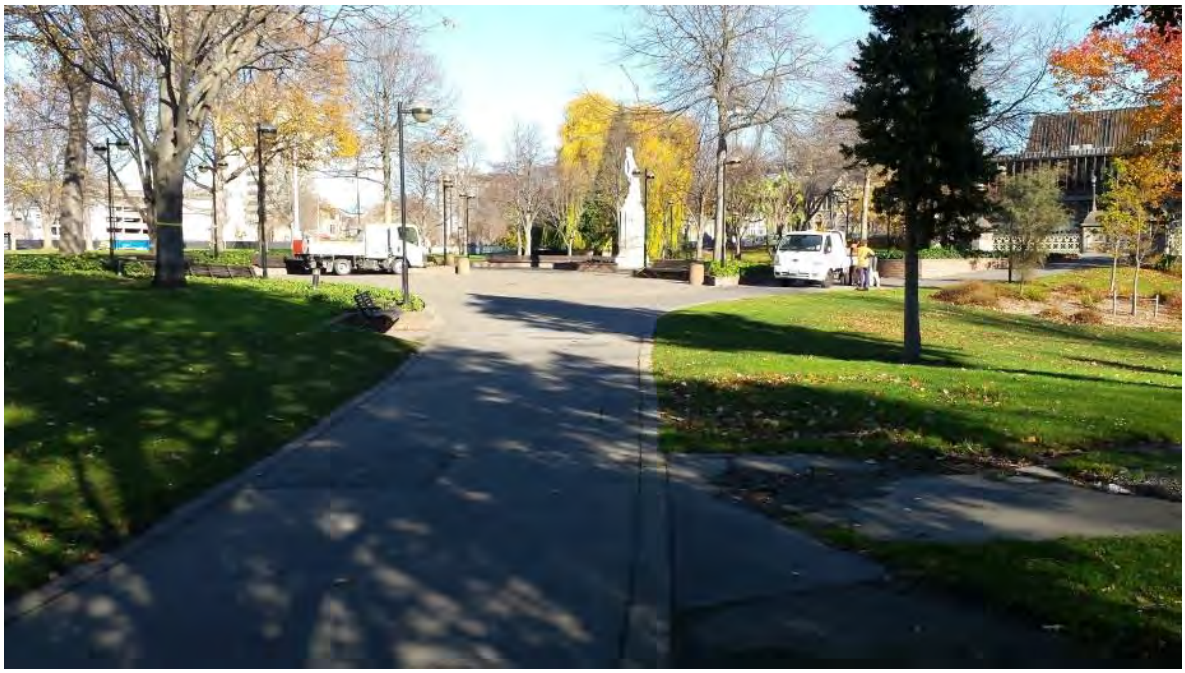
7.1.2.2 NEGATIVE

- Nil.

7.1.2.3 RECOMMENDATIONS

- Consider increasing the width of the pathway to create further opportunities for accessible seating and refuge areas, provide increased space to manoeuvre for both pedestrians and cyclists, and reduce/eliminate the effect of parked service vehicles blocking the pathway as noted in other sections of this report.

7.1.3 PATHWAY CONTINUED



7.1.3.1 POSITIVE

- The average width of this pathway was 3.5m wide, with a gradient close to 1:50
- The surface was asphalt, and would give adequate slip resistance when wet.

7.1.3.2 NEGATIVE

- The path leading off to the punt stop on the right had side was not signposted.
- The width of the pathway is not enough to allow a 1.2m clear space to the sides of parked service vehicles.

7.1.3.3 RECOMMENDATIONS

- Include totem signage indicating the location of the punt stop.
- Consider increasing the width of the pathway to create further opportunities for accessible seating and refuge areas, provide increased space to manoeuvre for both pedestrians and cyclists, and reduce/eliminate the effect of parked service vehicles blocking the pathway as noted in other sections of this report.

7.1.4 RAMP TO HAMISH HAY BRIDGE

7.1.4.1 POSITIVE

- The width of this ramp was 4.1m wide at its base, and 3.5m wide at its top.
- The surface was asphalt, and would give adequate slip resistance when wet.

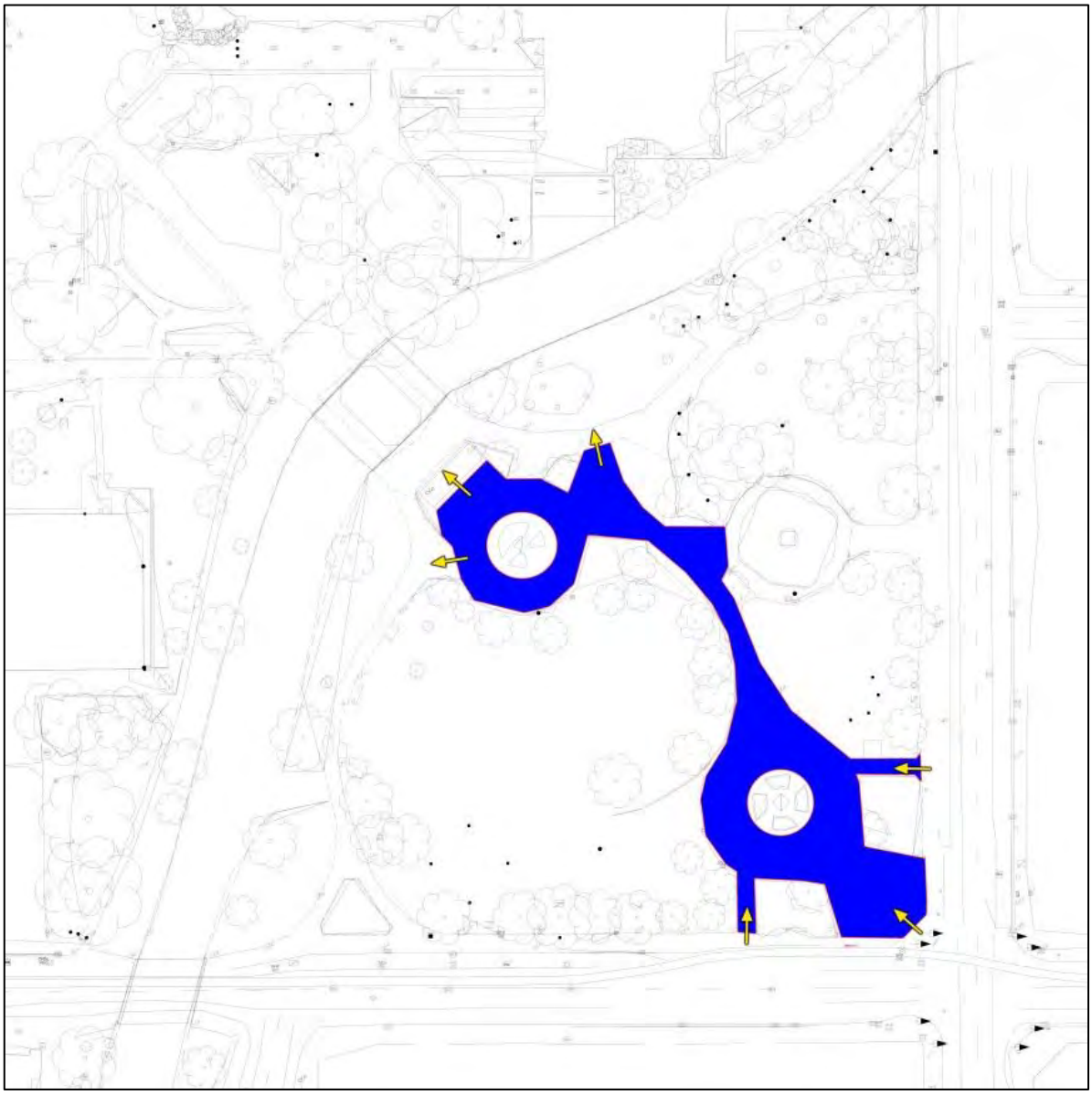
7.1.4.2 NEGATIVE

- The ramp has a traverse slope (cross fall to the western side)
- The ramps longitudinal gradient was averaged at a non-accessible 1:8.5
- No handrails are present either side of the ramp.

7.1.4.3 RECOMMENDATIONS

- There is potential to increase the elevation of the pathways leading to the ramp to create an elevation increase at the base of the ramp of approximately 490mm. This would enable a gradient of 1:20 to be possible and eliminate the need for handrail provision.

7.2 ROUTE 2 - CORNER ARMAGH/COLOMBO STREET TO HAMISH HAY BRIDGE



Route 2 begins at the point where Armagh Street and Colombo Street, heading through Victoria Square passing by the water fountain, route 1 and route 3 before stopping at the base of the southern stairs to Hamish Hay Bridge.

7.2.1 ENTRANCE

7.2.1.1 POSITIVE

- The South East corner entrance an open, near level space with plenty of room for circulation.
- The secondary entrances to the South and East are 2.6m wide and near level.
- The surface was rough finished pavers, and would give adequate slip resistance when wet.
- The tram stop had a good wheelchair seating space at its West end.

7.2.1.2 NEGATIVE

- The tram stop seating was similar to the rest of the seating within Victoria Square and had a deep bucket with a high front lip.
- The wheelchair space on the East end of the tram stop is less than 800mm wide.

7.2.1.3 RECOMMENDATIONS

- Widen the wheelchair space on the East end of the tram stop to be 800mm wide.
- Consider replacing the tram stop seating as per our seating recommendations later in this report.

7.2.2 PEDESTRIAN ROUTE PAST VICTORIA STATUE

7.2.2.1 POSITIVE

- The route is a wide open, near level space with plenty of room for circulation.
- The surface was rough finished pavers, and would give adequate slip resistance when wet.

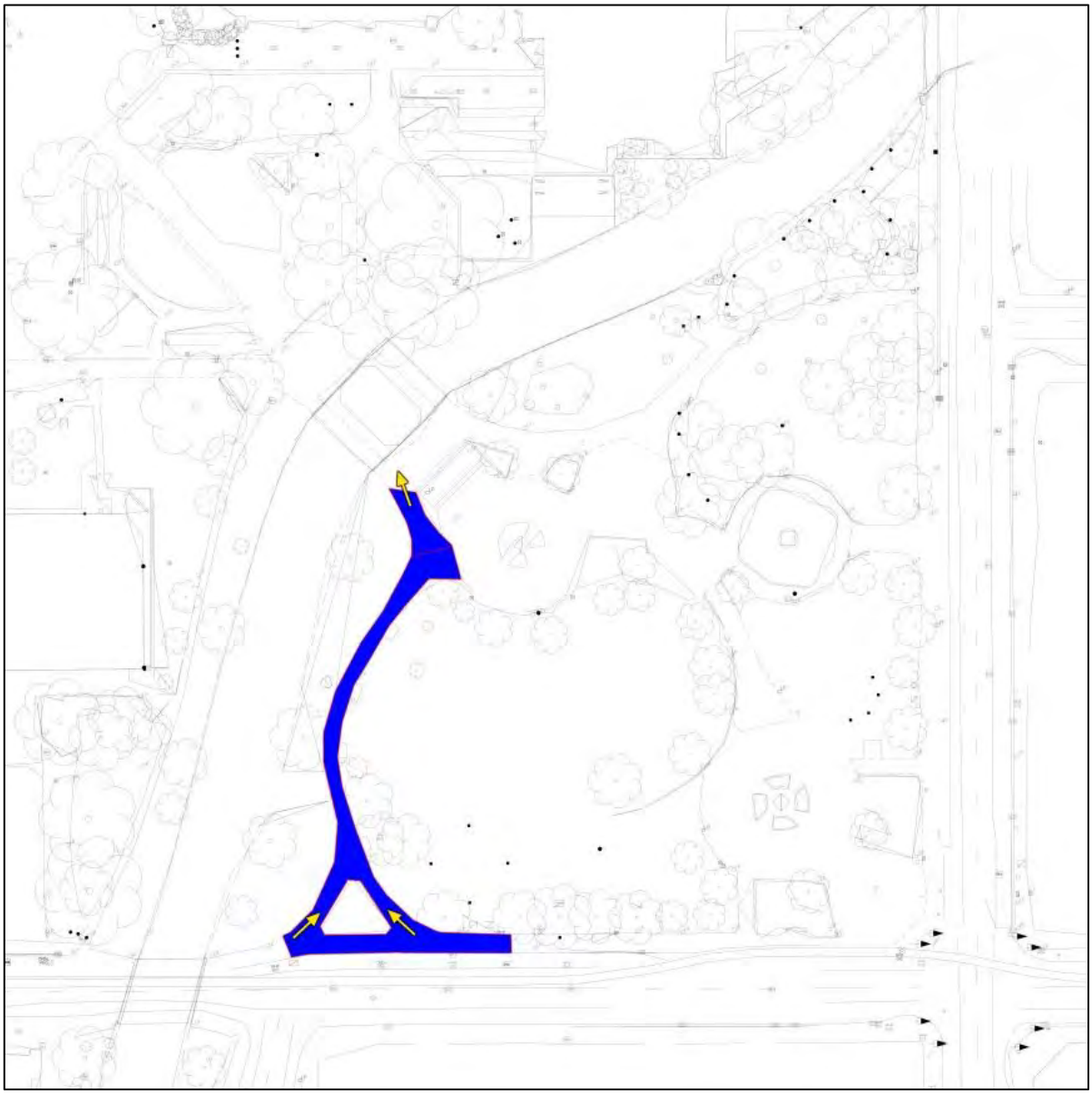
7.2.2.2 NEGATIVE

- Nil.

7.2.2.3 RECOMMENDATIONS

- Given the openness of this space, consider the inclusion of way finding cues for the blind or low vision.

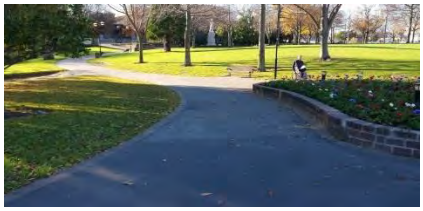
7.3 ROUTE 3 - ARMAGH STREET EAST TO HAMISH HAY BRIDGE



Route 3 begins at Armagh Street to the East side of the Avon River, with feeder routes from the East and West connecting into it. The route follows the Avon River to the North before connecting via a ramped pathway to the Hamish Hay Bridge.

7.3.1 ENTRANCE





7.3.1.1 POSITIVE

- The path to the east side of the entrance garden was 2.6m wide and had a smooth gradient of approximately 1:30.
- The surface was asphalt, and would give adequate slip resistance when wet.
- The path to the west side of the entrance was 2.6m wide.

7.3.1.2 NEGATIVE

- The footpaths cross fall was 1:15 in front of this entry point, significantly steeper than the recommended minimum of 1:50.
- The path to the west side of the entrance garden had a ramp gradient of approximately 1:16. No handrails were provided on this ramp.

7.3.1.3 RECOMMENDATIONS

- Consider raising the level of the path within the square so that both the east and west pathways at this entrance have a much smoother gradient, ideally 1:33 or gentler.
- Level off the footpath along the entrance ways to this route so that the cross fall is 1:50 or gentler.
- Consider increasing the width of the entrance pathways to create further opportunities for accessible seating and refuge areas, provide increased space to manoeuvre for both pedestrians and cyclists, and reduce/eliminate the effect of parked service vehicles blocking the pathway as noted in other sections of this report.

7.3.2 PATHWAY

7.3.2.1 POSITIVE

- The average width of this pathway was 2.6m wide, with a gradient of 1:30
- The surface was asphalt, and would give adequate slip resistance when wet.

7.3.2.2 NEGATIVE

- The average cross fall on this pathway was 1:20, significantly steeper than the recommended minimum of 1:50.

7.3.2.3 RECOMMENDATIONS

- Raise this pathway to reduce the ramp gradients at each end of it, and ensure that once raised the gradient is at least as smooth as 1:33 (ideally 1:50) and ensure that the cross fall is no greater than 1:50.
- If the pathway is not to be raised then re-level this path so that the cross fall is no greater than 1:50.
- Consider increasing the width of the pathway to create further opportunities for accessible seating and refuge areas, provide increased space to manoeuvre for both pedestrians and cyclists, and reduce/eliminate the effect of parked service vehicles blocking the pathway as noted in other sections of this report**.**

7.3.3 RAMP TO HAMISH HAY BRIDGE

7.3.3.1 POSITIVE

- The width of this ramp was 3.3m wide at its base. The width at its top was not measured onsite but assumed to be around 3.0m wide.
- The surface was asphalt, and would give adequate slip resistance when wet.

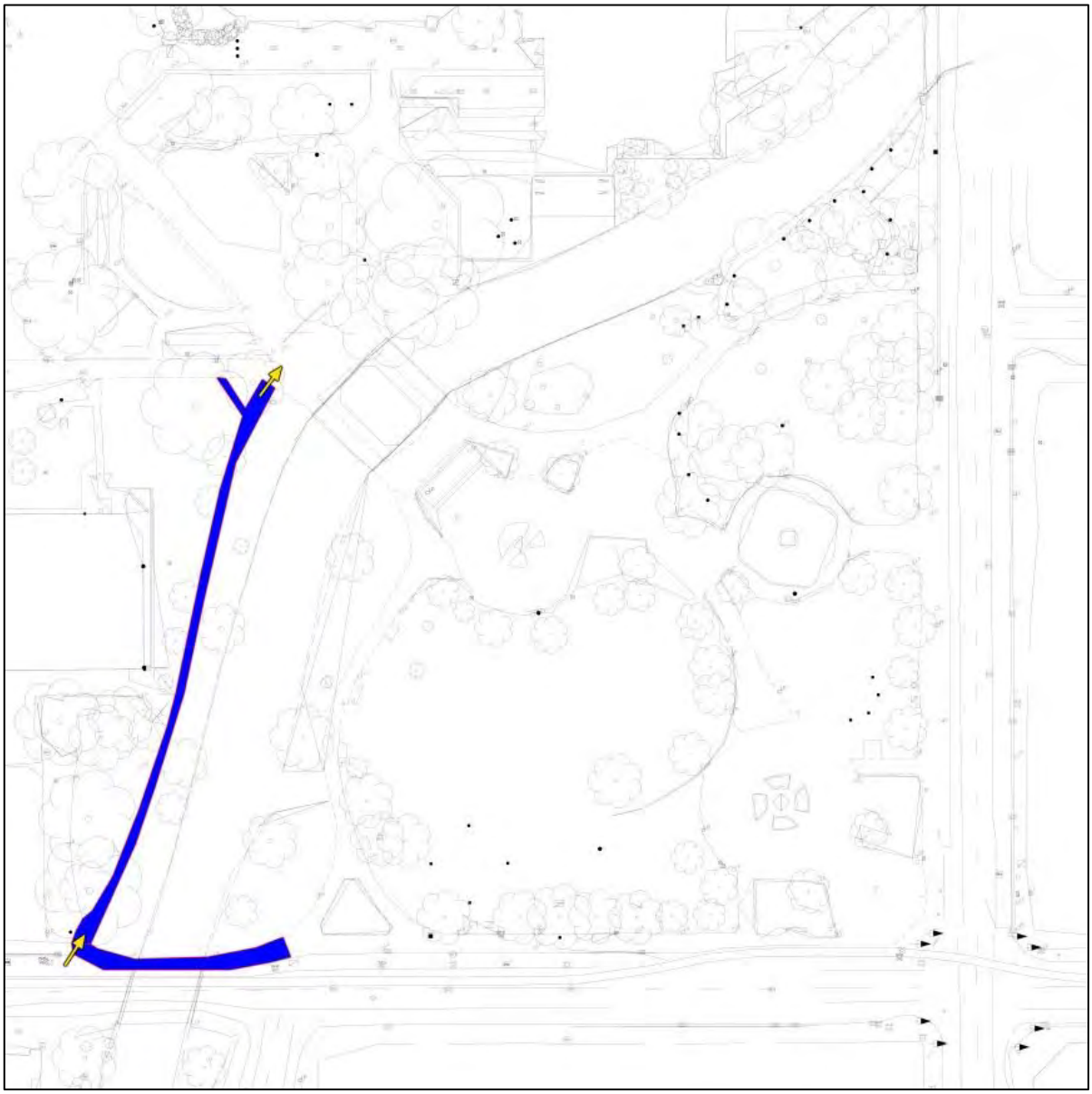
7.3.3.2 NEGATIVE

- The ramp has a traverse slope (cross fall to the western side).
- The ramps longitudinal gradient was averaged at a non-accessible 1:9
- No handrails are present either side of the ramp.

7.3.3.3 RECOMMENDATIONS

- There is potential to increase the elevation of the pathways leading to the ramp to create an elevation increase at the base of the ramp of approximately 490mm. This would enable a gradient of 1:20 to be possible and eliminate the need for handrail provision.

7.4 ROUTE 4 - ARMAGH STREET WEST TO HAMISH HAY BRIDGE



Route 4 starts on the Eastern side of the Armagh Street Bridge then crosses over the bridge to the Western side of the Avon River, before following the Avon River North up to the northernmost end of the Hamish Hay Bridge.

7.4.1 ARMAGH STREET BRIDGE

7.4.1.1 POSITIVE

- The surface was asphalt, and would give adequate slip resistance when wet.

7.4.1.2 NEGATIVE

- The section of footpath over the bridge connecting to the beginning of route 3 had a very steep cross fall of 1:12, significantly steeper than the recommended minimum of 1:50. The clear width was also 1450mm at one point due to the positioning of a lighting pole within the footpath.
- The section of footpath connecting this entrance to that of route three had a longitudinal ramp gradient of approximately 1:15 in some sections. No handrails were provided on this ramp.

7.4.1.3 RECOMMENDATIONS

- Relocate the lighting pole outside of the footpath if possible.
- Re-level the footpath along this route so that the cross fall is 1:50 or gentler.
- Reduce the longitudinal gradient of the footpath to be 1:20 or gentler if possible to eliminate the need for handrail provision.

7.4.2 PATHWAY ENTRANCE (SOUTH END)

7.4.2.1 POSITIVE

- The bollards contrast to their surrounds, and are over 900mm high.
- Clear space of 900mm is available between all but the right most of the bollards.
- The surface at the entry to this pathway was a mix of asphalt and rough finished pavers, which would give an adequate slip resistance when wet.

7.4.2.2 NEGATIVE

- The traverse gradient of the footpath running in front of the entrance to this pathway was 1:15, significantly steeper than the recommended minimum of 1:50.

7.4.2.3 RECOMMENDATIONS

- The footpath running in front of the entrance to this pathway should be re-levelled so that the traverse gradient is no steeper than 1:50 and it longitudinal gradient is no steeper than 1:33

7.4.3 PATHWAY

7.4.3.1 POSITIVE

- The surface of the pavers was rough, and would give adequate slip resistance when wet.
- The pathway has a gradient of 1:33 at its northern end.

7.4.3.2 NEGATIVE

- The pathway has a ramp gradient of 1:13 at the southern end, and no handrails either side.
- The average width of this pathway was 1.45m wide.
- The average cross fall was hard to measure due to the pavers but would be in the range of 1:30 which is steeper than the recommended minimum of 1:50.
- The pavers had spacing of up to 25mm between their top flat surface, with depths up to 20mm in some places.

7.4.3.3 RECOMMENDATIONS

- Reconstruct this pathway in asphalt with as gentler grades as possible, ideally a longitudinal gradient of 1:20 or smoother to eliminate the need for handrail provision. Alternately if a paved finish is to be retained then flush jointed pavers are preferable. NZS3116:2002 - Concrete segmental and flagstone paving allows for a maximum width of 7mm, and maximum depth of 4mm.
- Consider increasing the width of the pathway to create further opportunities for accessible seating and refuge areas, provide increased space to manoeuvre for both pedestrians and cyclists, and reduce/eliminate the effect of parked service vehicles blocking the pathway as noted in other sections of this report.

7.4.4 MAIN PATHWAY EXIT (NORTH END) TO HAMISH HAY BRIDGE

7.4.4.1 POSITIVE

- The bollards are over 900mm high.
- Clear space of 900mm is available to the left of both bollards.
- The surface is a mix of asphalt and rough finished pavers, which would give an adequate slip resistance when wet.

7.4.4.2 NEGATIVE

- The bollards upper section does not contrast to the surrounds.
- The right bollard only has a clearance of 670mm from the Hamish Hay Bridge.
- The pavers had spacing of up to 25mm between their top flat surface, with depths up to 20mm in some places.

7.4.4.3 RECOMMENDATIONS

- Reconstruct this pathway in asphalt with as gentler grades as possible. Alternately if a paved finish is to be retained then flush jointed pavers are preferable. NZS3116:2002 - Concrete segmental and flagstone paving allows for a maximum width of 7mm, and maximum depth of 4mm.
- Remove the bollard closest to the Hamish Hay Bridge.

7.4.5 ALTERNATE PATHWAY EXIT (NORTH END) TO CHESTER STREET WEST

7.4.5.1 POSITIVE

- The surface is brushed concrete and would likely give adequate slip resistance when wet.

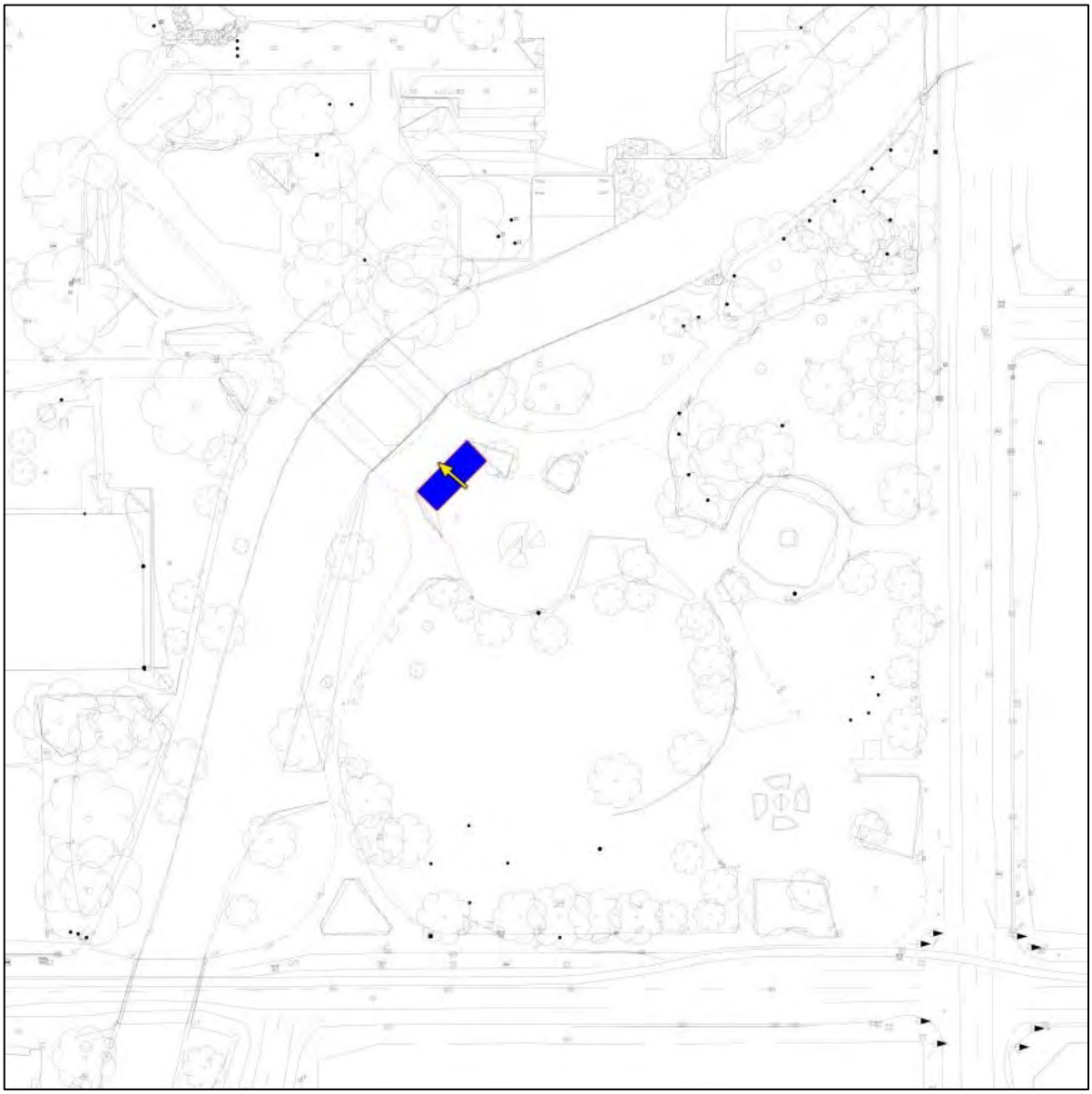
7.4.5.2 NEGATIVE

- The ramp was a non-accessible gradient of 1:9.5 and has no handrails on both sides.

7.4.5.3 RECOMMENDATIONS

- This ramp provides an alternate connection at the northern end of route 4. Therefore provided that the main pathway of route 4 was made accessible including the connection to the Hamish Hay Bridge then this alternate pathway could remain 'as is' due to the main route 4 pathway connecting to effectively the same place (other side of tree) on the pathway to Chester Street West.

7.5 STAIRS TO HAMISH HAY BRIDGE – SOUTH SIDE



These stairs are located at the northern end of route 3 and provide a connection up to the south end of the Hamish Hay Bridge.

7.5.1 SOUTH SIDE STAIRS TO HAMISH HAY BRIDGE

7.5.1.1 POSITIVE

- The riser height was below the maximum of 180mm for an accessible stair.
- The treads were 430mm, which exceeds the minimum of 310mm for an accessible stair.
- A change in texture was provided at both the top and bottom of the stairs (flipped bricks).
- The stairs had a rough brick finish which would give adequate slip resistance when wet.
- The handrail was an appropriate height.
- The dual rail central handrail was an appropriate choice for a central rail which will allow users to pass each other on different sides without their hands colliding.
- The fixing method of the handrail to the vertical posts does not obstruct the passage of the hand.
- The landing between stair flights was an appropriate size.

7.5.1.2 NEGATIVE

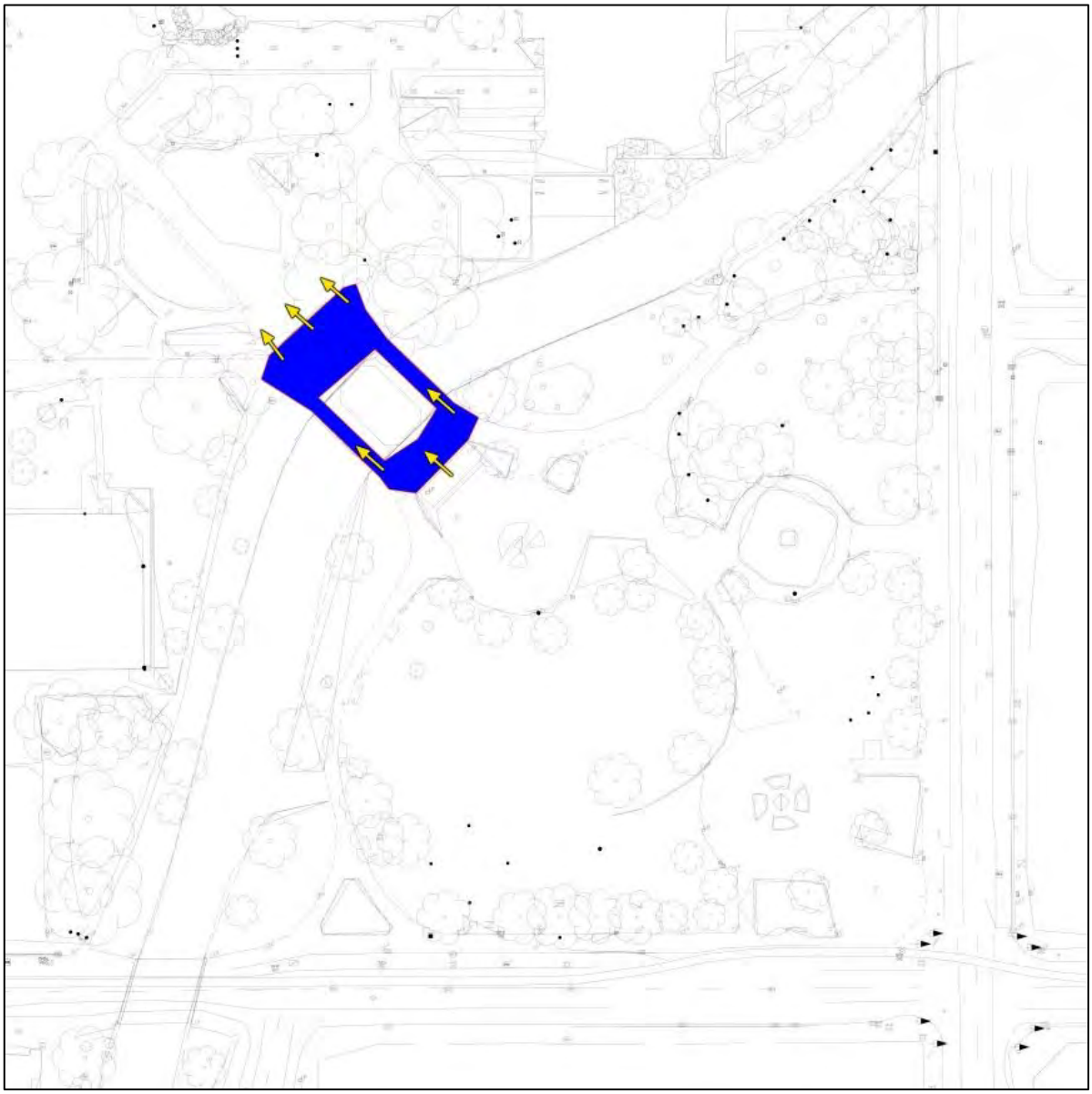
- The riser height varied between 140-160mm. Accessible stairs must have consistent riser heights.
- The handrail lacked extensions of 300mm past the top riser, and 300mm plus one tread length past the bottom riser.
- For a stairway that has a total width of 13m handrails should be provided at both ends in addition to a central handrail.
- No contrasting nosings were present on the stairs.
- The nosing projected 30mm in some places (others it was flush) this projection creates a trip hazard.
- The front edge of the tread was not rounded.
- The contrast was poor between the surrounding routes and the stairs.

7.5.1.3 RECOMMENDATIONS

- Ensure that the stair risers are a consistent height.
- Install additional compliant handrails at each end of the stair.
- Replace the existing central handrail with one that meets today's standards (extensions etc).

- Incorporate contrast of colour at the top and bottom of each stair flight.
- Incorporate a contrasting nosing strip into the stair treads.

7.6 HAMISH HAY BRIDGE



The Hamish Hay Bridge is the only land based connection within Victoria Square for the pedestrian routes which run between the Square and North.

7.6.1 HAMISH HAY BRIDGE

7.6.1.1 POSITIVE

- No gradient on the bridge exceeded 1:20, with most areas having a much gentler gradient.
- The surface is asphalt, which would give an adequate slip resistance when wet.

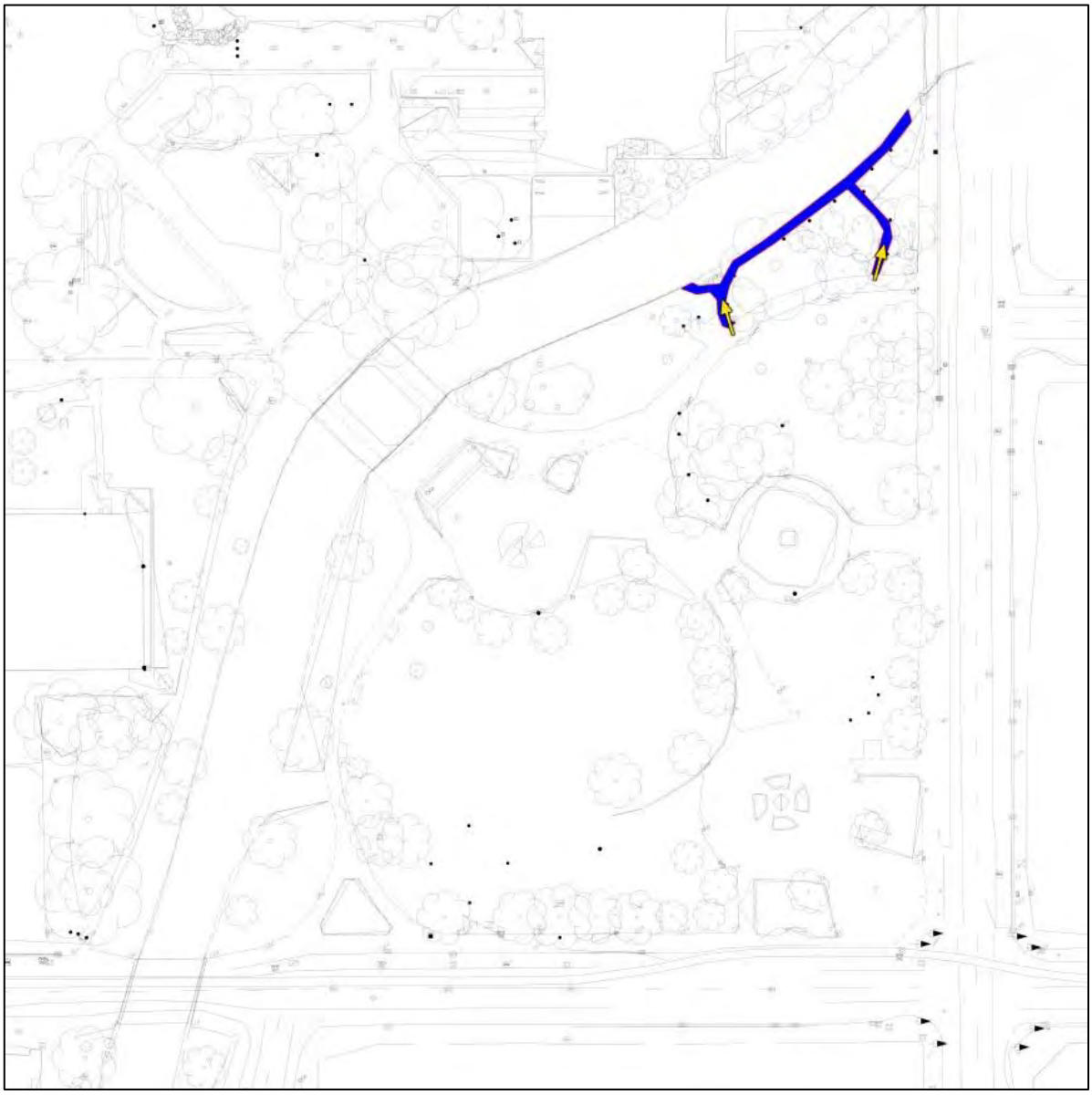
7.6.1.2 NEGATIVE

- Nil

7.6.1.3 RECOMMENDATIONS

- Nil

7.7 PUNT STOP



The punt stop is accessed via either a ramped or stepped side path towards the North Eastern most end of Route 1.

7.7.1 ACCESS PATH WEST (RAMP)

7.7.1.1 POSITIVE

- The surface is asphalt, which would give an adequate slip resistance when wet.

7.7.1.2 NEGATIVE

- The surface of this ramp has multiple slopes and rough patches.
- The ramp slope is 1:13 but has no handrails on both sides.
- The width of the ramp is 1200mm wide.

7.7.1.3 RECOMMENDATIONS

- Smooth the ramp slope to be 1:20 or gentler, so that the requirement for handrails is negated.
- Increase the ramp width to 1500mm (ideally 2.0m+).
- Include totem signage indicating the location of the punt stop.

7.7.2 ACCESS PATH EAST (STAIR)

NOTE: *The stairs here were hard to measure or assess accurately due to the level of degradation/damage that they experienced.*

7.7.2.1 POSITIVE

- The gradient of the pathway is 1:24 at its steepest.
- The stair riser appeared to be roughly 120mm.
- The tread was approximately 500mm.

7.7.2.2 NEGATIVE

- The surface is loose metal, and uneven in many places.
- The width of the path and stairs is 1400mm wide.
- No handrail was provided either side of the stairs.

7.7.2.3 RECOMMENDATIONS

- Resurface the metal path with an asphalt or concrete surface.
- Reconstruct the steps as accessible steps, including handrail provision on each side.
- Increase the path, and stair width to 1500mm (ideally 2.0m+).

7.7.3 RIVERSIDE PATHWAY

7.7.3.1 POSITIVE

- This pathway is a great opportunity to give safe access to the waterside for persons uncomfortable with navigating, or unable to navigate the grassed banks around the rest of the square.

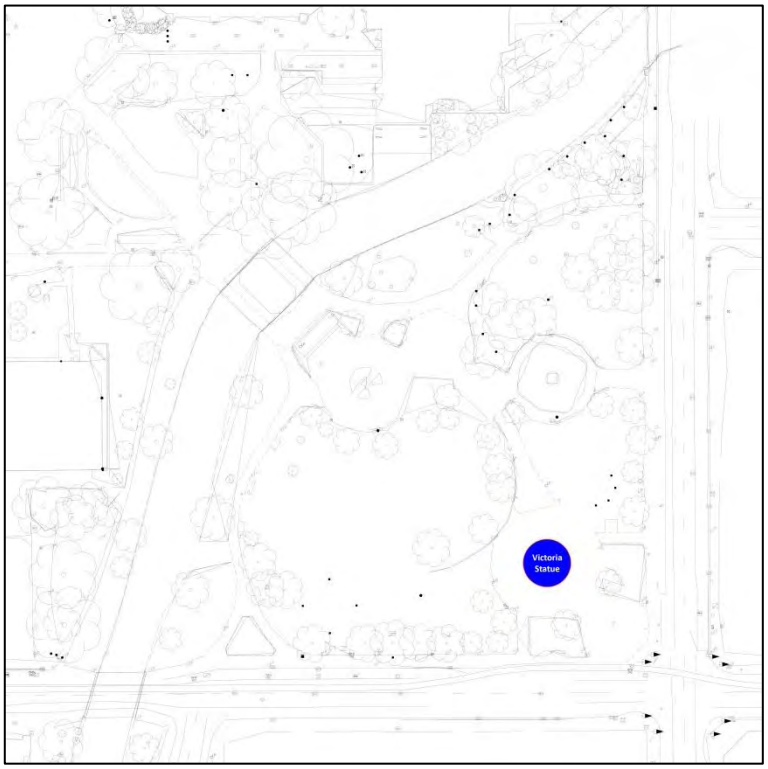
7.7.3.2 NEGATIVE

- The surface is loose metal, and uneven in many places.
- The width of the pathway is 1200mm wide at its widest point, and 1000mm at its narrowest.
- No upstand on river edge of path.

7.7.3.3 RECOMMENDATIONS

- Resurface the metal path with an asphalt or concrete surface.
- Increase the pathway width to 1500mm (ideally 2.0m+)
- Consider inclusion of recessed seating areas off to the side of the path which would provide a safe and level platform outside of the pedestrian flow for relaxing and taking in the view for wheelchair users, persons with mobility aides and parents with strollers.
- Install an upstand of 75mm along the river edge side of the path to prevent wheelchairs, prams etc running/tipping over the edge into the Avon River.

7.8 QUEEN VICTORIA STATUE



Approximately 50 metres from its original site, a statue of Queen Victoria commemorates the Golden Jubilee of the founding of the Canterbury Settlement (1900) and is also a memorial to those soldiers of Canterbury (79 in number) who were killed in the South African War between 1900–1902.

The foundation stone was laid on 22 June 1901 by His Royal Highness, The Duke of Cornwall and York (afterwards King George V), and the statue was unveiled on 25 May 1903 by the Mayoress, Mrs H. F. Wigram. The statue was sculpted by British sculptor Francis J. Williamson.[1]

[1] Description sourced from http://my.christchurchcitylibraries.com/statues/

7.8.1 ACCESS PATHWAYS TO STATUE

7.8.1.1 POSITIVE

- The surface is rough finished pavers, which would give an adequate slip resistance when wet.
- The clear width of the four pathways leading up to the statue varied between 1500-1600mm

7.8.1.2 NEGATIVE

- Nil

7.8.1.3 RECOMMENDATIONS

- Nil

7.8.2 ACCESS PATHWAYS AROUND STATUE

7.8.2.1 POSITIVE

- The surface is rough finished pavers, which would give an adequate slip resistance when wet.
- The clear width of the circulation spaces around the statue at their narrowest point are 1200mm (1180mm at one corner)

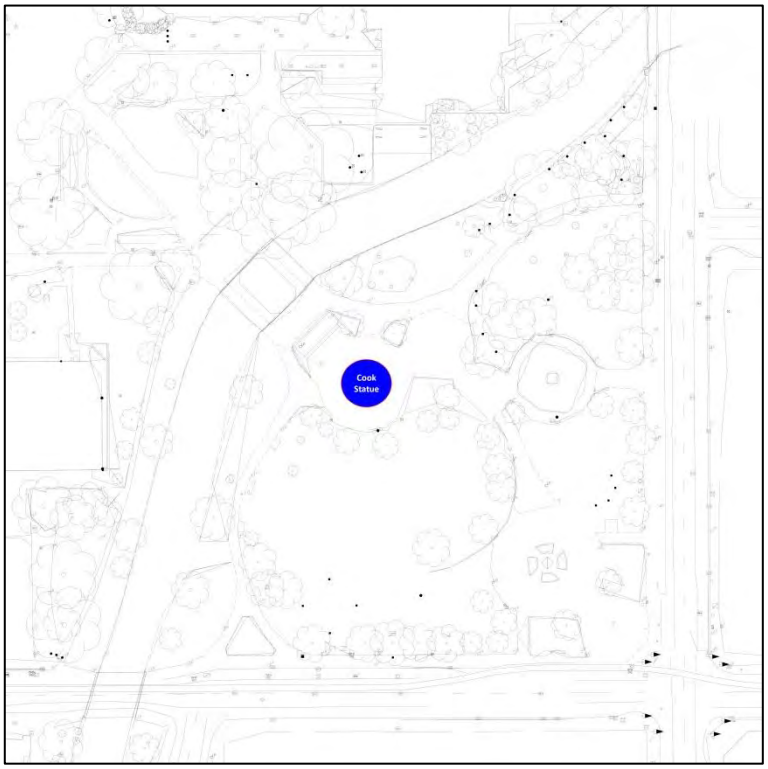
7.8.2.2 NEGATIVE

- Nil

7.8.2.3 RECOMMENDATIONS

- Nil

7.9 JAMES COOK STATUE



The James Cook Statue in Victoria Square, Christchurch, commemorates the three journeys of James Cook to New Zealand. The statue, sculpted by William Trethewey, was unveiled on 10 August 1932 by the Governor-General, Lord Bledisloe. It was donated by bookmaker and philanthropist Matthew Barnett (1861–1935).[2]

[2] Description sourced from https://en.wikipedia.org/wiki/Cook_Statue,_Christchurch

7.9.1 ACCESS PATHWAYS TO STATUE

7.9.1.1 POSITIVE

- The surface is rough finished pavers, which would give an adequate slip resistance when wet.
- The clear width of the four pathways leading up to the statue varied between 1500-1600mm

7.9.1.2 NEGATIVE

- Nil

7.9.1.3 RECOMMENDATIONS

- Nil

7.9.2 ACCESS PATHWAYS AROUND STATUE

7.9.2.1 POSITIVE

- The surface is rough finished granite paving slabs, which would give an adequate slip resistance when wet.

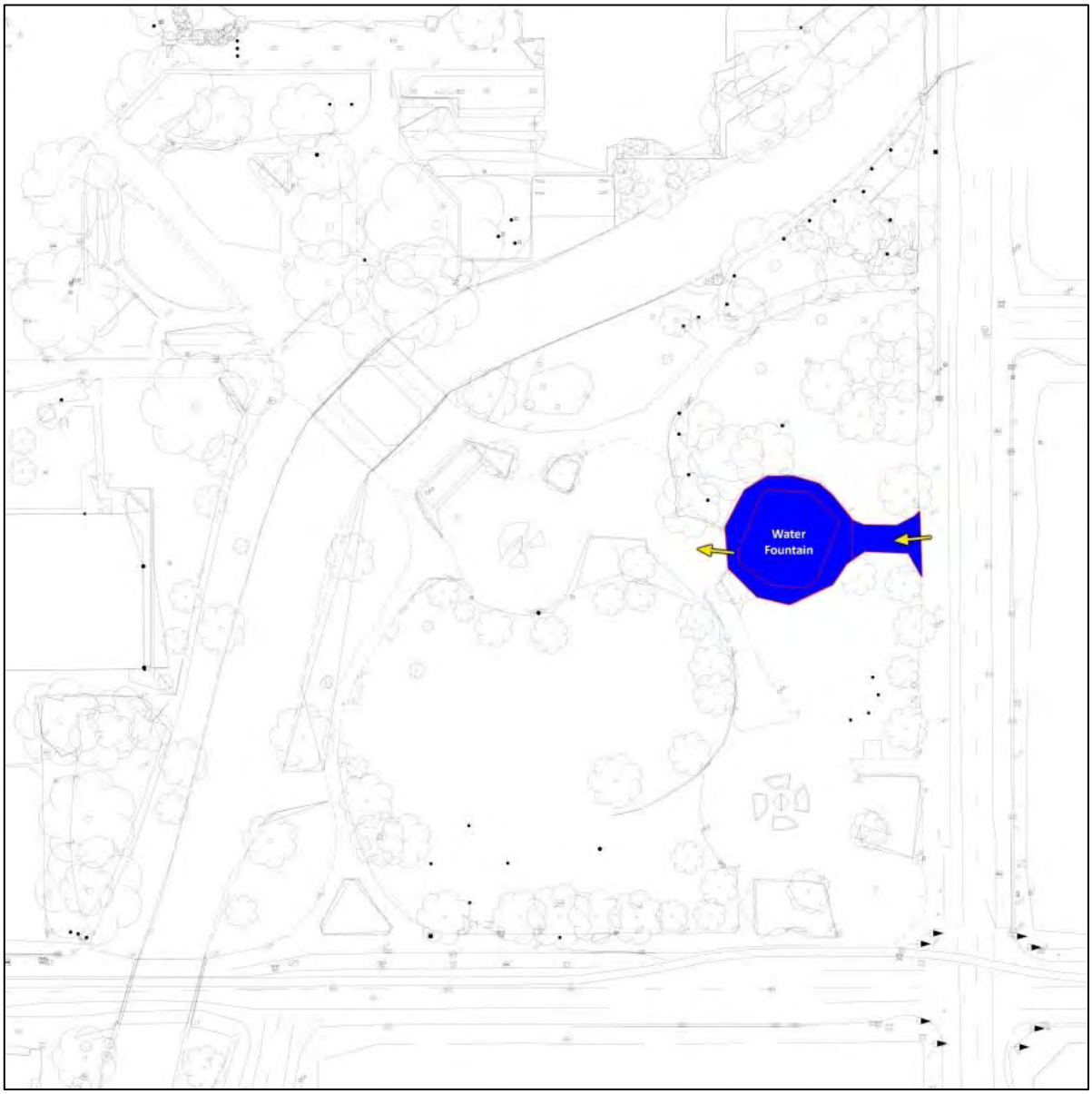
7.9.2.2 NEGATIVE

- The clear width of the circulation spaces around the statue at their narrowest point are between 510-590mm. This means a wheelchair user, or two ambulant persons coming from opposite directions would be unable to circulate the statue.

7.9.2.3 RECOMMENDATIONS

- Take the design approach used by the Victoria Statue and make the internal corners of the garden curved rather than square. Ensure a clear width of 1200mm is achieved at the tightest points.

7.10 WATER FOUNTAIN



The H. L. Bowker fountain, also part of the Victoria Square complex, was designed by Victor Hean in 1931 and was the first illuminated electric fountain in Australasia. In his will of 1915, Henry Bowker, a city businessman whose office overlooked Victoria Square, gifted money for a fountain or structure to be erected in front of the proposed Town Hall. It took until 1931 to erect the fountain and until 1972 to finally build a Town Hall. The fountain is on the site of a former animal pound.[3]

[3] Description sourced from http://my.christchurchcitylibraries.com/victoria-square/

7.10.1 ACCESS PATHWAY FROM COLOMBO STREET TO FOUNTAIN

7.10.1.1 POSITIVE

- The surface is asphalt, which would give an adequate slip resistance when wet.
- The clear width of the pathway is 4600mm.
- The gradient of this pathway was near flat, roughly 1:60.

7.10.1.2 NEGATIVE

- Nil

7.10.1.3 RECOMMENDATIONS

- Nil

7.10.2 ACCESS PATHWAYS AROUND FOUNTAIN

7.10.2.1 POSITIVE

- The surface is rough finished pavers, which would give an adequate slip resistance when wet.
- The clear width of the pathway around the fountain varies between 1650-2400mm at its narrowest points.

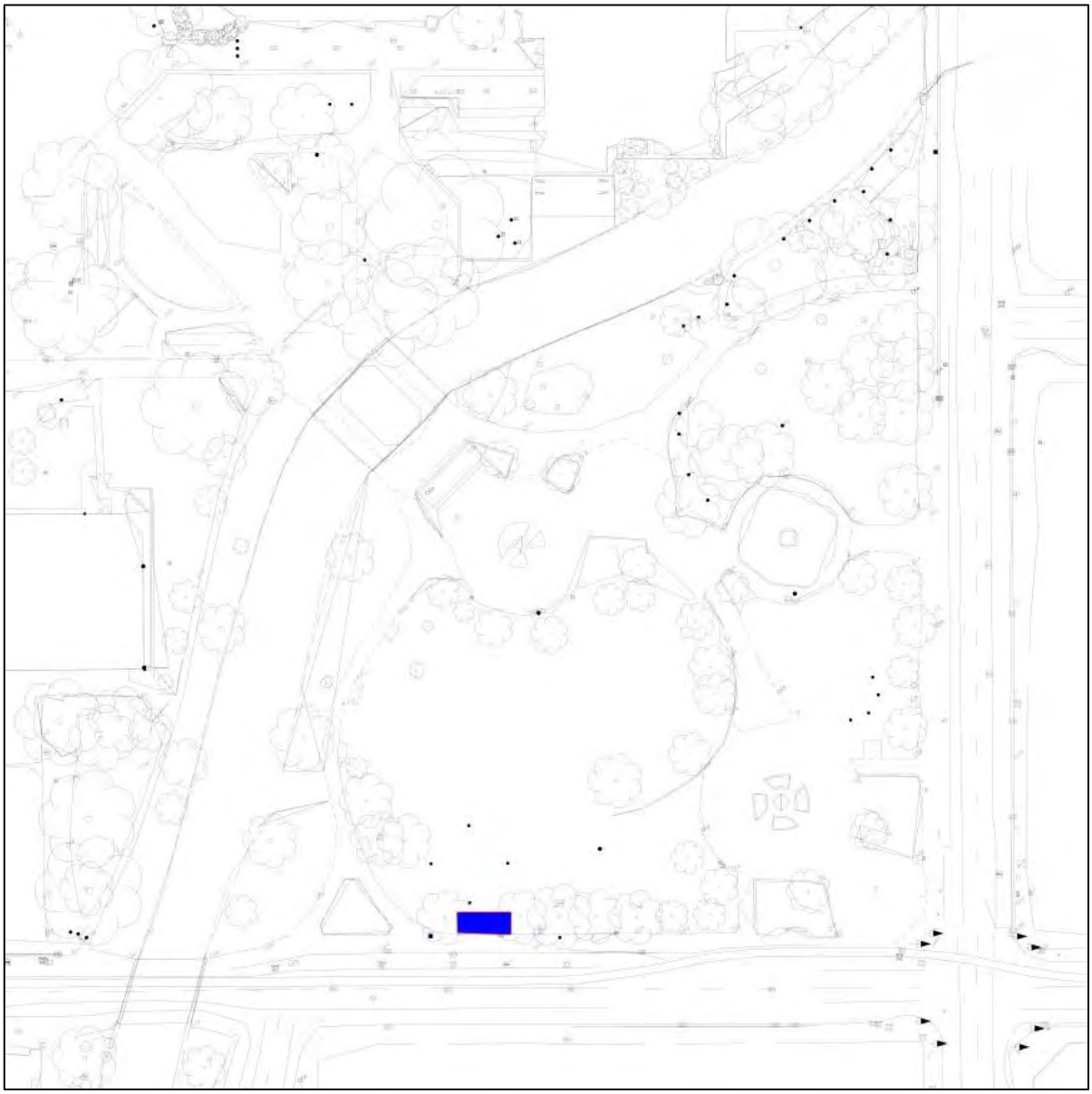
7.10.2.2 NEGATIVE

- Nil

7.10.2.3 RECOMMENDATIONS

- Consider inclusion of recessed refuge and seating areas off to the side of the pathways around the fountain. Such areas would create a safe level platform outside of the pedestrian flow for relaxing and enjoying the water feature for wheelchair users, persons with mobility aides and parents with strollers.

7.11 PICNIC AREA



This small picnic area consisting of two tables and fixed seating is located towards the South West corner of Victoria Square.

7.11.1 PICNIC AREA

7.11.1.1 POSITIVE

- The surface is a rough finished paver, which would give an adequate slip resistance when wet.
- The tables are usable by a person in a wheelchair.

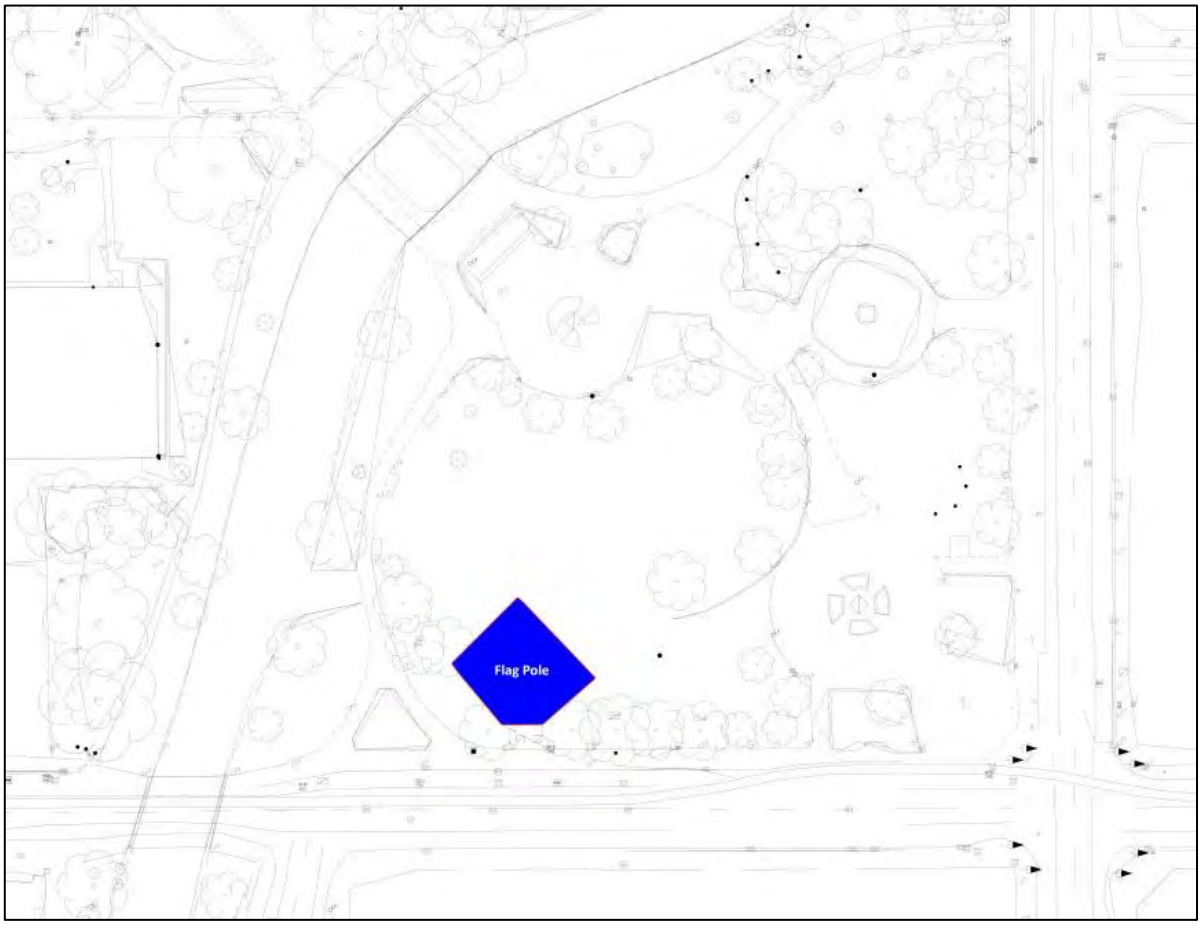
7.11.1.2 NEGATIVE

- The low fixed seating may prove difficult for the elderly or persons with limited strength/mobility to sit in and get back up.
- The ground surface is sloped down towards the footpath which may affect balance, or catch wheeled mobility aides off guard upon reaching the table.

7.11.1.3 RECOMMENDATIONS

- We understand that all seating and tables in this area are likely to be replaced; we see this as an opportunity to create some universally accessible furniture and gathering areas at Victoria square which will cater for a wide range of persons regardless of ability well into the future.
- Seating should be provided to accommodate all persons regardless of ability. For elderly people the preferred seat height is 520mm, for children and small people the preferred seat height is 350mm, and for general use a seat height of between 400-450mm is preferred. Typically seating should be mixed height in each location it is placed to cater for mixed groups of people to sit together.

7.12 FLAGPOLE



On 24 May 1907, a newly erected flagpole in Victoria Square was used for Christchurch's first 'Empire Day' To the sound of buglers playing the 'Royal Salute', the Union Jack was hoisted up above the thousands that had gathered below.

In 1909, this flagpole was transformed in a flagstaff by the addition of a crosspiece. An even larger flagstaff took the place of this in 1911, being situated closer to Oxford Terrace so not to overcrowd the Victoria Statue. Here it remained until the Victoria Square revamp in the 1980's where it was relocated.

Empire day had been celebrated in New Zealand as early as 1903, 24 May being set aside to celebrate the late Queen Victoria's birthday and 'rejoice in the consolidation of our great Empire'. This did not stop the birthday celebrations of her son, King Edward VII in November but the two days did merge in 1910 with her Grandson, King George V (our current Queen's grandfather) having his birthday in June and it being considered 'close enough'. Schools and some offices would close but all shops remained open. In 1958, Empire Day became known as 'Commonwealth Day', now celebrated in New Zealand under the term of the 'Queen's Birthday' – the first Monday in June.[4]

[4] Description sourced from Christchurch City Council

7.12.1 FLAGPOLE GENERAL

7.12.1.1 POSITIVE

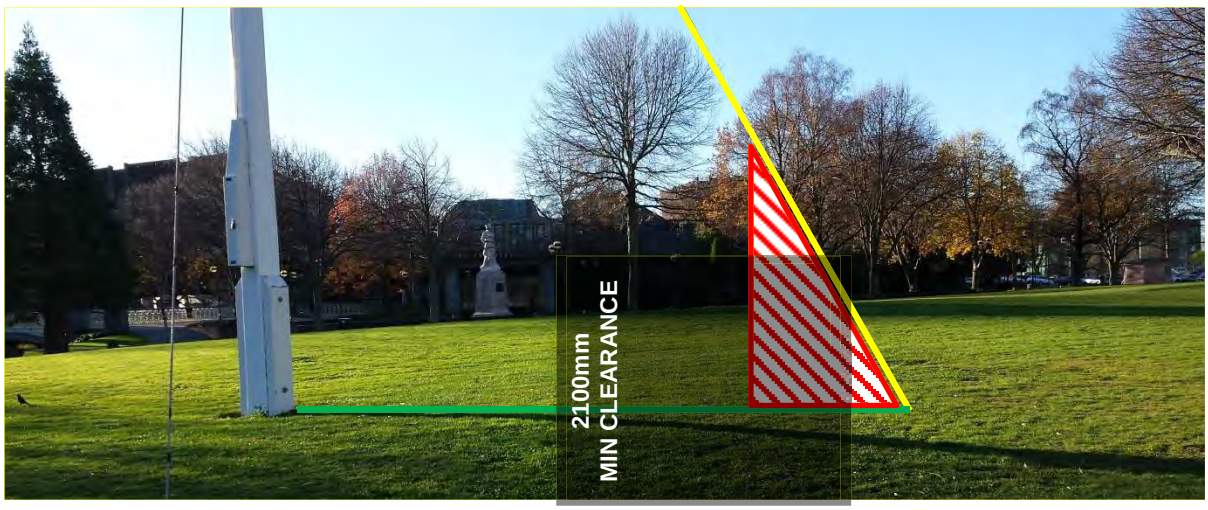
- The flagpole is a contrasting colour to its surrounds.

7.12.1.2 NEGATIVE

- The support lines for this flagpole are not contrasting to their surrounds, and are not protected at ground level. They could be considered as a dangerous projection for persons with low vision or blindness.

7.12.1.3 RECOMMENDATIONS

- With the support lines projecting into a grassed space intended for usage by persons with a range of disabilities including those with low vision or blindness we suggest that some form of barrier, or contrasting tactile ground surface be applied under each support line protecting the distance where a 2100mm head clearance is not provided. (see sketch below)



7.13 SEATING (MISCELLANEOUS LOCATIONS)

7.13.1 SEATING GENERAL

7.13.1.1 POSITIVE

- Seating has been well distributed throughout Victoria Square which gives the opportunity for people to rest, or to take in the surrounding view.

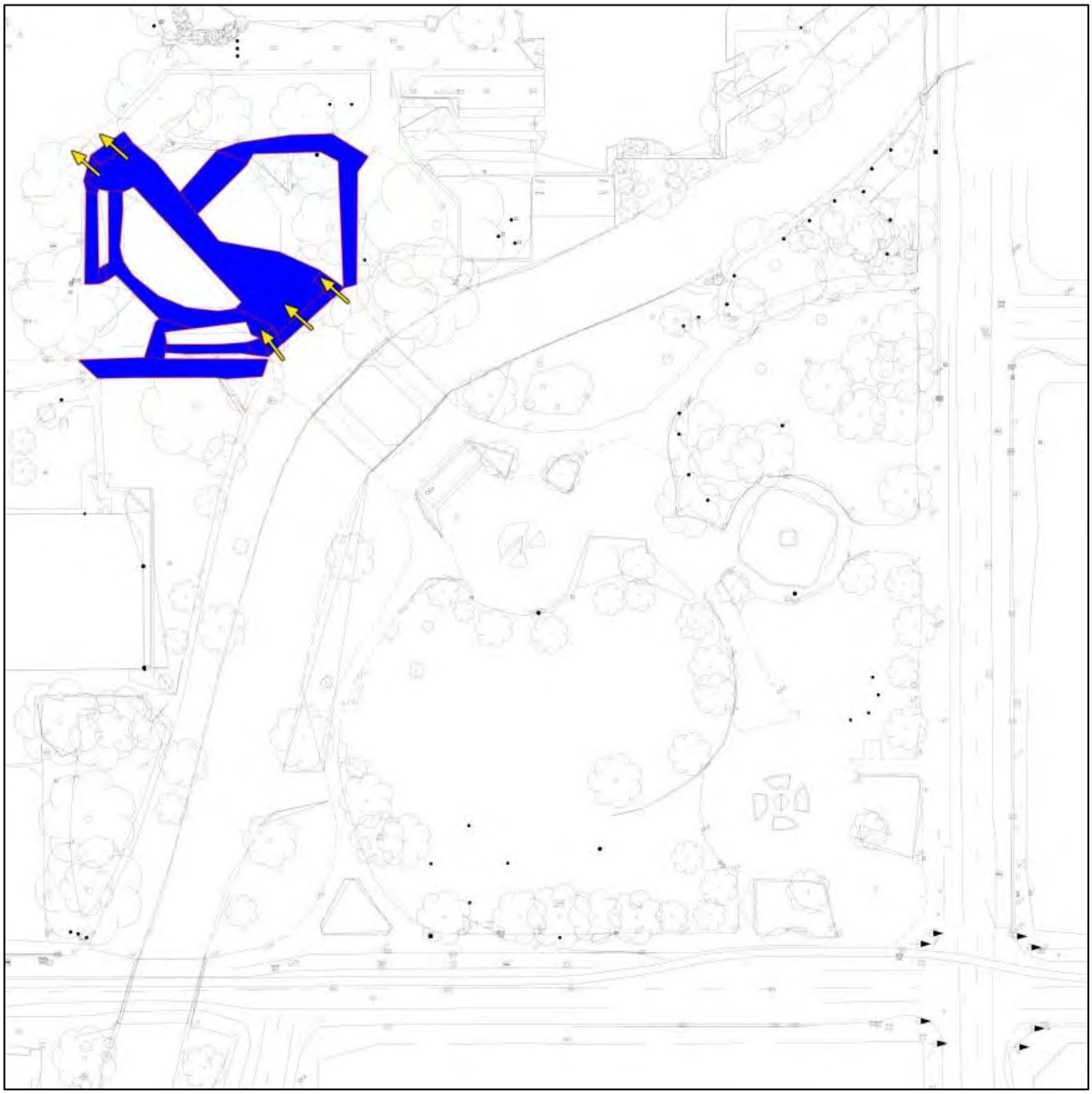
7.13.1.2 NEGATIVE

- The seating typically is of a curved bucket type throughout the park. The low point of the bucket is located at the rear of the seat and measures 410mm above ground level, with the high point at its front lip measuring 440mm above ground level. This low height, and deep bucket fixed seating may prove difficult for the elderly or persons with limited strength/mobility to sit in and get back up
- Where the seating is provided no clear bays or recessed areas are present, which means a safe level platform outside of the pedestrian flow for wheelchair users, persons with mobility aides and parents with strollers is not available.

7.13.1.3 RECOMMENDATIONS

- Seating should be provided to accommodate all persons regardless of ability. For elderly people the preferred seat height is 520mm, for children and small people the preferred seat height is 350mm, and for general use a seat height of between 400-450mm is preferred. Typically seating should be mixed height in each location it is placed to cater for mixed groups of people to sit together.
- Consider the inclusion of wheelchair, and stroller spaces between seating or to the side of it
- Replace the existing seating with seating that aligns as closely as possible to the dimensions given in NZS4121:2001 13.5.1, 13.5.2, Fig.49 and fig.50

7.14 NORTH OF HAMISH HAY BRIDGE



This area had signs of significant earthquake damage, and has been temporarily repaired to some extent. Two of the key features of this area are the Town Hall located outside the squares boundary to the East, and the Floral Clock located within the square to the North West of the Hamish Hay Bridge.

The floral clock was gifted to the city in 1953 by the former retailing firm of Calder Mackay Limited. The clock mechanism is electrically operated and the face has an approximate diameter of 8.5 metres. Up to 7,000 plants are required each spring and autumn for the floral design.[5]

[5] Description sourced from http://my.christchurchcitylibraries.com/victoria-square/

7.14.1 NORTH OF HAMISH HAY BRIDGE - BRIDGE STAIR

7.14.1.1 POSITIVE

- The riser height was 130mm.
- The treads are 430mm, which exceeds the minimum of 310mm for an accessible stair.
- A change in texture was provided at both the top and bottom of the stairs for the majority of the full width (flipped bricks).
- The stairs had a rough brick finish which would give adequate slip resistance when wet.
- The dual rail central handrail was an appropriate choice for a central rail which will allow users to pass each other on different sides without their hands colliding.

7.14.1.2 NEGATIVE

- The handrail lacked extensions of 300mm past the top riser, and 300mm plus one tread length past the bottom riser.
- For a stairway that has a total width of 4m+ handrails should be provided at both ends in addition to a central handrail.
- No contrasting nosings were present on the stairs.
- The nosing projected 30-40mm in some places (others it was flush) this projection would create a trip hazard.
- The front edge of the tread was not rounded.
- The contrast was poor between the surrounding spaces and the stairs (except where new black asphalt had been used to fill some patches in).
- The fixing method of the handrail to the vertical posts obstructed the passage of the hand.

7.14.1.3 RECOMMENDATIONS

- Install additional compliant handrails at each end of the stair.
- Replace the existing central handrail with one that meets todays standards (extensions etc).
- Incorporate contrast of colour at the top and bottom of each stair flight.
- Incorporate a contrasting nosing strip into the stair treads.
- Fill in the back of the riser under the 30-40mm projections to eliminate the trip hazard.

7.14.2 NORTH OF HAMISH HAY BRIDGE – BRIDGE RAMP 1

7.14.2.1 POSITIVE

- The width of this ramp was 1.2m wide.
- The surface was a rough finish paver, and would give adequate slip resistance when wet.

7.14.2.2 NEGATIVE

- The ramp has a traverse slope (cross fall to the eastern side).
- The ramps longitudinal gradient was averaged at a non-accessible 1:6
- No handrails are present either side of the ramp.

7.14.2.3 RECOMMENDATIONS

- Consider replacement of this ramp or improvement of it as part of the reconstruction design.

7.14.3 NORTH OF HAMISH HAY BRIDGE – BRIDGE RAMP 2

7.14.3.1 POSITIVE

- The width of this ramp was 1.2m wide.
- The surface was asphalt, and would give adequate slip resistance when wet.

7.14.3.2 NEGATIVE

- The ramp has a traverse slope to both sides (cross fall to the eastern and western sides).
- The ramps longitudinal gradient was averaged at a non-accessible 1:7.5
- No handrails are present either side of the ramp.

7.14.3.3 RECOMMENDATIONS

- Consider replacement of this ramp or improvement of it as part of the reconstruction design.

7.14.4 RAMP OFF PATHWAY TO CHESTER STREET WEST

7.14.4.1 POSITIVE

- The width of this ramp was 2.4m wide.
- The surface was a rough finish paver, and would give adequate slip resistance when wet.

7.14.4.2 NEGATIVE

- The ramp has a traverse slope to the north on its lower segment.
- The ramp has no landing where it changes direction.
- The ramps longitudinal gradient was averaged at a non-accessible 1:10
- Handrails were only present on one side of the ramp.

7.14.4.3 RECOMMENDATIONS

- Consider replacement of this ramp or improvement of it as part of the reconstruction design.

7.14.5 NORTH OF HAMISH HAY BRIDGE – EAST PATHWAY

7.14.5.1 POSITIVE

- The surface was a rough finish paver, and would give adequate slip resistance when wet.

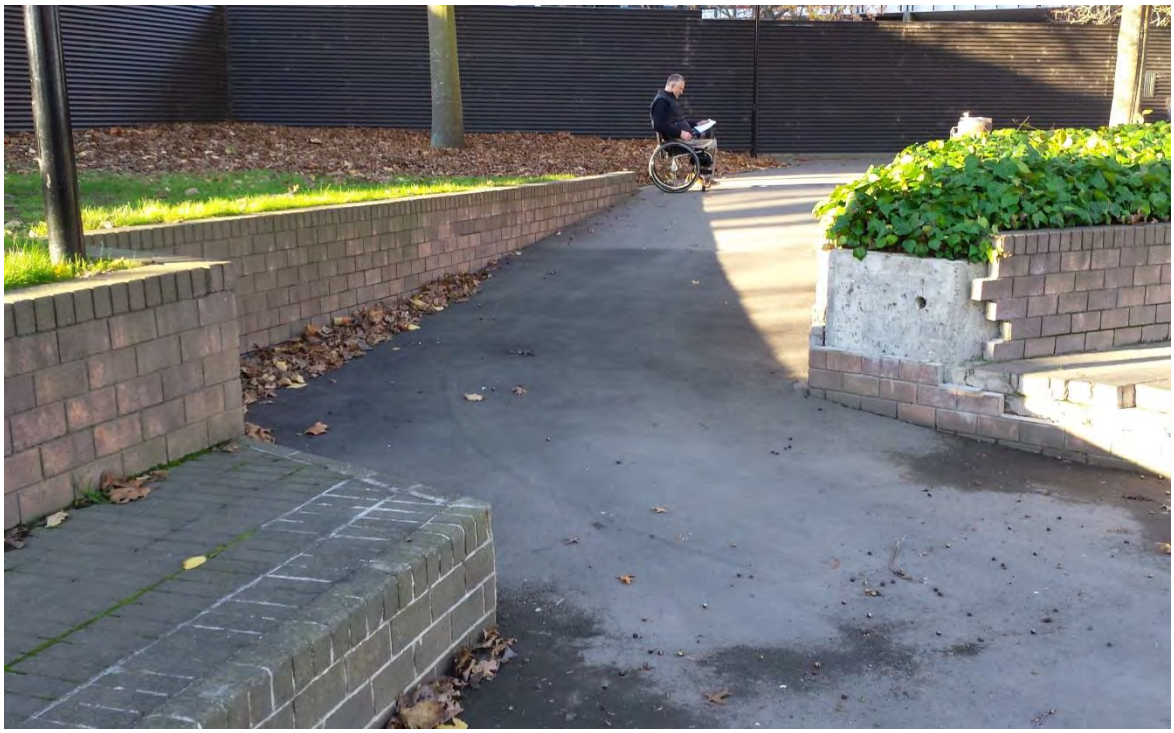
7.14.5.2 NEGATIVE

- The width of this pathway was 700mm wide at its narrowest point (between the bin and tree).
- The path has a steep traverse slope batter to the north.

7.14.5.3 RECOMMENDATIONS

- Consider replacement of this pathway or improvement of it as part of the reconstruction design.

7.14.6 NORTH OF HAMISH HAY BRIDGE – NORTH EASTERN RAMP



7.14.6.1 POSITIVE

- The width of this ramp was 3.1m wide
- The ramps longitudinal gradient was averaged at 1:14
- The surface was asphalt, and would give adequate slip resistance when wet

7.14.6.2 NEGATIVE

- The ramp has a traverse slope on its lower half
- The ramp has no landing where it changes direction
- No handrails are present either side of the ramp

7.14.6.3 RECOMMENDATIONS

- Consider replacement of this ramp or improvement of it as part of the reconstruction design.

7.14.7 NORTH OF HAMISH HAY BRIDGE – NORTH STAIR

7.14.7.1 POSITIVE

- The riser height was below the maximum of 180mm for an accessible stair.
- The treads were 420mm, which exceeds the minimum of 310mm for an accessible stair.
- A change in texture was provided at both the top and bottom of the stairs for the majority of the full width (flipped bricks).
- The stairs had a rough brick finish which would give adequate slip resistance when wet.
- The dual rail central handrail was an appropriate choice for a central rail which will allow users to pass each other on different sides without their hands colliding.

7.14.7.2 NEGATIVE

- The handrail lacked extensions of 300mm past the top riser, and 300mm plus one tread length past the bottom riser.
- For a stairway that has a total width of 4m+ handrails should be provided at both ends in addition to a central handrail.
- No contrasting nosings were present on the stairs.
- The nosing projected 30mm in some places creating a trip hazard.
- The front edge of the tread was not rounded.
- The contrast was poor between the surrounding routes and the stairs.

7.14.7.3 RECOMMENDATIONS

- Install additional compliant handrails at each end of the stair.
- Replace the existing central handrail with one that meets today's standards (extensions etc).
- Incorporate contrast of colour at the top and bottom of each stair flight.
- Incorporate a contrasting nosing strip into the stair treads.
- Fill in the back of the riser under the 30mm projections to eliminate the trip hazard.

7.14.8 NORTH OF HAMISH HAY BRIDGE – NORTH WEST STAIR

7.14.8.1 POSITIVE

- The riser height was below the maximum of 180mm for an accessible stair.
- The treads were 440mm, which exceeds the minimum of 310mm for an accessible stair.
- A change in texture was provided at the top of the stairs (flipped bricks).
- The stairs had a rough brick finish which would give adequate slip resistance when wet.

7.14.8.2 NEGATIVE

- No handrail was present.
- No contrasting nosings were present on the stairs.
- The front edge of the tread was not rounded.
- The riser height was uneven 120mm for the lower, and 140mm for the upper.
- A change in texture was not present at the base of the stairs.
- The contrast was poor between the surrounding routes and the stairs.

7.14.8.3 RECOMMENDATIONS

- Install additional compliant handrails both sides of the stair.
- Incorporate contrast of colour at the top and bottom of each stair flight.
- Incorporate a contrasting nosing strip into the stair treads.
- Even out the difference in riser height if possible.

  OR

- Replace the stair with an accessible ramp.

7.14.9 NORTH OF HAMISH HAY BRIDGE – NORTH WEST PATH (UPPER)

7.14.9.1 POSITIVE

- The surface was a rough finish paver, and would give adequate slip resistance when wet.

7.14.9.2 NEGATIVE

- This pathway has stair only access.
- The clear width was only 1050mm.

7.14.9.3 RECOMMENDATIONS

- Consider incorporating a threshold ramp, or fully ramped access way to this section of path as part of the redevelopment.

7.14.10 NORTH OF HAMISH HAY BRIDGE – NORTH WEST PATH (NORTH END)

7.14.10.1 POSITIVE

- The surface was a rough finish paver, and would give adequate slip resistance when wet.
- The width of this pathway was 2660mm wide, and 2000mm at its narrowest point.

7.14.10.2 NEGATIVE

- There are some drop-offs and stairs around the edge of this path which are poorly contrasted to their surrounds.

7.14.10.3 RECOMMENDATIONS

- Consider upgrading/replacement of this pathway as part of the reconstruction design, specifically with regard to increasing visibility of edges and minimising the risk of a wheeled mobility device toppling over an edge.

7.14.11 NORTH OF HAMISH HAY BRIDGE – NORTH WEST PATH (MIDDLE)

7.14.11.1 POSITIVE

- The surface was a rough finish paver, and would give adequate slip resistance when wet.
- The width of this pathway was 2660mm wide, and 2000mm at its narrowest point.

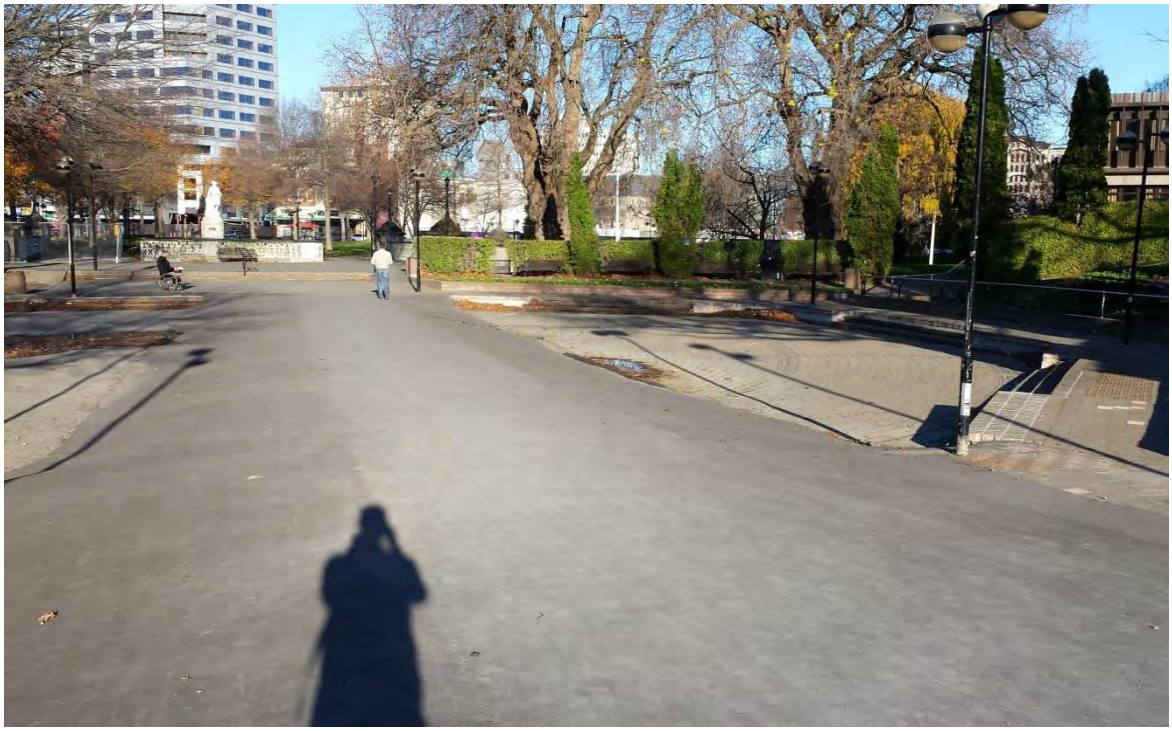
7.14.11.2 NEGATIVE

- There are some drop-offs and stairs around the edge of this path which are poorly contrasted to their surrounds.
- A light pole is located centrally in this pathway.

7.14.11.3 RECOMMENDATIONS

- Consider upgrading/replacement of this pathway as part of the reconstruction design, specifically with regard to increasing visibility of edges and minimising the risk of a wheeled mobility device toppling over an edge.
- Investigate the possibility of relocating the light pole out of its central pathway location.

7.14.12 NORTH OF HAMISH HAY BRIDGE – ASPHALT MOUND PATHWAY



7.14.12.1 POSITIVE

- The surface was asphalt, and would give adequate slip resistance when wet.
- Provides a near accessible 'direct' connection between the north and south areas or northern Victoria Square.

7.14.12.2 NEGATIVE

- Batters on the sides of the asphalt mound are a gradient of approximately 1:10

7.14.12.3 RECOMMENDATIONS

- Consider improvement and inclusion of this temporary direct accessible route/connection in some form as part of the reconstruction design; the direct connection it provides is a positive improvement on the original design for accessibility.

8.0 CONCLUSION

Overall the fundamental elements of the pedestrian routes found within the square are what would be expected for a public space of this age. Items such as the main pathways and circulation spaces typically had complaint grades/widths, with the ramps/stairs been mostly non-complaint due to their gradients and handrail provisions (or lack thereof).

Various other non-compliances and opportunities for improvement outside of the above were also identified, but it should be noted that the majority of these non-compliances including those aforementioned should for the most part be requiring only relativity simple (and subtle) alterations, reconstruction or landscape reshaping,

The above said, our findings indicate that there are not currently any ‘compliant’ Accessible Route/s connecting the Southern areas of Victoria Square to the Northern areas.

9.0 NOTE FOR CONSIDERATION

Given that the future of Victoria Square is still to be decided it is an ideal time to consider the recommendations of this report with specific consideration to the fact that without some level of alteration or redevelopment to the existing Victoria Square it will not have an accessible route/s.

Not having an accessible route/s will cause Victoria Square to become a disconnection of the new high quality accessible routes which will be connecting into, and passing through it from the adjacent Avon River Precinct upgrade projects.