



COUNCIL MEETING

ATTACHMENTS UNDER SEPARATE COVER

7.00 PM, TUESDAY 18 AUGUST 2020

Waverley Council
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ATTACHMENTS UNDER SEPARATE COVER

CM/7.3/20.08 Delivery Program 2018-2022 - Six-monthly Progress Report

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CM/7.10/20.08 Bronte Cutting Safety Upgrade

1	Report previously considered by Council - Bronte Cutting Safety Upgrade - 21 July 2020	71
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SIX MONTHLY PROGRESS REPORT

Waverley Council » June 2020

ACKNOWLEDGEMENT

We acknowledge the Bidjigal and Gadigal people,
who traditionally occupied the Sydney coast

We also acknowledge Aboriginal Elders
both past and present.

OUR COMMUNITY VISION

Waverley: connecting
the city and the sea.

A welcoming and cohesive community
that celebrates and enhances our
spectacular coastline, vibrant places,
and rich cultural heritage.



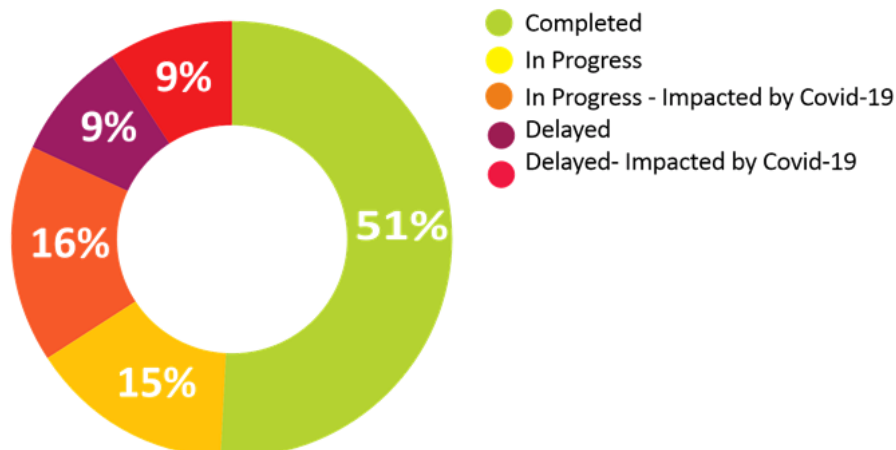
4 OUR PERFORMANCE SNAPSHOT

Waverley's Community Strategic Plan, Waverley Community Strategic Plan 2018–2029, is built around 11 themes. The Delivery Program and Operational Plan are also based on these themes. Each theme has a set of goals which outlines the specific directions we intend to head in. Sitting beneath these are the strategies Waverley Council will implement to achieve the goals set out in the Waverley Community Strategic Plan and Waverley Council's reporting tracks our progress in delivering these. Below is a summary of our overall progress in meeting targets set out in the Operational Plan 2019-20 for the period 1 December 2020–30 June 2020.

Measuring our Progress against Delivery Program

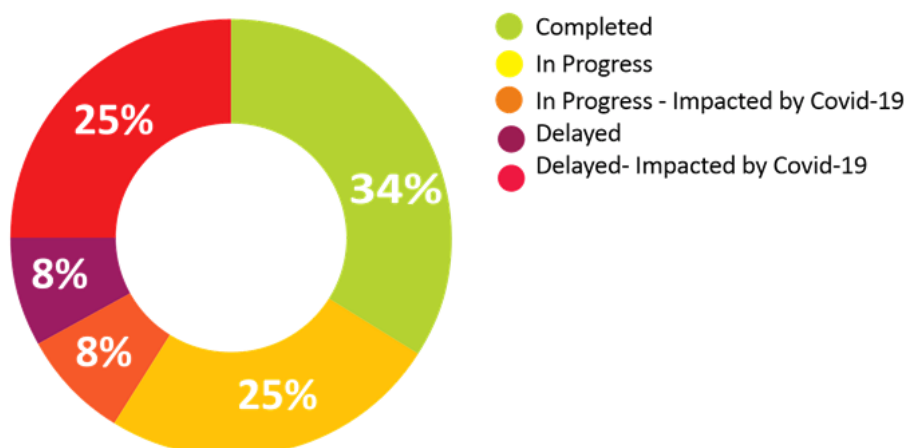
OVERALL PERFORMANCE

Overall, 51% of the actions in the Operational Plan were completed, 15% are progressing, another 16% are in progress but are impacted by Covid-19, nine per cent were delayed due to operational reasons and nine per cent were delayed due to Covid-19



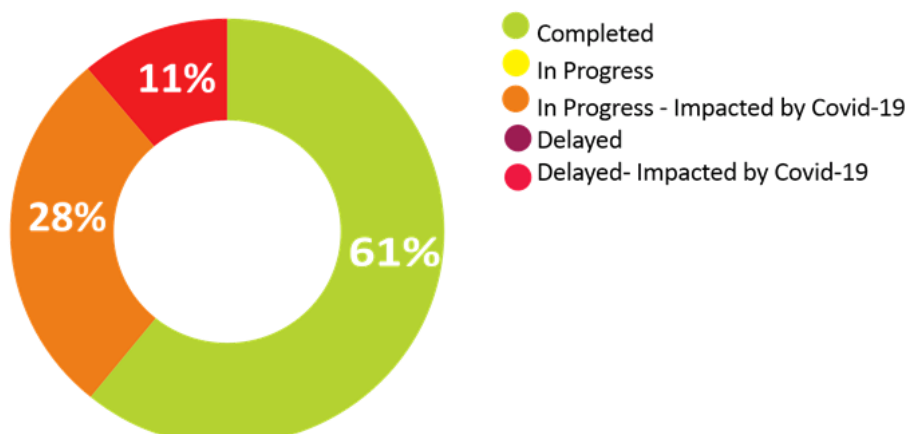
ARTS AND CULTURE

In the Arts and Culture theme, 34% of the actions were completed, 25% are progressing, another eight per cent are in progress but are impacted by Covid-19, eight per cent were delayed due to operational reasons and 25% were delayed due to Covid-19



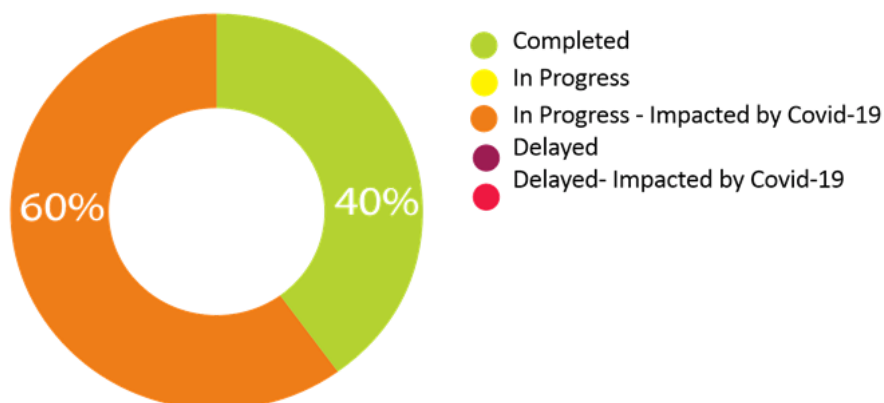
COMMUNITY SERVICES AND WELL-BEING

In the Community Services and Well-Being theme, 61% of the actions were completed, 28% are in progress but are impacted by Covid-19 and 11% were delayed due to Covid-19



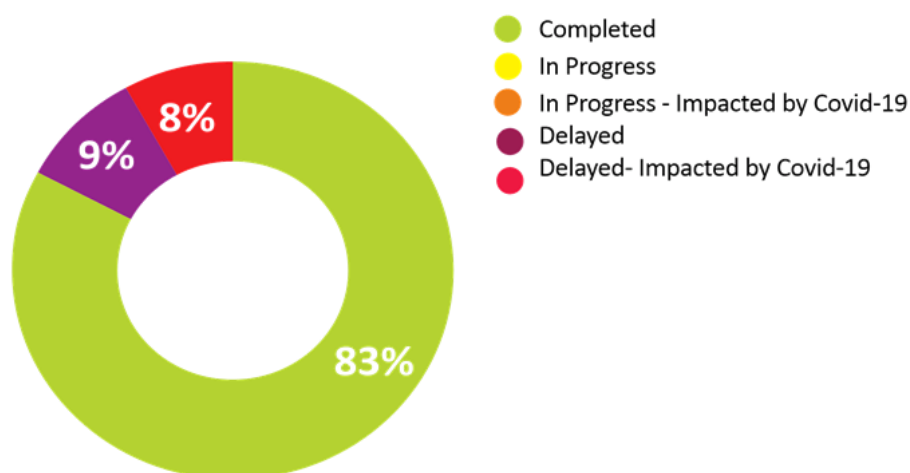
RECREATION AND OPEN SPACES

In the Recreation and Open Spaces theme, 40% of the actions were completed and 60% are in progress but are impacted by Covid-19



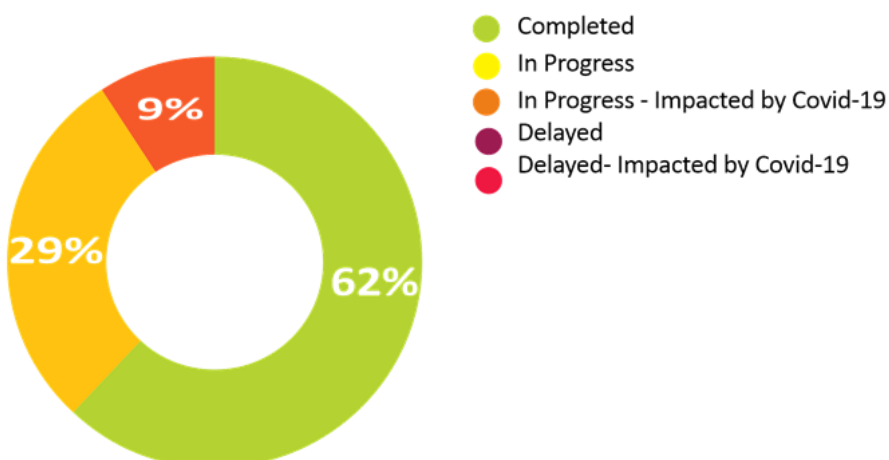
LOCAL ECONOMY

In the Local Economy theme, 83% of the actions were completed, nine per cent were delayed due to operational reasons and eight per cent were delayed due to Covid-19



PLANNING, DEVELOPMENT AND HERITAGE

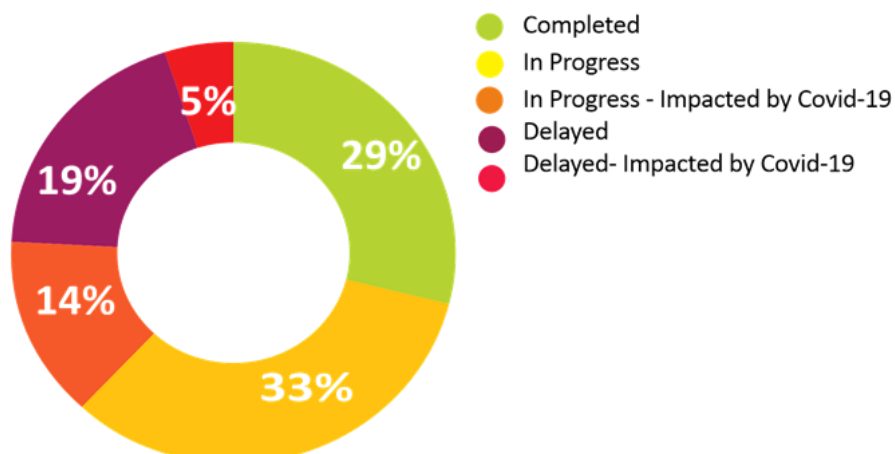
In the Planning, Development and Heritage theme, 62% of the actions were completed, 29% are progressing and another nine per cent are in progress but are impacted by Covid-19



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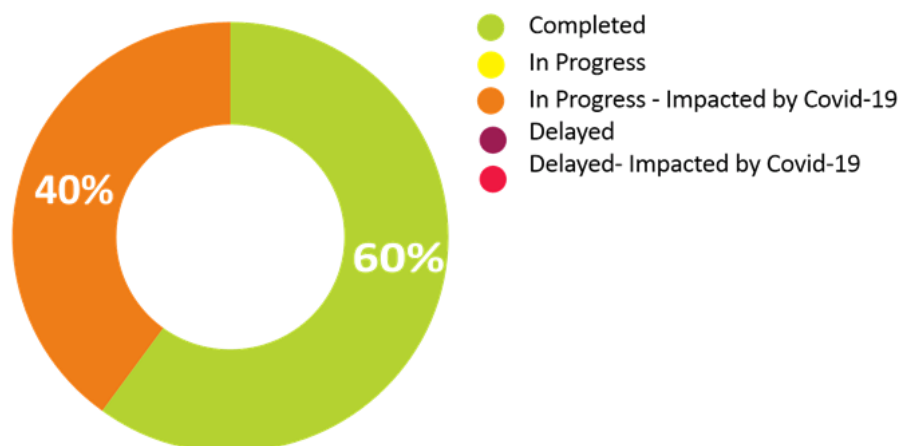
TRANSPORT, PEDESTRIANS AND PARKING

In the Transport, Pedestrians and Parking theme, 29% of the actions were completed, 33% are progressing, another 14% per cent are in progress but are impacted by Covid-19, 19% were delayed due to operational reasons and 5% were delayed due to Covid-19



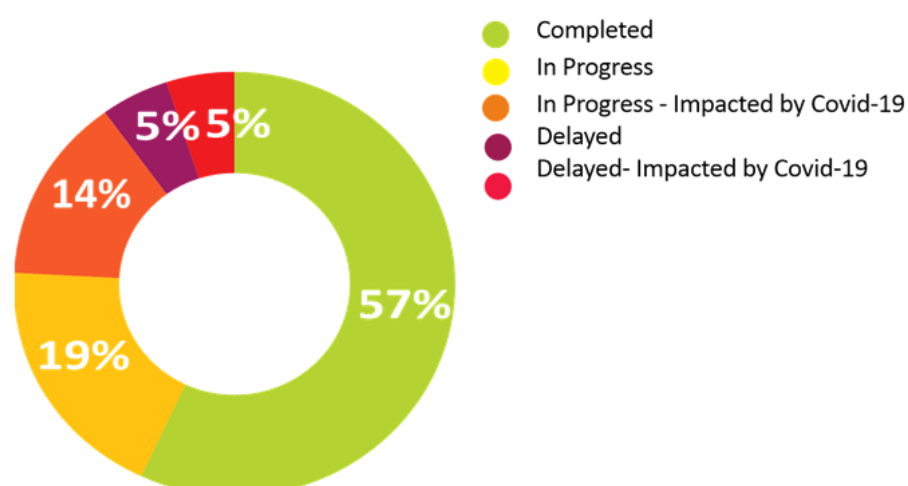
BUILDINGS AND INFRASTRUCTURE

In the Buildings and Infrastructure theme, 60% of the actions were completed and 40% are in progress but are impacted by Covid-19



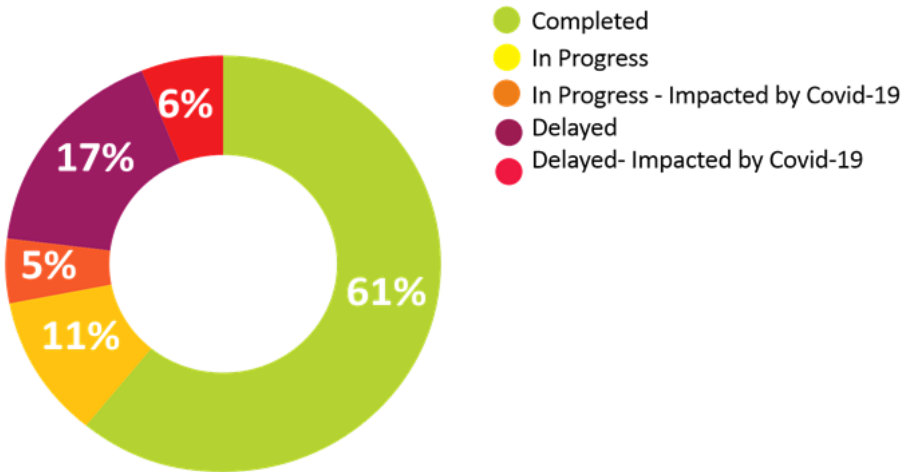
SUSTAINABLE ENVIRONMENT

In the Sustainable Environment theme, 57% of the actions were completed, 19% are progressing, another 14% are in progress but are impacted by Covid-19, five per cent were delayed due to operational reasons and another five per cent were delayed due to Covid-19.



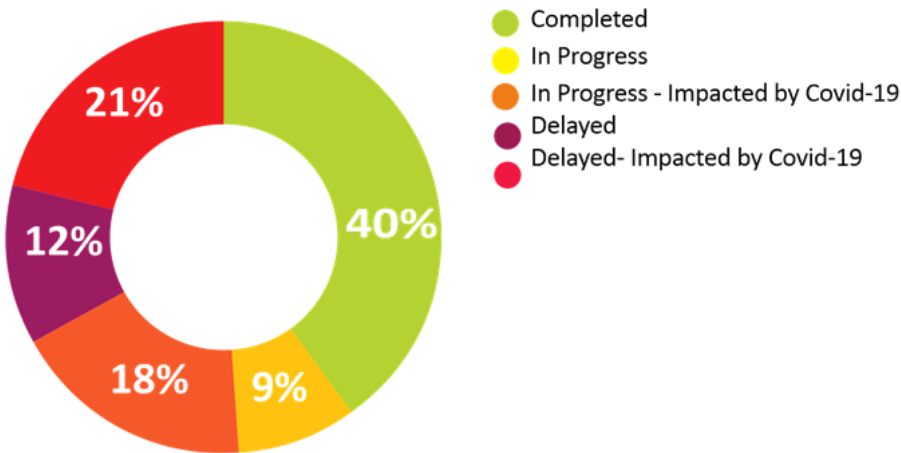
SUSTAINABLE WASTE

In the Sustainable Waste theme, 61% of the actions were completed, 11% are progressing, another five per cent are in progress but are impacted by Covid-19, 17% were delayed due to operational reasons and six per cent were delayed due to Covid-19



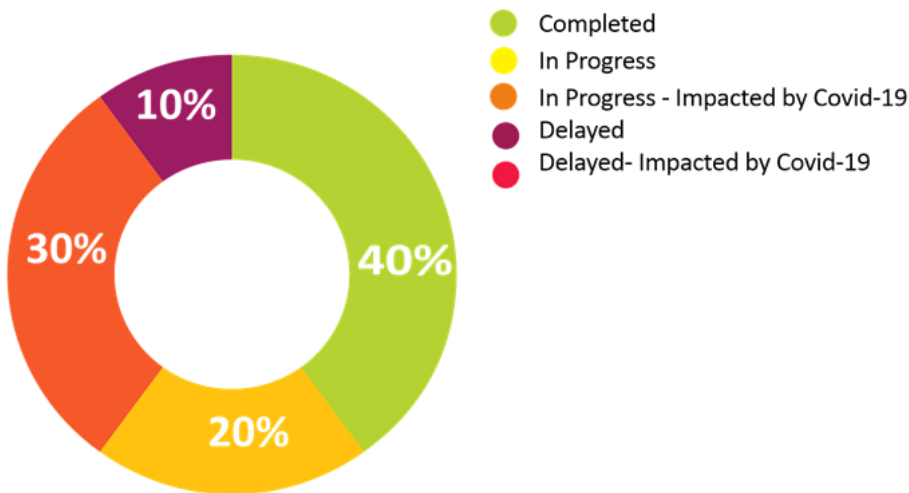
CORPORATE LEADERSHIP AND ENGAGEMENT

In the Corporate Leadership and Engagement theme, 40% of the actions were completed, nine per cent are progressing, 18% are in progress but is impacted by Covid-19, 12% were delayed due to operational reasons and 21% were delayed due to Covid-19



KNOWLEDGE AND INNOVATION

In the Knowledge and Innovation theme, 40% of the actions were completed, 20% are progressing, another 30% are in progress but are impacted by Covid-19, and 10% were delayed due to operational reasons



8 OUR RESPONSE TO COVID-19 AND ITS IMPACT ON THE OPERATIONAL PLAN

The implementation of the Operational Plan 2019-20 was significantly affected by the Covid-19 pandemic in the third and fourth quarters of the financial year. The service and facility closures, business continuity arrangements, revenue losses, and the pandemic related response and service measures caused by the pandemic have meant significant changes to the budget and the work program.

The pandemic has seen a significant reduction in Council revenues of around \$3.5 million per month. There have been reductions in:

- Revenue for footpath dining licenses and other licenses
- Parking fees due to reduced vehicle activity
- Income across a range of other activities including early childhood education, facility and venue hire and some commercial tenancies.

The Council has also sought to provide relief and assistance to businesses and help to those in the community requiring assistance. This has included assisting and coordinating with agencies, NGOs and voluntary groups working to assist the vulnerable. The focus of Council operations has also changed significantly. Many facilities, areas and services have been closed. Significant focus has gone onto keeping essential services (for example waste and recycling collection, public place cleaning, development assessment processing and food hygiene) operating in a way that keeps staff safe and separated to reduce the vulnerability of our service crews to the virus.

Many staff have been working from home where they can. Council public works have been kept going and, in some cases, accelerated in order to support employment and the economy. Management and compliance monitoring of public spaces, including beaches, has also become a focus, with staff redeployed within Council to assist Rangers with those tasks.

The Commonwealth and NSW Governments are providing assistance to Council specifically and to the community more broadly, and further economic stimulus measures are introduced.

In terms of the strategy underpinning the Operational Plan implementation in the third and fourth quarter of the financial year 2019-20, Council's approach was to continue to keep services running and deliver the aspirations expressed in the Community Strategic Plan to the fullest extent possible. Capital works programs continued to be delivered where viable.

However significant staff and budget resources were diverted to Covid-19 response during the financial year. Council has resolved to continue its Community Support and Business Support Program including fee waivers and non-financial support. Operational expenditure was examined carefully to allow some offset of revenue reductions where possible. Where there were initiatives proposed that can be delayed with acceptable risk, these delays have been implemented. This includes activities such as business, system and process improvements, IT initiatives, plant replacement and some training and other activities. Most new hiring were deferred until the revenue situation stabilizes.

A total of 45 Operational Plan 2019-20 activities were impacted by Covid-19 pandemic. Activities such as events were cancelled or placed on hold in line with public health and safety measures, while some other business as usual activities are in progress but are impacted by Covid-19 with new hiring deferred and available staff working from home where viable. In other instances, resources were diverted for direct Covid-19 related responses.



ARTS AND CULTURE



10 Goal 1.1: Facilitate opportunities that recognise Waverley's unique place in the Australian contemporary cultural landscape

Strategy: 1.1.1

Develop and implement a Cultural Plan for Waverley that delivers a diverse range of integrated cultural activities

Deliverables	Activity	Measure	Status	Comments
Implement a rich and diverse program of cultural activities across a range of creative and performing art forms	Implement an annual program of cultural and learning activities across artforms in alignment with the Cultural Plan	80 per cent of the annually planned activities implemented	●	Program delivery was impacted from March to June 2020 due to the Covid-19 pandemic. Art and cultural programs such as Bondi Wave, School Holiday Program, Waverley Art Prize, Youth Art Prize and the Mark and Evette Moran Nib Literary Award were delivered online
Build partnerships with key stakeholders and explore funding opportunities that support and enhance the cultural offering in Waverley	Apply for sponsorship and grant opportunities to support cultural events	Three new funding opportunities identified	●	Council received a grant funding of \$20,000 in support of the Boot Factory Project via the Community Building Partnerships Grant Program. A \$30,000 sponsorship was secured for Mark and Evette Moran Literary Award; \$19,500 in-kind sponsorship was received from design company Hours After in support of the Bondi Festival event. The outcome of a grant submission to Create NSW has been delayed and is awaiting determination






Strategy: 1.1.2

Deliver a dynamic library service that enriches lives by providing a means of social and cultural interaction

Deliverables	Activity	Measure	Status	Comments
Deliver a diverse program of library activities that foster creativity	Develop and implement an annual program of creative activities	Six creative activities implemented	●	More than 10 creative activities were implemented including knitting basics, collage online and Colour Me Calm. Online platforms were provided where viable in response to Covid-19
Deliver a broad range of learning programs that educate and inspire	Promote and implement a range of learning opportunities for all ages	Minimum 80 per cent positive customer feedback	●	More than 10 educational activities including Aboriginal and Torres Strait Islander Culture Club, Multicultural Cooking Class and Minecraft Book Club were organised

Strategy: 1.1.3

Provide a diverse program of recreational and entertainment events that balance community and visitor expectations

Deliverables	Activity	Measure	Status	Comments
Provide a broad program of Council-delivered civic and community events	Deliver an annual program of civic events and community festivals	Minimum 80 per cent positive community and stakeholder feedback for evaluated events		Events scheduled for Q3 and Q4 such as Latin American Festival, Ocean Lovers Festival, Bronte House Open Weekend, Charing Cross Market Fair, Mermaid Festival, Global Table, Bondi Festival, City2 Surf and Council Marquee Program were cancelled
	Review and update Sponsorship Policy	Policy adopted		Sponsorship Policy was adopted by Council in December 2019
	Implement Events Policy review recommendations	Recommendations implemented		The draft Events Policy is prepared. A Councillor Workshop is scheduled for July 2020 to engage Councillors on the Policy. A final round of internal stakeholder engagement will be undertaken
	Organise and deliver citizenship and other civic ceremonies	15 events organised		Citizenship and civic ceremonies were not scheduled to align with Covid-19 public health and safety measures
Co-ordinate the delivery of externally managed flagship events	Manage public spaces effectively and facilitate the successful delivery of large scale flagship events	Minimum 80 per cent positive community and stakeholder feedback for evaluated events		Due to Covid-19 pandemic public health safety measures, all events are under review and likely to be rescheduled

12 Goal 1.2: Preserve and interpret the unique cultural heritage of Waverley

Strategy: 1.2.1

Maintain the unique cultural value and heritage significance of key landmarks

Deliverables	Activity	Measure	Status	Comments
Ensure future uses of Bondi Pavilion reflect its place as a significant cultural space	Develop annual plans for the Bondi Pavilion that acknowledge and reflect its cultural heritage	Initial plans for Bondi Story Room developed, Cultural and Heritage programs for Bondi Pavilion developed	●	In Q4, community consultation on the Draft Cultural Plan included aspects of the Bondi Story Room and future operations of the Bondi Pavilion. This work will remain on-going as further planning is undertaken concurrently with the Bondi Pavilion Build Program
	Implement the Bondi Memorial Project	Project delivered on time and budget	●	Bondi Memorial Project will continue as planned. Activities implemented include artists submissions review and community consultation. Final selection and project commencement will continue in 2020-21

Strategy: 1.2.2

Plan and deliver a range of cultural heritage activities that inspire creativity, build participation and create learning opportunities

Deliverables	Activity	Measure	Status	Comments
Deliver and partner with cultural heritage groups and other organisations to deliver culturally relevant activities	Engage with key stakeholders to develop and implement cultural heritage activities and programs	Increase in cultural heritage programs and activities	●	Some activities were cancelled due to Covid-19 pandemic, including the Bondi Mermaid Festival.



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COMMUNITY SERVICES AND WELL-BEING



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Goal 2.1: Create a resilient, caring and cohesive community

Strategy: 2.1.1




Provide a range of needs-based, flexible and accessible services, buildings and facilities

Deliverables	Activity	Measure	Status	Comments
Develop and implement an integrated social sustainability framework in partnership with other agencies	Implement social research findings to innovate and enhance service delivery at the Mill Hill Community Centre and associated community services in response to emerging community needs	80 per cent of the annually planned activities implemented	●	With community members isolated and impacted by Covid-19 related stress and anxieties, providing opportunities for connection and support was a priority for Council. Social and community services focused on delivering agile, flexible and responsive services during the pandemic and ongoing recovery efforts. This has caused delays but has increased focus on resilience, importance of a strong service network and leveraging existing capacity to support local connections and essential social supports. The strategy is scheduled for adoption in 2020-21
Improve the delivery and viability of integrated early childhood and family support services, Community and Seniors Centre and NDIS registered disability service	Deliver flexible and responsive high quality community services including: Early Education Centres, Community and Seniors Centres, Family Day Care program, WCLP (Service for people with intellectual disability)	Utilisation maintained and quality assurance and legislative requirements met	●	All services continued to operate during the pandemic. The Community and Seniors Centre and WCLP delivered essential support services through zoom and tele sessions. The four EECs and FDC delivered free childcare services to families requiring care from April to July 2020 with some government support as part of the relief package. Utilisation/ service/staffing levels and program outputs were adjusted in line with Covid-19 Federal and State directives. Some services will continue into Q1 2020-21 with a mix of online and face to face options as appropriate

Strategy: 2.1.1

Provide a range of needs-based, flexible and accessible services, buildings and facilities

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Deliverables	Activity	Measure	Status	Comments
Deliver a transparent, targeted and outcome-focused grants program in response to changing community needs and expectations	Implement Waverley Council's community grants program with updated criteria/guidelines in line with review findings	Maintain and increase satisfaction rating of grant recipients over 2017 baseline		Following a grant review, Council's Community Services and Small Grants Programs were implemented as per new Policy and Guidelines. Small Grants were successfully distributed following endorsement by Council in May 2020, assisting many groups with initiatives during the pandemic. A new satisfaction survey will be undertaken in 2020-21
Review and implement Waverley Council's Community Tenancy Policy	Implement and monitor the Community Tenancy Policy	Policy implemented as per schedule		The Community Tenancy Policy is being updated and will be presented to Council along with a Community Tenancy Accommodation and Review Report in September 2020.
Improve the capacity of services to better respond to people with complex needs (e.g. young people, mental health, homelessness)	Facilitate and support networking, advocacy and partnership activities with government and community to address unmet needs	Four activities supported		Council connected with local services, provided support and facilitated online meetings to improve local service capacity. Online community service directory and FAQs to capture and manage requests and provide advice and referral information was coordinated across programs to enable the community access to Covid-19 related emergency and support information and resources

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Strategy: 2.1.2

Provide and manage social and affordable rental housing, community venues and facilities

Deliverables	Activity	Measure	Status	Comments
Manage Council's affordable and social housing programs and partner with other agencies to improve provision	Progress improvements for identified project to safeguard continued provision of quality social housing for Waverley's older people	Pre-construction planning completed for 2A Edmund Street	●	A report on concept design is planned for August 2020 Council meeting
Deliver accessible community facilities and venues that cater for the diverse needs of the community	Promote Waverley Council's community venues and facilities and investigate opportunities to increase utilisation	Increased use of venues and facilities	●	Community facilities were shut down in response to Covid-19 pandemic. Venues will reopen for bookings in July 2020

Goal 2.2: Nurture a safe, healthy and well-connected community that has the capacity to embrace challenges and the resilience to adapt to change

Strategy: 2.2.1

Facilitate social inclusion and neighbourhood programs to strengthen community connections

Deliverables	Activity	Measure	Status	Responsibility
Implement and facilitate resident-led projects and encourage creative community interactions	Design, deliver and promote neighbourhood programs	Community satisfaction rating of 80 per cent or above and increased participation in neighbourhood programs		Covid -19 restrictions resulted in modifications to volunteer activities. Limited Community Garden/shared garden activities continued under modified risk management plans. Installation of new greenhouse in the Waverley Community Garden was installed to begin seed saving. The project is shared with garden volunteers and community members. Expansion of the children's area of garden with four new raised garden beds was incorporated. Two shared gardens that were dormant were made active through renewed local neighbourhood support and Tafe student engagements
Provide programs that inform, educate and support Waverley's community	Deliver workshops, information sessions and seminars to inform and support people's wellbeing and resilience	Increased community participation (2018 baseline)		Multiple face to face workshops and parent education sessions were delivered online. Information focused on resilience and coping strategies were provided via electronic means such as newsletter and web information. Transition to School forum was held in partnership with Woollahra Council as a webinar on 4 June, 100 participants attended. A webpage was created to house information resources including a video of the presentation which participants and others unable to attend can access via Waverley Council website. A parent webinar session with Waverley Family Support 'Toward the New Normal' was delivered on 9 June, to assist families manage the stress of change due to the impacts of Covid-19 on family life. Feedback indicated high level of satisfaction with content and presentation

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Deliverables	Activity	Measure	Status	Responsibility
Connect with older people and assist residents to remain healthy and active in their homes and communities with good access to information, services and support	Implement Wellness and Re-ablement Action Plan to support older people as they age and connect them to their communities and prepare the Community and Senior Centre for 2020 federal funding review	80 per cent of annually planned actions implemented		Wellness and reablement support were provided via regular client catch ups on phone/email and newsletter distribution. Virtual classes offered were popular with many centre clients. Resumption of services at Mill Hill is planned in Q1 2020-21. Community Connection cards were developed and distributed to 31,000 households with a contact list of people being maintained and followed up to coordinate volunteering or providing of material support locally
Enhance organisational support for volunteering opportunities and recognise and celebrate volunteers	Review volunteer operations and update policy to improve resourcing of volunteer opportunities	Updated Volunteer Policy and report recommendations completed		With Covid-19 restrictions, Council volunteers were recognised this year via a letter of recognition from the Mayor. The volunteer recognition event scheduled in May was postponed. Volunteer policy and systems implementation proceeded, and a range of online social gatherings, professional development opportunities and training sessions were provided. New volunteer stories were featured on the website and showcased during volunteer week. Council's updated volunteer page on the website was enhanced with more visible and accessible information

Goal 2.2: Nurture a safe, healthy and well-connected community that has the capacity to embrace challenges and the resilience to adapt to change

Strategy: 2.2.2

Manage and regulate public places to achieve safe and healthy lifestyles

Deliverables	Activity	Measure	Status	Comments
Prepare and implement proactive health and safety strategies to improve community health and address anti-social behaviour	Undertake daily patrols to improve safety at Bondi, Bronte and seasonally at Tamarama beaches	100 per cent compliance	●	Daily lifeguard patrols were completed at all beaches. Lifeguards continued to patrol during beach closures due to Covid-19 pandemic
	Implement strategies to address antisocial behaviour and noise related issues	Reduction in incidents	●	Rangers responded to a number of noise related complaints as more people are working from home and are impacted by construction noise
	Undertake inspections to regulate food handling, sewerage, excessive noise and other issues	All inspections completed meet industry standards	●	Food business inspections continued during Council's response to Covid-19. In Q3, 219 inspections were undertaken and in Q4, 158 inspections were undertaken
	Manage and implement companion animals and impounding program	100 per cent legislative requirements met and increase in impounded animals	●	Daily patrols were undertaken throughout the LGA. Three dogs were impounded in Q3 and no dogs were impounded in Q4

20 **Goal 2.3: Strengthen people's inclusion in community life, promote diversity and celebrate Aboriginal culture past, present and future**


Strategy: 2.3.1

Improve access, participation and inclusion for everyone

Deliverables	Activity	Measure	Status	Comments
Implement Disability Inclusion Action Plan (DIAP), Reconciliation Action Plan (RAP) and other key plans and policies	Develop resourcing options in collaboration with external and internal partners to implement priority actions in the RAP, DIAP and other relevant plans	Resourcing options identified; Annual progress report completed	●	Resources were reallocated to Covid-19 community responses. RAP resources were identified and approved for 2020-21. This includes a three day/ week dedicated Aboriginal and Torres Strait Islander Community Development Officer role. Resourcing work will continue for DIAP implementation in 2020-21
Deliver and facilitate inclusive, informal and family-friendly local programs that promote harmony and respect	Provide events and activities such as Neighbour Day, Harmony Day and National Reconciliation Week for residents and visitors to celebrate Waverley's diverse community	Six activities delivered or facilitated	●	Two zoom cooking classes were delivered by a catering business run by people with refugee background during Refugee Week. During National Reconciliation Week and Harmony week, Council utilised Waverley 160 to profile members and community and share messages around harmony, respect and reconciliation

Strategy: 2.3.1

Improve access, participation and inclusion for everyone

Deliverables	Activity	Measure	Status	Comments
Strengthen Council's capacity for collaboration and effective partnerships to deliver community and social well-being projects	Deliver joint projects with community groups and government agencies to harness resources for community benefit such as transition to school forums and innovative youth employment initiatives	Four initiatives or partnership projects implemented		Several partnership projects were delivered including the Waverley Homelessness Count and the Intergenerational program generating social interaction between pre-schoolers and aged care residents. Planning commenced for an online 'Principals' forum to coordinate transition support for vulnerable students moving from year 6 to year 7. The forum is scheduled for 20 August and will involve eight high schools, 10 feeder primary schools and nine child/youth and family services across the Eastern Suburbs region for prevention and early intervention for better Mental Health and education outcomes. Internal engagement on Local Schools Enterprise Program to deliver a digital resource for careers education and work experience pathways at Waverley Council has commenced. Youth Week which was planned for April 2020 involving Bondi Blitz, skate jam and a range of other activities in partnership with WAYS has been postponed to November 2020

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RECREATION AND OPEN SPACES






Six Month Progress Report – Waverley Council, June 2020

Goal 3.1. Improve health and quality of life through a range of recreational opportunities and quality open spaces

Strategy: 3.1.1

Retain, protect, and improve the quality, capacity and accessibility of parks, open spaces, sporting and recreational facilities

Deliverables	Activity	Measure	Status	Comments
Understand and respond to the recreation needs of the community	Implement recreation needs study recommendations	90 per cent of the annually planned study recommendations implemented		Approximately 70% of the 2008 Recreation Needs Study recommendations were implemented. The remaining actions are redundant due to changing community use and demand of community facilities; and changes to Council procedures and policies. In 2020, an assessment for cricket facilities in Waverley Park was completed. The Open Space and Recreation Strategy 2020 will replace the Recreation Needs Study recommendations
Prepare and implement an Open Space Strategy that caters to and balances the needs of all users	Undertake park and playground upgrades	90 per cent of scheduled park and playground upgrades completed on time and within budget		Major projects completed this year include Marks Park, Fitness Stations and Clarke Reserve. Marlborough Reserve, Varna Park and Bondi Park projects progressed in Q4 and will continue in 2020- 21 as multi-year projects. Bondi Playground refurbishment will be completed by Q2 in 2020-21. Barracluff Park, Varna Park and Marlborough Reserve Playground designs are near completion to hand over to the construction team. All projects are currently on budget
	Implement Open Space Strategy and meet service standards for all open spaces	90 per cent of the annually planned works meet service standards		A draft Open Space and Recreation Strategy was prepared. Council endorsed the document to be placed on public exhibition. Consultation is scheduled for July 2020. Project was delayed due to staffing constraints in Covid-19 context

24 Goal 3.2. Expand the diverse network of parks and open spaces, sporting and recreational facilities

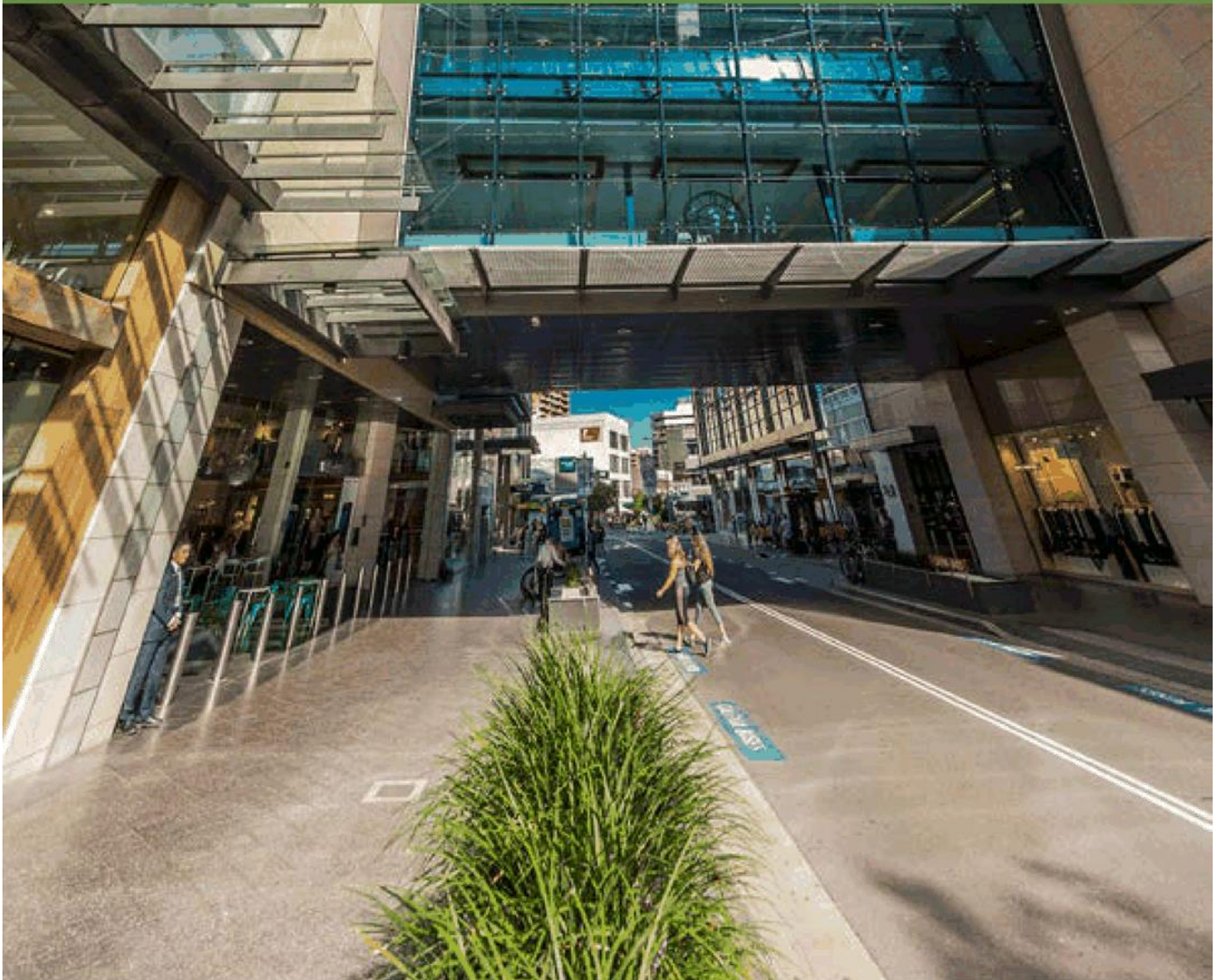
Strategy: 3.2.1

Improve access to private and public recreation facilities and open spaces

Deliverables	Activity	Measure	Status	Comments
Partner with key stakeholders to maximise the use and access to private and public open spaces, recreation and sports fields	Manage access to public open spaces to promote optimal use	100 per cent utilisation of available licenses and permits issued according to Waverley Council guidelines	●	Sports fields and courts were shut down in response to Covid-19 and are now reopened for training. Competition match play will recommence from 1 July 2020
Integrate innovation and emerging technologies in planning and design of open spaces and recreational facilities	Investigate opportunities to include emerging materials that provide cost, lifecycle, environmental and social benefits	Asset maintenance and lifecycle cost reduction reflected in Annual Delivery program	●	Access improvements in Eastern Reserve were undertaken with new stairs and planting. Improvements made to wayfinding along the Cliff Walk included sign installations in Clarke Reserve, Diamond Bay, Rodney Reserve and Raleigh Reserve




LOCAL ECONOMY



26 Goal 4.1: Promote Waverley as a significant sustainable economy and innovation precinct


Strategy: 4.1.1

Facilitate networking and collaboration between Waverley's independent professionals and aspiring start-ups

Deliverables	Activity	Measure	Status	Comments
Implement innovative and alternative mechanisms to encourage collaboration and networking	Organise Waverley Business Forum interactive events	Two events organised		Business forums were placed on hold to divert resources to Covid-19 related response. Works undertaken include business response and recovery planning and support, Financial Hardship Policy and Process and Keep it Local Campaign in partnership with Chamber of Commerce

Strategy: 4.1.2



Develop approaches to increase employment opportunities among the highly skilled and educated workforce, including young graduates

Deliverables	Activity	Measure	Status	Comments
Undertake initiatives to facilitate employment opportunities	Partner with private operators, universities and state agencies to release Waverley Council held data (open data) to stimulate employment opportunities for highly skilled businesses	Open data released via data platform		An Innovation Challenge was launched and completed with Transport for NSW as part of the Smart Waverley Innovation Project. The Hackathon was planned to support a growth in innovation and improved transport choices for the community using digital technology

Goal 4.2: Ensure Bondi Junction and Waverley's villages continue to have a diverse range of businesses, local jobs and services

Strategy: 4.2.1

Enhance the commercial core of Bondi Junction to increase employment

Deliverables	Activity	Measure	Status	Comments
Investigate and implement strategies to facilitate commercial office floorspace in Bondi Junction and other centres	Implement recommendations of Planning Proposal for Bondi Junction B4 Zone from the Department of Planning and Environment	90 per cent of annually planned actions implemented and LEP update initiated		LEP update was initiated and is awaiting Gateway Determination before proceeding to exhibition. After exhibition the plan will be finalised
	Undertake evidence based study on commercial floorspace in local centres	90 per cent of annually planned actions implemented		The Village Centres Study investigates availability of local commercial spaces. This project was placed on consultation and is planned for Council endorsement in 2020-21

Six Monthly Progress Report – Waverley Council June 2020

Strategy: 4.2.1

Enhance the commercial core of Bondi Junction to increase employment

Deliverables	Activity	Measure	Status	Comments
Investigate and implement strategies to facilitate commercial office floorspace in Bondi Junction and other centres	Introduce mechanisms to increase commercial floorspace in Bondi Junction	Increased investment in development of commercial floorspace	●	Non commercial floorspace LEP amendment was prepared and Voluntary Planning Agreement was negotiated for commercial floorspace dedication

Strategy: 4.2.2

Support the efforts of a range of stakeholders to increase the diversity of the local economy

Deliverables	Activity	Measure	Status	Comments
Partner with JobsNSW and other agencies to support start-ups and small and medium enterprises	Organise a workshop to support start-ups, small and medium enterprises applying for Government loans such as accelerating growth loans and strategic growth loans	One workshop organised	●	A Start Up Grant Workshop was organised in November 2019 to support start-ups applying for Government loans
	Partner with State government and SMEs to analyse options to increase diversity of the local economy	Partnerships with State and SME's established	●	Partnered with State government on mediation services to the small business community
Implement an Easy To Do Business with Council policy	Partner with Small Business Friendly Councils to deliver support programs for businesses	At least two initiatives implemented	●	

28 Goal 4.3: Encourage tourism to support to the local economy and contribute to local amenity

Strategy: 4.3.1

Ensure tourism contributes to natural and cultural attractions and local amenity

Deliverables	Activity	Measure	Status	Comments
Implement place activation initiatives that reflect community concerns and needs	Implement urban interventions program	One pop up completed	●	Bronte Pool installation was completed as part of Council's Urban Intervention Program
Lobby State government to amend legislation to better manage short-term holiday lettings	Continue to monitor and lobby state government regulatory developments on short-term lettings	Periodic review completed	●	Submissions on short-term lettings were made to the Department of Planning, Infrastructure and Environment and was reported to Council

Strategy: 4.3.2

Support and enhance the tourist economy

Deliverables	Activity	Measure	Status	Comments
Promote and educate visitors on local history, landscape, businesses and cultural assets	Develop self-guided heritage walks and promote through HelloBondi website	Uptake of self-guided heritage walks	●	Council prepared a new Heritage Walk through the Charing Cross Conservation Area to Bronte Beach. The Walk aims to tell stories of people who have lived in the Charing Cross and Bronte area and celebrates the long history of Charing Cross as Waverley's first commercial centre. Along the walk, participants are invited to stop and view particular buildings from the street. The walk highlights the notable contribution each building or item makes to the historic streetscapes: for their significant architecture, the people who designed them, the people who once worked or lived in them, or by describing what the site previously housed.
Prepare and implement a Destination Management Plan(now called Sustainable Visitation Strategy)	Implement priority actions in Sustainable Visitation Strategy such as visitor information data reports and Visitor Information Centre	Annually planned activities implemented	●	Temporary Visitor Information Centre project research and planning commenced. A feasibility study was completed to create a new Visitor Information Centre at Bondi Beach






PLANNING, DEVELOPMENT AND HERITAGE



30 Goal 5.1: Facilitate and deliver well-designed, accessible and sustainable buildings and places that improve the liveability of existing neighbourhoods


Strategy: 5.1.1

Facilitate and enable a diverse range of housing options and other land uses

Deliverables	Activity	Measure	Status	Comments
Develop and implement planning policies to increase affordable housing options	Prepare the Waverley Local Housing Strategy	Waverley Local Housing Strategy adopted and annually planned actions implemented		The Waverley Local Housing Strategy was prepared and adopted by Council in June 2020
Align local planning policy regularly with metropolitan planning directions and ensure a diversity of uses are provided	Prepare the Waverley Local Strategic Planning Statement	Waverley Local Strategic Planning Statement adopted		The first Waverley Local Strategic Planning Statement (LSPS) became effective on 18 March 2020 when it was placed on the NSW ePlanning Portal. This completes the first two phases of the Planning in Waverley Project. The next phase is to undertake a comprehensive review of existing LEP and DCP and prepare an update to these documents which would become a 'new' LEP and DCP. The LSPS will be used to guide and inform the comprehensive review, as well as a number of subject specific strategies that are currently being prepared. These include areas such as housing, local character, village centres, open space and recreation, a review of the Bondi Junction Urban Design Review, resilience and adaptation and urban greening
	Review Waverley Local Environment Plan (LEP) and Development Control Plan (DCP)	Annual review of DCP and LEP completed		Housekeeping LEP was endorsed by Council in May and DCP updates are reported to July Strategy Planning and Development Committee for post-exhibition finalisation

Strategy: 5.1.2

Ensure new development maintains or improves the liveability and amenity of existing neighbourhoods

Deliverables	Activity	Measure	Status	Comments
Ensure planning policy and agreements provide improvements to the surrounding facilities and areas	Undertake review of the Planning Agreement Policy	Revised Planning Agreement Policy Adopted		The VPA Policy update is scheduled for August 2020 meeting

Goal 5.1: Facilitate and deliver well-designed, accessible and sustainable buildings and places that improve the liveability of existing neighbourhoods

Strategy: 5.1.3

Ensure new development provides a high standard of design quality and does not impact on the amenity of neighbours or the wider community

Deliverables	Activity	Measure	Status	Comments
Provide timely determinations of applications for developments	Implement assessment procedures that deliver high quality outcomes and efficient determinations	80 per cent of applications that meet LEP and DCP are determined within 40 working days after notification	●	In Q4, 89% , 52 out of 58 DAs were determined within 40 days. In Q3, 81.53% ,53 out of 65 DAs were determined within 40 days
Ensure new development meets the aims and objectives of the LEP and DCP	Assess all applications against provisions of the LEP and DCP and other relevant legislation	100 per cent of applications are assessed against relevant provisions of the LEP and DCP and other relevant legislation	●	In Q3 and Q4, all applications were assessed against required legislation





Strategy: 5.1.4

Ensure development is undertaken in accordance with required approvals and new and existing buildings provide a high standard of fire safety and amenity

Deliverables	Activity	Measure	Status	Comments
Ensure the development meets the requirements of the development consent and relevant legislation where Council is appointed as the certifier	Assess applications for a construction certificate against the development consent and legislation and ensure compliance during required inspections	Where Waverley Council is appointed as the Principal Certifying Authority (PCA) 100 per cent of applications are assessed against relevant development consent and legislation	●	In Q3, six applications were received and three were determined. In Q4, seven applications were received and four were determined, 100% of applications received were assessed against the relevant development consent and legislation
Provide efficient and professional certification	Implement assessment and inspection procedures that deliver high quality outcomes and efficient determinations	80 per cent of building certification inspections are undertaken within 10 working days	●	In Q3, eight building certification inspections were carried out. In Q4, 20 building certification inspections were carried out; 100% of inspections are carried out within 10 working days


Strategy: 5.1.4(Continued..)

Ensure development is undertaken in accordance with required approvals and new and existing buildings provide a high standard of fire safety and amenity

Deliverables	Activity	Measure	Status	Comments
Provide efficient and professional certification	Undertake swimming pool inspections in compliance with Swimming Pool Act and Regulation	100 per cent of annually planned inspections undertaken		Pool barrier inspections were slightly delayed due to an increase in complaints due to Covid-19. In Q3, 10 pool inspections were carried out in compliance with the Swimming Pool Act and Regulation. In Q4, four pool inspections were carried out in compliance with the Swimming Pool Act and Regulation
Ensure new buildings meet current fire safety standards and existing buildings are upgraded	Undertake fire safety assessment of new developments where Council is the certifier	100 per cent applications are assessed against relevant fire safety legislation		Council was nominated as the certifier for 46 developments during this reporting period. All applications were assessed against required legislation
	Undertake fire safety inspections where potential fire safety issues are identified	100 per cent of annually planned fire safety inspections undertaken		All applications received within this period were assessed against required legislation
Undertake initiatives to address issues relating to illegal use or building works in a timely manner	Investigate complaints relating to illegal use of building works in a timely manner	100 per cent of complaints regarding illegal development or use of buildings are responded to within 15 working days		In Q3, 208 complaints were received and 100% were responded to within 15 working days; 146 complaints were resolved and closed. In Q4, 209 complaints were received and 100% were responded to within 15 working days; 234 complaints were resolved and closed

Strategy: 5.1.5

Encourage energy and water efficiency, best practice waste management and zero carbon buildings for all developments

Deliverables	Activity	Measure	Status	Comments
Update planning policies, consider incentives and lobby for improved regulations	Partner with Eastern City District Councils and lobby State Government for improved Building Sustainability Index targets	Three advocacy initiatives implemented		A submission was made to the Parliamentary Enquiry into Sustainable Energy Supply and Resource Use in September 2019 regarding BASIX. Recommendations and submissions were also made to NSW Waste Enquiry and Energy Security Target and Safeguard consultation. Council is leading the regional BASIX performance under future climate scenarios through a grant awarded by the State Government in November 2019 under the Increasing Resilience to Climate Change program. A grant of \$135,000 was received from Department of Planning, Industry and Environment to investigate appropriateness of BASIX targets

Goal 5.2: Value and embrace Waverley's heritage items and places

Strategy: 5.2.1

Protect, respect and conserve items and places of heritage significance within Waverley

Deliverables	Activity	Measure	Status	Comments
Prepare and implement Conservation Management Plans (CMPs) and Conservation Strategies	Implement Conservation Management Plan (CMP) and Site Master Plan	80 per cent of the annually planned activities implemented	●	The Conservation Management Plan for the Bondi Surf Club is awaiting Heritage Office review comments. The Bondi Beach Cultural Landscape CMP checklist was updated by the Heritage Office following a meeting held in May 2020
	Prepare and implement CMPs for Council-owned heritage assets	CMPs adopted by NSW Heritage Council	●	A conditional endorsement of Conservation Management Plan for the Bondi Surf Bathing Life Saving Club is underway
Implement events to promote local heritage	Partner with community and relevant heritage bodies to identify options to promote local heritage	One key event to promote local heritage held and two talks held	●	The key event was placed on hold due to Covid-19. Heritage talks were held to promote local heritage
Prepare and implement Waverley Heritage Study	Prepare a list of potential heritage items and undertake initial assessments of each heritage item	Draft Waverley Heritage Study prepared	●	<p>The draft Heritage Assessment is finalised and aims to celebrate Waverley's history; increase community awareness of the LGA's heritage; protect and enhance its character to ensure continuity between past, present and future; ensure what is historically important is preserved for the enjoyment of future generations; and maintain Waverley as an attractive place to be.</p> <p>To achieve these outcomes, the draft Heritage Assessment proposes to list individual items and a number of Heritage Conservation Areas as significant to the heritage of Waverley. When finalised, the Heritage Assessment will be used to inform Council decision-making with regards to Planning Proposals and Development Applications, and to make recommendations for the future of Waverley's building and landscapes. It will also inform the comprehensive review of the LEP and DCP</p>

34 Goal 5.2: Value and embrace Waverley's heritage items and places

Strategy: 5.2.1 (continued..)

Protect, respect and conserve items and places of heritage significance within Waverley

Deliverables	Activity	Measure	Status	Comments
Prepare and implement Waverley Heritage Study	Review heritage inventory sheets for existing heritage items and Heritage Conservation Areas(HCAs)	Inventory sheets reviewed and updated	●	Inventory sheets for existing heritage items and Heritage Conservation Areas were completed in December 2019

Goal 5.3: Encourage new developments to achieve design excellence

Strategy: 5.3.1

Ensure development and construction in the public and private domain achieves excellence in design

Deliverables	Activity	Measure	Status	Comments
Ensure new developments and building upgrades achieve high quality design outcomes	Engage the Design Excellence Panel (DEP) to help achieve improved building design	100 per cent of applications requiring Design Excellence Panel review referred to the Panel	●	Two meetings were held and eight developments were reviewed
Expand the concept of Complete Streets to all of Waverley local government area and prepare and implement the Street Design Manual	Roll out the Street Design manual and integrate into relevant streetscape upgrades	Street Design manual used in streetscape upgrades	●	The Street Design Manual was adopted by the Leadership Team and is now in use

Strategy: 5.3.2

Encourage creativity and innovation in the planning, design and delivery of new buildings, streetscape and public places upgrades

Deliverables	Activity	Measure	Status	Comments
Adapt and implement 3D modelling to increase user understanding and appreciation of place	Expand 3D model for community use	Increase usage of Waverley's 3D Model	●	Two options are being investigated for the 3D Model, one based on Waverley digital mesh model and other on the GIS information. The preferred solution will be identified once model demonstrations are completed. A simple model will be developed to be shared online at a later stage



TRANSPORT, PEDESTRIANS AND PARKING



36 Goal 6.1. Provide a wide range of transport options so people can easily move within and beyond Waverley

Strategy: 6.1.1

Enable people to walk and cycle easily around the local area





Deliverables	Activity	Measure	Status	Comments
Prepare and implement a Walking Audit and Walking Strategy	Audit walking infrastructure and integrate relevant findings into LEP review	Results of Geographic Information System (GIS) analysis included into LEP review	●	This project is not delivered due to resourcing constraints
	Undertake Walking Audit and prepare the Walking Strategy	Walking Audit completed and Walking Strategy adopted	●	This project is not delivered due to resourcing constraints
Implement Waverley Bike Plan 2013 and prepare a Cycling Strategy for separated cycling infrastructure	Investigate feasibility of a separated cycleway at Henrietta Street	Feasibility study completed	●	Trial of a separated cycleway in Henrietta Street was implemented in November 2019
Continue to implement a partnership program with schools and businesses to promote and encourage active transport	Implement Arden Street Safety Upgrade	Arden Street improvements approved and 30 per cent completed	●	Preparation of detailed design is in progress
	Partner with schools to deliver safer school travel initiatives	At least two initiatives completed	●	Delayed due to Covid 19
	Prepare a Cycling Strategy concentrating on separated cycleway	Strategy adopted	●	This project is not delivered due to resourcing constraints
	Implement Active Travel to Schools and travel behaviour change programs	Partnered with three local schools	●	Partnered with three schools including Bondi, Clovelly and Bronte Public

Goal 6.1. Provide a wide range of transport options so people can easily move within and beyond Waverley

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Strategy: 6.1.2

Improve accessibility to public transport and ride sharing

Deliverables	Activity	Measure	Status	Comments
Partner with State government to undertake major improvements to Bondi Junction Interchange, and bus services on Bondi Road Corridor	Partner with Transport for NSW for a cofunded study for public transport improvements	Co-funded study commenced		Partnership is established with ongoing dialogues with Transport for NSW
	Prepare plans for improved pedestrian access to Bondi Junction. Interchange and lobby State Government for bus service improvements	Plans prepared and lodged with State Government ; Pedestrian improvements endorsed		Council officers met with Transport for NSW and State Transit Authority to discuss opportunities for improving bus services through the use of dedicated bus lanes. No funding opportunities were identified
Encourage more ride sharing, shared vehicles and electric vehicles through our policies, planning and facilities management	Provide public place electric vehicle charging stations in the Waverley LGA	Two operating EV charging points installed at Bondi Beach and Bondi Junction		Works to install the charger commenced and is awaiting for AusGrid to complete connections
	Implement Mobility as a Service project with key industry and government stakeholders	100 per cent of the annually planned activities implemented		Project roll out is planned to commence in July 2020

Strategy: 6.1.3


Reduce the need to own and travel by private motor vehicle

Deliverables	Activity	Measure	Status	Comments
Implement an integrated approach to parking, land use and travel demand through our planning instruments and parking policies	Incorporate strategic transport priorities into planning instruments	Transport priorities included in planning instruments		Ongoing review of DCP and planning proposals are undertaken as required

38 Goal 6.2. Build and maintain streetscapes that have a welcoming sense of place




Strategy: 6.2.1

Improve accessibility and convenience with new and upgraded roads and footpaths that balance the needs of pedestrians, bicycles and other users

Deliverables	Activity	Measure	Status	Comments
Adopt the Transport Hierarchy into all road and footpath works undertaken by council, for both capital and maintenance works	Incorporate transport hierarchy principles into civil designs of asset renewal projects	100 per cent compliance with Transport Hierarchy		All project designs have transport hierarchy principles incorporated ensuring 100% compliance with transport hierarchy

Strategy: 6.2.2



Deliver improved access to popular destinations such as Bondi Junction, Bondi Beach and local villages

Deliverables	Activity	Measure	Status	Comments
Implement Complete Streets and other improvements to Bondi Junction and implement Campbell Parade Streetscape Upgrade	Manage delivery of Bondi Junction cycleway and design of Campbell Parade Streetscape	Bondi Junction cycleway construction completed between Adelaide Street and Denison Street and commenced between Denison Street and Centennial Park; Detailed design completed for Campbell Parade Streetscape upgrade		Bondi Junction Cycleway - staging was amended in agreement with Transport for NSW. Works were completed in Spring Street between Newland Street and Denison Street. Works are in progress in Spring Street between Bronte Road and Newland Street and along Denison Street between Spring Street and Oxford Street. Campbell Parade detailed design was deferred
Secure State government funding to prepare a study on dedicated bus lanes on Bondi Road, Campbell Parade and Old South Head Road	Partner with Strategic Transport Working Group and identify potential funding options	Funding options identified		Submissions were made to the Department of Planning, Industry and Environment for Streets for Shared Spaces funding in June 2020 and negotiations are continuing with Transport for NSW for funding pop up cycleway projects
	Apply for State and Federal Government funding for dedicated bus land study	Two funding applications submitted		Delayed pending Campbell Parade upgrade

Goal 6.3. Create safe streets and footpaths with fair access to parking


Strategy: 6.3.1

Build and maintain streets and footpaths that are safe for everybody

Deliverables	Activity	Measure	Status	Comments
Reduce road speeds in Waverley local government area to 40kmh throughout and 10kmh in select locations	Partner with Roads and Maritime Services (RMS) and NSW Centre for Road Safety to reduce road speeds	Additional 10kmh share zones approved, implementation of 50 per cent of the 40kmh default urban speed limit south of Bondi Road		Notts Avenue 10km/hr share zone has progressed to construction phases and is scheduled for completion in October 2020; 40km/hr zone is currently in detailed design stage pending Council approval
Install lighting, safe crossings and other measures to improve perception of personal safety	Review RMS crash data, pedestrian crossing lighting standards and high pedestrian use areas across Waverley to identify areas that need improvement	Reduction in number of incidents at locations where improvements and changes are undertaken		Footpath renewal program was completed; Design of compliant DDA footpaths and ramps were completed. Designs and investigations into pedestrian crossing lighting designs were completed. Active transport projects are scoped for implementation in future years as funding becomes available. Continuous review of safety measures was completed

Strategy: 6.3.2

Prioritise residential access to car parking

Deliverables	Activity	Measure	Status	Comments
Review arrangements for parking to address changing community needs including parking permit and electronic permit systems	Explore options for ePermits in key areas and implement online parking forms	Review of ePermits completed and electronic parking forms implemented		Project was delayed due to Covid-19 impact on resourcing. Requirements for a new online application process was documented in March 2020 and procurement process was completed in May/June 2020. New application system is scheduled for implementation in 2020-21

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Strategy: 6.3.3

Ensure that on-street and off-street parking is fairly and effectively managed

Deliverables	Activity	Measure	Status	Comments
Research and implement cost-effective technology, policy and process improvements and prepare Smart Parking Management Strategy	Implement ticketless parking in Council's off-street parking facilities and research and commence procurement process for on street parking meters	Ticketless parking in Waverley Council's off-street parking facilities implemented and tender specifications drafted for replacement of on street parking meters	●	A new feasibility study was prepared by consultants to analyse the cost and benefit of the project. The findings will be presented at a Councillor Workshop in 2020-21
	Research options for ticketless parking and online availability in Council's car parks and implement mobile phone parking at key locations	Ticketless parking in Council's off-street parking facilities investigated and mobile phone payment options implemented at key locations		
Ensure residential and commercial parking areas are patrolled as per Service Level Agreement	Patrol residential and commercial parking areas and identify and address areas of concern	Reduction in complaints in target areas	●	All commercial and residential areas were patrolled as per service level agreement up to end of March. Normal patrols were suspended due to Covid-19 between April and June. Only residential complaints and safety related areas were enforced during this time. Normal patrols recommenced on 9 June






BUILDINGS AND INFRASTRUCTURE



42 Goal 7.1. Undertake long-term maintenance and renewal of Council assets that meet community expectations and statutory obligations

Strategy: 7.1.1



Implement a sustainable asset management policy and strategy

Deliverables	Activity	Measure	Status	Responsibility
Implement adopted Asset Management Plans (AMPs) for all infrastructure types	Manage design and delivery of asset renewal projects identified in AMPs and included in Capital Works Program (CWP)	90 per cent of projects included in CWP implemented on time and budget		Projects were delivered on time and within budget in 2019-20
	Deliver proactive maintenance activities to ensure all Waverley Council's civil infrastructure assets meet standards	90 per cent of the annually planned maintenance activities meet services standards		With the Covid-19 situation, staffing constraints has impacted optimal delivery to a certain extent. Plans are underway to address these issues by August 2020
Implement continual Improvement Plan for all asset categories	Continual improvement plan recommendations in SAMP5 prioritised and high priority recommendations implemented prioritised and high priority recommendations implemented	90 per cent of recommendations implemented		Actions in the Continuous Improvements Plan are being implemented. This has achieved expected outcomes in 2019-20

Goal 7.2. Construct and upgrade new buildings and infrastructure that meet current and future community needs

Strategy: 7.2.1

Work with the community to deliver long-term building and infrastructure plans

Deliverables	Activity	Measure	Status	Responsibility
Deliver a community infrastructure Capital Works Program	Prepare and implement annual Community Infrastructure Program	90 per cent of Community Infrastructure Program implemented on time and within budget		Projects were delivered on time and within budget in 2019-20
Develop and implement a Strategic Property Investment framework to effectively manage Council's property portfolio	Manage Waverley Council's property portfolio to optimise usage and rental returns	100 per cent occupancy of leasable spaces across property and increase in revenue from annual rentals		In March 2020, Council endorsed a three month rent abatement for Council tenants due to the impact of Covid-19. One vacancy at 276 Bronte is held for strategic reasons. Waverley Park Kiosk is currently vacant and tender process will commence as normal trading conditions return

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SUSTAINABLE ENVIRONMENT






Six Month Progress Report – Waverley Council, June 2020

Goal 8.1. Reduce greenhouse gas emissions and prepare for the impacts of climate change

Strategy: 8.1.1

Improve energy efficiency of Council and community buildings and infrastructure

Deliverables	Activity	Measure	Status	Comments
Upgrade lighting, heating, cooling and operations to improve energy efficiency	Improve energy saving initiative such as heating, ventilation and air conditioning (HVAC) and lighting control capability at Library, AIF, Mill Hill Community Centre and Customer Service Centre	Reduced energy consumption		Efficient lighting upgrades at Waverley Library, AIF, Mill Hill Community Centre, Waverley Early Education Centre, and Margaret Whitlam Recreation Centre were completed. An upgrade to the Library's HVAC Control System, using long range wireless connectivity (LoraWAN) with high level data analytics was installed
	Partner with Ausgrid to upgrade and improve street lighting performance	At least 50 main road luminaires upgraded		Replacement of streetlights in partnership with Ausgrid was delayed due to a Work Health and Safety incident. Ausgrid's stop-work order was lifted in May 2020, and this program is likely to proceed in 2020-21
Improve environmental performance of new and existing buildings	Deliver round two of Building Futures program to 10 large strata residential buildings to reduce their common area energy consumption	Energy upgrades completed at 10 large strata residential buildings accounting for 15 per cent energy savings of common area energy use		Efficient lighting upgrades were completed or are progressing in seven buildings. Solar power systems will be installed at one building. It is estimated that 23% common area energy use reductions (exceeding 20% target) will result in carbon emission reductions of 203 tonnes per annum and annual cost savings of \$39,000 for the strata buildings

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Strategy: 8.1.2

Increase uptake of renewable energy

Deliverables	Activity	Measure	Status	Comments
Deliver programs to increase the amount of solar and battery installed on community and council properties and buildings, schools and residential properties	Investigate feasibility of solar and battery storage at additional Waverley Council buildings such as Alexandria Integrated Facility and Bondi Pavilion	Solar and battery storage feasibility study completed	●	The solar and battery storage feasibility study at Alexandria Integrated Facility was completed
	Facilitate the installation of solar panels at schools	Installation completed at three schools	●	Installation of a 99kW system at St Clare's College, a 99kW system at St Catherine's School and a 40 kW solar system at Galilee Primary School were completed
Increase proportion of renewables in Council electricity through our electricity procurement and facilitate community uptake of renewable energy use	Partner with SSROC and neighbouring Councils to procure renewable energy and increase the proportion of renewable energy that Waverley purchase	30 per cent renewable energy purchased	●	Council is purchasing 30% of our large site electricity from a Moree Farm through Origin energy. This Power Purchase Agreement (PPA) was organised by SSROC on behalf of 18 Councils. The PPA will run for 10 years and provides a fixed price to Council over the period of this contract

Strategy: 8.1.3

Plan and respond to the impacts of climate change

Deliverables	Activity	Measure	Status	Comments
Prepare and implement a Waverley Climate Change Adaptation Risk Assessment and Adaptation Plan	Undertake a Climate Change Adaptation Risk Assessment	Climate Change Adaptation Risk Assessment completed	●	A draft Resilience Framework was prepared to guide the Risk Assessment, which is scheduled to commence in 2020-21, following the development of a regional climate scenario

Goal 8.2. Conserve water and improve water quality**Strategy: 8.2.1**

Increase water harvesting through stormwater harvesting schemes and rainwater capture

Deliverables	Activity	Measure	Status	Comments
Maintain and increase stormwater infrastructure at Bronte, Tamarama and Bondi Beaches	Undertake water demand analysis to expand Bondi Storm Water Harvesting system	Design completed by fourth quarter	●	The Skate Park Amenities DA is currently being assessed. The Bondi stormwater harvesting system will be connected to this amenity when completed

Strategy: 8.2.2



Improve water efficiency of new and existing community and Council buildings and infrastructure

Deliverables	Activity	Measure	Status	Comments
Utilise water saving devices and practices across parks, beaches and facilities	Maintain leak detection meters at Council's high water-using assets	Reduction in water wastage through faster leak detection	●	Six new smart sensors were installed on existing meters and one new meter was installed. Leaks were detected and rectified at Biddigal, North Bondi, Dickson and Clementson Park sites
Engage with the community and businesses to promote water savings devices and practices	Undertake monitoring and reporting of water consumption	Annual water consumption report completed	●	The Annual Water Consumption Report will be completed after receiving the Q4 water consumption data

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Strategy: 8.2.3

Reduce pollutants entering waterways

Deliverables	Activity	Measure	Status	Comments
Maintain and increase the number of raingardens, gross pollutant traps and stormwater quality improvement devices to reduce pollutants at beaches	Install a gross pollutant trap at North Bondi to improve stormwater quality	Gross pollutant trap installed at North Bondi		Existing Gross Pollutant Trap is offline due to asset deterioration and failure. An Application for Federal Government support to complete this project was submitted, If grant application is unsuccessful, project will be implemented in 2020-21
Manage existing sewer overflows and legacy issue of sewer outfalls at Diamond Bay and Vacluse	Partner with Sydney Water to divert untreated sewer outfalls reaching the ocean to the Bondi Waste Water Treatment Plant	Detailed plans prepared for Diamond Bay and Eastern Reserve sewer outfalls with community and Waverley Council inputs		Sydney Water in June 2020 released the Review of Environmental Factors (REF) for the Vacluse Diamond Bay Refresh Project to connect the sewer that currently releases untreated effluent at Eastern Reserve, Diamond Bay and Vacluse to the Bondi Waste Water Treatment Plant. Council and the community provided input into the design options and development

Goal 8.3. Protect and increase our local bushland, parks, trees and habitat

Strategy: 8.3.1

Improve the condition and increase the extent of remnant bushland sites

Deliverables	Activity	Measure	Status	Comments
Implement the Biodiversity Action Plan - Remnant sites, and volunteer bushcare program	Undertake bush regeneration works across Waverley Council's remnant bushland sites	Regeneration works completed in all sites	●	Bush regeneration contractors completed scheduled works for 2019-20. Council's 2020 Flora Survey found an average 10% increase in native species across remnant sites. Request for quotations were released for 2020-2021 works
Support the delivery of the threatened species Sunshine Wattle (<i>Acacia terminalis</i>) and Eastern Suburbs Banksia Scrub Recovery Plans	Undertake Recovery Plan actions at Loombah Cliffs, York Road and support Centennial Parklands at Queens Park	Increase in number of sunshine wattle plants and area of Eastern Suburbs Banksia Scrub (ESBS)	●	Bush regeneration contractors completed scheduled works for 2019-20. Eastern Suburbs Banksia Scrub remnant at York Road has increased in size over the past 12 months. Sunshine Wattle plant population is stable and some plants that emerged in recent years are now mature and flowering

Strategy: 8.3.2

Develop and implement coastal bushland and habitat improvement plans

Deliverables	Activity	Measure	Status	Comments
Implement the Bronte, Tamarama and Thomas Hogan Ecological Restoration Plans	Expand native bushland and manage weeds at Bronte Gully, Tamarama Gully and Thomas Hogan Reserve	Increase in bushland that is native and indigenous	●	Bush regeneration contractors have completed 2019-20 works. Around 3500 tubestock planted in Autumn 2020 across Tamarama Gully, Bronte Gully and Thomas Hogan Reserve
Prepare and implement the Coastal Bushland Restoration Plan	Implement a 10-year Coastal Bushland Restoration Plan	Plan adopted and 100 per cent of the annually planned activities implemented	●	New Biodiversity Action Plan for Remnant Sites Stage 1 milestones were achieved

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Strategy: 8.3.3

Increase the quantity of trees and plants in public spaces, parks and streets

Deliverables	Activity	Measure	Status	Comments
Prepare and implement an Urban Tree and Canopy Strategy	Prepare an Urban Tree and Canopy Strategy to increase the number of trees across Waverley	Strategy adopted and 90 per cent of annually planned activities implemented	●	Awaiting completion of Tree Condition Report before commencing detailed strategy preparation
	Implement a tree planting program to increase tree canopy cover	Increase in number of trees planted and maintain survival rates for trees planted	●	Officers proactively assessed tree canopy throughout the urban environment and planted an additional 355 during the year. Also 59 dead, dying and safety risk trees were replaced, 16 trees that were vandalised and/or died were replaced and 187 infill plantings for sites chosen throughout the LGA were completed
	Enforce Waverley Council's Tree Management Policy	100 per cent compliance with the policy	●	Council's Tree Management Policy is being enforced
	Review Council's Tree Management Policy	Policy reviewed and updated	●	This activity is delayed with the Covid-19 pandemic and is carried over to 2020-21
Deliver the Living Connections and Habitat Stepping Stones programs to improve habitat on private land in Waverley	Implement the Living Connections Environmental Trust grant project	150 households engaged	●	As part of this program, 65 households received plants and expert advice. The program has been impacted by drought and the limitations on household visits and supply due to Covid-19





SUSTAINABLE WASTE



52 Goal 9.1. Reduce the amount of waste generated


Strategy: 9.1.1

Engage with residents, visitors and businesses to promote sustainable consumption and waste avoidance

Deliverables	Activity	Measure	Status	Comments
Develop and deliver targeted engagement programs to facilitate re-use, repair and sustainable purchasing	Implement education programs and workshops to facilitate an increase in community re-use and repair	Six educational workshops delivered		Six reuse/repair workshops were completed
Develop and deliver programs targeted at residents and businesses to reduce single-use plastics	Support community groups targeting the reduction of single-use plastics through business and residential engagement programs	Reduction in single-use plastics; 50 businesses engaged		Business resources and Sustainable Business webpage were created. Eleven businesses were engaged and with the Covid-19 pandemic the engagement resumed through phone and email

Strategy: 9.1.2

Lead advocacy campaigns, policy development and research into systems to reduce waste

Deliverables	Activity	Measure	Status	Comments
Work with businesses, government and industry stakeholders to increase waste recycling and reduction	Collaborate with the NSW EPA, SSROC and industry stakeholders to investigate optimum options to reduce waste going to landfill	Recommendations report endorsed		Council provided feedback for NSW 20 year Waste Strategy along with SSROCs feedback for NSW Plastics Plan and NSW 20 Year Waste Strategy

Goal 9.2. Facilitate best practise in waste management to increase recycling and recovery

Strategy: 9.2.1




Deliver engagement programs and services to increase waste diversion from landfill

Deliverables	Activity	Measure	Status	Comments
Identify and deliver targeted engagement programs to residents, schools and businesses to increase recycling and lower contamination rates	Deliver engagement programs focused on reducing contamination of recycling bins, improve recovery of recyclables from the general waste and reduce the incidence of problem waste	Increased recycling at apartment blocks and schools	●	Seventy-eight buildings (2,660 households) which equates to almost nine per cent of households in the Waverley LGA received the Recycling Improvement Program. The program led to an overall 53% reduction in contamination in the container recycling bin (yellow lid bin) and 55% reduction in the paper and cardboard recycling bin (blue lid bin)
	Continue to foster relationships and partnerships with key stakeholders including strata managers, real estate agents, building managers and strata committees to drive improved recycling outcomes in apartment buildings	Strata by-law created in consultation with strata managers at six properties tested	●	Thirty-four strata plans have requested the Waste Strata Bylaw Template. All apartment resources and tools are available for free via online order forms on our webpage
	Deliver compost revolution program to increase uptake of organics recycling by residents	200 wormfarms or compost bins delivered to Waverley residents	●	In Q3, 122 compost/wormfarms were delivered and in Q4, 130 were delivered
Provide waste collection points and recovery programs for problem waste items	Provide electronic and battery waste collection points at the Library and Customer Service Centre and test collection points at schools and promote additional problem waste disposal locations	Two e-waste drop off days organised and problem waste disposal locations operational at the Library, Customer Service Centre and trialled at schools	●	A contract was signed to include additional items in problem waste recycling stations including globes, x-rays and bathroom waste. E-waste was collected via the Clean up Booking Service (to compensate for cancellation of May e-waste event). New problem waste stations are under construction and is planned to be installed in next financial year

54 Goal 9.2. Facilitate best practise in waste management to increase recycling and recovery




Strategy: 9.2.2

Provide efficient collection of Waverley's waste and recycling to minimise waste to landfill

Deliverables	Activity	Measure	Status	Comments
Provide an optimal, efficient and reliable kerbside recycling and waste collection service	Support the NSW Container Deposit Scheme (CDS) and identify opportunities to collect and recycle textiles and e-waste from apartment blocks	Feasibility Study for textile and e-waste collection completed		At the end of financial year, 3.1 tonnes of textiles and 51 e-waste items were recovered and diverted from landfill
		Return Vending Machines operational in the Waverley LGA		
	Transition from a four bin waste collection system to an optimal collection system to improve waste collection services	Waste, recycling and green waste bins collected with best service practices		Due to changes in the waste regulations, Council will not be transitioning to a three bin collection system at this time. Council is currently awaiting the release of the NSW EPA 20 year Strategy before considering any significant changes to current waste collection services
Provide a bulky waste collection service which is processed to recover as much waste as possible	Undertake a review of the bulky waste collection service	Review completed		Review of bulky waste collection service will commence in 2020-21 after finalisation of bulky waste materials processing contract

Strategy: 9.2.3

Incorporate the most advanced waste management and treatment technologies to maximise diversion from landfill

Deliverables	Activity	Measure	Status	Comments
Partner with regional stakeholders and State government to investigate and implement new waste technologies to maximise resource recovery	Participate in the Bulky Waste Collection Contract with SSROC to improve bulky waste recovery from kerbsides	Increased recycling of bulky household waste		The SSROC bulky waste contract was finalised and Council is reviewing the contract to improve service and recovery rate
Kerbside and public bin waste processed through advanced waste treatment or other technology to maximise diversion from landfill	Continue to work with waste processing contractors and the NSW EPA to improve landfill diversion rates and to apply principles of responsible, best practice waste management	Annual improvement in resource recovery of kerbside and public place waste		Processing of Council's kerbside and public bin waste through advanced waste treatment is continuing. Following the regulatory changes introduced by the NSW EPA, the advanced waste treatment facility operators must cease to apply the mixed waste organic output material as a soil conditioner. The collection of waste and recycling in Waverley will not be affected. Council is continuing to work with waste processing contractors and the NSW EPA to achieve optimal landfill diversion under the current NSW regulations
	Process kerbside and public place waste in an advanced waste treatment system that reduces landfill	Annual reduction of kerbside and public place waste to landfill		Council's kerbside and public bin waste continues to be processed through advanced waste treatment. Waste diversion from landfill rates for general waste collected in Waverley was temporarily affected by a change in NSW waste regulation. Council is continuing to work with waste processing contractors and the NSW EPA to achieve optimal landfill diversion under the current NSW regulations.

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Goal 9.3. Keep our streets, beaches and parks clean and free of litter, rubbish and pollution

Strategy: 9.3.1

Undertake programs and services to reduce litter and create clean and attractive public spaces

Deliverables	Activity	Measure	Status	Comments
Deliver education, engagement, and enforcement to reduce litter and dumping in Waverley	Actively patrol and undertake education and enforcement to reduce illegal dumping and litter	10 per cent reduction in illegal dumping and litter	●	Through the Sydney RID Squad Agreement, Council has investigated 937 illegal dumping incidents, served 59 clean up notices, 48 cautions and 12 penalty notices were issued. Additionally, resources were created to support rangers to enforce illegal dumping and litter. These are currently being tested
Develop and support partnerships to reduce litter and dumping on streets, parks and beaches	Build strategic partnerships with strata managers, building managers, real estate agents, cleaners and community groups to improve management of unwanted bulky items and reduce illegal dumping and litter		●	
Provide public place waste and recycling infrastructure and improve the cleanliness of streets, litter hotspots and beaches	Prepare and implement Waste Management Plan for Bronte	Plans adopted and 100 per cent of annually planned activities implemented	●	Internal review of the First Year Implementation Plan of the Bronte Waste Management Plan was completed and adoption of Year 1 Bronte WMP is currently underway.
	Undertake beach, park and public place cleaning program according to schedule	Cleaning program completed according to schedule and service standards	●	Residential street sweeping schedule time frames were extended during Covid-19 lockdown while all main areas continued to be serviced. Normal schedules were reinstated from June 2020
	Manage waste and recycling infrastructure to improve operational effectiveness	100 per cent of waste and recycling infrastructure is managed to schedule and service standards	●	Staff deployment to Commercial Waste and Domestic Waste were adjusted to meet the change in resourcing demands due to Covid-19. Additional domestic waste red bin and clean up services were offered to meet increased demand due to residents working from home







CORPORATE LEADERSHIP AND ENGAGEMENT



58 Goal 10.1. Engage the local community in shaping the future of Waverley

Strategy: 10.1.1

Provide opportunities for the community to contribute to decision making

Deliverables	Activity	Measure	Status	Comments
Develop and maintain a suite of integrated corporate plans that meet legislative requirements	Undertake Waverley Council's Integrated Planning and Reporting (IPR) activities, promote to the community and provide engagement opportunities for input	100 per cent of IPR documents prepared and compliant with legislative requirements		The last Six Monthly Progress Report was presented to Council at its meeting in February 2020. The draft Operational Plan including Statement of Revenue Policy was presented to Council at its meeting in May 2020. The document was placed on public exhibition for a period of 28 days and adopted by Council in June 2020. All IPR requirements were completed on time
Implement Waverley Community Engagement Strategy	Engage Precinct committees on strategic issues	Increase or maintain Precinct satisfaction against baseline (2018-19) satisfaction with their involvement		The Precinct Satisfaction Survey reflects a 76% overall satisfaction rating for precinct related services offered by Council. Strategies were developed to address areas for improvement and is planned for implementation in 2020-21. With the Covid-19, General Precincts meeting were cancelled and Precinct Executive Committee meetings transitioned to an online platform in April. Precincts continued to be engaged on strategic issues, major projects and strategy development via Zoom. Feedback received during this period on the effectiveness of engagement through zoom meetings including the flexibility it provides to allow wider participation were positive
	Develop and Implement a Community Engagement Campaign	Engagement Campaign completed by Q2		A community engagement campaign named Talk to Us was launched and completed. The Community Engagement Policy was prepared
	Review and update media and social media policy	Policy adopted by Council		The Media and Social Media Policy was prepared and adopted by Council in December 2019

Goal 10.2. Build the community's confidence in the integrity and capability of Waverley Council

Strategy: 10.1.1

Provide opportunities for the community to contribute to decision making

Deliverables	Activity	Measure	Status	Comments
Implement Waverley Community Engagement Strategy	Roll out media and social media policy	Training completed for all target groups	●	Covid -19 and changes to staff working arrangements has impacted 'Lunch and Learn' sessions. The roll out and a follow up session was organised for lifeguards in May 2020, a session for rangers was organised in June 2020. Further sessions will be organised in 2020-21
	Implement digital engagement tool review recommendations	90 per cent of the annually planned recommendation activities implemented	●	The Digital Engagement Tools review was completed and it was identified that the current tools meet engagement requirements
	Organise training for relevant internal stakeholders on community engagement procedures	Training completed for all target groups	●	Trainings were organised and completed for relevant team. Staff involved in face to face community engagement took part in training for 'dealing with difficult people' in October 2019

Strategy: 10.2.1








Establish a strong governance framework that is transparent, accountable and employs evidence-based decision making

Deliverables	Activity	Measure	Status	Comments
Develop and implement an Enterprise Risk Management framework	Implement and monitor Business Continuity Plan (BCP)	100 per cent of critical Waverley Council functions addressed within one week of a critical incident BCP tested across all departments and completed	●	A draft Business Continuity Policy and a draft Business Continuity Framework were developed. The preparation of Business Impact Assessments (BIA's) for all Council functions has commenced and are scheduled to be completed in the first quarter of 2020-21. These will provide the key information necessary for the development of the Business Continuity Plan (BCP). In response to the Covid-19 pandemic, a Crisis Management Team was established in early 2020 to lead Council's response. This included the development and implementation of a Pandemic Plan, with this work now providing benefit in informing aspects of the BIA's/BCP.

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Strategy: 10.2.1 continued






Establish a strong governance framework that is transparent, accountable and employs evidence-based decision making

Deliverables	Activity	Measure	Status	Comments
Develop and implement an Enterprise Risk Management framework	Strategic Safety Management System reviewed and updated	All Workplace Health and Safety policies updated and endorsed		Alcohol and Other Drugs Policy and Procedure was finalised following staff consultation. Implementation will commence in September 2020. An education and training program is scheduled as part of roll out in 2020-21. Fatigue Management and Fall Protection were completed
	Prepare an Organisational Risk Register	Strategic Risk Register in place by fourth quarter		Strategic Corporate Risk Register was adopted. Enterprise risk register is 90% complete and is scheduled to be finalised by 31 July
Review and implement a governance framework	Develop a corruption resistance plan to mitigate corruption, improve probity and increase accountability	Improved staff understanding of corruption and ethical behaviour		Draft Corruption Strategy and Plan is prepared and will be reviewed in alignment with the Governance Framework. The development of a Governance Framework, which includes the Corruption Resistance Plan based on the NSW Audit Office Guidelines, has commenced. Internal workshops were held, with areas for improvements identified. The framework will be further developed in 2020-21
	Implement Corruption Resistance Plan and increase accountability	90 per cent of the annually planned actions implemented		This project is delayed pending preparation of the Corruption Resistance Plan
	Review and update policies in line with Policy Review Program	90 per cent of the annual program of policy review completed		New decentralised Policy Management Process was adopted and rolled out to staff. Maintenance of the policy register and the development of policy templates were completed
	Facilitate approved Councillor Professional Development Programs	Councillors meet their Professional Development obligations		In Q3 and Q4, Councillors annual development programs were restricted and trainings were cancelled. During the year Councillors attended training on the Code of Conduct, land use planning, speaking and debating skills, local government procurement and financial decision-making in local government
	Prepare and roll out the new Code of Meeting Practice in accordance with Model Code	Code of Meeting practice adopted and training completed		Code of meeting practice was embedded into meeting procedures and an on-line meeting etiquette guide was developed to support Councillors and staff in the move to on-line meetings (Zoom) during Covid-19

Six Monthly Progress Report – Waverley Council June 2020

Strategy: 10.2.1 continued


Establish a strong governance framework that is transparent, accountable and employs evidence-based decision making

Deliverables	Activity	Measure	Status	Comments
Review and implement a governance framework	Prepare and rollout an organisation wide Government Information Public Access (GIPA) training program	90 per cent of the key GIPA stakeholders trained		A GIPA introductory training package was developed for roll out. New staff continue to receive basic GIPA and record keeping training as part of their induction. However induction programs were not held since March 2020 due to Covid-19
	Develop an integrated complaints management system	Increased customer satisfaction with the handling of complaints		This has been delayed due to an internal Structural and Operational Review
	Implement Information Management and Records Management review recommendations	Information management improvement programme developed		The Information and Records Management Review was completed. The review recommendations will be considered as an input to draft the Information, Communications and Technology Strategy in 2020-21
	Review and update financial policies, procedures and business processes to improve financial compliance and risk mitigation	Increase in financial compliance		Financial policies such as Investment Policy, Related Party Disclosures Policy, Asset Disposal Procedure and Bank Guarantee Procedure were reviewed and updated
	Implement the procurement framework	Improved contract cost efficiency		The Draft Procurement Policy was prepared. The Executive Leadership Team was engaged on the draft policy and further detailed internal consultation is underway. The feedback received will be incorporated into the policy where applicable

Goal 10.2. Build the community's confidence in the integrity and capability of Waverley Council

Strategy: 10.2.2

Deliver long-term financial and economic programs that improve financial sustainability


Deliverables	Activity	Measure	Status	Comments
Meet legislative requirements for financial reporting	Prepare all financial reports required by legislation or requested by government departments and agencies	100 per cent of financial reports are completed within the legislative requirements		All financial legislative reporting requirements were completed within the required deadline. They include Budget and Statement of Revenue Policy, Pricing Policy, Schedule of Fees and Charges and Quarterly Budget Reviews

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Goal 10.2. Build the community's confidence in the integrity and capability of Waverley Council





Strategy: 10.2.2

Deliver long-term financial and economic programs that improve financial sustainability

Deliverables	Activity	Measure	Status	Comments
Prepare and implement strategies to improve financial performance	Investigate and implement cost efficiency options and income generation opportunities to improve financial performance	Improvement in financial ratios		Multiple payment options including direct bank payment were made available to customers to make payments to Council. Review of Commercial Waste Service and Early Education Centre Service operation and fee structure were completed. These resulted in amended fee structure reflecting the local market pricing and generating additional revenue to Council

Strategy: 10.2.3

Strengthen capabilities and resources to deliver Waverley Community Strategic Plan 2018-2029 outcomes



Deliverables	Activity	Measure	Status	Comments
Implement the Workforce Management plan	Explore options for expansion of apprenticeships/ traineeships/ graduate programs and broadbanded positions	Pilot program completed by fourth quarter		This project is delayed and is placed on hold
	Review recruitment, selection, onboarding and internship and apprenticeship/ traineeship strategies	Three apprenticeships and eight traineeships developed		This project is delayed and is placed on hold
Implement a Leadership and Employee Development program	Identify and roll out a Council wide Leadership program	50 per cent senior management team enrolled in Leadership Development program; 50 per cent middle management attend management skills courses		The Leadership Development Program was launched and 20 staff were enrolled in the program. The Executive Managers cohort of the program will be launched in July 2020
	Continue to offer health and wellbeing programs	Minimum of 8 activities offered		More than 200 flu shots were provided to employees registered for flu shot in April and May 2020. With the Covid-19 pandemic, there is an increase in number of employees working from home. Therefore there is a shift in focus to work from home mechanisms and Mental Health. Other programs will recommence once employees return to workplace.

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Goal 10.3. Build an organisation that places customers and the community at the heart of service delivery



Strategy: 10.3.1

Engage and partner with the community to provide services that meet its needs and expectations

Deliverables	Activity	Measure	Status	Comments
Pilot and deliver new customer service ideas focusing on community needs	Implement customer feedback capability initiatives and provide services which are responsive to identified community priorities	Improved customer access to services and options for feedback		Service agreement with Snap Send Solve was upgraded, allowing Council to access increased information for requests logged using the application. Promotion continued during the temporary closure of Customer Service Centre closure in response to Covid-19. There has been 80 per cent increase in Snap Send Solve usage since its initial promotion in late 2019
Review and implement a Customer Experience Strategy	Review and update Customer Experience Action Plan to improve customer service delivery	Customer Experience Action Plan adopted and 90 per cent of the annually planned activities implemented		Project delayed due to impact of Covid-19 on resourcing

Strategy: 10.3.2

Use technology to streamline and enhance customer interactions with Council

Deliverables	Activity	Measure	Status	Comments
Increase in end-to-end service delivery offerings	Research enhanced Customer Relationship Management System and identify business requirements	Customer Relationship Management System procurement process commenced		Project delayed due to impact of Covid-19 on resourcing
	Identify potential digital services to improve customer online interaction	Catalogue of digital services documented and potential services identified for digitisation		Capital Works Program 2019-20 and Waverley Architecture Mapping projects were completed. These spacial layers were made available to the community and Council staff

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Strategy: 10.3.3

Deliver efficient and effective services to increase value for money

Deliverables	Activity	Measure	Status	Comments
Develop and undertake a Business Improvement and Service Review program	Undertake three business improvement or service reviews across Council	Demonstrated efficiency and effectiveness improvements	●	Recruitment of Business Improvement team delayed due to Covid-19
	Review customer service measures to improve customer satisfaction and investigate options for self-serve payments	90 per cent of review recommendations implemented	●	Review of Local Government Customer Service Benchmarking Program is scheduled for completion in 2020-21. Online payment options for parking permits and planning are made available for customers
Undertake resource sharing and/or service delivery partnerships with other councils and community organisations	Partner with other Councils and/or community organisations to facilitate best practice outcomes	Two meetings held	●	Recruitment of Business Improvement team delayed due to Covid-19



KNOWLEDGE AND INNOVATION



66 Goal 11.1. Enable our community to embrace economic opportunities using knowledge-based and other emerging technologies

Strategy: 11.1.1

Use smart city technology to improve the quality of life, optimise resources and economic sustainability

Deliverables	Activity	Measure	Status	Comments
Prepare and Implement the Smart City Strategy	Implement priority projects to improve business efficiency and ease of customer transactions with Council	100 per cent of the planned activities completed	●	A range of Smart City Strategy priority projects were implemented including increasing data sharing with community and organisation, continued expansion of cloud services to improve delivery of community services and introduction of digital phone meters at Bondi Beach and Bronte Beach, e-planning initiatives such as 3D Modelling for major DAs and automated zoning certificates

Strategy: 11.1.2



Expand opportunities for the community to access and utilise digital technology

Deliverables	Activity	Measure	Status	Comments
Expand free Wi-Fi network to neighbourhood centres	Undertake feasibility study to identify potential locations for Wi-Fi expansion	Feasibility study completed	●	Feasibility study to identify potential locations for Wi-Fi expansion was completed. The study revealed that tourists are the main users of service and the service covers main tourist hotspots. Therefore there is no business case for further expansion
Initiate a small grant technology start-up scheme	Organise workshops, seminars and other events to facilitate technology grant opportunities for small businesses	At least one event held	●	A Start Up Grant workshop was organised in November 2019 to support start-ups applying for government loans

Goal 11.1. Enable our community to embrace economic opportunities using knowledge-based and other emerging technologies

Strategy: 11.1.2


Expand opportunities for the community to access and utilise digital technology

Deliverables	Activity	Measure	Status	Comments
Explore feasibility of developing data-sharing partnerships	Undertake a feasibility study to identify options and benefits for sharing data and entering into partnerships	Recommendation Report completed		Students from UNSW Data Analytics Masters Program were engaged to explore data sharing and reporting opportunities across the organisation. This has resulted in increased data insights across the organisation through dashboard using business intelligence tools; Partnership with Transport for NSW to share data publicly for Parking Innovation Challenge; Data sharing agreements with Mastercard for sharing data to assist with the response to Covid-19 and creation of a data register across the organisation is in progress. Research Paper was prepared and a Smart Waverley Transport Innovation Project (Pick Up Drop Off) which is a data sharing project was initiated with Transport for NSW
	Prepare a Data Governance/ Management policy	Policy adopted by fourth quarter		This project is carried over to 2020-21 to reassess the requirement of a data/information policy

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Strategy: 11.1.3



Encourage knowledge intensive and innovative industries

Deliverables	Activity	Measure	Status	Comments
Develop and implement a strategy to attract knowledge-intensive public sector and private sector employers	Undertake branding and promotional initiatives to promote Waverley's strengths and opportunities to attract knowledge intensive industries	Increase in site visitation for online promotional material		Occupancy audit report was completed. Part 2 of the Infographic draft prepared for release was delayed due to Covid-19

Goal 11.2. Provide multi-purpose community spaces where innovation and collaboration can occur



Strategy: 11.2.1

Create innovative spaces for business incubation and knowledge transfer

Deliverables	Activity	Measure	Status	Comments
Plan and finalise the concept of the knowledge and innovation hub based around the Boot Factory	Pilot and finalise business models for the Boot Factory	Business model finalised		Detailed business case on Innovation Civic Hall Model was prepared and presented at the Councillor Workshop in June 2020. Final Council report is planned for the September 2020 Committee meeting
	Manage design and implementation of restoration of the Boot Factory	Detailed design and approvals for restoration completed and restoration works commenced		Planning approval to implement the restoration of the Boot Factory was received in May 2020, works will commence in 2020-21

Strategy: 11.2.2

Deliver and facilitate access to emerging technologies and library collections

Deliverables	Activity	Measure	Status	Comments
Develop and implement a new Library Strategic Plan to guide the provision of technology and learning opportunities to support community engagement	Prepare the Library Strategic Plan in consultation with the community	Plan endorsed		Community engagement activities and staff consultation were completed. Progress on writing the plan was delayed due to resources being redirected to pandemic response
Deliver and facilitate access to emerging technologies and library collections	Implement updated Library Collection and Development Guidelines to ensure a relevant and accessible library collection	100 per cent compliance with updated guidelines		Refresh of Children's Library collection was completed. Additional resources including Beamafilm, Story Box Library, Newsbank were added in response to Covid-19 shut down of physical library services. Stock collection deselection process commenced



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REPORT
CM/7.11/20.07

Subject: Bronte Cutting Safety Upgrade

TRIM No: A20/0015

Author: Amanda Tipping, Project Manager, Major Projects

Director: Emily Scott, Director, Community, Assets and Operations

RECOMMENDATION:

That Council:

1. Receives and notes the outcome of the options analysis study for the Bronte Cutting Project.
2. Endorses Option 1B (2.5–3 m wide footpath, Calga Place) as the preferred option for Bronte Cutting Project, as detailed in the attachment to this report.
3. Develops Option 1B to a concept design suitable for informing the community.
4. Notes that the developed Option 1B will be reported back to Council prior to informing community.

1. Executive Summary

The purpose of this report is to summarise the outcomes of the options analysis for the Bronte Cutting project carried out by GHD Pty. Ltd. and to seek approval to proceed to concept design development on the preferred option: Option 1B, 2.5–3 m wide footpath, Calga Place.

A further report will be prepared for the Council summarising the concept design and seeking approval to inform the community.

This report includes outcomes of the assessment of two design options that will improve pedestrian and vehicle movement on Calga Place, as well as improve pedestrian user safety through the cutting. The report will discuss the following two design options:

- Provision of a separated path for pedestrians along the eastern side of Calga Place from Bronte Road to Macpherson Street. This footpath will replace the temporary path installed by Waverley Council in 2018 in the cutting area.
- Upgrade of the existing road to a shared space that facilitates the safety of both pedestrians and vehicles. The shared space or 'zone' will change the colour of the asphalt on Calga Place and widen the road corridor for pedestrians and vehicles to share.

2. Introduction/Background

Bronte Cutting forms part of one of the most significant coastal walks in the world. The Bondi to Bronte coastal walk attracts an estimated one million walkers per year and during peak times (such as when the Sculpture by the Sea event is held in Spring each year), as many as 500 pedestrians per hour. This causes a

conflict between pedestrians and vehicles, as there are no pedestrian facilities in place within the Cutting to accommodate such high pedestrian numbers.

This conflict is referenced in several Waverley Council strategic documents and other studies, such as the Bronte Plan of Management (PoM), People Movement and Places (WPMP), Bronte Park Universal Access Study, as well as in Council resolutions. The local community have also mentioned the problem in public consultation for the Bronte PoM and for the Bronte Access Study. During previous consultation with the community, safety concerns were raised for pedestrians through the Cutting due to conflict between traffic flow, parking and pedestrians walking on the road. A continuous dedicated pedestrian walkway was requested, linking Bronte Park and the Coastal Walk.

In March 2018, Council requested Council officers to report to the Strategic Planning and Development Committee with options for the improved pedestrian connection in the Bronte Cutting, consistent with the recommendations contained in WPMP and Bronte PoM, including a stakeholder consultation strategy.

As a result, in September 2018 Council endorsed a pilot project to pedestrianise part of the Bronte Cutting by temporarily removing 22 car spaces in order to connect the existing footpath with Calga Reserve and the Coastal Walk. The pilot project was installed in November 2018.

While the pilot project was in place, Council consulted with the community and other relevant stakeholders to communicate options for the future and seek feedback on the pilot project. For this, Council organized intercept surveys, an information session and a community workshop. The consultation reached over 500 people with a high number of responses expressing support for the temporary footpath solution.

The key concerns about a future solution from the ideas presented to the community were mainly related to the impact on the heritage significance of the Bronte Cutting, impacts on biodiversity and loss of parking. The majority of the engaged community want to preserve the natural landscape and heritage of Bronte Cutting, as well as to not impact local biodiversity.

In April 2019, a meeting was held with the Mayor, Councillors and Council officers to clarify the scope of works for the project in conjunction with approval of funding requirements.

In May 2020, Council engaged GHD Pty Ltd to carry out assessment of future options through an options analysis study for Calga Place, including Bronte Cutting.

A Project Control Group (PCG) meeting with GHD Pty Ltd was held on 2 July 2020 to discuss the outcome of the options analysis study for the project. A consensus on a preferred option for the future was reached.

3. Relevant Council Resolutions

Meeting and date	Minute No.	Decision
Council 19 February 2019	CM/7.13/19.02	That: <ol style="list-style-type: none"> Council pursues a 10 km/h zone as soon as possible by preparing a report for the Waverley Traffic Committee's consideration. Council further investigates the following options for the Bronte Cutting Pedestrian Link Project: <ol style="list-style-type: none"> A formalised pedestrian footpath. Drop-off/pick-up zones.

		<ol style="list-style-type: none"> 3. The investigation include design development to resolve disability access issues that respond to the Bronte Plan of Management priorities for the Cutting. 4. Council extends the temporary pilot project until the above investigation has been undertaken and a permanent solution is approved by Council. 5. Council investigates whether additional parking spaces can be identified through standardisation of existing parking bays.
Strategic Planning and Development Committee 9 October 2018	PD/5.4/18.10	<p>That Council:</p> <ol style="list-style-type: none"> 1. Approves the pilot project for an on road pedestrian pathway in the Bronte Cutting carpark/Calga Place for a two-month trial period. 2. Approves the installation of a lane separator with wands similar to that used for the light rail along the outer edge of the proposed separated pedestrian path on the eastern side of the Bronte Cutting car park, subject to any changes being delegated to the Executive Manager, Creating Waverley. 3. Converts parking space 55 into a disabled person's parking space to replace the existing disabled parking space which is to be removed to make way for the pathway. 4. Investigates a parking configuration in Bronte Cutting to determine whether the 20 spaces forgone by this initiative can be re-accommodated and a report come to Council.
Traffic Committee 27 September 2018		<p>That Council:</p> <ol style="list-style-type: none"> 1. Approves the pilot project for an on road pedestrian pathway in the Bronte Cutting carpark/Calga Place for a two-month trial period. 2. Approves the installation of a lane separator with wands similar to that used for the light rail along the outer edge of the proposed separated pedestrian path on the eastern side of the Bronte Cutting car park, subject to any changes being delegated to the Executive Manager, Creating Waverley. 3. Converts parking space 55 into a disabled person's parking space to replace the existing disabled parking space which is to be removed to make way for the pathway.

<p>Strategic Planning and Development Committee 4 September 2018</p>	<p>PD/5.4/18.09</p>	<p>That Council:</p> <ol style="list-style-type: none"> 1. Approves the Bronte Cutting Pedestrian Link pilot project, which involves removing 20 car spaces along the eastern side of the Bronte Cutting car park to create a pedestrian footpath connection linking the existing footpath in the Bronte Cutting and the Coastal Walk at Calga Reserve, for a minimum period of two months. 2. Approves a stakeholder engagement program, to be undertaken during the period of time the pilot project is in place, and presents the following additional options for consideration: <ol style="list-style-type: none"> (a) Segregated pedestrian pathway in the Bronte Cutting. (b) Elevated walkway on the top of the eastern side of Bronte Cutting headland. (c) Widening the Bronte Cutting to permit a footpath to be constructed with no loss of parking. (d) Creating a 10 km/h shared zone for the entire length of the Bronte Cutting carpark. 3. Notes that a report will be submitted to the Strategic Planning and Development Committee following the stakeholder engagement period, summarising the outcomes of the feedback and including a preferred option for future action.
<p>Council 20 March 2018</p>	<p>CM/4.2.2/18.03</p>	<p>That:</p> <ol style="list-style-type: none"> 1. Council notes the officer's report to the Traffic Committee relating to the Bronte Cutting Pedestrian Project, including consideration of alternative options including a 10 km/h shared zone. 2. Council requests Council officers to report to the Strategic Planning and Development Committee with options for the improved pedestrian connection in the Bronte Cutting, consistent with the recommendations contained in the People, Movement and Places report and all the options in the draft Bronte Park and Beach Plan of Management. 3. The options presented to the Strategic Planning and Development Committee also include a stakeholder consultation strategy.

4. Discussion

As part of the options analysis, following factors were assessed:

Pedestrians

One million people use the Coastal Walk from Bronte to Bondi every year, and during peak times, as many as 500 pedestrians per hour use Calga Place.

The previous arrangement of Bronte Cutting, prior to the installation of the temporary walkway, where pedestrians were required to walk along the road, created the following problems:

- On-road conflict between pedestrians and vehicles.
- Car doors opening onto pedestrians.
- Cars reversing into car parking spaces in high pedestrian activity area.
- 'Jay-walking' occurs to a high degree across Bronte Road, suggesting that infrastructure in the area does not cater well for pedestrians.
- Pedestrians having to move to the side to let cars through.
- Pedestrians not having 'right of way', including having to wait while cars are parking.
- High stress environment for pedestrians with mobility issues including those using wheelchairs, mobility aides and parents/carers using pushers and walking with children.

The implementation of a temporary footpath, shown in Figure 1, has assisted with the issues outlined above.



Figure 1. Temporary footpath.

Cyclists

It is likely that most cyclists will use the Bronte Road and Macpherson Street route, due to the route being shorter:

- 280 m on the Macpherson/Bronte route.
- 500 m on the Calga Place route.

However, Calga Place is likely to be used as an alternative route for cyclists who prefer a quieter and less steep road.

Vehicles

The annual average daily traffic (AADT) count for vehicles across the three counter locations is 588 and falls within the $\pm 2\%$ difference of the actual recorded counts. The signposted speed at Calga Place is 40 km/h, however the average vehicle speeds recorded through this area are lower and have been summarised below:

- The entry of Calga Place showed the lowest speed of 17 km/h.
- The middle of Calga Place showed the highest mean speed of 21 km/h.
- The exit of Calga Place showed a mean speed of 19 km/h.

Parking study

An analysis was undertaken on the parking occupancy rates after the construction of the temporary walkway. On a 'normal' high season weekend there is an abundance of parking available with just 50% of parking being occupied. During the Sculpture by the Sea period, parking occupancy peaks to being in excess of 95% occupied. Usually, an 85% occupancy rate is considered ideal.

While not explicitly covered in the study, Council has received feedback that parking occupancy rates can be very high when activities such as Nipper programmes run by the Bronte Surf Life Saving Club are being held on weekend mornings.

Safety

Over the last five years, only three crashes were recorded, with none resulting in fatalities.

Lighting

Currently, there is no lighting along Calga Place, reducing the experience of the coastal walkway for pedestrians. An objective of this project is to provide lighting to enhance the pedestrian experience in the early morning and late afternoon to evening.

Heritage

The site is located within the curtilage of the South Bronte Headland Landscape Conservation Area and is in the vicinity of a number of other heritage items. Advisian was engaged to provide preliminary advice on the heritage aspects of the site and the impacts that each option would have. The main heritage items to be considered in the design are:

- The local heritage conservation area, which includes the sandstone cutting through Calga Place.
- The visual impacts of light poles and other structures on the heritage conservation area.

In previous Council reports discussions have been raised around providing a path on top of the cutting with a viewing platform. This option proved to be infeasible due to the visual and construction impacts on the heritage conservation area.

Parking offset options

An internal investigation was carried out to look at parking feasibility in the area to offset the loss of 22 parking spaces in the cutting, due to the temporary footpath. Trafalgar Street could potentially accommodate parking on the Waverley Cemetery side; however, a large amount of tree removal and

substantial capital works would be required. It would look and function similar to the 90-degree parking on the corner of St Thomas Street and Trafalgar Street.

Options for Bronte Cutting Project

Refer to Attachment 1, which includes sketches of option 1 and option 2 only.

Seven options were considered as part of the options analysis, shown in the following table.

Table 1. Options.

Option	Description
Option 1	1.8 – 2m wide footpath from the cutting to Macpherson St
Option1A	1.8 – 2m wide footpath, Calga Place
Option1B	2.5 – 3m wide footpath, Calga Place
Option 2	Shared zone, Calga Place, replacing existing pavement surface
Option 2A	Shared zone, Bronte Road to coastal walk entrance
Option 2B	Shared zone, Calga Place coating existing pavement surface
Option 2C	Shared zone, Calga Place, angled parking

Option 1B, 2.5–3 m wide footpath, Calga Place (Project Control Group and GHD Pty Ltd recommendation and preferred option)

Option1B proposes to reduce the trafficable lane width to 3 m for the full length of Calga Place and realign a 50 m section of the existing kerb and retaining wall along the western edge of the road near the steps from Bronte Road, shown in Figure 2. This will allow the installation of a new 3 m wide concrete footpath through the cutting, and widening of the existing footpaths north of the cutting to 2.5-3 m. Option 1B also allows for the installation of a 1.2 m wide footpath to the south of the cutting to connect to Macpherson Street, while also retaining the 17 parking spaces through this section. The risk of pedestrians using the road for travel is reduced for this option due to the reduced traffic lanes and the widened footpaths.



Figure 2. Widening required for Option 1B.

Traffic and parking

Option 1 will have the following impacts on traffic:

- Reduced lanes widths where the existing footpaths are widened could result in reduced traffic speeds.
- Permanent removal of 22 parking spaces, in keeping with current existing conditions, along the eastern side of Bronte Cutting.

Key risks

The key risks associated with this option are:

- Pedestrians not using the footpath provided and choosing to walk on the road.

The recommendation is based on the significant risks that Option 2 has with regards to vehicle safety and embankment stability, which could also have significant cost implications for the project. Although Option 1B is slightly more expensive than the other Option 1 alternatives, it reduces the risks of pedestrians walking within the road by providing a much wider footpath and also reduces the width of the traffic lanes. It also retains the 17 parking spaces to the south of the cutting while installing a 1.2 m footpath to connect the cutting to Macpherson Street, resulting in no further parking loss to the existing conditions.

Option comparison

Table 2. Advantages and disadvantages of options.

Option 1, Option 1A and Option 1B	
Advantages	Disadvantages
Existing temporary walkway has been tested and for the most part is working	People can still be seen to walk on the road at times even with the implementation of the temporary walkway
Widening of existing footpaths should incentivise pedestrian use	Option 1B requires permanent removal of 22 parking spaces, resulting in no further parking loss to existing conditions
Cheaper construction costs than Option 2	
Removal of parking spaces will lower the risk of car related damage to the side of the cutting area (heritage)	
Option 1B retains the parking spaces (17) between the cutting and Macpherson Street	

Provides clear separation between pedestrians and vehicles	
Option 2, Option 2A and Option 2B	
Advantages	Disadvantages
Increased safety for pedestrians who currently choose to walk on the road rather than use the temporary walkway provided	Requires replacement of a significant area of road pavement with paving / other textured material - recolouring of large amounts of pavement
Increased number of parking spaces *Council officers and GHD Pty Ltd recommend reviewing the option of permanently removing 22 spaces in the cutting for safety reasons due	Will require night works / road closure to replace pavement.
	Most expensive to construct
	Requires guard rails or traffic barriers along the eastern edge of the road
	Requires retaining walls or capping beams to stabilise embankment
	Will require slope stability analysis
	Will increase travel time along Calga Place for vehicles with pedestrians taking priority within the road

Construction cost estimates

Final accurate costings of the proposal have not been determined at this stage and will depend on the outcome of design development.

Table 3. Construction cost estimates.

Option	Construction Cost Estimate
Option 1B: 2.5 – 3m wide footpath, Calga Place	\$916,810
Option 2: Shared zone, Calga Place, replacing existing pavement surface	\$1,809,126 (including provisional sums for traffic barriers and slope stabilisation)

Alternative options

The following information outlines further detail in relation to the other options from the options analysis study:

Option 1 (1.8–2 m wide footpath from the cutting to Macpherson St) and Option 1A (1.8–2 m wide footpath, Calga Place)

These options looked at implementing a 2 m footpath where the existing temporary footpath is and either extending the footpath to Macpherson Street and/or widening the footpath north of the cutting towards

Bronte Road. The footpath requirement is 3 m due to pedestrian volume in this area, the minimum requirement would be 2.5 m, which neither of these options could achieve. Due to proposed footpath width, the main risk for these options is pedestrians not using the footpaths and deciding to walk on the road.

Option 2 (Shared zone, Calga Place, replacing existing pavement surface)

Option 2 Considers formalising a shared zone on Calga Place (Bronte Cutting) to manage pedestrian/vehicle conflicts in this low vehicle and high pedestrian activity area. The shared zone would feature a 10 km/h speed limit and require traffic calming devices to cause drivers to reduce their speed when travelling along Calga Place. Within a shared zone, pedestrian users have right of way over vehicles. This option requires the changing of the pavement colour and surface type, as well as the removal of all the existing footpaths along the eastern edge of the road. Option 2 would provide a shared zone corridor width of 4m through the cutting and 4-5.8m to the north of the cutting in which pedestrians and vehicles can move freely. Option 2 is the most expensive option of all the options, and has the most significant risks.

Traffic

A shared zone will have the following impacts on the existing traffic conditions along Calga Place:

- A reduction of the existing speed limit (40 km/h) to 10 km/h would be required through the extent of the shared zone. Existing traffic speeds are between 17 and 21 km/h.
- Pedestrians will have right of way, which will increase travel time along Calga Place.
- Relocation of parallel parking spaces along the eastern side of the road closer to the edge of the embankment. This will not impact the number of spaces available for parking (139 spaces).

Key risks

The key risks associated with this option are as follows:

- With the removal of the existing footpath, converting the area to a shared zone, and relocation of parking, vehicles will drive and will park close to the edge of the embankment on the eastern side of Calga Place. The embankment is not currently required to support these vehicle loadings, and parking vehicles in this zone could cause stability issues.
- Based on the visual site investigation undertaken by GHD's geotechnical engineer, during which settlement of the existing footpaths in localised areas were noted, the design for Option 2 will have to consider the installation of a retaining wall or capping beam along the eastern edge of Calga Place to mitigate the risk of embankment failure. A provisional sum of \$500,000 has therefore been included in the cost for Option 2 to allow for the construction of these mitigation measures. If selected as a preferred option, GHD will undertake intrusive investigations of the eastern edge of the road to determine the extent of the retaining wall or capping beam required;
- There is the risk that vehicles could drive over the embankment, which means barriers, bollards or other protection measures will also be required along the eastern edge of Calga Place to mitigate this risk. Due to the significant risk for users, GHD have allowed for a provisional sum of \$100,000 to be included in the cost of this option. The full extent of the traffic barrier or bollards would be confirmed in further design development stages were this option to be chosen.
- Due to the width of cutting there is a safety risk associated with travel width and high pedestrian volumes through this area. Council officers and GHD Pty Ltd recommend reviewing the option of permanently removing 22 spaces in the cutting for safety reasons were this option to be chosen.

Option 2A (Shared zone, Bronte Road to coastal walk entrance)

Shared zone starting at Bronte Road and finishing at the end of the existing temporary walkway section. Although dealing with less pedestrians, this option leaves the pedestrian safety issue between the coastal walk entry and Macpherson Street.

Option 2B (Shared zone, Calga Place coating existing pavement surface)

Similar to Option 2 (in terms of issues), but instead of replacing the existing wearing course with a coloured wearing course, the option allows for a colour coating/paint to be applied to the existing pavement surface. This is a much cheaper solution, but is less permanent and might require regular maintenance as the colour of the paint fades.

Option 2C (Shared zone, Calga Place, angled parking)

Shared zone along the eastern side of Calga Place. A number of options were investigated in relation to angled parking to increase parking spaces, however due to road widths angled parking did not provide benefits in this option.

5. Financial impact statement/Time frame/Consultation**Financial impact statement**

2020/21 Budget Bronte Cutting project
Budget \$155,000 (including carry over)

Should Council approve to proceed, a Q1 adjustment of \$50,000 will be required to continue with consultant design work, project management and contingency for the project in the current year.

At the current time, there is no capital works budget provided for the construction of the project (estimated cost \$916,810). Council can address this at a future time when it has considered the design.

Proposed time frame (subject to decision making)

Table 4. Time frame.

Activity	Time frame
Concept development	August 2020
Council meeting	September 2020
Inform community	October 2020
Council meeting	November 2020
Detailed design	December 2020 – February 2021
Traffic Committee meeting and Council meeting	March 2021
Procurement	April 2021
Construction	May 2021 onwards

Consultation

Should Council approve, officers will develop Option 1B to a concept design suitable for informing the community. The concept design will be reported back to Council prior to informing the community.

6. Conclusion

It is recommended that Council endorses Option 1B (2.5–3m wide footpath, Calga Place) as the preferred option, and develops this option to a concept level to inform community.

7. Attachments

1. Options Assessment Report (under separate cover) .



Waverley Council

Bronte Cutting Safety Upgrade Options Assessment Report

July 2020

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GHD otherwise disclaims responsibility to any person other than Waverley Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

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Appendices

Appendix A – Advisian Heritage Memorandum

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Appendix C – Option Sketches

Appendix D – Rendered Sketches

1. Introduction

Bronte Cutting is located on Calga Place in Bronte and is a popular route for pedestrian and vehicle users, especially during the summer months. The popularity and the flow of traffic through this narrow section of road has given rise to safety concerns for those using it. Waverley Council (WC) has engaged GHD to undertake the design for the Bronte Cutting Safety Upgrades project.

1.1 Background

Bronte Cutting forms part of one of the most significant coastal walks in the world. The Bondi to Bronte coastal walk attracts an estimated one million walkers per year and during peak times (such as when the free Sculpture by the Sea event is held in Spring each year), as many as 500 pedestrians per hour. This causes a conflict between pedestrians and vehicles, as there is no pedestrian facilities in place to accommodate such high pedestrian numbers.

In addition to the Sculptures by the Sea event, the route serves multiple pedestrian user groups, including:

- Locals undertaking their daily exercise jogs/walks;
- Dog walkers;
- Walkers of all ages - the elderly, young people and children;
- Local and international tourists, both in organised tours and individually.

The overwhelming success of the walk has resulted in the need to review the existing 'weak spots' for pedestrians – most notably an almost 500 m stretch of Calga Place. In this location pedestrians walk on the road, mixing with vehicle traffic accessing beach parking. It is noted that WC is currently trialling a separated walkway (temporarily) through the cutting section on Calga Place, which required the removal of a stretch of the on-street parking.

Although there have been no recorded crashes between vehicles and pedestrians in the last five years, it is important to reach beyond crash statistics to understand the related issues of pedestrian comfort and convenience. Some examples of the pedestrian discomfort and inconveniences that are likely to occur at Bronte Cutting include:

- Moving aside for traffic;
- Waiting for a car to parallel park;
- Car door/s opening in their 'path'.

1.2 Scope of this report

The scope of works for this report includes the development and assessment of two design options that will improve pedestrian and vehicle movement on Calga Place, as well as improve pedestrian user safety through the cutting. The report will discuss the following two design options:

- Provision of a separated path for pedestrians along the eastern side of the cutting. This path will replace the temporary path installed by WC approximately 18 months ago, and will include the widening of the existing footpaths further north of the cutting where possible;
- Upgrade of the existing road to a shared space that facilitates the safety of both pedestrians and vehicles. The shared space or 'zone' will change the colour of the asphalt on Calga Place and widen the road corridor for pedestrians and vehicles to share.

2. Existing Conditions

2.1 Site overview

Calga Place is a one-way street that commences from Bronte Road and ends at Macpherson Street, with an approximate length of 470 m. The existing arrangement along the road comprises of two parallel parking lanes on either side of the road with one trafficable lane down the middle. A section of Calga Place to the north of the cutting has an existing concrete footpath along the eastern side of the road. The 135 m section of Calga Place through the cutting and the 107 m section to the south of the cutting does not have any permanent pedestrian infrastructure. As mentioned in Section 1.1, WC demarcated a temporary pedestrian walkway using temporary bollards through the cutting section by removing parking (22 spaces).

2.2 Traffic and pedestrian study

A traffic and pedestrian study was undertaken to understand the pedestrian and vehicle movements within the vicinity of the Bronte Cutting site. The traffic and pedestrian study analysed data from previous studies provided by Council, which included:

- The Bronte Village Streetscape Traffic Study by Bitzios Consulting in 2018;
- The Bronte Cutting Pedestrian Link Project Analysis by DJN Traffic and Safety Solutions in 2018.

As part of the study, GHD assessed the studies provided and summarised the existing conditions for pedestrians, vehicles, cyclists and parking. This section of the report will discuss these conditions and the safety impacts they have on the users.

2.2.1 Pedestrians

One million people use the Coastal Walk from Bronte to Bondi every year, and during peak times, as many as 500 pedestrians per hour use Calga Place (Bronte Cutting Pedestrian Link Project Analysis, DJN Traffic and Safety Solutions, 2018).

These peak times include:

- Summer months; and
- Sculpture by the Sea event that is held for three weeks in Spring.

A summary of the typical traffic volumes during the Sculptures by the Sea event is shown in Figure 2-1 below.

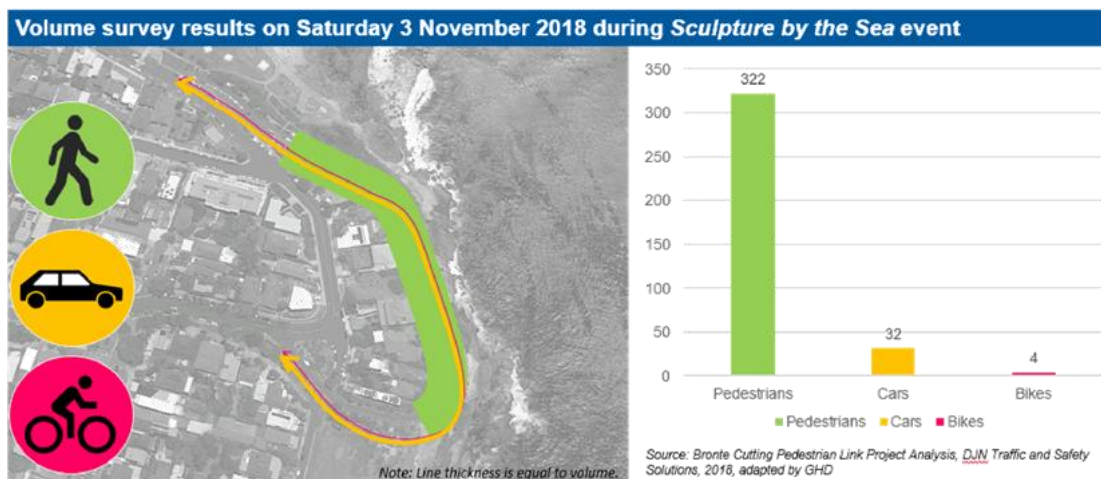


Figure 2-1 Volume survey during sculptures by the sea

The analysed data shows that a significant proportion of pedestrians frequent the area between the hours of 10 am to 2 pm and that movement is fairly even in both directions. The morning period outside of these hours also experiences high pedestrian volumes likely representative of morning walkers out for exercise.

The previous arrangement of Bronte Cutting, prior to the installation of the temporary walkway, where pedestrians were required to walk along the road as shown in (Figure 2-2), created the following problems:

- Safety:
 - On-road conflict between pedestrians and vehicles;
 - Car doors opening onto pedestrians;
 - Cars reversing into car parking spaces in high pedestrian activity area;
 - 'Jay-walking' occurs to a high degree across Bronte Road, suggesting that infrastructure in the area does not cater well for pedestrians.
- Comfort:
 - Pedestrians having to move to the side to let cars through;
 - Pedestrians not having 'right of way', including having to wait while cars are parking;
 - High stress environment for pedestrians with mobility issues including those using wheelchairs, mobility aides and parents/carers using pushers and walking with children.

The implementation of a temporary footpath (Figure 2-3) has assisted with the issues outlined above.



Figure 2-2 Bronte Cutting - configuration pre-October 2018



Figure 2-3 Bronte Cutting - configuration post October 2018

2.2.2 Cyclists

As shown by Figure 2-4, there are two existing routes for cyclists between the Bronte Shops and the Macpherson Street / Calga Place intersection. These are:

- Bronte Road and Macpherson Street (main route);
- Calga Place (secondary route).

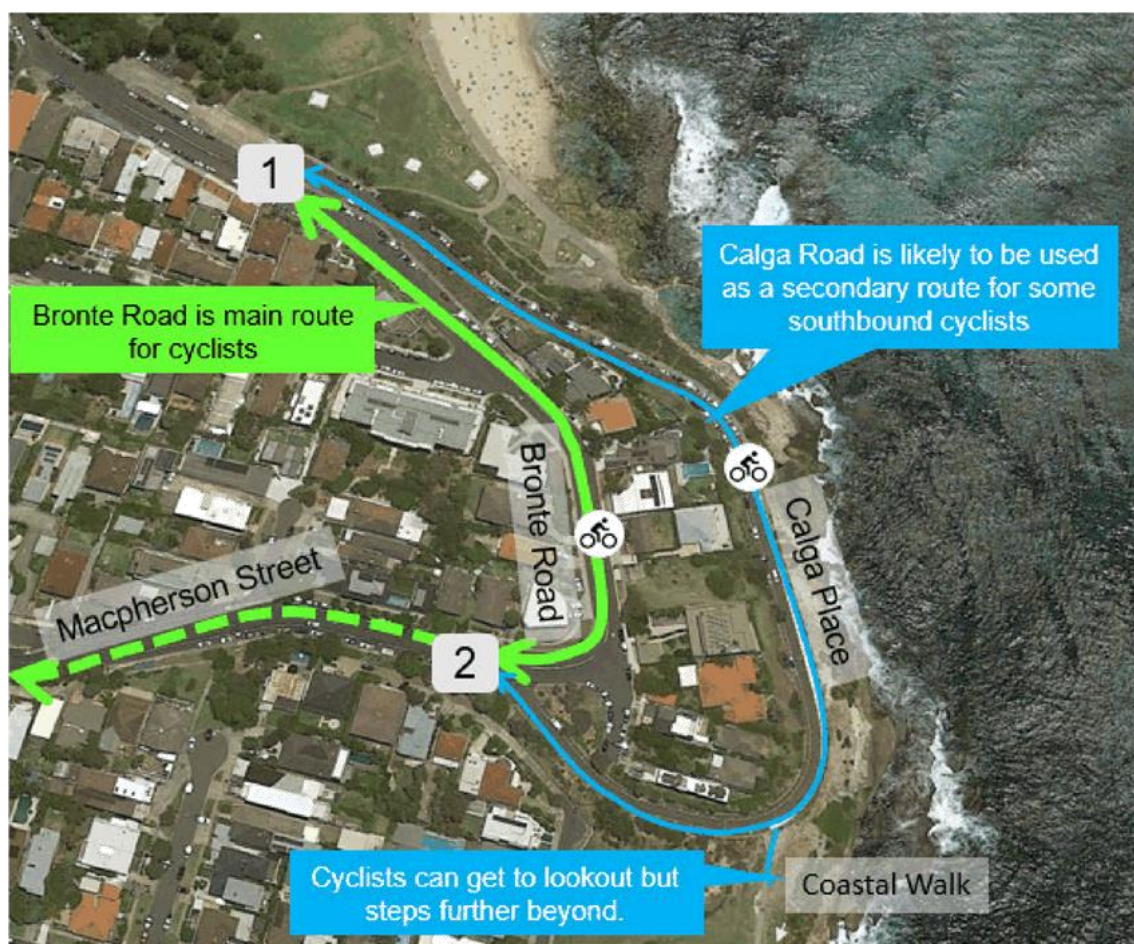


Figure 2-4 Cycle routes

It is likely that most cyclists will use the Bronte Road and Macpherson Street route, due to the route being shorter:

- 280 m on the Macpherson/Bronte route;
- 500 m on the Calga Place route.

However, Calga Place is likely to be used as an alternative route for cyclists who prefer a quieter and less steep road, as shown in Figure 2-5 below.



Figure 2-5 Gradient comparison between cycle routes

2.2.3 Vehicles

The annual average daily traffic (AADT) count for vehicles across the three counter locations, as shown in Figure 2-6, is 588 and falls within the $\pm 2\%$ difference of the actual recorded counts. Analysis of the traffic data identified the following:

- Vehicle traffic numbers at the three count locations are relatively similar, with an average over the three counters of 55 in the AM Peak and 46 in the PM Peak;
- A greater volume (19% greater) of vehicles is recorded in the morning peak as compared to the evening peak. This could be attributed to patrons accessing the beach area in the earlier hours of the day;
- The proportion of traffic volumes for a 7 day average across the three locations is consistent with the 5 day average. However, it is evident that a greater volume of vehicles is recorded. On average, there are 3 more vehicles in the AM Peak and 4 more vehicles in the PM Peak in the 7 day average.



Figure 2-6 Location of traffic survey

The signposted speed at Calga Place is 40 km/h, however the average vehicle speeds recorded through this area are lower and have been summarised below:

- The entry of Calga Place (3. Calga Pl) showed the lowest speed of 17 km/h;
- The middle of Calga Place (4. Calga Pl) showed the highest mean speed of 21 km/h;
- The exit of Calga Place (5. Calga Pl) showed a mean speed of 19 km/h.

2.2.4 Parking

There are a number of parking areas in the study - and surrounding areas. The parking in these areas are time restricted and ticketed with varying restrictions. A summary of the parking zones in the vicinity of the project is provided in Figure 2-7.

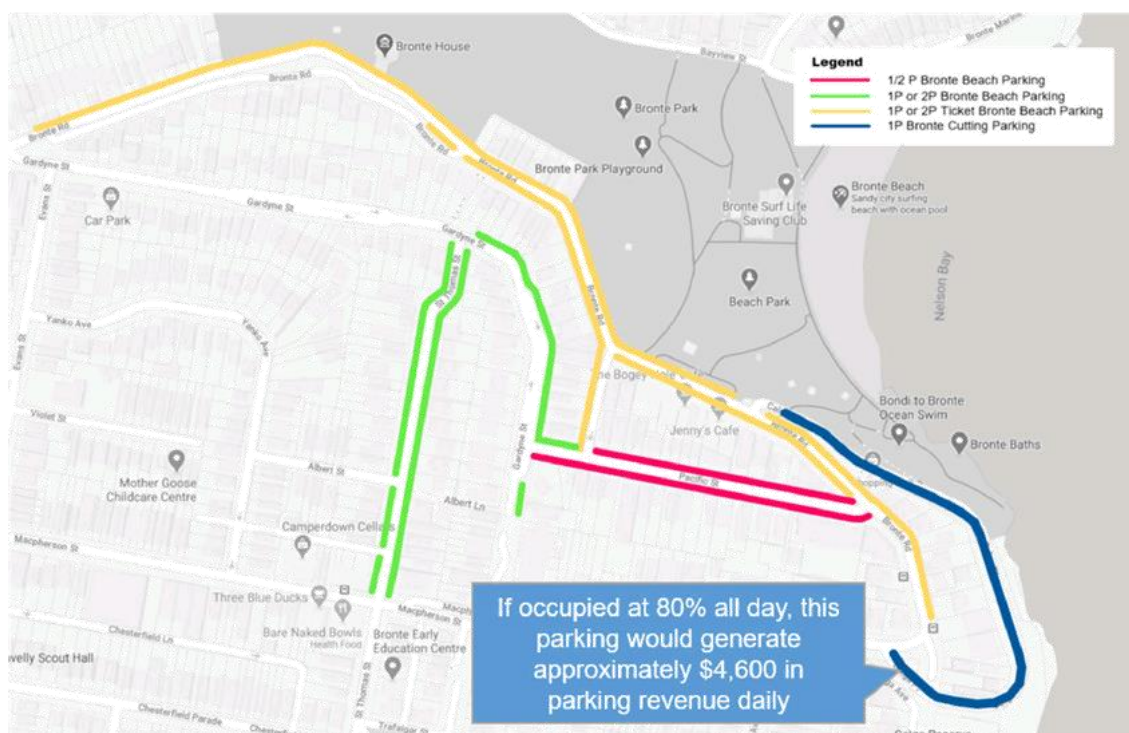


Figure 2-7 Parking zones

Bronte Cutting parking

The Bronte Cutting Parking Area is a seasonal ticket parking area with the following restrictions:

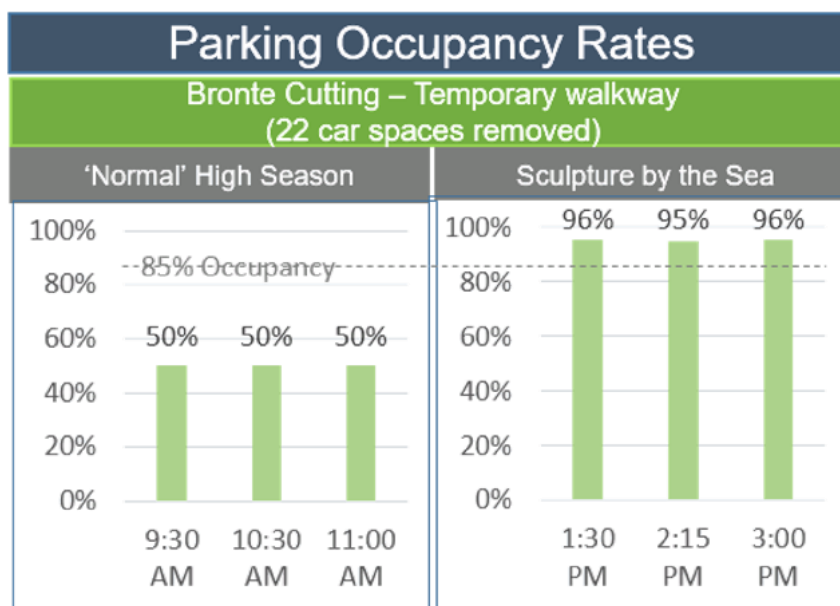
- 1P Ticket Parking 9am-8pm September through to May.

The Bronte Cutting car park includes:

- 140 parking spaces in total, including:
 - Two accessible (PWD) parking spaces;
 - Six Bronte Surf Life Saving permit spaces.

The temporary walkway implemented by WC on Calga Place in October 2018 has resulted in the removal of 22 spaces.

An analysis was undertaken on the parking occupancy rates after the construction of the temporary walkway. Figure 2-8 shows that on a 'normal' high season weekend there is an abundance of parking available with just 50% of parking being occupied. During the Sculpture by the Sea period, parking occupancy peaks to being in excess of 95% occupied. Usually an 85% occupancy rate is considered ideal.



Data Source: Bronte Cutting Pedestrian Link Project Analysis, DJN Traffic and Safety Solutions, 2018, adapted by GHD.

Note 1: Counts undertaken on Sat 3 Nov 2018 and Sat 17 Nov 2018

Note 2: No of vacant car spaces includes some disabled spaces and those available only for Council/Surf Rescue

Figure 2-8 Parking occupancy rates

2.2.5 Safety

Over the last 5 years, only three crashes were recorded with none resulting in fatalities. All crashes occurred during fine weather conditions, which does not indicate any trend. Table 1 and Figure 2-8 show the locations and types of crashes that have occurred.

Table 1 Crash analysis

ID	Location	Crash type	Weather	Surface condition
	Calga Place	Vehicle door	Fine	Dry
	Bronte Road	Off end of road	Fine	Dry
	Macpherson Street	Rear end	Fine	Dry



Source: Google Maps 2020 & TfNSW 2020, Modified by GHD

Figure 2-9 Crash locations

2.3 Lighting

Currently there is no lighting along Calga Place, reducing the experience of the coastal walkway for pedestrians. An objective of this project is to provide lighting to enhance the pedestrian experience in the early morning and late afternoon to evening. The design options have considered this objective in accordance with the Waverley Creative Lighting Strategy. Refer to Section 3.3 for GHD's proposed lighting design options.

2.4 Heritage

The site is located within the curtilage of the South Bronte Headland Landscape Conservation Area (LCA) and is in the vicinity of a number of other heritage items. Advisian was engaged to provide preliminary advice on the heritage aspects of the site and the impacts that each option would have.

The two main heritage elements listed within Advisian's Heritage Assessment which will be considered in the design are:

- The sandstone cutting through Calga Place - The sandstone cutting element of the LCA is a rare and significant modification to the natural landscape and is evidence of Sydney's tram network. The exposed sandstone is of exceptional historic and aesthetic historical interest;
- The sandstone cliffs and rock shelving - The LCA's sandstone cliffs and rock shelving is of "High" heritage significance to the Site. The sandstone cliffs are of high natural and scenic value and offer a vantage point for views along the coastline. Seating that has been

installed on to the sandstone cliffs do not detract from the significance of the element. This element is the key element in the LCA's significance.

As part of their assessment, Advisian also reviewed GHD's proposed design options, and provided the following feedback:

- Installation of a separated footpath along the eastern edge of the cutting is not anticipated to detract from the significance of the sandstone cutting element of the LGA. The footpath would also reduce the risk of vehicles damaging the cutting by relocating the parking to the west by 2 m;
- Changing Calga Place to a shared zone is considered to be minor to the heritage significance of the site, as the road is already a highly disturbed area and will not detract from the historic and rarity significance of the sandstone cutting element of the LCA;
- Installation of freestanding lights would have a moderate negative impact on the physical elements of the LCA and alter the aesthetic significance of the area through the contemporary addition of lighting elements;
- The installation of lighting poles that are fixed to the cutting would require drilling and bolting into the sandstone cutting which would have an irreversible impact on the sandstone cutting element of the LCA, which is graded as being of exceptional significance. This option is not recommended;

Based on the heritage elements and options discussed above, Advisian has recommended the following mitigation measures be considered in the development of the design:

- A Statement of Heritage Impact be prepared for the project;
- The design of the pedestrian walkway, including any art designs and other physical elements of the walkway, considers the visual setting of the surrounding locale and does not detract from the visual amenity of the LCA;
- Design should consider lighting options that do not involve drilling into the sandstone cutting and reversible interventions are preferred;
- Freestanding lighting pole design options should consider the context of the area as a significant heritage conservation area and be sympathetic to the surroundings. Where possible, lighting poles should have a minimalist design and seek to accentuate the elements of the LCA that are graded as being of high or exceptional heritage significance;
- In the event that historical archaeological resources are encountered, the Roads and Maritime Services Unexpected Heritage Items Heritage Procedure 02 (2015) is to be carried out.

Refer to Appendix A for Advisian's complete Heritage Memorandum.

2.5 Geotechnical conditions

As part of GHD's options assessment, a geotechnical site investigation of the cutting and surrounding area was undertaken. This section of the report presents and discusses the geotechnical site investigation and findings, which will be considered in the design going forward.

2.5.1 Geological setting

The Sydney 1:100,000 Geological Map (sheet 9130) shows the site lithology as Hawkesbury Sandstone, which typically comprises sub-horizontally bedded, medium to coarse grained quartz sandstone, with minor shale, mudstone, siltstone and laminate lenses.

2.5.2 Site walkover

An experienced GHD geotechnical engineer undertook a site walkover and high-level geological mapping on 11 June 2020. Both sides of the Calga Place cutting were appraised, including the 135 m section of footpath being considered in the options assessment, as described in Section 2.1 of this report. Observations from the site walkover are summarised below.

General

The surrounding topography is relatively steep, with approximately 30 m of elevation change between the top and bottom of Calga Place. The road is built at a consistent incline (suitable for trams at the time) with an average gradient of approximately 7%.

The 135 m section of footpath being considered is located within a box cutting through Hawkesbury Sandstone. The cutting is formed with vertical (90°) batters on either side of the road, with cutting heights ranging from 1 m up to 5 m above the current temporary footpath. The cutting extends up to 8 m high further along Calga Place, closer to Calga Avenue.

For the purposes of this geotechnical assessment, the full length of both cuttings were assessed with the eastern side (temporary footpath) covering Ch0 – Ch230 and the western side covering Ch0 – Ch220.

Sandstone cutting faces

The cutting generally exposed slightly weathered to fresh sandstone, with sub-horizontal bedding partings, with spacing generally observed to be between 0.3 m to 1 m or greater. Preferentially weathered beds were also observed, leading to some minor overhangs. The largest overhang has already been underpinned, located at approximately Ch65 on the eastern side, along the temporary footpath. Some overhangs (likely created during the road's construction) were observed opposite the footpath, approximately Ch85 on the western side.

Two sets of sub-vertical, orthogonally intersecting joints were observed within the bedrock, striking approximately NNE (~010°) & ESE (~100°). The joints were often discontinuous, constrained to single beds.

Figures 2-14 to 2-16 below show typical features observed in the rock cutting.



Figure 2-10 - Typical cutting face and small overhang



Figure 2-11 - Preferentially weathered beds and underpinned overhang

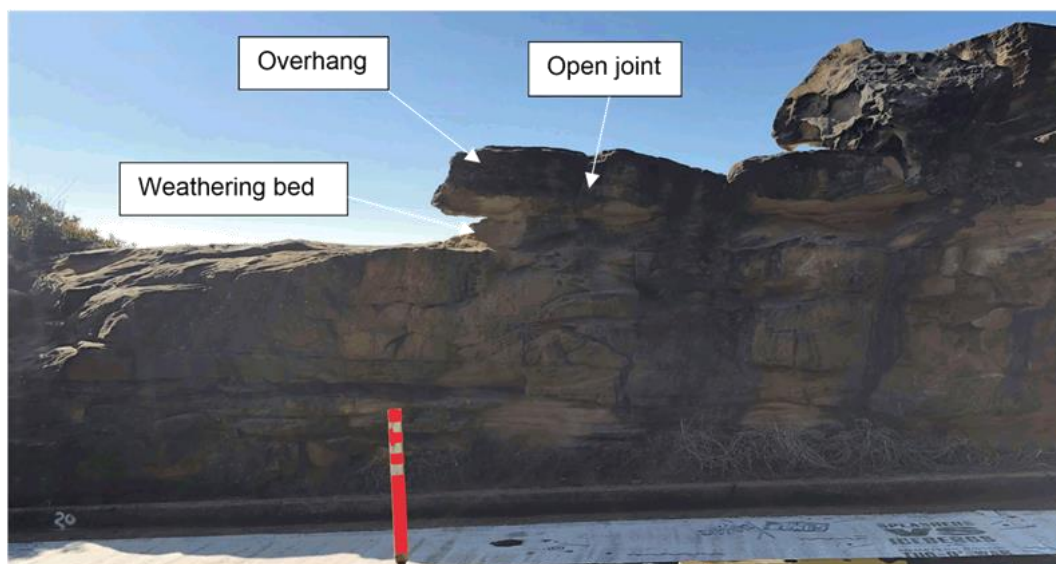


Figure 2-12 - Preferentially weathering beds causing undermining

Figure 2-12 shows an undermined sandstone overhang, caused by preferential weathering of the bed below. Adversely-oriented joints were observed in close proximity to the overhang, potentially allowing a block fall if the undermining further progresses. Potential hazards like this could occur along the cutting face and stabilisation should be considered during the later phases of design (outside of GHD's current scope).

Other notable features within the cutting have been highlighted in the photo mosaics found in Appendix B.

Cutting crests

The eastern crest is dominated by outcropping sandstone bedrock, with large defect driven steps formed by weathering and erosion. The western crest comprises a thin layer of soil overlying sandstone bedrock. Refer to Figure 2-13 and Figure 2-14.



Figure 2-13 - Eastern crest



Figure 2-14 - Western crest

Road formation

With the current temporary footpath being located solely within the box cutting, it is expected that there would be minimal fill below the pavement, likely associated with the construction of the pavement or legacy fill from previous uses of the cutting (tramway). It is expected that sandstone bedrock of similar condition observed in the cutting faces underlie the fill and could be classified as Class III or better sandstone. This is based on the classification system for Foundations on Sandstone and Shale in the Sydney Region, (Pells et al., 1998) and Geotechnical Parameters of Sydney Sandstone and Shale (Pells, Bertuizzi, 2002).

3. Design Options

As discussed in Section 1.2 of this report, GHD have considered two design options for the pedestrian safety improvements along Calga Place. These options include the following elements:

- Option 1 – Considers the replacement of the temporary walkway constructed by WC with a permanent concrete footpath that connects to the existing footpath to the north of the cutting and extends to Macpherson Street. This option also considers the widening of existing footpaths along Calga Place to the north of the cutting, where possible, to facilitate pedestrian usage.
- Option 2 – Considers converting Calga Place, starting at Bronte Road and ending at Macpherson Street, to a shared zone for both pedestrian and vehicle usage in accordance with Roads and Maritime Services (RMS) Technical Direction – Traffic Management and Road Safety Practice, TTD 2016/001. This option requires the removal of the existing footpath and relocation of existing parking spaces along the eastern side of Calga Place.

Alternative options that have also been considered include:

- Providing a path on top of the cutting with a viewing platform. This option proved to be infeasible due to the visual and construction impacts on the heritage conservation area;
- Alternative Option 1 arrangements, 1A and 1B, that include variances within Option 1 (see section 3.1.4);
- Alternative Option 2 arrangements, 2A, 2B and 2C, that include variances within Option 2 (see section 3.2.4).

3.1 Option 1 – Concrete footpath

Option 1 considers the removal of the temporary walkway (approximate length 130 m) along the eastern side of Bronte Cutting and replacing the temporary walkway with a permanent footpath. The permanent footpath will be installed from the start of the existing temporary walkway at the northern end of the cutting to the Calga Place intersection with Macpherson Street. Option 1 also seeks to improve pedestrian amenity further north of the cutting by widening existing footpaths along Calga Place to a minimum width of 2 m where possible.

Refer to Appendix C for sketch drawings of Option 1.

3.1.1 Civil and road infrastructure

Works associated with formalising the pedestrian footpath along Calga Place include:

- Removal of the temporary walkway and replacing it with a new 2 m wide concrete footpath (approximate length 130 m);
- Extending the 2 m wide concrete footpath to Macpherson Street (to be confirmed by Council);
- Widening existing concrete footpaths:
 - Approximate 90 m section of existing 1.2 – 1.5 m wide concrete footpath to be widened to 2.0 m wide;
 - Approximate 45 m section of existing 1.3 m wide concrete footpath to be widened to 1.8 m wide;
- Reconstruction of existing kerb and gutter for all footpath widening sections;

- New kerb and gutter where new pedestrian footpath is to be constructed;
- Re-marking of parking spaces impacted by footpath widening;
- Trafficable lane widths reduced up to a minimum of 2.8 m where existing footpaths are widened;
- Construction of new kerb inlet pits on the new kerb alignment with stormwater pipes to connect the new pits to the existing stormwater pits.

3.1.2 Traffic and parking

Option 1 will have the following impacts on traffic:

- Reduced lanes widths where the existing footpaths are widened could result in reduced traffic speeds;
- Permanent removal of 39 parking spaces along the eastern side of Bronte Cutting.

3.1.3 Key risks

The key risks associated with this option are:

- Pedestrians not using the footpath provided and choosing to walk on the road.

3.1.4 Alternative Option 1 arrangements

- Option 1A – Replacing only the temporary walkway section with a permanent footpath as per Option 1 without the extension to Macpherson Street, while also widening the existing footpath to the north of the cutting where possible. This option proposes to only construct a new footpath for Stage 1 and 2 of the works, which would result in 17 less parking spaces removed;
- Option 1B – Widening the existing footpaths from the northern end of Calga Place to the start of the cutting to a width of 2.5 m by realigning a section of the western kerb line and retaining wall near the steps from Bronte Road (refer to Figure 3-1 below). This option also considers reducing the traffic lane width within the cutting to 3 m, which provides an opportunity for a 3 m concrete footpath to be installed through the cutting. This option also provides a 1.2 m wide footpath from the southern end of the cutting to Macpherson Street while retaining parking along that section.



Figure 3-1: Proposed kerb and retaining wall realignment

3.2 Option 2 – Shared zone

Option 2 considers formalising a shared zone on Calga Place (Bronte Cutting) to manage pedestrian/vehicle conflicts in this low vehicle and high pedestrian activity area. The shared zone would feature a 10 km/h speed limit and require traffic calming devices to cause drivers to reduce their speed when travelling along Calga Place. Within a shared zone, pedestrian users have right of way over vehicles, which would significantly improve pedestrian safety.

Currently, Calga Place complies with the majority of the Transport for New South Wales' (TfNSW) Safer Speeds Policy and Guidelines SS/12/01 – Shared Zone Policy. A summary of these requirements has been provided in Table 2 below.

Table 2 Shared zone requirements

Warrant Requirements	Requirements Check	Degree Met
Current Traffic Flows – ≤ 100 vehicles per hour and ≤ 1000 vehicles per day	Peak hour vehicle volumes do not exceed 100 vehicles per hour	Degree met
Current Speed Limit – ≤ 50 km/h	Sign posted speed limit is 40 km/h	Degree met
Length of Proposed Shared Zone – ≤ 400 metres	Proposed shared zone area has approximate length of 460 m	Degree not met
Current Speed Limit of Adjoining Roads – ≤ 50 km/h	Adjoining roads are Bronte Road with a speed limit of 40 km/h and Macpherson Street with a speed limit of 50 km/h	Degree met

Warrant Requirements	Requirements Check	Degree Met
Current Carriageway Width – Minimum trafficable width of 2.8 m	Trafficable widths of Calga Place are greater than 3 m	Degree met
Route Access – Must not be located along bus route or heavy vehicle routes except delivery or garbage trucks	No bus routes or heavy vehicle routes service this road	Degree met
Streets with Narrow or No Footpath – Where pedestrians are forced to use the road	Pedestrians have little to no choice but to use the road to access this area	Degree met
Kerbs – Kerbs must be removed unless excepted by Roads and Maritime Services	Kerbs are currently in place due to current parking infrastructure and drainage system	Degree not met

As shown in Table 2, the length of the shared zone in GHD's design is currently 460 m for the full length of Calga Place, which is larger than the recommended maximum length of 400 m. The recommended length of 400 m is only a recommendation, and if required, the length of the shared zone can be extended to suit the requirements of the site.

In addition to the length of the existing shared zone, Calga Place has kerb and gutters along the eastern side of the road, which does not comply with the shared zone requirements listed in Table 2. GHD's design addresses this requirement, in Section 3.2.1, by removing the existing footpaths and relocating existing parking towards the eastern edge of Calga Place.

Refer to Appendix C for sketch drawings of Option 2.

3.2.1 Civil and road infrastructure

The impact of implementing a shared zone through the Bronte Cutting involves complying with RMS Technical Direction – Traffic Management and Road Safety Practice, TTD 2016/001, which requires:

- Additional signage throughout the extent of the shared zone, including signage advising the start and end of the shared zone, signage for vehicles to park in bays only, and give way to pedestrian signage;
- Additional traffic calming devices in the form of speed humps;
- Replacement of existing pavement surface with one of a different texture and colour;
- Realignment of the existing eastern kerb and gutter by 1 m to the east to allow for parking to be relocated to the east along the edge of the existing fence;
- Removal of existing footpaths;

In addition to the requirements of the RMS technical specifications, the following modifications will also be required to accommodate the shared zone along Calga Place:

- Installation of traffic barriers along the eastern edge of Calga Place to mitigate the risk of vehicles driving down the embankment;
- Installation of a capping beam or retaining wall along the eastern edge of the cutting to support the additional loads from vehicles parking along the edge of the road. The extent of

the retaining wall or capping beam is to be confirmed prior to the finalisation of the concept design should option 2 be selected as the preferred option;

- Modification of existing stormwater pits by installing new inlet pits within the new gutter alignment and connecting these pits to the existing stormwater pits.

3.2.2 Traffic

A shared zone will have the following impacts on the existing traffic conditions along Calga Place:

- A reduction of the existing speed limit (40 km/h) to 10 km/h would be required through the extent of the shared zone. As described in Section 2.2, existing traffic speeds are between 17 and 21 km/h;
- Pedestrians will have right of way, which will increase travel time along Calga Place;
- Relocation of parallel parking spaces along the eastern side of the road closer to the edge of the embankment. This will not impact the number of spaces available for parking (139 spaces).

3.2.3 Key risks

The key risks associated with this option are as follows:

- There is the risk that vehicles could drive over the embankment, which means barriers, bollards or other protection measures will be required along the eastern edge of Calga Place to mitigate this risk. This will have a significant impact on the construction costs for this option, and therefore a Provisional Sum for this has been allowed in the cost estimate of Option 2 (see Section 4);
- With the removal of the existing footpath, converting the area to a shared zone, and relocation of parking, vehicles will drive and will park close to the edge of the embankment on the eastern side of Calga Place. The embankment is not currently required to support these vehicle loadings, and parking vehicles in this zone could cause stability issues. Based on the visual site investigation undertaken by GHD's geotechnical engineer, during which differential settlement of the existing footpath in localised areas was observed (refer to Figure 3-2), the design for Option 2 will have to consider the installation of a retaining wall or capping beam along the eastern edge of Calga Place to mitigate the risk of embankment failure. A Provisional Sum has therefore been included in the cost for Option 2 (see Section 4) to allow for the construction of these mitigation measures. If selected as the preferred option, the next step for the design will require intrusive investigations of the eastern edge of the road to determine the extent of the retaining wall or capping beam required.



Figure 3-2: Existing footpath settlement and separation from kerb

3.2.4 Alternative Option 2 arrangements

- Option 2A – Includes a shared zone starting at Bronte Road and finishing at the end of the existing temporary walkway section, without the extension to Macpherson Street. This option would reduce the length of the proposed shared zone by 100 m (approximate length), which means it would comply with TfNSW's requirement for the shared zone (shorter than 400 m);
- Option 2B – Similar to Option 2, but instead of replacing the existing wearing course with a coloured wearing course, we allow for a colour coating / paint to be applied to the existing pavement surface. This is a much cheaper solution, but is less permanent and might require regular maintenance as the colour of the paint fades;
- Option 2C – Considers a shared zone along the eastern side of Calga Place, converting parking on the western side of the road from Bronte Road to the start of Bronte Cutting to 45 degree angled parking (52 angled parking spaces) and removing the parallel parking along the eastern side of the road (35 removed). This would result in a loss of 16 parking spaces along the length of Calga Place. This option was compared to Option 2, and due to the additional width required for the 45 degree parking, less space will be available for the shared zone than in Option 2, therefore this option was not considered in the cost estimates in Section 4 of this report.

3.3 Lighting

GHD's lighting design will look to split Calga Place into three different sections. The three different lighting sections would be based on the natural environment changing along the street and would be applicable for either of the two design options. The three different sections are shown in Figure 3-3 below.



Figure 3-3: Three different sections of Calga Place

It is proposed that pole top lighting would be used in Sections 1 and 3 as there appears to be sufficient space for new light poles to be installed on the side of the road. The lighting throughout Section 2 (Bronte Cutting) will likely have to be of a different type as the space is restricted in that section due to the sandstone on either side of the road. The lighting design will comply with Waverley Council's Creative Lighting Strategy (October 2018), which recommends a lighting level category of P4 or P5 for coastal walkways. The spacing of the lighting allowed for in the options assessment might change once further analysis is undertaken in the concept design stage.

3.3.1 Pole top lighting

The pole top lighting would have a similar specification to what is set out in the Waverley Creative Lighting Strategy and would provide a comfortable level of lighting for the pedestrian area. Refer to Figure 3-4 below for a potential option.



Figure 3-4 Pole top light installed at Bondi Beach

3.3.2 Other lighting options

Alternative lighting could be considered throughout Section 2 so that the effects on the sandstone throughout the cutting can be expressed in accordance with the Waverly Creative Lighting Strategy. Different lighting types for this area could include bollard lighting or in-ground lighting. Refer to Figure 3-5 below for potential options.



Figure 3-5: In-ground LED lighting on the left. Bollard lighting on the right.

3.3.3 Power requirements

Pedestrian lighting to the bus drop off area along Bronte Road was recently upgraded and this lighting is supplied from a main switchboard located in the corner of the bus drop off area. A meeting with Waverley Council on 16 June 2020 was held and it was confirmed in that meeting that there is sufficient space in the main switchboard to supply the lighting upgrades to Calga Place. Figure 3-6 below shows the location of main switchboard.



Figure 3-6: Location of existing private pillar and main switchboard

4. Cost Estimates

This section of the report provides a summary of the construction cost estimates for each of the design options discussed in section 3.

As discussed in section 3.2.3, a provisional sum has been included for Option 2 to allow for the installation of traffic barriers along the eastern kerb line. A provisional sum for embankment stabilisation is also included, should it prove to be required.

Table 3: Construction cost summary

Option	Total Cost	Staged Cost
Option 1	\$838,094	Stage 1: \$232,150 Stage 2: \$394,784 Stage 3: \$211,160
Option 1A	\$626,934	Stage 1: \$232,150 Stage 2: \$394,784
Option 1B	\$916,810	Stage 1: \$242,150 Stage 2: \$463,500 Stage 3: \$211,160
Option 2	\$1,209,126 (\$1,809,126 including provisional sums)	Stage 1: \$258,819 Stage 2: \$749,870 Stage 3: \$200,437 Traffic Barrier: \$100,000 (Prov. Sum) Slope Stabilisation: \$500,000 (Prov. Sum)
Option 2A	\$1,008,689 (\$1, 608,689 including provisional sums)	Stage 1: \$258,819 Stage 2: \$749,870 Traffic Barrier: \$100,000 (Prov. Sum) Slope Stabilisation: \$500,000 (Prov. Sum)
Option 2B	\$1,012,399 (\$1,612,399 including provisional sums)	Stage 1: \$204,243 Stage 2: \$647,902 Stage 3: \$160,254 Traffic Barrier: \$100,000 (Prov. Sum) Slope Stabilisation: \$500,000 (Prov. Sum)

The costs summarised in Table 3 are based on the preliminary cost estimates undertaken by Vasey Consulting and additional calculations using the Rawlinson's Construction Handbook (2020).

5. Options Comparison

The advantages and disadvantages of each option are summarised in Table 4.

Table 4 Pros and cons comparison for each base option

Option 1, Option 1A and Option 1B	
Advantages	Disadvantages
Existing temporary walkway has been tested and for the most part is working.	People can still be seen to walk on the road at times even with the implementation of the temporary walkway.
Widening of existing footpaths should incentivise pedestrian use.	Requires permanent removal of 39 parking spaces resulting in a loss of revenue for WC. (Can be reduced to 22 if parking is retained south of the cutting area).
Cheaper construction costs than Option 2	
Removal of parking spaces will lower the risk of car related damage to the side of the cutting area (heritage).	
Option 1B retains the parking spaces (17) between the cutting and Macpherson Street.	
Provides clear separation between pedestrians and vehicles	
Option 2, Option 2A and Option 2B	
Advantages	Disadvantages
Increased safety for pedestrians who currently choose to walk on the road rather than use the temporary walkway provided.	Requires replacement of a significant area of road pavement with paving / other textured material - recolouring of large amounts of pavement.
Increased number of parking spaces	Will require night works / road closure to replace pavement.
	Most expensive to construct
	Required guard rails or traffic barriers along the eastern edge of the road
	Requires retaining walls or capping beams to stabilise embankment
	Will increase travel time along Calga Place for vehicles with pedestrians taking priority within the road

6. Conclusion / Recommendation

Based on the existing conditions discussed in section 2 of this report, GHD has undertaken a detailed options assessment for the safety upgrades to Calga Place and the Bronte Cutting within Bronte. The options assessment focussed on two different design solutions, with some minor alterations of these options also discussed as sub-options. Based on the assessments of the options, the following provides a short summary of each option, the risks and constraints associated with each option and provides Council with a recommendation for a preferred option.

Lighting – The preferred lighting solution will be based on the safety upgrade solution selected. Should Option 1 be selected, GHD recommends using poles with top lights in Stage 2 and 3, with bollard lights through the cutting section (Stage 1). If Option 2 is selected, poles with top lights will be the only solution along the full length of Calga Place. Option 2 will require more light poles with shorter spacing's in between due to the increased surface area that has to be illuminated to the specified lighting Category (P4 or P5) as per the Creative Lighting Strategy. Once the preferred pedestrian / traffic options are confirmed, GHD will undertake a detailed assessment of the lighting design to confirm the spacing's of the poles / bollards and the lighting category achievable.

Option 1 – Includes the provision of a new concrete footpath along the eastern end of Calga Place from the northern end of the cutting to Macpherson Street, which results in a loss of 39 parking spaces. It also allows for the widening of the existing footpath to the north of the cutting to a minimum width of 2 m. Option 1 is overall the second cheapest option, with the main risk being pedestrians not using the footpaths and deciding to walk on the road. The traffic lanes remains the same, which means vehicles speeds will remain similar to the existing.

Option 1A – Includes the same upgrades as in Option 1, but does not allow for the construction of the Stage 3 works, which is the footpath that runs from the southern end of the cutting to Macpherson Street. Option 1A results in a loss of only 22 parking spaces in comparison to Option 1's 39 spaces, but has similar risks, with the trafficable lanes staying the same and the footpath widths being limited to 2 m. This option is the cheapest of all the options discussed, but mainly due to the exclusion of the Stage 3 works from the scope.

Option 1B – Proposes to reduce the trafficable lane width to 3 m for the full length of Calga Place and realign a 50 m section of the existing kerb and retaining wall along the western edge of the road near the steps from Bronte Road. This will allow the installation of a new 3 m wide concrete footpath through the cutting, and widening of the existing footpaths north of the cutting to 2.5-3 m. Option 1B also allows for the installation of a 1-1.2 m wide footpath to the south of the cutting to connect to Macpherson Street, while also retaining the 17 parking spaces through this section. The risk of pedestrians using the road for travel is reduced for this option due to the reduced traffic lanes and the widened footpaths. Option 1B is the most expensive of all Option 1 alternatives, but has the least impacts and risks for pedestrian and vehicle users.

Option 2 – Includes changing Calga Place to a shared zone for pedestrians and vehicles to use. This option requires the changing of the pavement colour and surface type, as well as the removal of all the existing footpaths along the eastern edge of the road. Option 2 would provide a shared zone corridor width of 4 m through the cutting and 4-5.8 m to the north of the cutting in which pedestrians and vehicles can move freely. Option 2 is the most expensive option of all the options, and has the most significant risks. By removing the footpaths along the eastern edge of Calga Place, the road will require a guard rail or traffic barrier to protect vehicles from driving down the embankment, which adds additional costs to the option. The other risk is the stability of the embankment, which isn't currently affected by vehicle loads due to the 2 m wide footpath. Once the footpath is removed, vehicles will be parking within 500 mm of the edge of the

embankment, which could have a significant impact on the stability of the slope. Based on the risks for this option, and the early signs of differential settlement of the footpath noted on site, GHD recommends including a provisional sum of \$500,000 for the construction of retaining walls or capping beams to mitigate the risk of embankment failure.

Option 2A – Similar to Option 2, but does not allow for the construction of the works within Stage 3. Option 2A is slightly cheaper than Option 2, but has all the same risks and is significantly more expensive than any of the Option 1 solutions.

Option 2B – Similar to Option 2, but instead of replacing the existing wearing course (WC) of the road with a coloured WC, Option 2 proposes the use of a paint coating to colour the existing pavement. This is the cheapest solution of all three Option 2 alternatives, but is a less permanent solution and still carries the same risks as Option 2, which makes it significantly more expensive than Option 1.

Based on the summaries provided for each Option, GHD recommends Option 1B as the preferred design solution to be developed further. The recommendation is based on the significant risks that Option 2 has with regards to vehicle safety and embankment stability, which could also have significant cost implications for the project. Although Option 1B is slightly more expensive than the other Option 1 alternatives, it reduces the risks of pedestrians walking within the road by providing a much wider footpath and also reduces the width of the traffic lanes. It also retains the 17 parking spaces to the south of the cutting while installing a footpath to connect the cutting to Macpherson Street.

Appendices

Appendix A – Advisian Heritage Memorandum

Memorandum

Subject	Bronte Cutting Safety Upgrade – Heritage Advice for Options Considered		
Date	Wednesday, 24 June 2020	Pages	11
To	Guillaume de Swardt (GHD)	From	Thea Kane (Advisian)
CC	Waverley Council Claire Jones (Advisian)		
Project	Bronte Cutting Safety Upgrade		

Advisian provides the below preliminary advice on the potential impacts of the safety upgrade options proposed by GHD (the Client) and Waverley Council (the Council) on the heritage significance of the Bronte Cutting Pedestrian Link located within the curtilage of the "South Bronte Headland Landscape Conservation Area" (the LCA). These options are described by GHD as follows:

Option 1A – Replace the existing temporary footpath that the Council installed approximately 18 months ago with a permanent footpath along the eastern side of Calga Place with freestanding lighting poles.

Option 1B – Replace the existing temporary footpath that the Council installed approximately 18 months ago with a permanent footpath along the eastern side of Calga Place with lighting fixed to the sandstone cutting.

Option 2A – Change Calga Place to a pedestrian / vehicle shared zone with freestanding lighting poles.

Option 2B – Change Calga Place to a pedestrian / vehicle shared zone with lighting fixed to the sandstone cutting.

Option 3 – 'Do nothing'.

In preparing this advice, Advisian has reviewed the following information:

- Waverley Local Environmental Plan 2012 (the LEP).
- Waverley Development Control Plan 2012 (the DCP).
- NSW State Heritage Inventory (SHI).
- Aboriginal Heritage Information Management System (AHIMS).
- Draft State Heritage Inventory – South Bronte Landscape Conservation Area Extension.
- Photographs from Advisian site inspection on 5 June, 2020.
- Draft Waverley Cultural Plan 2020 – 2025.
- Waverley Aboriginal Cultural Heritage Study.

The Site and History

The proposed project footprint (the Site) consists of a one-way road known as Calga Place which makes up a portion of the Coastal Walk from Bronte to Bondi in Sydney's Eastern Suburbs. This portion of the Coastal Walk through Calga Place is commonly known as "*Bronte Cutting*" and does not include a permanent footpath for pedestrians. Over one million people use the Coastal Walk every year, and this missing link in the footpath through Bronte Cutting means that during peak times, as many as 500 pedestrians per hour are forced to walk along the road creating conflict between pedestrians and vehicles. A temporary footpath was implemented in November 2018 through the Bronte Cutting which temporarily replaced 20 car parking spaces on the eastern side of the road.

Prior to the appropriation of their lands by Europeans, the Sydney region was made up of over twenty different Aboriginal clan groups. The Waverley area formed part of the traditional lands of the clan known as the Cadi-gal (Dominic Steele Consulting Archaeology, 2009). The coastal cliffs along Calga Place were previously assessed as having Aboriginal archaeological potential, however there are no known deposits or items within the site.

The Bronte Cutting was constructed around 1910 to provide a suitable grade for trams out of Bronte Beach, which began running in 1911. Sydney trams were particularly important in providing access to the eastern beaches. The Bronte Cutting allowed the tramline to be extended to Bronte Beach from its previous terminus at Waverley Cemetery. The cultural fabric of the tram line at the Bronte Cutting corridor has remained virtually intact since construction, with the exception of removal of tram infrastructure (State Heritage Register, n.d.).

The Site (shown below in red) is located within the curtilage of the "*South Bronte Headland Landscape Conservation Area*" (No. C59) listed under Schedule 5 of the LEP, and in the vicinity of a number of other heritage items, as shown in Figure 1. GML Heritage (on behalf of the Council) prepared a draft State Heritage Inventory sheet for extending the current LCA to list the entire length of the Bronte Cutting to include the former tram terminus site at Bronte to Calga Cutting's junction with Macpherson Street. The extension would also include the current Bronte Bath heritage item (I280) and Calga Avenue Landscape Conservation Area (C32) and Bronte Reserve (not currently listed). The proposed extension is outlined in black in Figure 1 below.



Figure 1 Current LCA boundary and proposed extension of the LCA (Source: GLM Heritage, 2019)



Figure 3 Present day Bronte Cutting (Source: Advisian, 2020)

Bronte Cutting Safety Upgrade – Heritage Advice for Options Considered



Figure 2 Tram passing through the Bronte Cutting (Source: unknown, n.d.)

Advisian 4

Heritage Significance of the Site

For the purposes of providing an understanding of the heritage significance of the site and the context, the Statement of Significance of the "South Bronte Headland Landscape Conservation Area" from its State Heritage Inventory entry is provided as follows:

Outstanding sandstone cliffs and rock shelving of natural and scenic value. Vantage point for spectacular views along coastline. Conserves vestiges of native vegetation. Local significance.

The Assessment of Significance for the "South Bronte Headland Landscape Conservation Area" from its State Heritage Inventory entry records its significance as follows:

Table 1 NSW State Heritage Register Assessment of Significance

Criteria	"South Bronte Headland Landscape Conservation Area" Description
SHR Criteria c) [Aesthetic significance]	This item is of natural and streetscape/landscape significance

The above statement of significance and assessment of significance of the site does not take into account the rarity value and cultural history value associated with the site's history as a former tram route. A previous heritage item at the location named "Sandstone Cutting – Former Tram Route" was listed in the Waverley Local Environmental Plan 1996 but was not included in the current LEP. For this reason, Advisian has prepared an independent statement of significance and additional assessment of significance in line with the Council's proposed SHI extension for the LCA to account for the omission of former tram route elements in the current LCA's listing. Advisian's statement of significance is provided as follows:

South Bronte Headland Landscape Conservation Area has significant natural and cultural heritage values. The headland has significant aesthetic value for its outstanding sandstone cliffs and rock shelving which held in high esteem by locals and tourists who use the area to traverse the Bondi to Bronte Coastal Walk. Calga Place is a rare reminder of a former dedicated route for Sydney's trams, which were an important link to Sydney's eastern beaches. The cutting is direct evidence of the primary theme of transport and the exposure of natural sandstone is of high aesthetic and historical interest. The sandstone cutting has technical value as an engineering exemplar of early 20th century municipal council coastal landscape civic works to improve access to the city's beaches.

Advisian's Assessment of Significance has been developed in line with the Council's draft SHI extension for the LCA and is as follows:

Table 2 Advisian Assessment of Significance

Criteria	"South Bronte Headland Landscape Conservation Area" Description
SHR Criteria a) [Historical significance]	The LCA demonstrates development of coastal public lands and civic improvement as an integral part of the local history. It demonstrates the emergence of beach culture as an element of national identity

Criteria	"South Bronte Headland Landscape Conservation Area" Description
	that has shaped landscapes into significant cultural and recreational facilities. The LCA demonstrates the role public recreation and improved public transportation had on the development of Bronte as a tourism and residential destination from the late 19 th century and is of historical significance.
SHR Criteria c) [Aesthetic significance]	The South Bronte Headland has natural landscape significance and is one of a number of popular vantage points along the <i>Bondi to Bronte Coastal Walk</i> . The dramatic sandstone cliffs offer expansive views north toward Bondi Beach. The area is held in high esteem by local residents and tourists as a natural landscape setting.
SHR Criteria e) [Technical / research potential]	The LCA is of scientific significance as the cliffs of the LCA have been previously assessed as having potential to contain Aboriginal archaeological deposits, rock engravings, and grinding grooves.
SHR Criteria f) [Rarity]	The Bronte Cutting element of the LCA is a rare exemplar of landform modification for the purposes of establishing a dedicated tram route to the eastern beaches.

Grading of Significance

A grading of the main elements within the Site (Table 4) has been undertaken in accordance with Section 6 of the NSW Heritage Office's "*Assessing heritage significance*" guideline (Table 3) to determine which elements contribute to the heritage significance of the Site and inform the assessment of impact of the options.

Table 3 NSW Heritage Office's Gradings of Significance

Grading	Justification	Status
Exceptional	Rare or outstanding element directly contributing to an item's local and State significance	Fulfils criteria for local or State listing.
High	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfils criteria for local or State listing.
Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or State listing.
Little	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for local or State listing.
Intrusive	Damaging to the item's heritage significance	Does not fulfil criteria for local or State listing.

Table 4 Grading of the elements

Element	Grading	Assessment
Sandstone cutting through Calga Place	Exceptional	The sandstone cutting element of the LCA is a rare and significant modification to the natural landscape and is evidence of Sydney's tram network. The exposed sandstone is of exceptional historic and aesthetic historical interest.
Sandstone cliffs and rock shelving	High	<p>The LCA's sandstone cliffs and rock shelving is of "High" heritage significance to the Site. The sandstone cliffs are of high natural and scenic value and offer a vantage point for views along the coastline.</p> <p>Seating that has been installed on to the sandstone cliffs do not detract from the significance of the element.</p> <p>This element is the key element in the LCA's significance.</p>
Car parking spaces, car parking meters and bitumen road	Little / Intrusive	The car parking spaces, car parking meters and bitumen road are considered to detract from the significance of the LCA.
Native and introduced vegetation, some newly planted.	Little	Vegetation within the LCA are not original and some have been newly planted by the Council. Many of the species are introduced species. These are considered to be of little heritage significance.
Timber and steel fencing	Little / Intrusive	The timber and steel fencing along the Site detract from its heritage significance.
Turfed park area	Little	The grass park area connects the sandstone cutting part of the LCA to the "Bondi to Bronte Coastal Walk". The area is highly modified and includes a concrete path, water stations, a marble sculpture, council bins, park benches, and native vegetated areas. These elements detract from the heritage significance of the LCA.

Heritage Impact of Proposed Options

In consideration of the aforementioned sections which provided context for the heritage significance of the *Bronte Cutting* located within the curtilage of the LCA, Table 5 has assessed the potential impact of pedestrian link options on the conservation values of the Site.

Table 5 Preliminary Heritage Impact Assessment of Proposed Options

Works	Heritage Impact
Option 1A - Installation of a permanent footpath along the eastern side of Calga Place with freestanding lighting poles.	
Installation of permanent raised pedestrian footpath to replace existing temporary footpath along the eastern side of Calga Place.	The installation of a permanent footpath along the eastern side of Calga Place would be upon an existing highly disturbed section of the LCA. That section of the roadway has had a temporary footpath installed since November of 2018. This temporary

Works	Heritage Impact
Installation of freestanding lighting poles through the cutting.	<p>footpath has had inconsequential impacts on the LCA. The proposed permanent footpath would be visually similar to the existing temporary footpath, but would be raised approximately 20cm from the road surface.</p> <p>This option is not anticipated to detract from the significance of the sandstone cutting element of the LCA as this option would not include any physical changes to the exposed sandstone and will not detract from the historic importance of the element as a former tram route.</p> <p>The installation of a permanent footpath would remove car parking spaces on the eastern side of the roadway, which would lower the risk of car related damage to the side of the cutting area of the LCA.</p> <p>The installation of freestanding lights would have a moderate negative impact on the physical elements of the LCA and alter the aesthetic significance of the area through the contemporary addition of lighting elements.</p> <p>This option would have negative impacts on the elements of the LCA that are graded as having high to exceptional heritage significance, that is the sandstone cutting, and sandstone cliffs and rock shelving. These impacts could be managed through the adoption of appropriate mitigation measures.</p>
Option 1B - Installation of a permanent footpath along the eastern side of Calga Place with lighting fixed to the cutting.	
<p>Installation of permanent raised pedestrian footpath to replace existing temporary footpath along the eastern side of Calga Place.</p> <p>Installation of lighting fixed to the cutting.</p>	<p>Heritage impacts as above for the permanent footpath in Option 1A.</p> <p>The installation of lighting poles that are fixed to the cutting would require drilling and bolting into the sandstone cutting which would have an irreversible impact on the sandstone cutting element of the LCA which is graded as being of exceptional significance.</p> <p>This option would have a significant negative physical and aesthetic impact on the elements of the LCA that are graded as having high or exceptional heritage significance by creating irreversible lateral holes into the sandstone to hold lighting in place.</p>
Option 2A - Change Calga Place to a pedestrian / vehicle shared zone with freestanding lighting poles.	
<p>Resurfacing of Calga Place including removal of existing bitumen road.</p> <p>Installation of freestanding lighting poles through the cutting or installation of lighting poles fixed to the sandstone cutting.</p>	<p>Changing Calga Place to a pedestrian / vehicle shared zone would involve the resurfacing of the entire Calga Place through the Bronte Cutting. This option would include removing the existing road surface and installing paving through the Site. If a coloured asphalt is proposed, only a small layer of the existing asphalt would need to be removed.</p> <p>The physical impacts of resurfacing would be limited to the elements of the LCA that are graded as having little / intrusive</p>

Works	Heritage Impact
	<p>heritage significance, including car parking spaces, car parking meters and the bitumen road.</p> <p>The construction and operational impacts of this option is considered to be minor to the heritage significance of the Site, as the road is already a highly disturbed area and will not detract from the historic and rarity significance of the sandstone cutting element of the LCA.</p> <p>The installation of freestanding lights would have a moderate negative impact on the physical elements of the LCA and alter the aesthetic significance of the area through the contemporary addition of lighting elements.</p> <p>This option would have negative impacts on the elements of the LCA that are graded as having high to exceptional heritage significance, that is the sandstone cutting, and sandstone cliffs and rock shelving. These impacts could be managed through the adoption of appropriate mitigation measures.</p>
Option 2B - Change Calga Place to a pedestrian / vehicle shared zone with lighting fixed to the cutting	
<p>Resurfacing of Calga Place including removal of existing bitumen road.</p> <p>Installation of lighting fixed to the sandstone cutting.</p>	<p>Heritage impacts as above for resurfacing in Option 2A.</p> <p>The installation of lighting poles that are fixed to the cutting would require drilling and bolting into the sandstone cutting which would have an irreversible impact on the sandstone cutting element of the LCA which is graded as being of exceptional significance.</p> <p>This option would have a significant negative physical and aesthetic impact on the elements of the LCA that are graded as having high or exceptional heritage significance by creating irreversible lateral holes into the sandstone to hold lighting in place.</p>
Option 3 – ‘Do nothing’	
No works	<p>The ‘do nothing’ approach is not feasible on the basis of not fulfilling Council’s responsibility to provide safe pedestrian access at the Site.</p>

Recommended Mitigation Measures

The recommended management of works within the curtilage of “*South Bronte Headland Landscape Conservation Area*” is as follows:

- It is recommended that a Statement of Heritage Impact be prepared for the project.
- It is recommended that the design of the pedestrian walkway, including any art designs and other physical elements of the walkway, considers the visual setting of the surrounding locale and does not detract from the visual amenity of the LCA.

- It is recommended that lighting options that do not involve drilling into the sandstone cutting and are reversible interventions are preferred.
- Freestanding lighting pole design options should consider the context of the area as a significant heritage conservation area and be sympathetic to the surroundings. Where possible, lighting poles should have a minimalist design and seek to accentuate the elements of the LCA that are graded as being of high or exceptional heritage significance.
- In the event that historical archaeological resources are encountered, the *Roads and Maritime Services Unexpected Heritage Items Heritage Procedure 02* (2015) is to be carried out.

Aboriginal Heritage

The lands of the Cadi-gal people extended along the southern shore of Port Jackson from South Head to around Pyrmont. The southern boundary is less defined, however, it is believed to have reached to around present day Botany Bay. The Waverley area is thought to have represented around 10% of the area at the eastern end of Cadi-gal land and was possibly unoccupied during some parts of the year (Dominic Steele Consulting Archaeology, 2009).

Previous assessment of the coastal cliffs at Calga Avenue found the area has potential to contain Aboriginal archaeological deposits and / or rock engravings or grinding grooves, however there are currently no known Aboriginal cultural heritage items at the site (GML Heritage, 2019). The area is also mapped in the DCP as having high Aboriginal cultural sensitivity, requiring all developments in this area to gain consent and to exercise due diligence to determine whether an Aboriginal heritage impact permit (AHIP) is required for a project.

Background review

Waverley Aboriginal Cultural Heritage Study

The “*Waverley Aboriginal Cultural Heritage Study*” was prepared by Dominic Steele Consulting Archaeology in 2009 to research and identify Aboriginal cultural heritage sites documented to occur within the Waverley Local Government Area (LGA) for inclusion in the LEP. The document was established in consultation with the *La Perouse Local Aboriginal Land Council* and the *Dharawal Elders Group* to provide the Council with a recommended strategy for recording and managing currently undocumented items and sites of Aboriginal heritage within the Waverley LGA that may be identified within future development contexts.

The study resulted in the identification of eleven (11) Aboriginal cultural heritage sites for inclusion on the Waverley LEP 2010 (since superseded by the Waverley LEP 2012).

Aboriginal Heritage Information Management System Web Services Extensive Search Result

An extensive AHIMS Search was carried out on 5 June 2020 and showed that there is three (3) Aboriginal sites recorded within a 1km radius of Calga Place (Lot7123/DP1058515). These sites are given in Table 6 below. None of the Aboriginal cultural heritage items lie within 200 metres of the proposed Site, therefore the proposed works are not anticipated to have an impact on any of the below sites.

Table 6 AHIMS Extensive Search result

Site Name	Site ID	Site Feature/Types	Approximate distance from Site
Middle Head; Port Jackson*	45-6-0694	Art (pigment or engraved)	7000 metres
Tamarama Beach Cave	45-6-1947	Shell, artefact	750 metres
Marks Park; Tamarama, Bondi Beach	45-6-0750	Art (pigment or engraved)	950 metres

* This site has incorrect coordinates listed under the AHIMS and is in fact located at Middle Head and will therefore be discounted from this study.

Recommendations

It is recommended that the following be taken into consideration for the proposed works for the Bronte Cutting Safety Upgrade Project:

- Undertake an assessment of the potential impact on the Aboriginal site, given the scope of works, to determine whether the project is likely to impact Aboriginal cultural heritage. The assessment would be carried out with input from Council Heritage and Environmental Officers and in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*.
- The assessment would determine whether:
 - The project is unlikely to harm Aboriginal cultural heritage on site and therefore would not require formal consultation with the Aboriginal community or any further assessment; or
 - The project is likely to harm Aboriginal cultural heritage (including objects) and would require formal consultation with Aboriginal stakeholders, preparation of an Aboriginal Cultural Heritage Assessment and submission of an application for an Aboriginal Heritage Impact Permit under Section 90 of the *National Parks and Wildlife Act 1974*, as required.
- In the event that Aboriginal archaeological resources are encountered, the *Roads and Maritime Services Unexpected Heritage Items Heritage Procedure 02* (2015) is to be carried out.

Appendix B – Cutting Photograph Mosaics




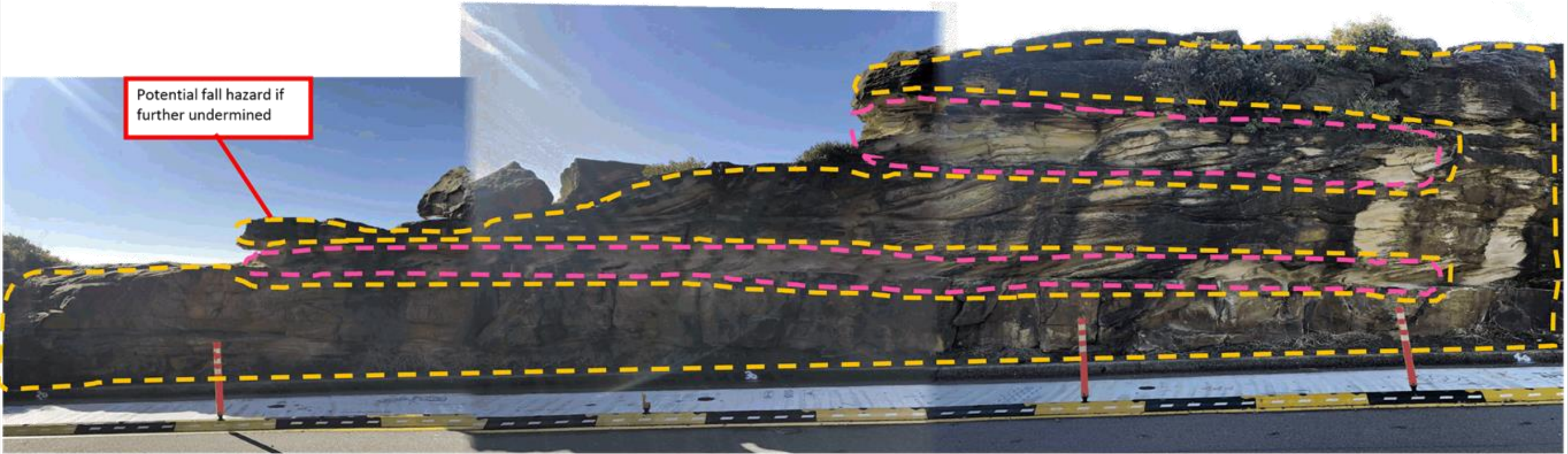
Legend

 Sandstone

Medium bedded

Slightly weathered

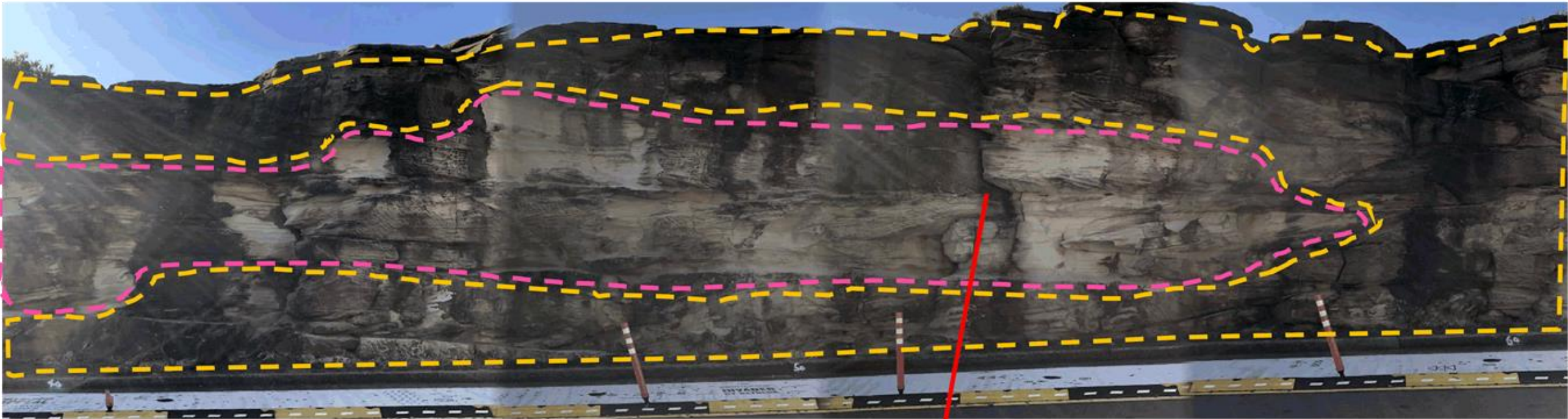
No	Revision	Date	Check	Auth		CLIENT: Waverly Council GEOLOGICAL MAPPING PHOTOMOSAICS Location: East Bronte Cutting - Calga Place Approximate CH: 0 m to 20 m	Photomosaic Date: 11/06/2020 Sheet No: 1 of 12		
A	Draft Preliminary Issue	30/06/20	JK				Mapped By: CT	Date: 16/06/2020	
							Checked By: JK	Date: 30/06/2020	
							GHD Job No: 12526408	File Ref:	



Legend

- Sandstone
Medium to thickly bedded
Slightly weathered to fresh
- Preferentially weathering seam/bed
Sandstone bed preferentially weathering

No	Revision	Date	Check	Auth		CLIENT: Waverly Council GEOLOGICAL MAPPING PHOTOMOSAICS Location: East Bronte Cutting - Calga Place Approximate CH: 20 m to 40 m	Photomosaic Date: 11/06/2020 Sheet No: 2 of 12		
A	Draft Preliminary Issue	30/06/20	JK				Mapped By: CT	Date: 16/06/2020	
							Checked By: JK	Date: 30/06/2020	
							GHD Job No: 12526408	File Ref:	



Join - open approximately
200m at the top. Exiting the
face at 45°

Legend

-  Sandstone
Medium to thickly bedded
Slightly weathered to fresh
-  Preferentially weathering seam/bed
Sandstone bed preferentially weathering

No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	



CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: East Bronte Cutting - Calga Place
Approximate CH: 40 m to 60 m


Photomosaic Date: 11/06/2020 Sheet No: 3 of 12
Mapped By: CT Date: 16/06/2020
Checked By: JK Date: 30/06/2020
GHD Job No: 12526408 File Ref:



Underpinned overhang

Legend

-  Sandstone
Medium to thickly bedded
Slightly weathered to fresh
-  Preferentially weathering seam/bed
Sandstone bed preferentially weathering

No	Revision	Date	Check	Auth		CLIENT: Waverly Council GEOLOGICAL MAPPING PHOTOMOSAICS Location: East Bronte Cutting - Calga Place Approximate CH: 60 m to 80 m	Photomosaic Date: 11/06/2020 Sheet No: 4 of 12		
A	Draft Preliminary Issue	30/06/20	JK				Mapped By: CT	Date: 16/06/2020	
							Checked By: JK	Date: 30/06/2020	
							GHD Job No: 12526408	File Ref:	




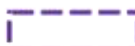
Legend


- Sandstone
Medium to thickly bedded
Slightly weathered to fresh
- Preferentially weathering seam/bed
Sandstone bed preferentially weathering

No	Revision	Date	Check	Auth		CLIENT: Waverly Council GEOLOGICAL MAPPING PHOTOMOSAICS Location: East Bronte Cutting - Calga Place Approximate CH: 80 m to 100 m	Photomosaic Date: 11/06/2020 Sheet No: 5 of 12		
A	Draft Preliminary Issue	30/06/20	JK				Mapped By: CT	Date: 16/06/2020	
							Checked By: JK	Date: 30/06/2020	
							GHD Job No: 12526408	File Ref:	



Legend

-  Sandstone
Medium to thickly bedded
Slightly weathered to fresh
-  Sandstone block retaining wall
Vertical grouted retaining wall

No	Revision	Date	Check	Auth		CLIENT: Waverly Council GEOLOGICAL MAPPING PHOTOMOSAICS Location: East Bronte Cutting - Calga Place Approximate CH: 100 m to 120 m	Photomosaic Date: 11/06/2020 Sheet No: 6 of 12		
A	Draft Preliminary Issue	30/06/20	JK				Mapped By: CT	Date: 16/06/2020	
							Checked By: JK	Date: 30/06/2020	
							GHD Job No: 12526408	File Ref:	



Legend

 Sandstone

Medium to thickly bedded

Slightly weathered

No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	



CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: East Bronte Cutting - Calga Place
Approximate CH: 120 m to 140 m

Photomosaic Date:	11/06/2020	Sheet No:	7	of	12
Mapped By:	CT	Date:	16/06/2020		
Checked By:	JK	Date:	30/06/2020		
GHD Job No:	12526408	File Ref:			



Legend

- Sandstone
Thickly bedded
Slightly weathered
- Weathered Sandstone
Highly to extremely weathered
Thinly to medium bedded
- Preferentially weathering seam/bed
Sandstone bed preferentially weathering

No	Revision	Date	Check	Auth		CLIENT: Waverly Council	Photomosaic Date: 11/06/2020	Sheet No: 8	of 12
A	Draft Preliminary Issue	30/06/20	JK			GEOLOGICAL MAPPING PHOTOMOSAICS	Mapped By: CT	Date: 16/06/2020	
						Location: East Bronte Cutting - Calga Place	Checked By: JK	Date: 30/06/2020	
						Approximate CH: 140 m to 160 m	GHD Job No: 12526408	File Ref:	



Legend

 Sandstone
Medium to thickly bedded
Slightly weathered

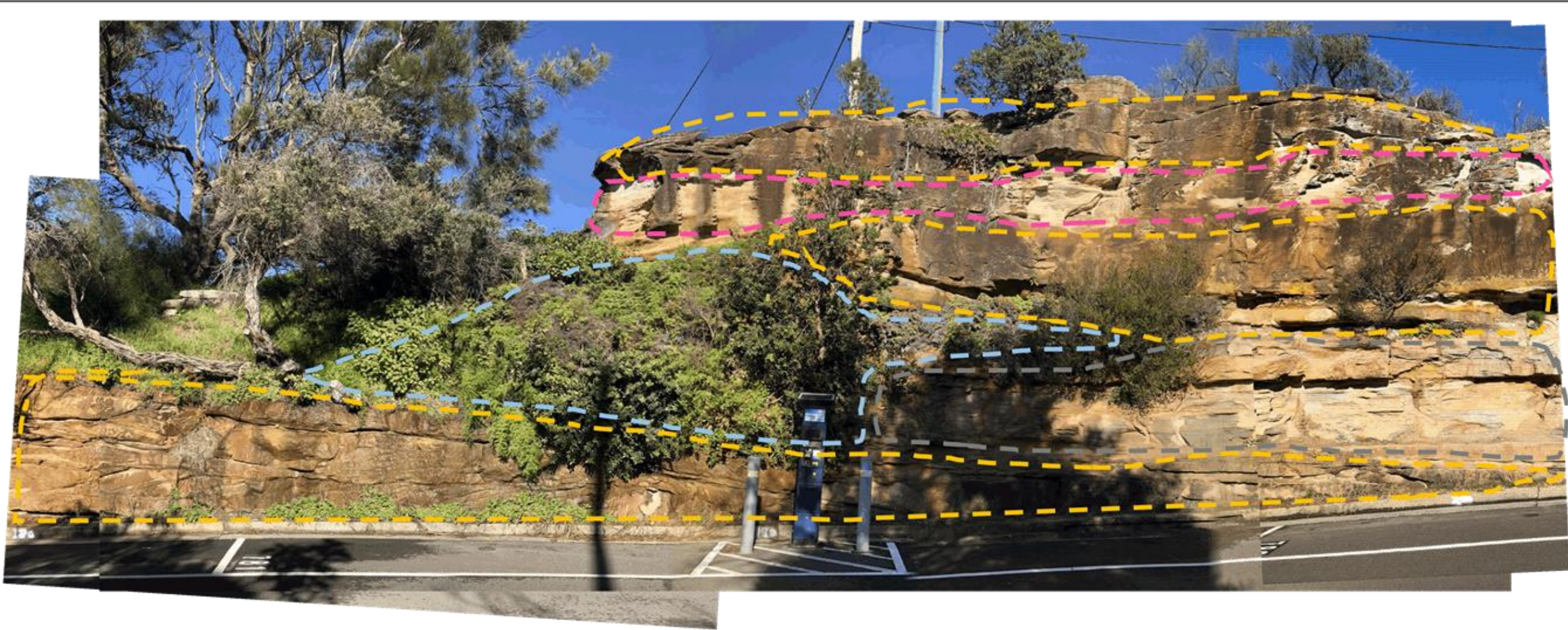
 Weathered Sandstone
Highly to extremely weathered
Thinly to medium bedded

No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	



CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: East Bronte Cutting - Calga Place
Approximate CH: 160 m to 180 m

Photomosaic Date: 11/06/2020 Sheet No: 9 of 12
Mapped By: CT Date: 16/06/2020
Checked By: JK Date: 30/06/2020
GHD Job No: 12526408 File Ref:



Legend

- Sandstone**
Medium to thickly bedded
Slightly weathered
- Vegetated slope**
Sandstone cutting covered in dense vegetation.
Unable to assess rock condition.
- Preferentially weathering seam/bed**
Sandstone bed preferentially weathering

- Interbedded Shale/siltstone**
Laminated
Slightly weathered

No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	




CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: East Bronte Cutting - Calga Place
Approximate CH: 180 m to 200 m

Photomosaic Date:	11/06/2020	Sheet No:	10	of	12
Mapped By:	CT	Date:	16/06/2020		
Checked By:	JK	Date:	30/06/2020		
GHD Job No:	12526408	File Ref:			



Legend

-  Sandstone
Medium to thickly bedded
Slightly weathered to fresh
-  Shale/siltstone
Laminated
Slightly weathered
-  Preferentially weathering seam/bed
Sandstone bed preferentially weathering

No	Revision	Date	Check	Auth		CLIENT: Waverly Council GEOLOGICAL MAPPING PHOTOMOSAICS Location: East Bronte Cutting - Calga Place Approximate CH: 200 m to 210 m	Photomosaic Date: 11/06/2020 Sheet No: 11 of 12		
A	Draft Preliminary Issue	30/06/20	JK				Mapped By: CT	Date: 16/06/2020	
							Checked By: JK	Date: 30/06/2020	
							GHD Job No: 12526408	File Ref:	



Legend



Sandstone

Medium to thickly bedded

Slightly weathered to fresh

No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	



CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: East Bronte Cutting - Calga Place
Approximate CH: 210 m to 230 m


Photomosaic Date: 11/06/2020 Sheet No: 12 of 12
Mapped By: CT Date: 16/06/2020
Checked By: JK Date: 30/06/2020
GHD Job No: 12526408 File Ref:



Legend

 Grass slope above
Aproximally 0-5°

 Sandstone
Medium bedded
Slightly weathered

 Vegetated slope
Weathered sandstone cutting covered in dense vegetation.
Unable to assess rock condition.

No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	



CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: West Bronte Cutting - Calga Place
Approximate CH: 0 m to 20 m


Photomosaic Date: 11/06/2020 Sheet No: 1 of 11
Mapped By: CT Date: 16/06/2020
Checked By: JK Date: 30/06/2020
GHD Job No: 12526408 File Ref:



Legend

 Vegetated slope
Sandstone cutting covered in dense vegetation.
Unable to assess rock condition.

 Sandstone
Medium bedded
Slightly weathered


No	Revision	Date	Check	Auth		CLIENT: Waverly Council GEOLOGICAL MAPPING PHOTOMOSAICS Location: West Bronte Cutting - Calga Place Approximate CH: 20 m to 40 m	Photomosaic Date: 11/06/2020 Sheet No: 2 of 11		
A	Draft Preliminary Issue	30/06/20	JK				Mapped By: CT	Date: 16/06/2020	
							Checked By: JK	Date: 30/06/2020	
							GHD Job No: 12526408	File Ref:	



Legend

 **Vegetated slope**
Sandstone cutting covered in dense vegetation.
Unable to assess rock condition.

 **Sandstone**
Medium bedded
Slightly weathered

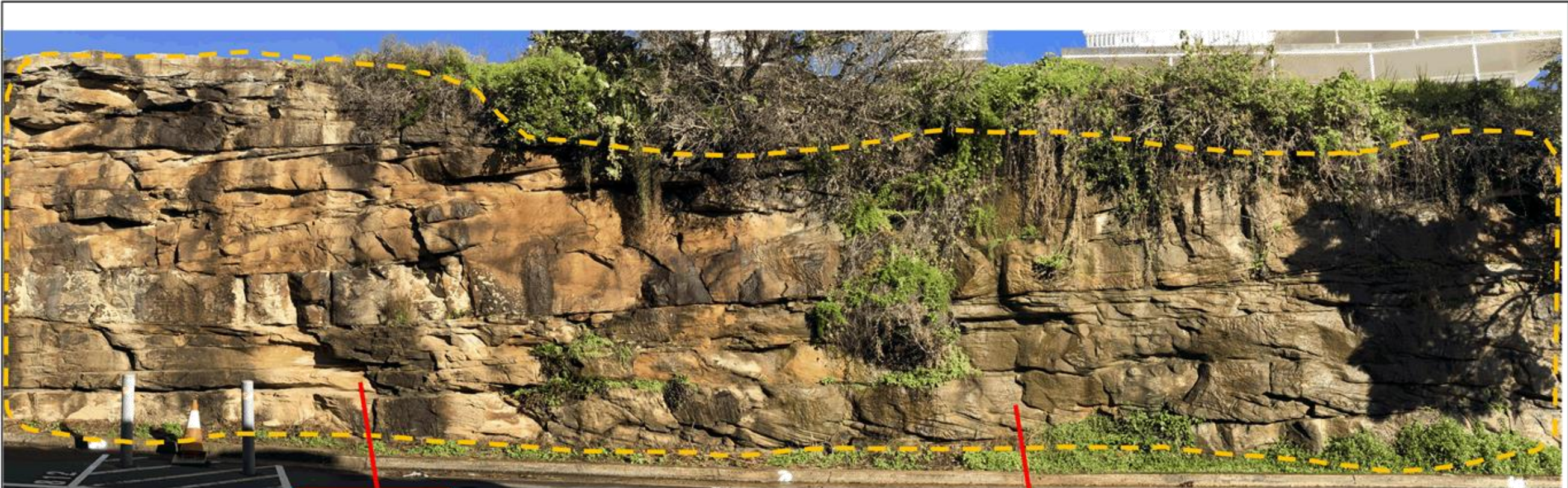
 **Water Seepage**
Significant seepage from near crest
Unsure of origin, potential service?

No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	



CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: West Bronte Cutting - Calga Place
Approximate CH: 40 m to 60 m

Photomosaic Date: 11/06/2020 Sheet No: 3 of 11
Mapped By: CT Date: 16/06/2020
Checked By: JK Date: 30/06/2020
GHD Job No: 12526408 File Ref:



Subvertical joints
exiting the face at

Subvertical joints
exiting the face at

Legend
[Yellow dashed box] Sandstone
Medium to thickly bedded
Slightly weathered to fresh

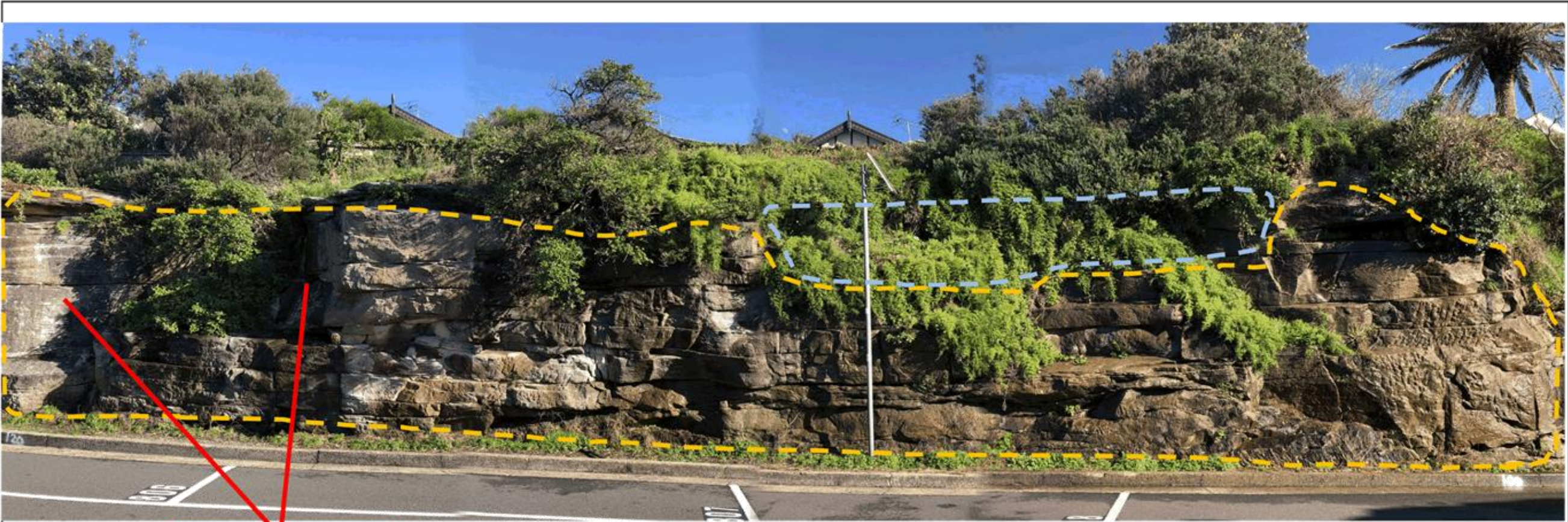
No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	



CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: West Bronte Cutting - Calga Place
Approximate CH: 60 m to 80 m

Photomosaic Date: 11/06/2020 Sheet No: 4 of 11
Mapped By: CT Date: 16/06/2020
Checked By: JK Date: 30/06/2020
GHD Job No: 12526408 File Ref:






Subvertical joints
exiting the face at 60°.
Wedge may have been
previously removed.

Legend

 Sandstone
Medium to thickly bedded
Slightly weathered to fresh

 Vegetated slope
Sandstone cutting covered in dense vegetation.
Unable to assess rock condition.

No	Revision	Date	Check	Auth		CLIENT: Waverly Council	Photomosaic Date: 11/06/2020	Sheet No: 6	of 11
A	Draft Preliminary Issue	30/06/20	JK			GEOLOGICAL MAPPING PHOTOMOSAICS	Mapped By: CT	Date: 16/06/2020	
						Location: West Bronte Cutting - Calga Place	Checked By: JK	Date: 30/06/2020	
						Approximate CH: 100 m to 120 m	GHD Job No: 12526408	File Ref:	




Legend

 Sandstone

Medium to thickly bedded

Slightly weathered to fresh



No	Revision	Date	Check	Auth		CLIENT: Waverly Council	Photomosaic Date: 11/06/2020	Sheet No: 7	of 11
A	Draft Preliminary Issue	30/06/20	JK			GEOLOGICAL MAPPING PHOTOMOSAICS	Mapped By: CT	Date: 16/06/2020	
						Location: West Bronte Cutting - Calga Place	Checked By: JK	Date: 30/06/2020	
						Approximate CH: 120 m to 140 m	GHD Job No: 12526408	File Ref:	



Legend

 Sandstone
Medium to thickly bedded
Slightly weathered to fresh

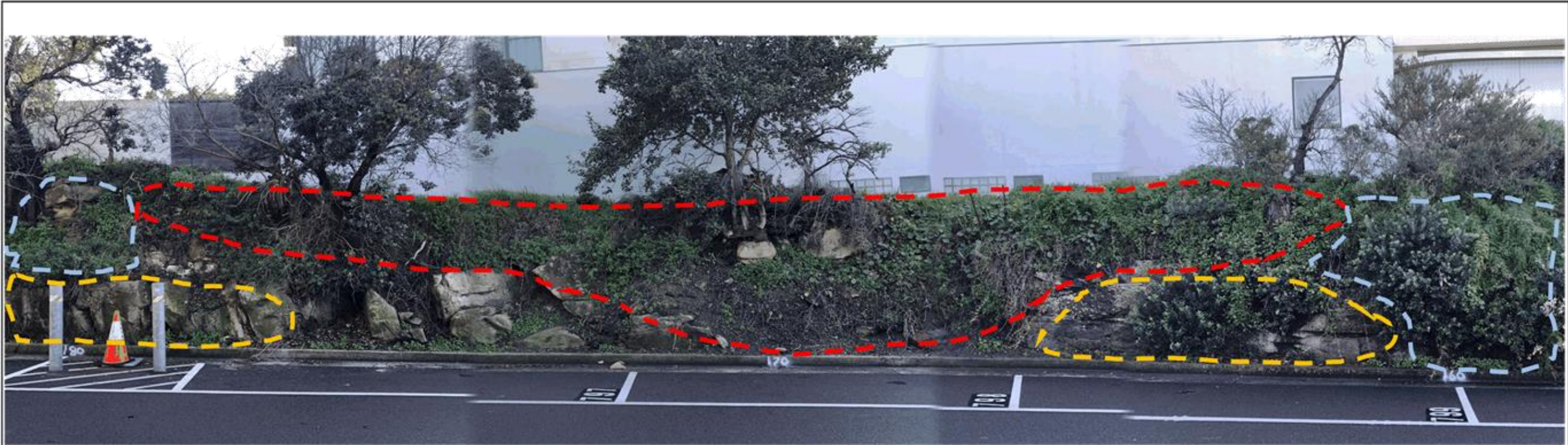
 Vegetated slope
Sandstone cutting covered in dense vegetation.
Unable to assess rock condition.

No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	




CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: West Bronte Cutting - Calga Place
Approximate CH: 140 m to 160 m

Photomosaic Date: 11/06/2020 Sheet No: 8 of 11
Mapped By: CT Date: 16/06/2020
Checked By: JK Date: 30/06/2020
GHD Job No: 12526408 File Ref:



Legend

 Sandstone
Medium bedded
Moderate to slightly weathered

 Weathered Sandstone
Extremely weathered
Residual or colluvial soils

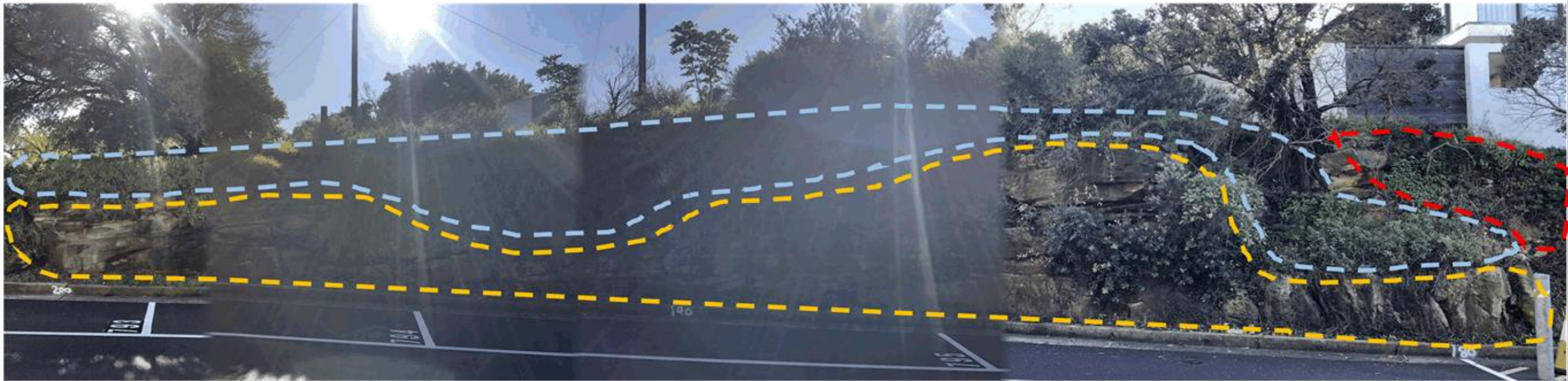
 Vegetated slope
Sandstone cutting covered in dense vegetation.

No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	




CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: West Bronte Cutting - Calga Place
Approximate CH: 160 m to 180 m

Photomosaic Date: 11/06/2020 Sheet No: 9 of 11
Mapped By: CT Date: 16/06/2020
Checked By: JK Date: 30/06/2020
GHD Job No: 12526408 File Ref:



Legend

 **Sandstone**
Medium bedded
Moderate to slightly weathered

 **Weathered Sandstone**
Extremely weathered
Residual or colluvial soils

 **Vegetated slope**
Sandstone cutting covered in dense vegetation.

No	Revision	Date	Check	Auth
A	Draft Preliminary Issue	30/06/20	JK	



CLIENT: Waverly Council
GEOLOGICAL MAPPING PHOTOMOSAICS
Location: West Bronte Cutting - Calga Place
Approximate CH: 180 m to 200 m

Photomosaic Date: 11/06/2020 Sheet No: 10 of 11
Mapped By: CT Date: 16/06/2020
Checked By: JK Date: 30/06/2020
GHD Job No: 12526408 File Ref:




Legend

- Sandstone

Medium bedded

Moderate to slightly weathered
- Vegetated slope

Sandstone cutting covered in dense vegetation.

No	Revision	Date	Check	Auth		CLIENT: Waverly Council GEOLOGICAL MAPPING PHOTOMOSAICS Location: West Bronte Cutting - Calga Place Approximate CH: 200 m to 220 m	Photomosaic Date: 11/06/2020 Sheet No: 11 of 11		
A	Draft Preliminary Issue	30/06/20	JK				Mapped By: CT	Date: 16/06/2020	
							Checked By: JK	Date: 30/06/2020	
							GHD Job No: 12526408	File Ref:	

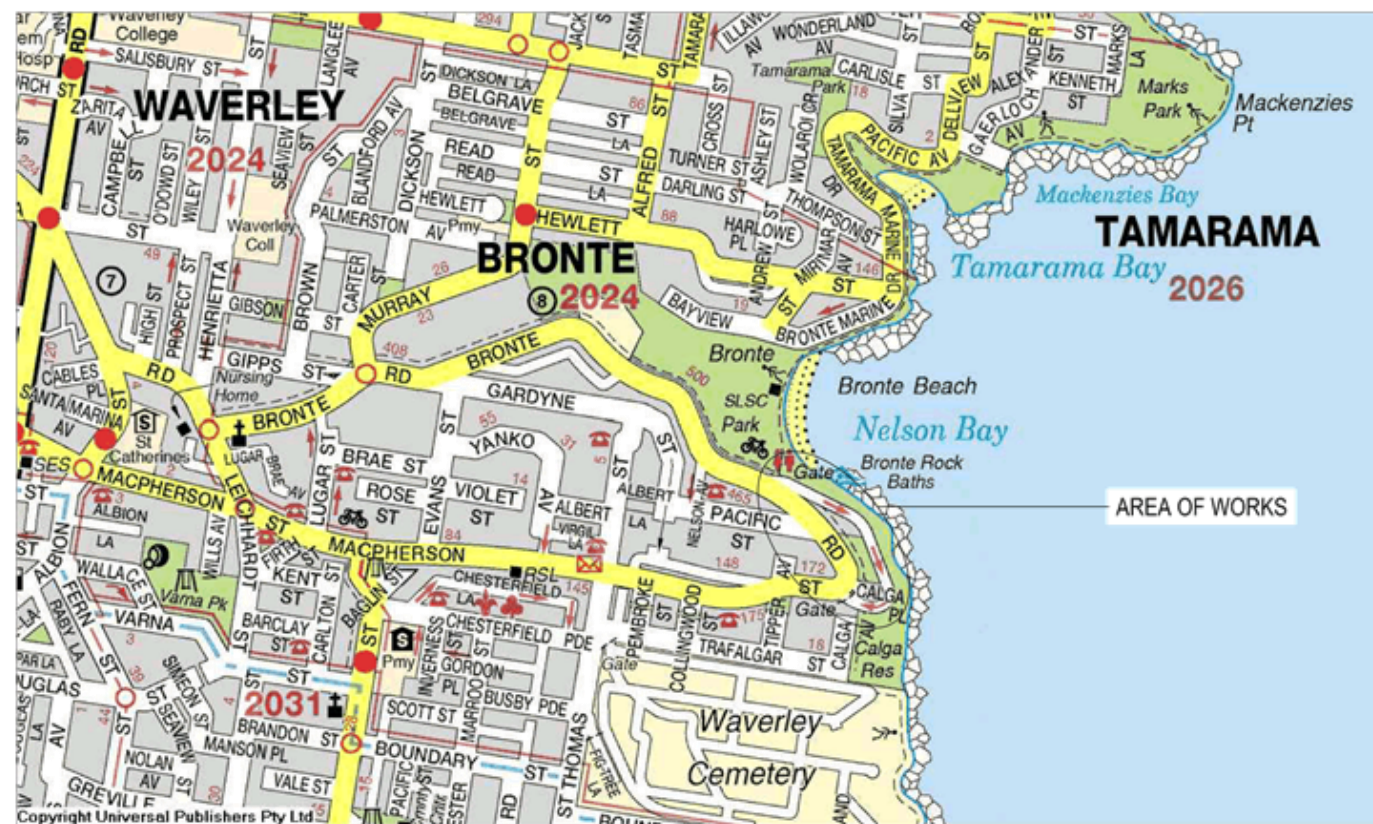
Appendix C – Option Sketches



WAVERLEY COUNCIL

BRONTE CUTTING SAFETY UPGRADE

12526408



LOCALITY PLAN
NTS

DRAWING LIST:

DRG No.	DRAWING TITLE
12526408-G001	COVER SHEET, DRAWING LIST AND LOCALITY PLAN
12526408-C011	SITE PLAN OPTION 1 - SHEET 1 OF 8
12526408-C012	SITE PLAN OPTION 1 - SHEET 2 OF 8
12526408-C013	SITE PLAN OPTION 1 - SHEET 3 OF 8
12526408-C014	SITE PLAN OPTION 1 - SHEET 4 OF 8
12526408-C015	SITE PLAN OPTION 1 - SHEET 5 OF 8
12526408-C016	SITE PLAN OPTION 1 - SHEET 6 OF 8
12526408-C017	SITE PLAN OPTION 1 - SHEET 7 OF 8
12526408-C018	SITE PLAN OPTION 1 - SHEET 8 OF 8
12526408-C111	SITE PLAN OPTION 2 - SHEET 1 OF 8
12526408-C112	SITE PLAN OPTION 2 - SHEET 2 OF 8
12526408-C113	SITE PLAN OPTION 2 - SHEET 3 OF 8
12526408-C114	SITE PLAN OPTION 2 - SHEET 4 OF 8
12526408-C115	SITE PLAN OPTION 2 - SHEET 5 OF 8
12526408-C116	SITE PLAN OPTION 2 - SHEET 6 OF 8
12526408-C117	SITE PLAN OPTION 2 - SHEET 7 OF 8
12526408-C118	SITE PLAN OPTION 2 - SHEET 8 OF 8

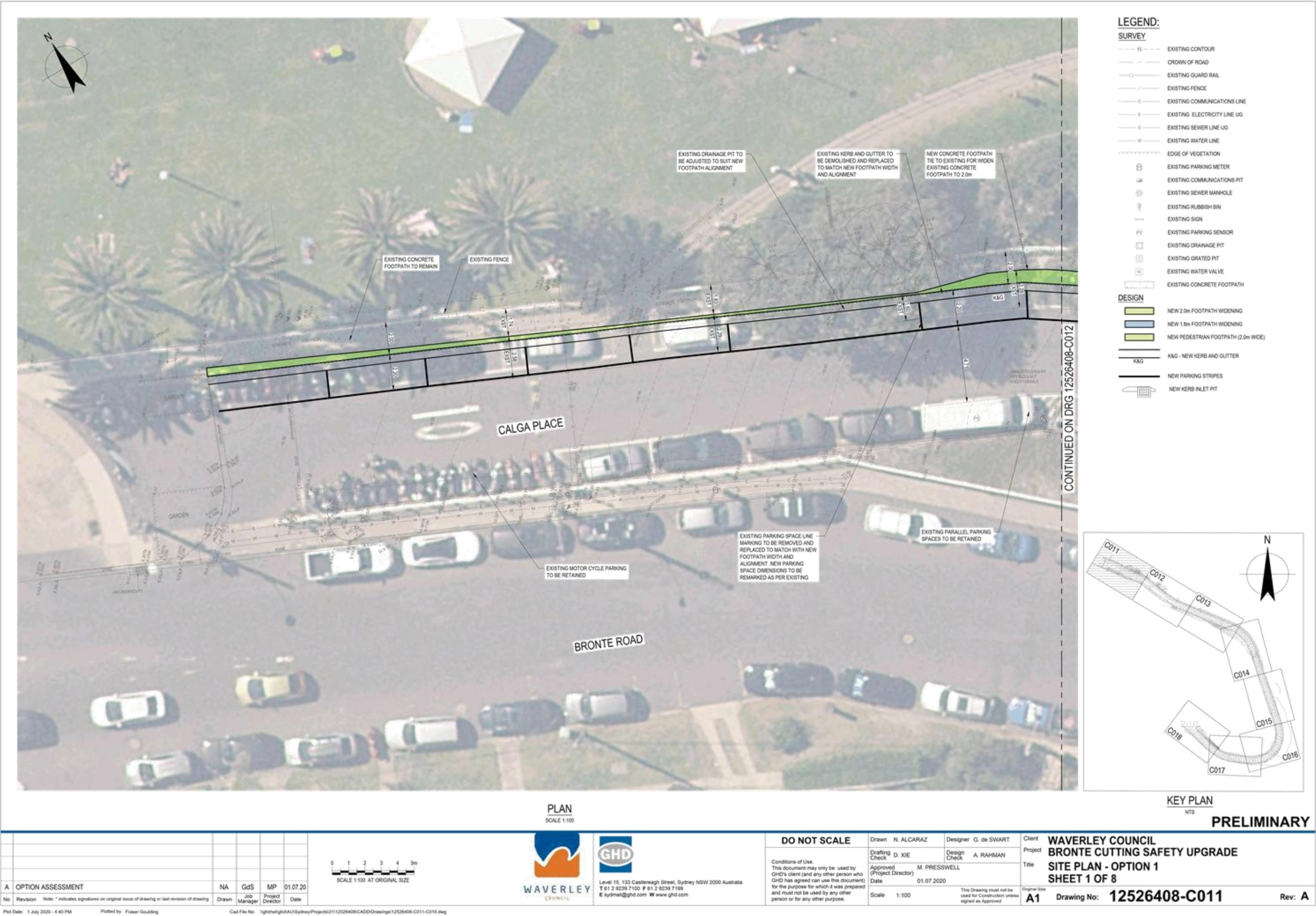
GENERAL NOTES:

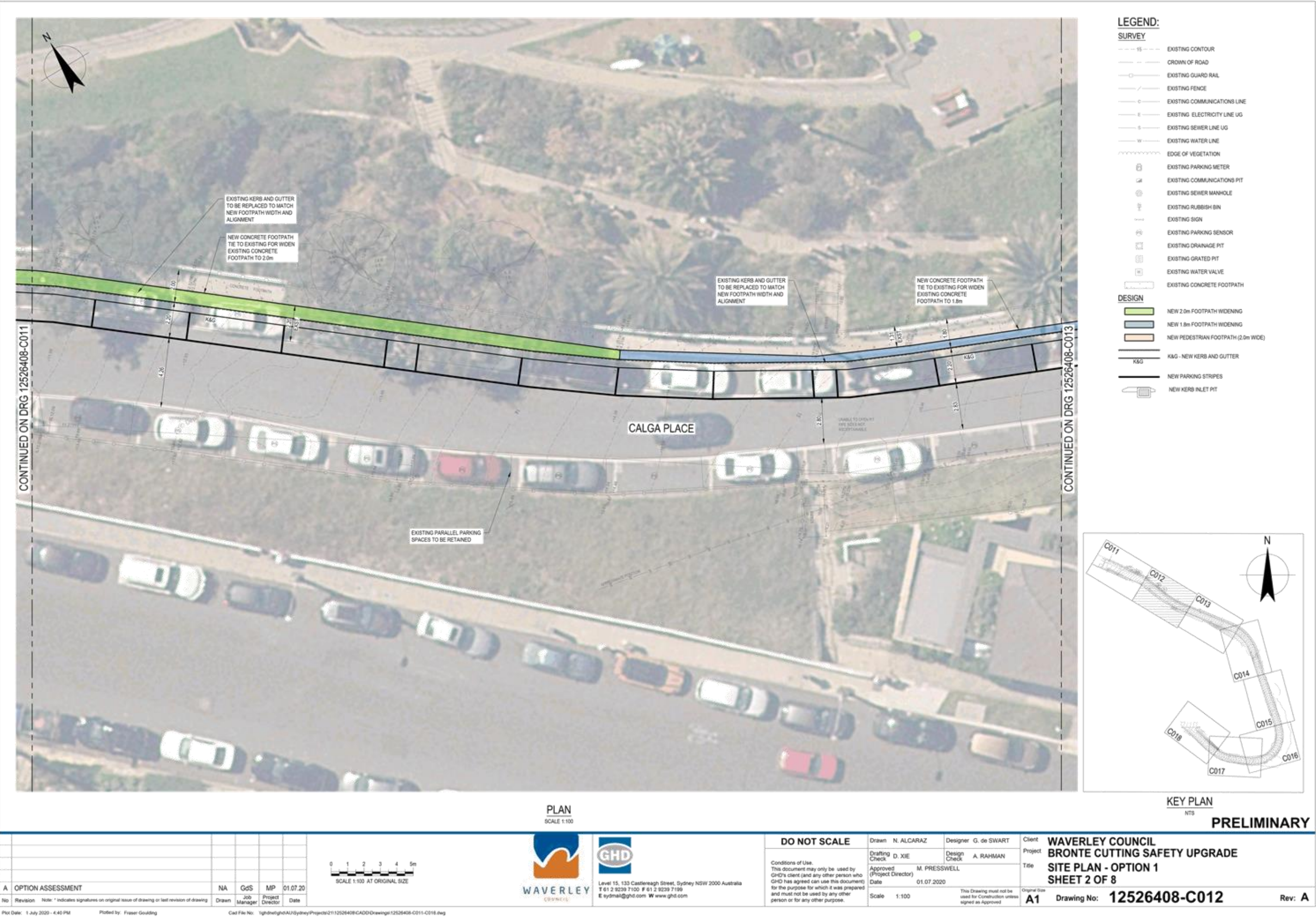
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- CO-ORDINATES ARE IN MAP GRID OF AUSTRALIA (MGA2020) CO-ORDINATE SYSTEM.
- LEVELS ARE IN AUSTRALIAN HEIGHT DATUM (AHD).
- ALL WORKS SHALL BE CARRIED OUT IN CONJUNCTION WITH ALL DRAWINGS, SPECIFICATIONS AND THE WAVERLEY COUNCIL'S STANDARD DRAWINGS AND SPECIFICATIONS.
- ALL LEVELS SHALL BE OBTAINED FROM ESTABLISHED BENCH MARKS ONLY.
- ALL SERVICE LOCATIONS SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
- NO WORK SHALL BE CARRIED OUT OUTSIDE THE COUNCIL'S INDICATED SITE EXTENT WITHOUT WRITTEN PERMISSION.
- DESIGN BASED ON SURVEY BY AXIOM SPATIAL SURVEYORS, DRAWING 2023901-00.DWG, REV 00, DATED 19/05/2020.
- BOUNDARIES SHALL BE CLEARLY MARKED ON SITE PRIOR TO CONSTRUCTION.
- CIVIL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH WAVERLEY COUNCIL'S PUBLIC DOMAIN TECHNICAL MANUAL.

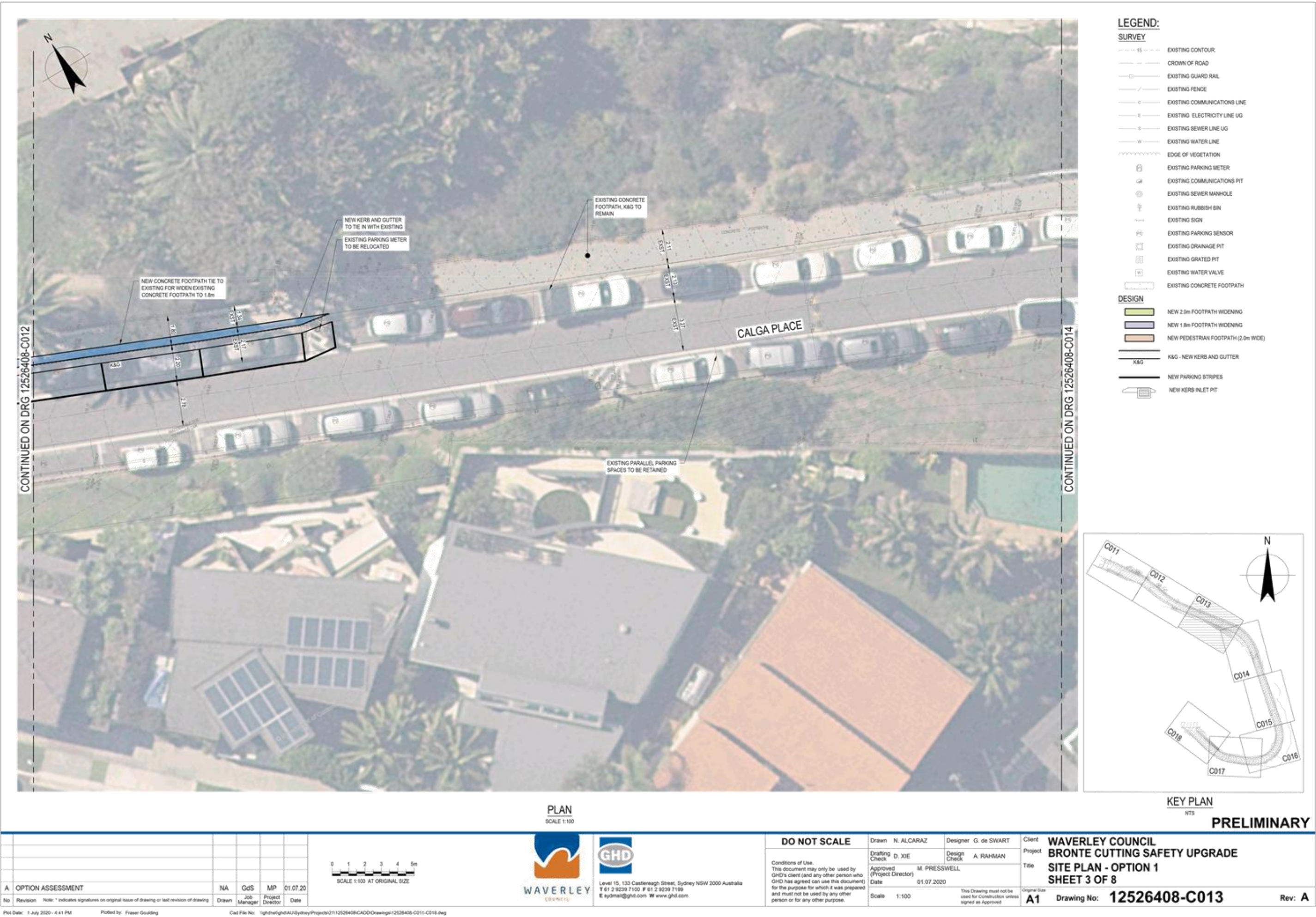
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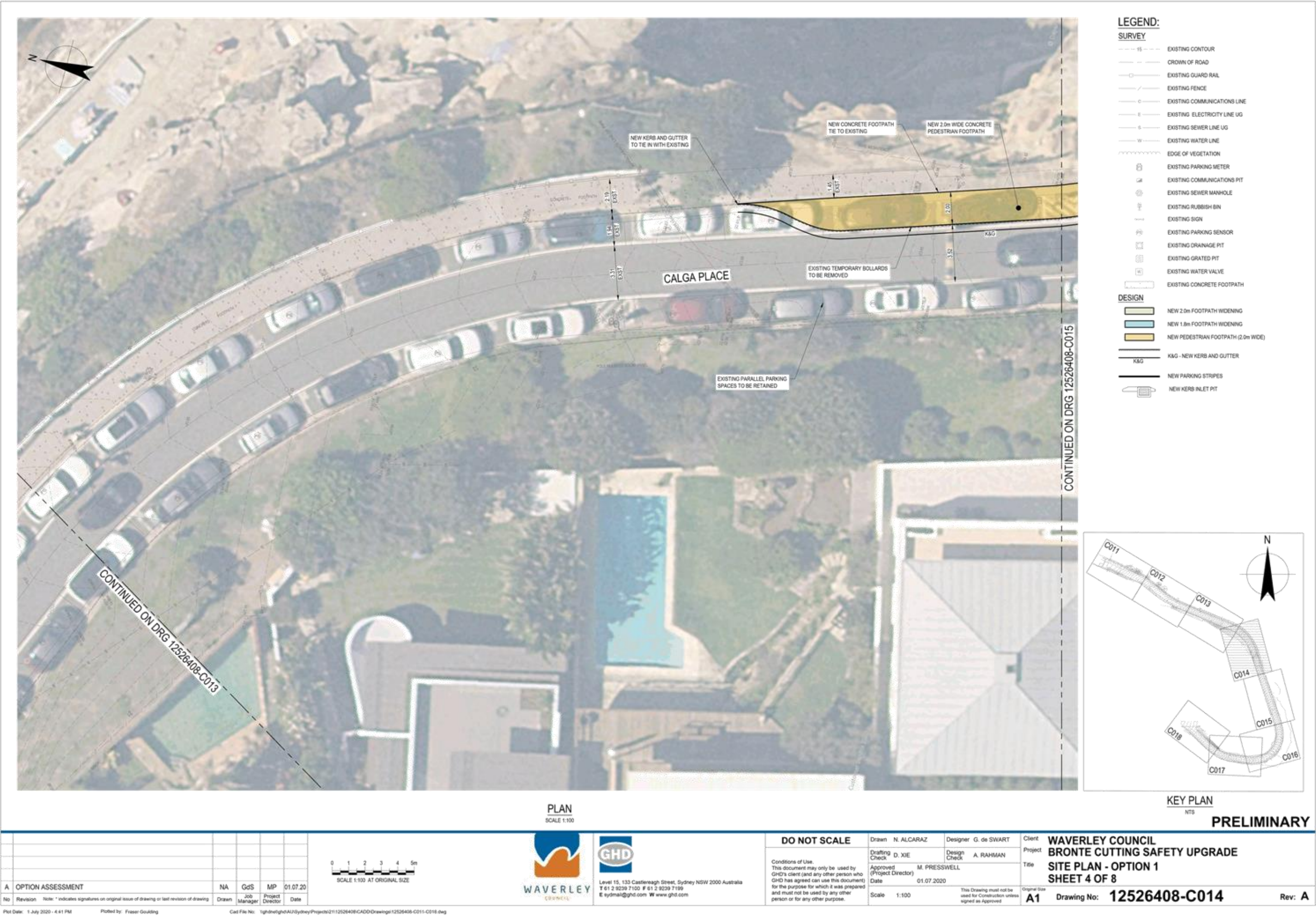
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A OPTION ASSESSMENT No Revision Note: * indicates signatures on original issue of drawing or last revision of drawing Drawn NA Job Manager GdS Project Director MP Date 01.07.20				Conditions of Use: This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.		Scale NTS This Drawing must not be used for Construction unless signed as Approved	Original Size A1 Drawing No: 12526408-G001 Rev: A

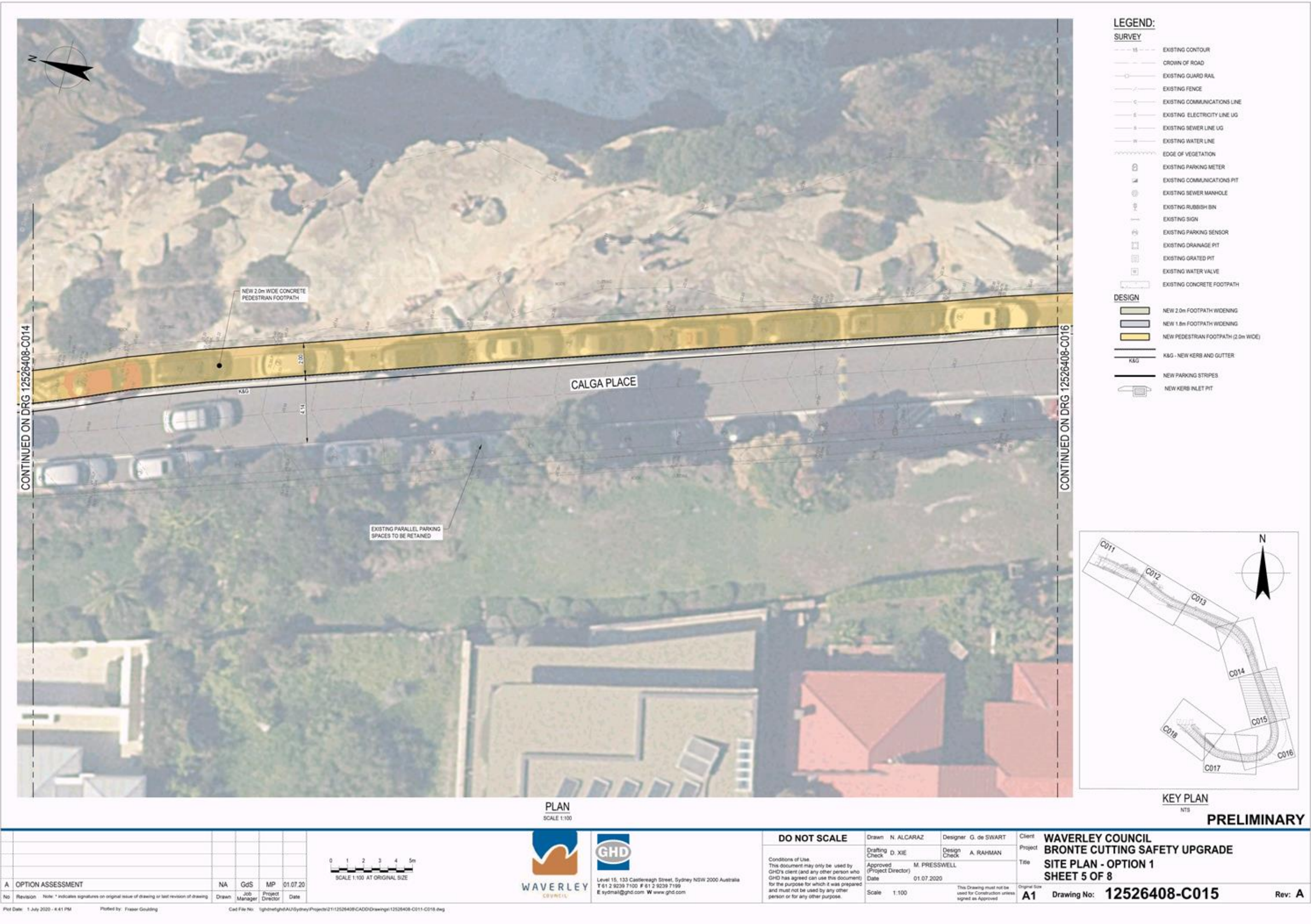
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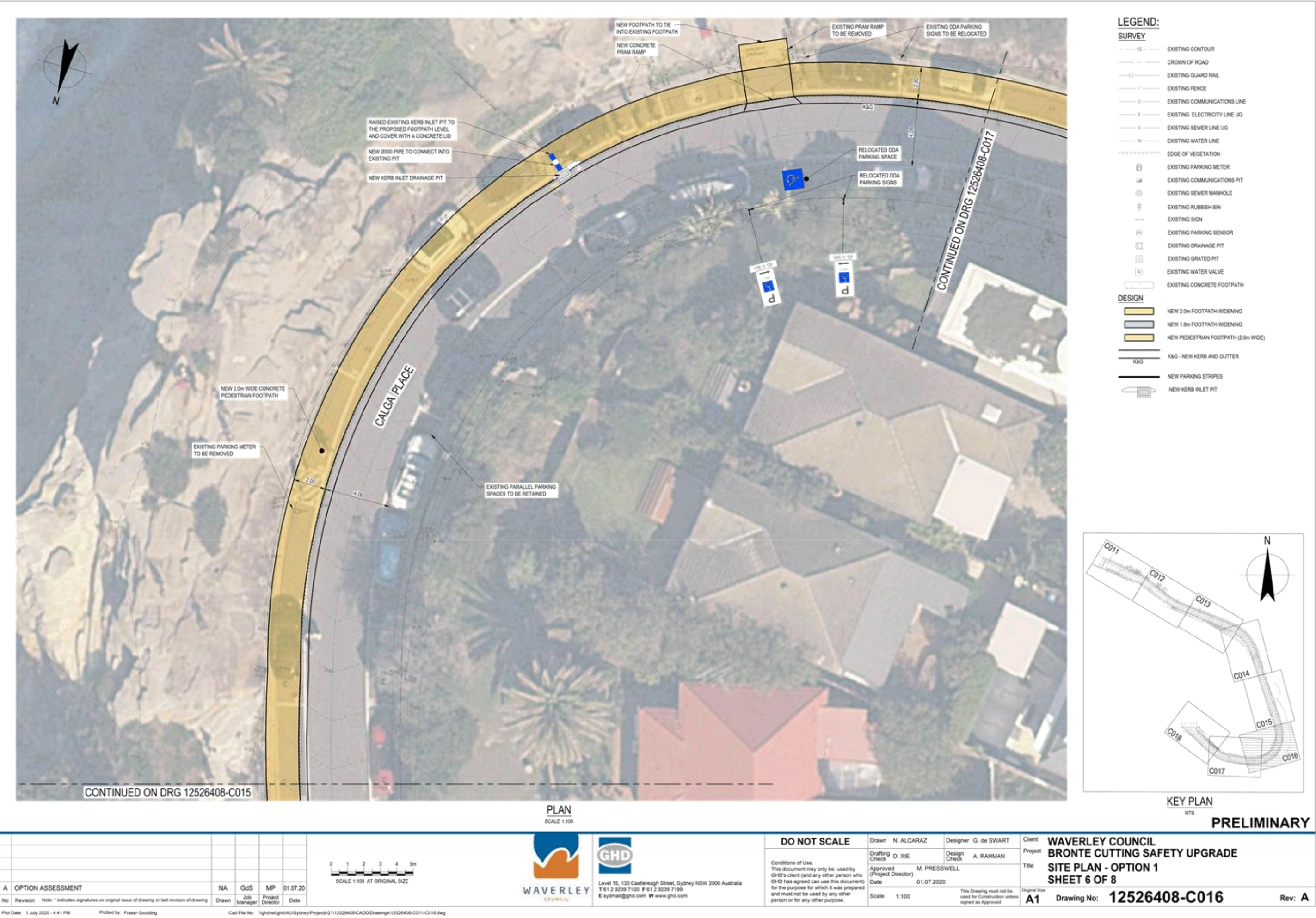


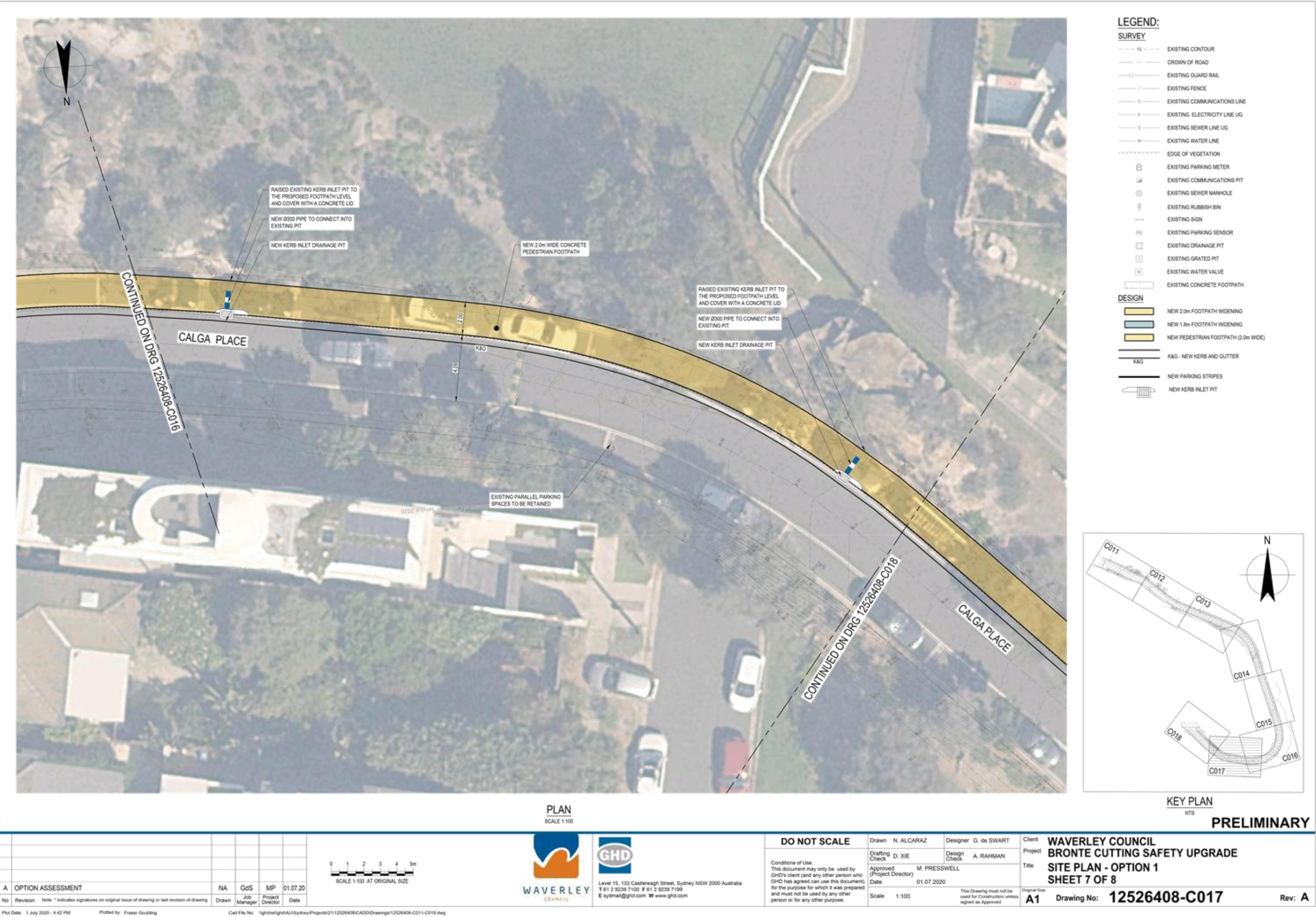






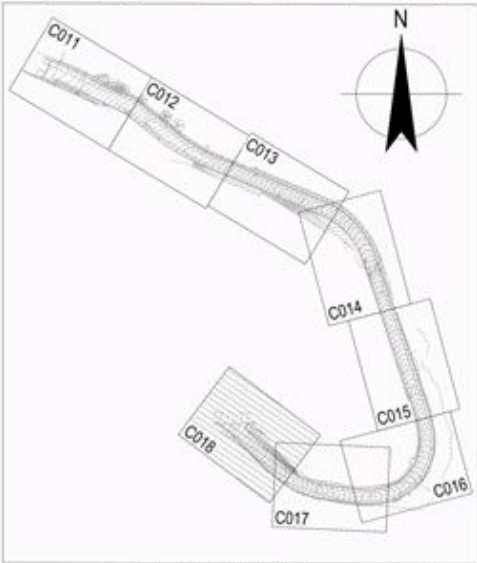








- LEGEND:**
- SURVEY**
- EXISTING CONTOUR
 - CROWN OF ROAD
 - EXISTING GUARD RAIL
 - EXISTING FENCE
 - EXISTING COMMUNICATIONS LINE
 - EXISTING ELECTRICITY LINE UG
 - EXISTING SEWER LINE UG
 - EXISTING WATER LINE
 - EDGE OF VEGETATION
 - EXISTING PARKING METER
 - EXISTING COMMUNICATIONS PIT
 - EXISTING SEWER MANHOLE
 - EXISTING RUBBISH BIN
 - EXISTING SIGN
 - EXISTING PARKING SENSOR
 - EXISTING DRAINAGE PIT
 - EXISTING GRATED PIT
 - EXISTING WATER VALVE
 - EXISTING CONCRETE FOOTPATH
- DESIGN**
- NEW 2.0m FOOTPATH WIDENING
 - NEW 1.8m FOOTPATH WIDENING
 - NEW PEDESTRIAN FOOTPATH (2.0m WIDE)
 - K&G - NEW KERB AND GUTTER
 - NEW PARKING STRIPES
 - NEW KERB INLET PIT



PLAN
SCALE 1:100

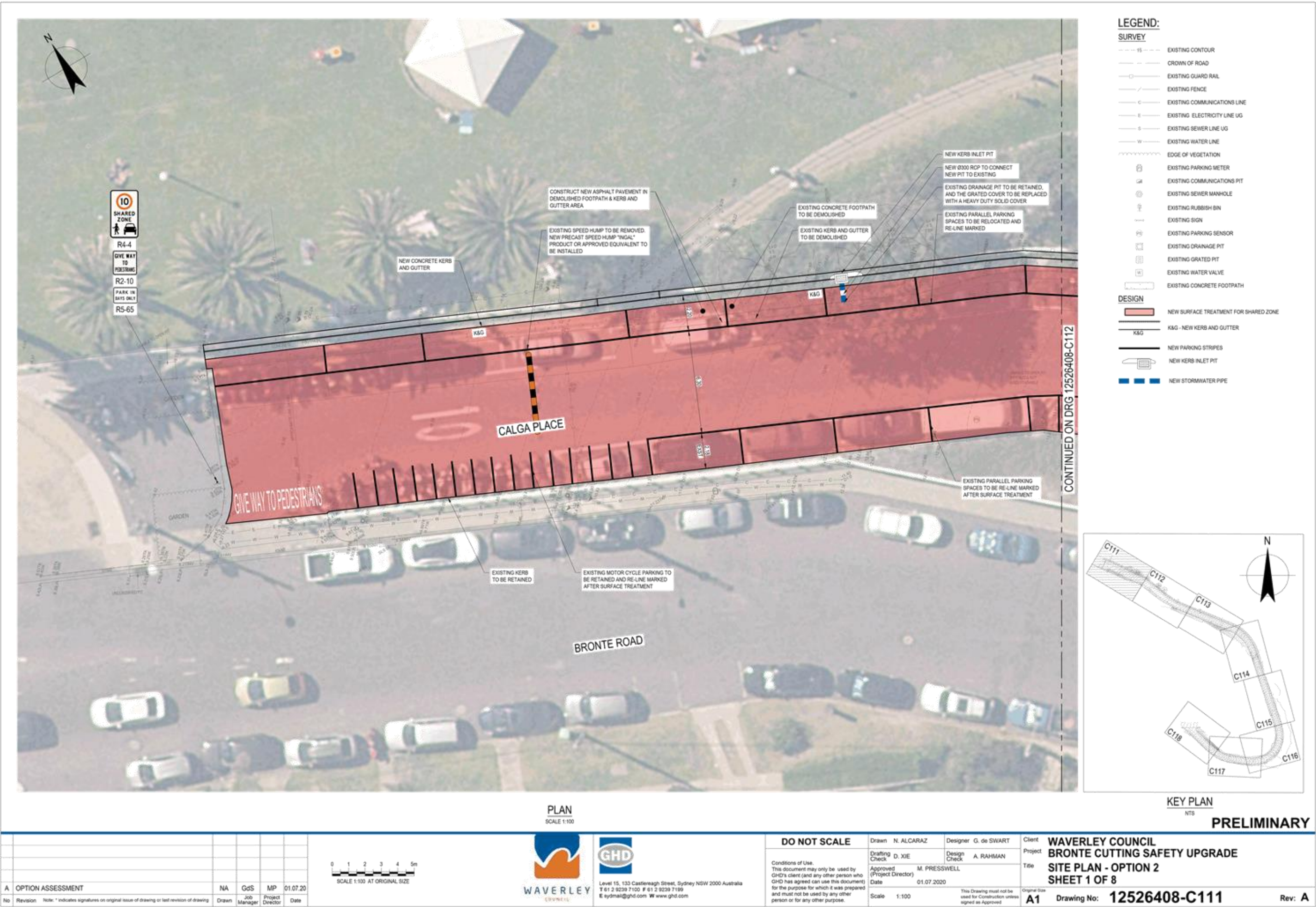
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PRELIMINARY

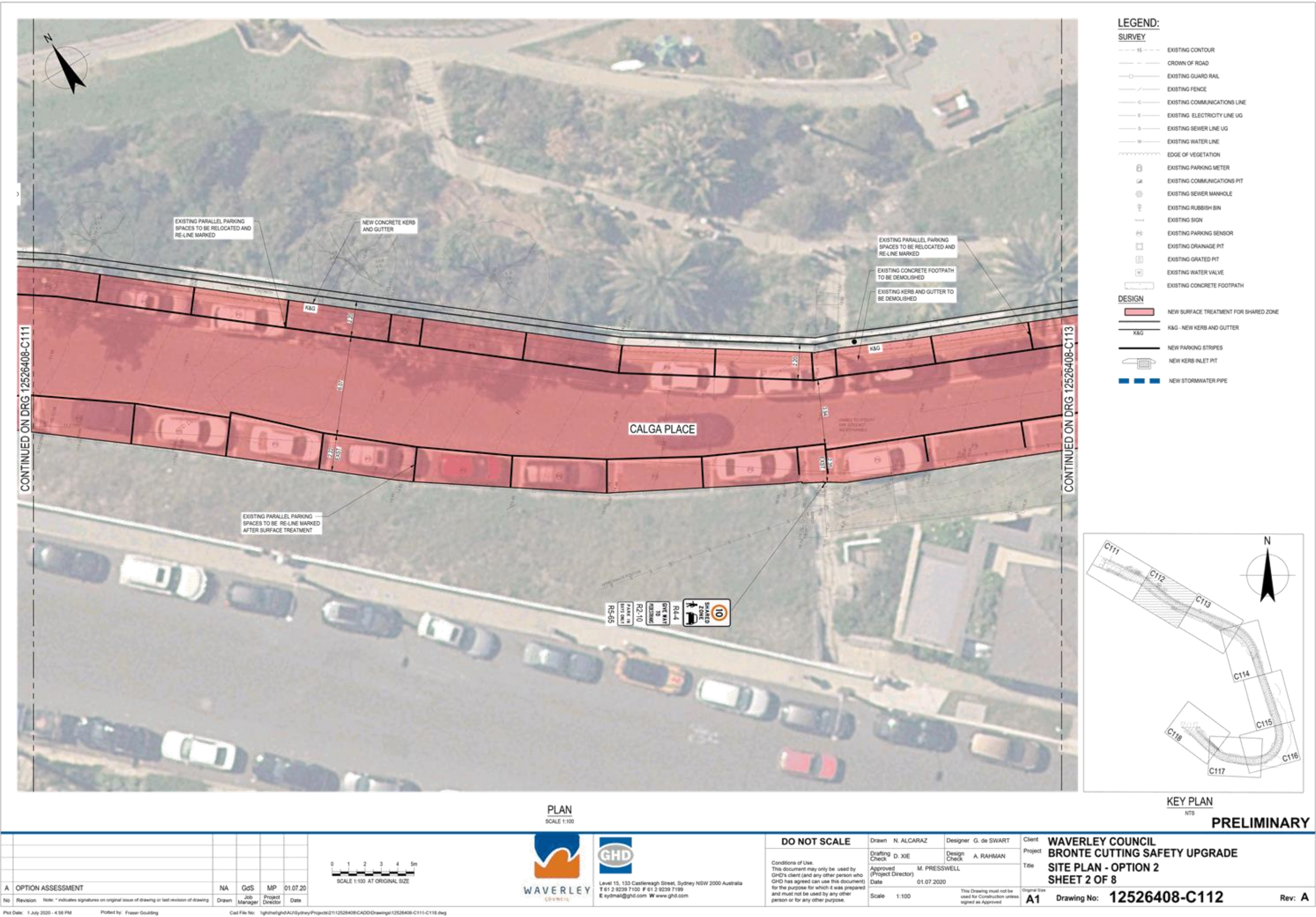
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Drawn	Job Manager	Project Director	Date		

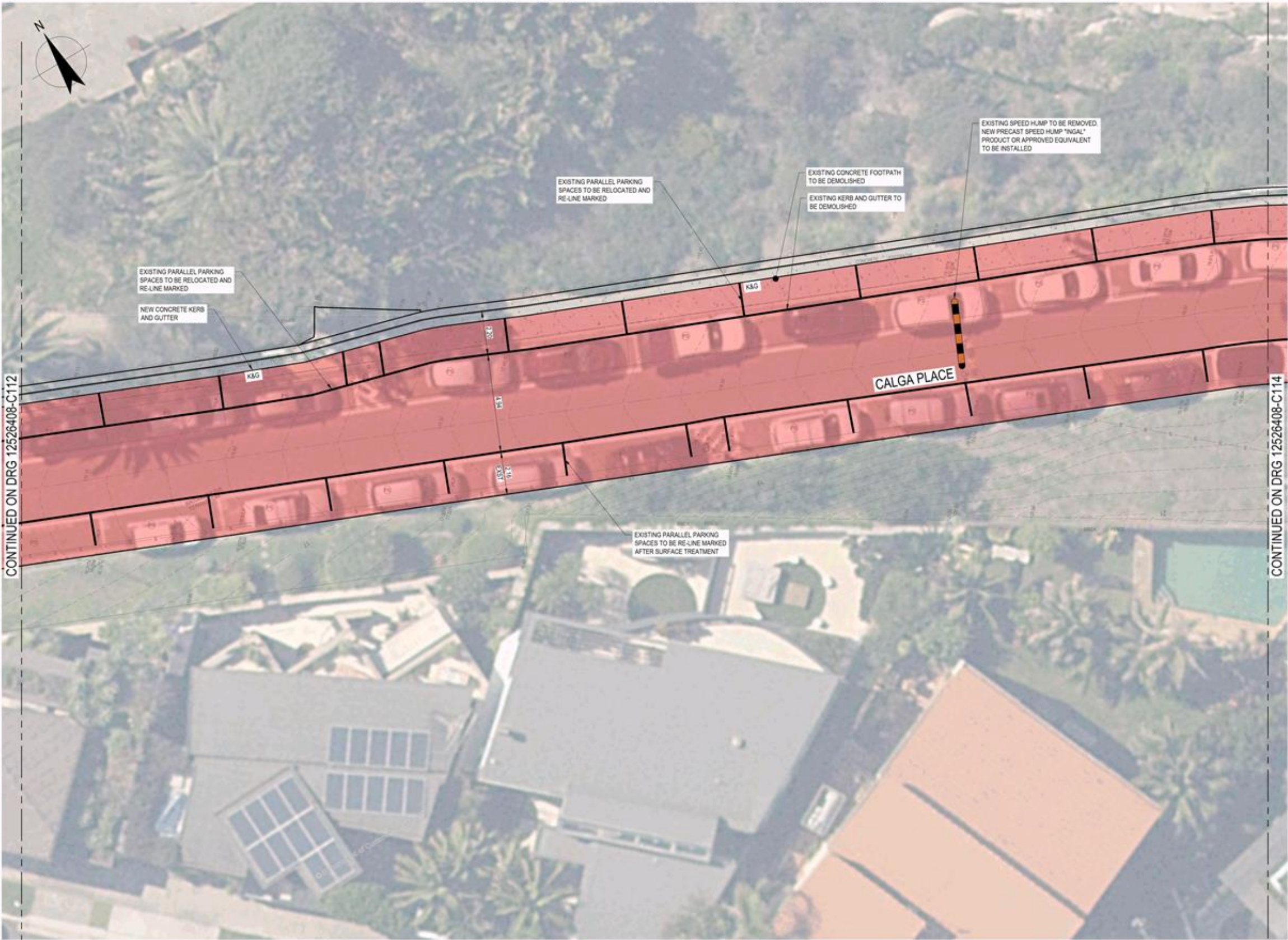


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Approved (Project Director)		M. PRESSWELL	
Date		01.07.2020	
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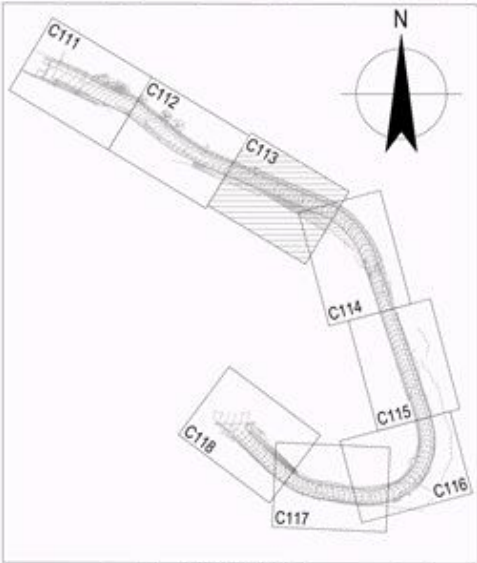
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Project	BRONTE CUTTING SAFETY UPGRADE		
Title	SITE PLAN - OPTION 1		
	SHEET 8 OF 8		
Original Size	A1	Drawing No:	12526408-C018
Rev:	A		







- LEGEND:**
- SURVEY**
- EXISTING CONTOUR
 - CROWN OF ROAD
 - EXISTING GUARD RAIL
 - EXISTING FENCE
 - EXISTING COMMUNICATIONS LINE
 - EXISTING ELECTRICITY LINE UG
 - EXISTING SEWER LINE UG
 - EXISTING WATER LINE
 - EDGE OF VEGETATION
 - EXISTING PARKING METER
 - EXISTING COMMUNICATIONS PIT
 - EXISTING SEWER MANHOLE
 - EXISTING RUBBISH BIN
 - EXISTING SIGN
 - EXISTING PARKING SENSOR
 - EXISTING DRAINAGE PIT
 - EXISTING GRATED PIT
 - EXISTING WATER VALVE
 - EXISTING CONCRETE FOOTPATH
- DESIGN**
- NEW SURFACE TREATMENT FOR SHARED ZONE
 - K&G - NEW KERB AND GUTTER
 - NEW PARKING STRIPES
 - NEW KERB INLET PIT
 - NEW STORMWATER PIPE



PLAN
SCALE 1:100

KEY PLAN
NTS
PRELIMINARY

A OPTION ASSESSMENT		NA	GdS	MP	01.07.20
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing			
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Approved (Project Director)	M. PRESSWELL	Date	01.07.2020
Scale	1:100	This Drawing must not be used for Construction unless signed as Approved	

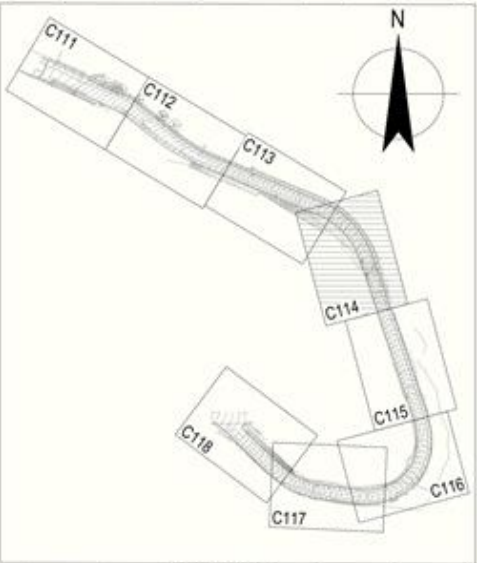
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Project	BRONTE CUTTING SAFETY UPGRADE		
Title	SITE PLAN - OPTION 2		
Original Size	A1	Drawing No:	12526408-C113
Rev:	A		



- LEGEND:**
- SURVEY**
- EXISTING CONTOUR
 - CROWN OF ROAD
 - EXISTING GUARD RAIL
 - EXISTING FENCE
 - EXISTING COMMUNICATIONS LINE
 - EXISTING ELECTRICITY LINE UG
 - EXISTING SEWER LINE UG
 - EXISTING WATER LINE
 - EDGE OF VEGETATION
 - EXISTING PARKING METER
 - EXISTING COMMUNICATIONS PIT
 - EXISTING SEWER MANHOLE
 - EXISTING RUBBISH BIN
 - EXISTING SIGN
 - EXISTING PARKING SENSOR
 - EXISTING DRAINAGE PIT
 - EXISTING GRATED PIT
 - EXISTING WATER VALVE
 - EXISTING CONCRETE FOOTPATH
- DESIGN**
- NEW SURFACE TREATMENT FOR SHARED ZONE
 - K&G - NEW KERB AND GUTTER
 - NEW PARKING STRIPES
 - NEW KERB INLET PIT
 - NEW STORMWATER PIPE

CONTINUED ON DRG 12526408-C115

CONTINUED ON DRG 12526408-C113



KEY PLAN
NTS
PRELIMINARY

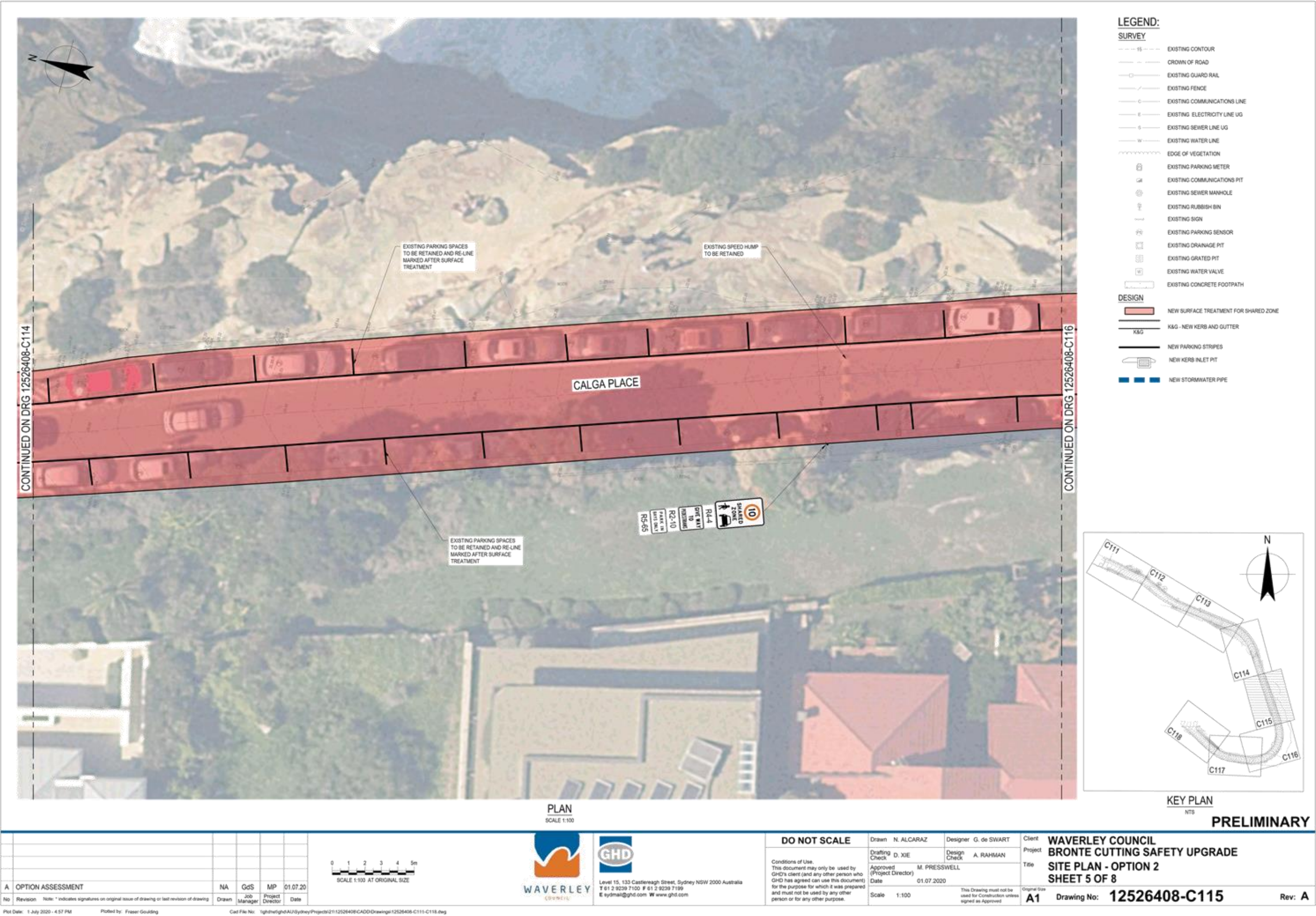
PLAN
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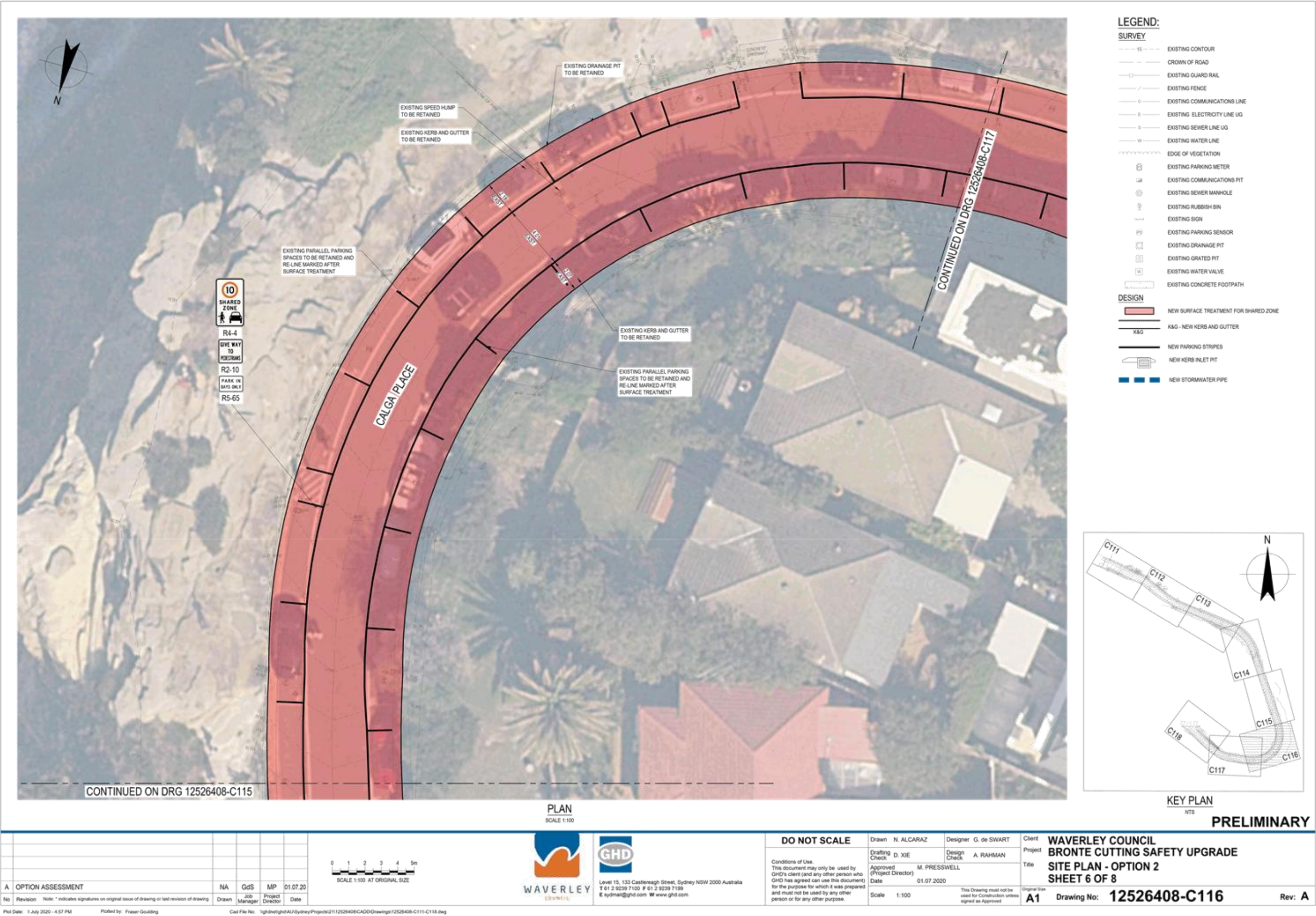
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Drawn	Job Manager	Project Director	Date		

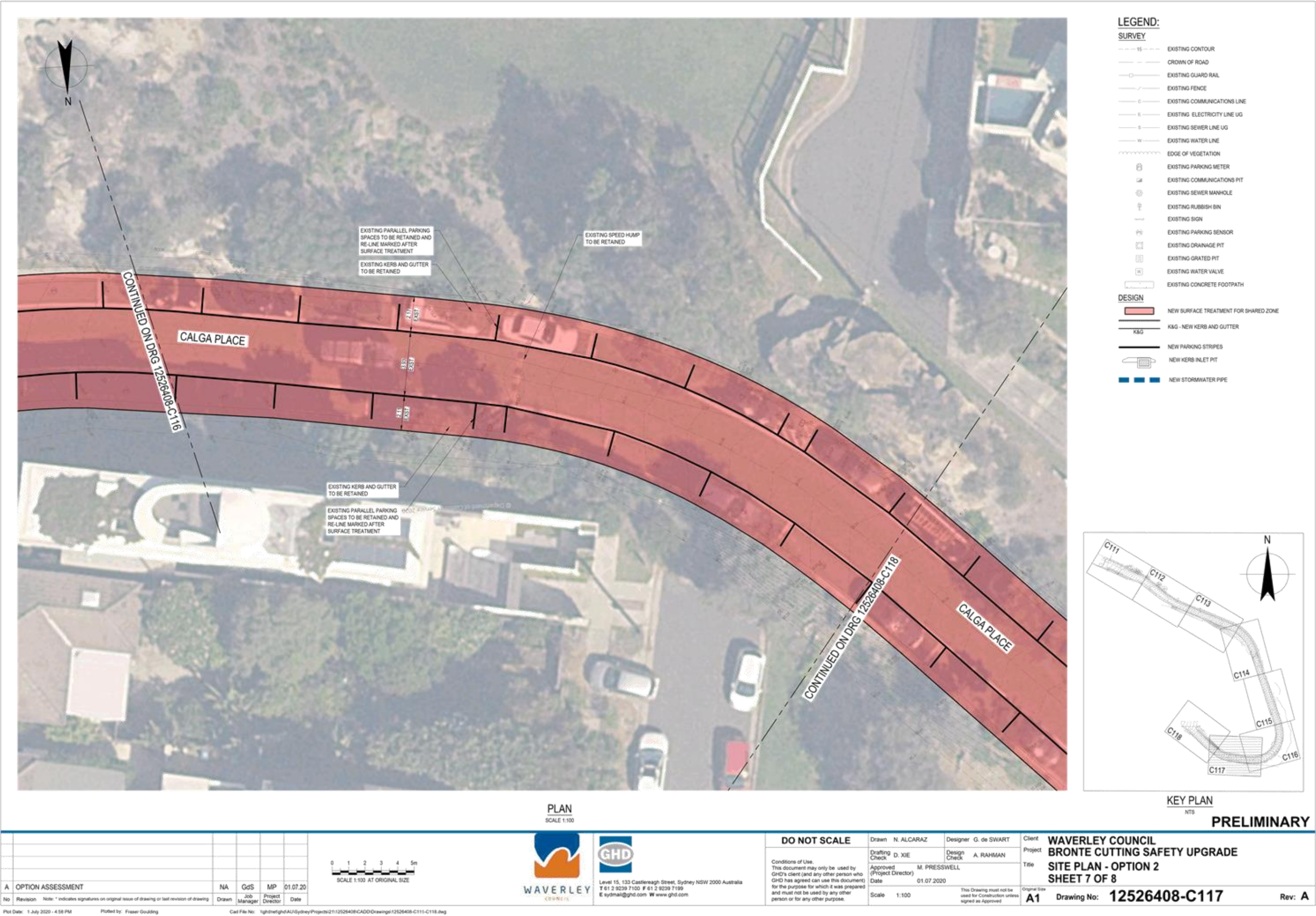


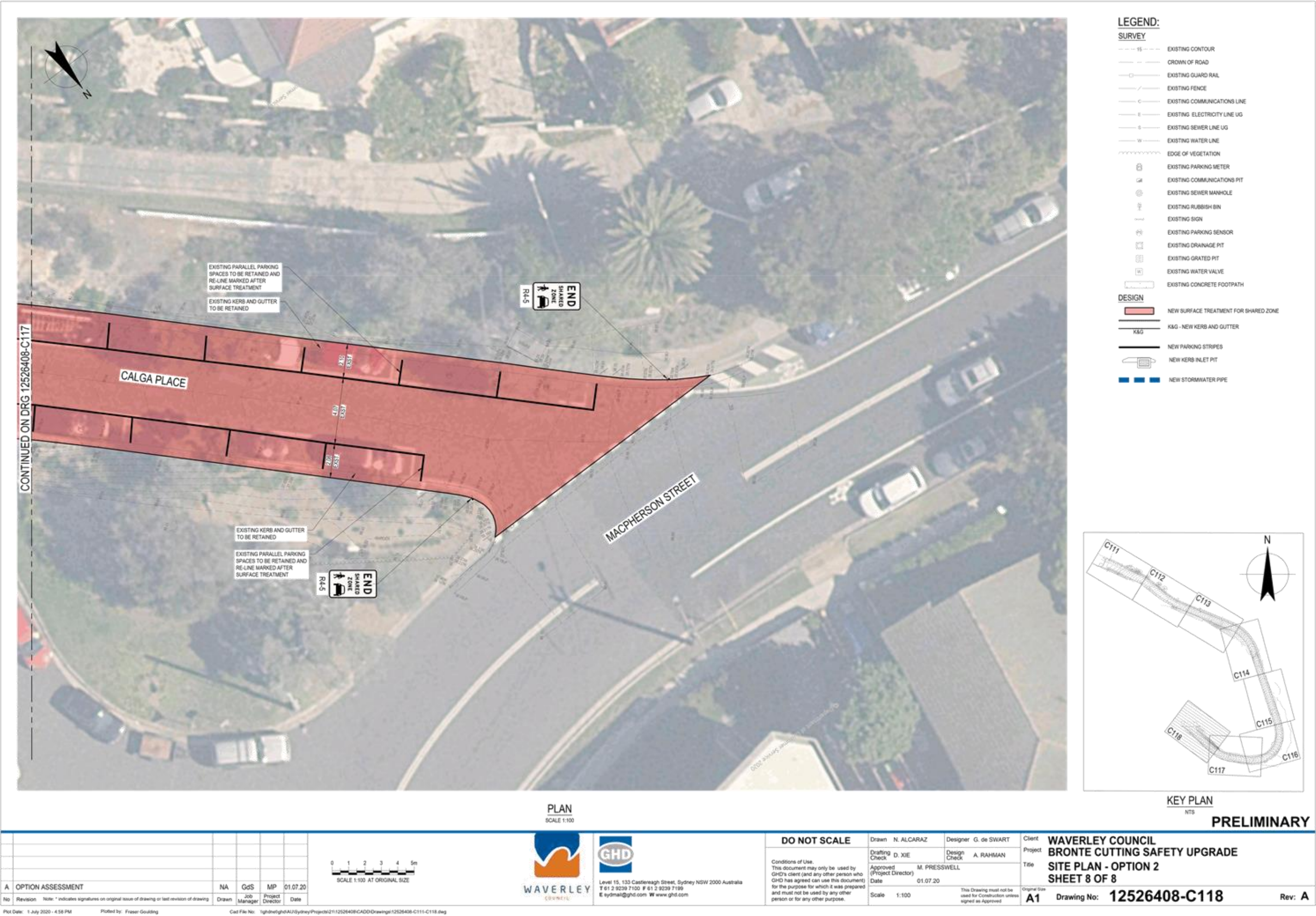
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Client	WAVERLEY COUNCIL		
Project	BRONTE CUTTING SAFETY UPGRADE		
Title	SITE PLAN - OPTION 2		
	SHEET 4 OF 8		
Original Size	A1	Drawing No:	12526408-C114
Rev:	A		









Appendix D – Rendered Sketches



WAVERLEY COUNCIL
BRONTE CUTTING SAFETY UPGRADE
12526408



OPTION 1 - SEPARATED FOOTPATH - SITE PLAN A

PRELIMINARY

A	OPTION ASSESSMENT	NA	GdS	MP	10.07.20
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	JOB Manager	Project Director

Plot Date: 10 July 2020 - 9:53 AM

Plotted by: Rachel Venter

Cad File No: N:\AU\Sydney\Projects\2112526408\CAD\Drawings\12526408-LANDSCAPE.dwg



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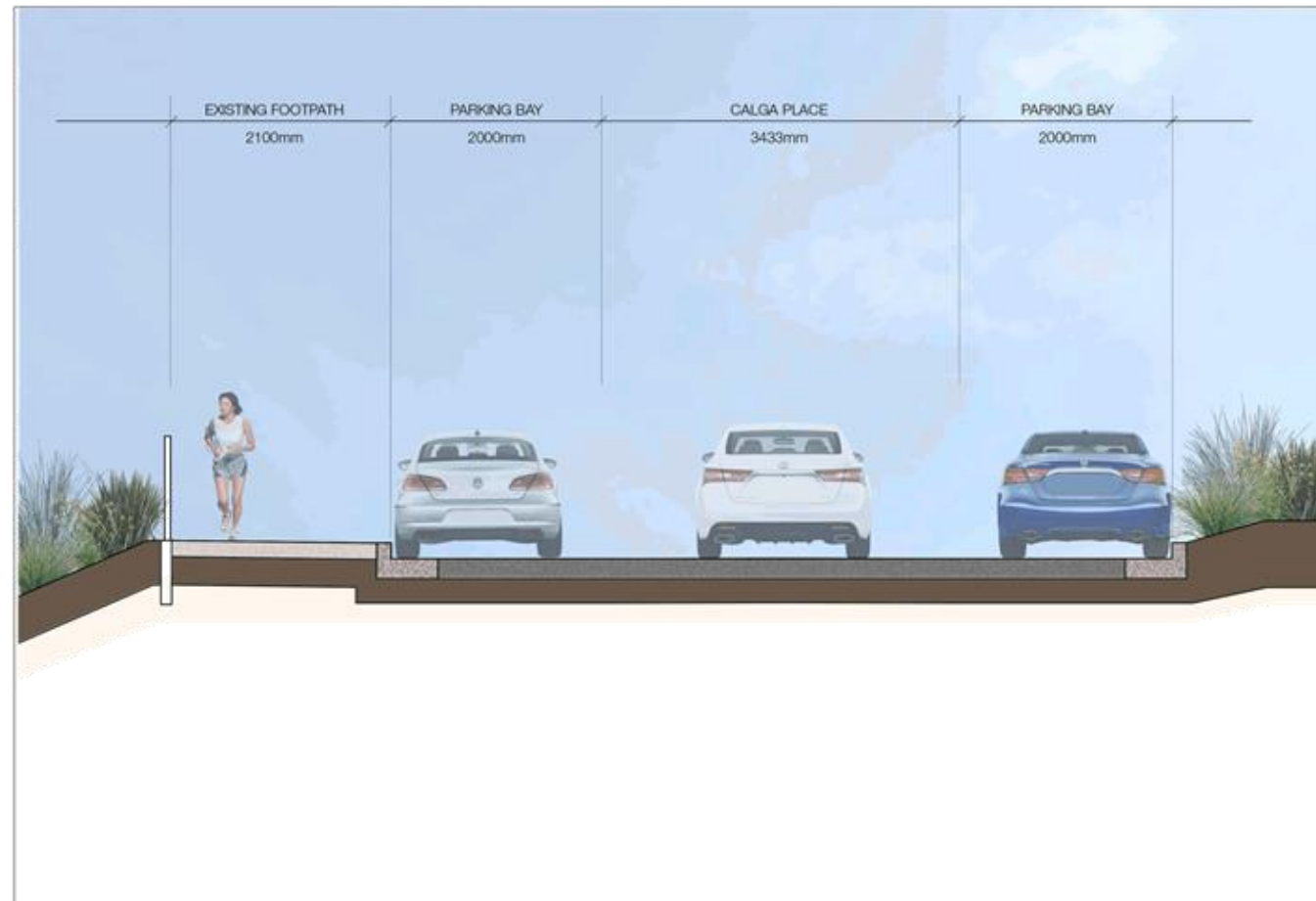
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Drafting Check	D. XIE	Design Check	A. RAHMAN
Approved (Project Director)	M. PRESSWELL		
Date	01.07.2020		
Scale	NTS		

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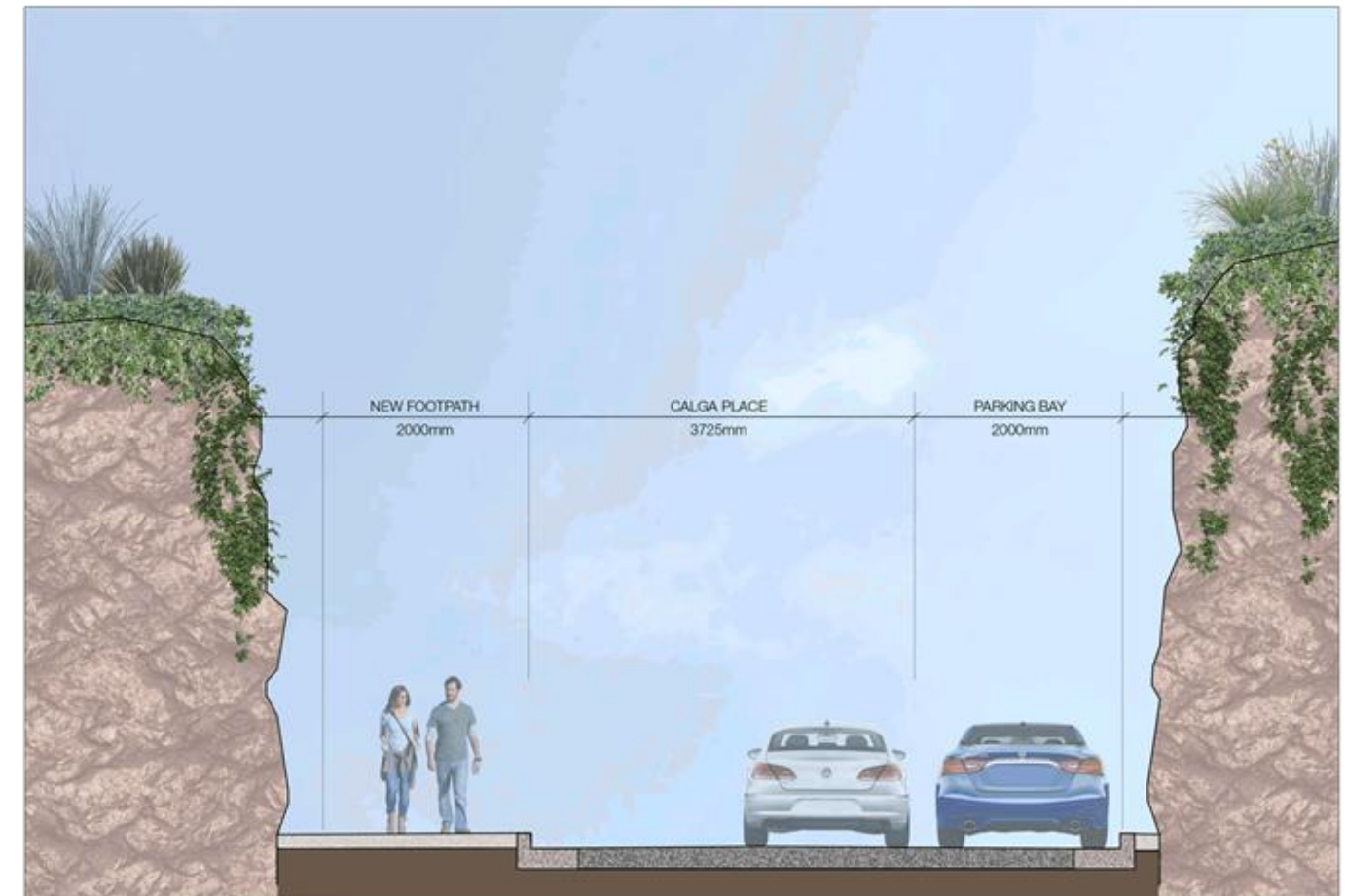
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Project	BRONTE CUTTING SAFETY UPGRADE
Title	OPTION 1 - SEPARATED FOOTPATH
Original Size	A1
Drawing No:	12526408-LS-001
Rev:	A



WAVERLEY COUNCIL BRONTE CUTTING SAFETY UPGRADE 12526408



OPTION 1 - SEPARATED FOOTPATH - SECTION A



OPTION 1 - SEPARATED FOOTPATH - SECTION B

PRELIMINARY

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No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	JOB Manager	Project Director	Date

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Plotted by: Rachel Venter

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	Approved (Project Director) M. PRESSWELL	Date 01.07.2020	Title OPTION 1- SEPARATED FOOTPATH
	Scale NTS	This Drawing must not be used for Construction unless signed as Approved	Original Size A1
			Drawing No: 12526408-LS-002
			Rev: A



WAVERLEY COUNCIL BRONTE CUTTING SAFETY UPGRADE 12526408



OPTION 2 - SHARED ZONE - SITE PLAN A

PRELIMINARY

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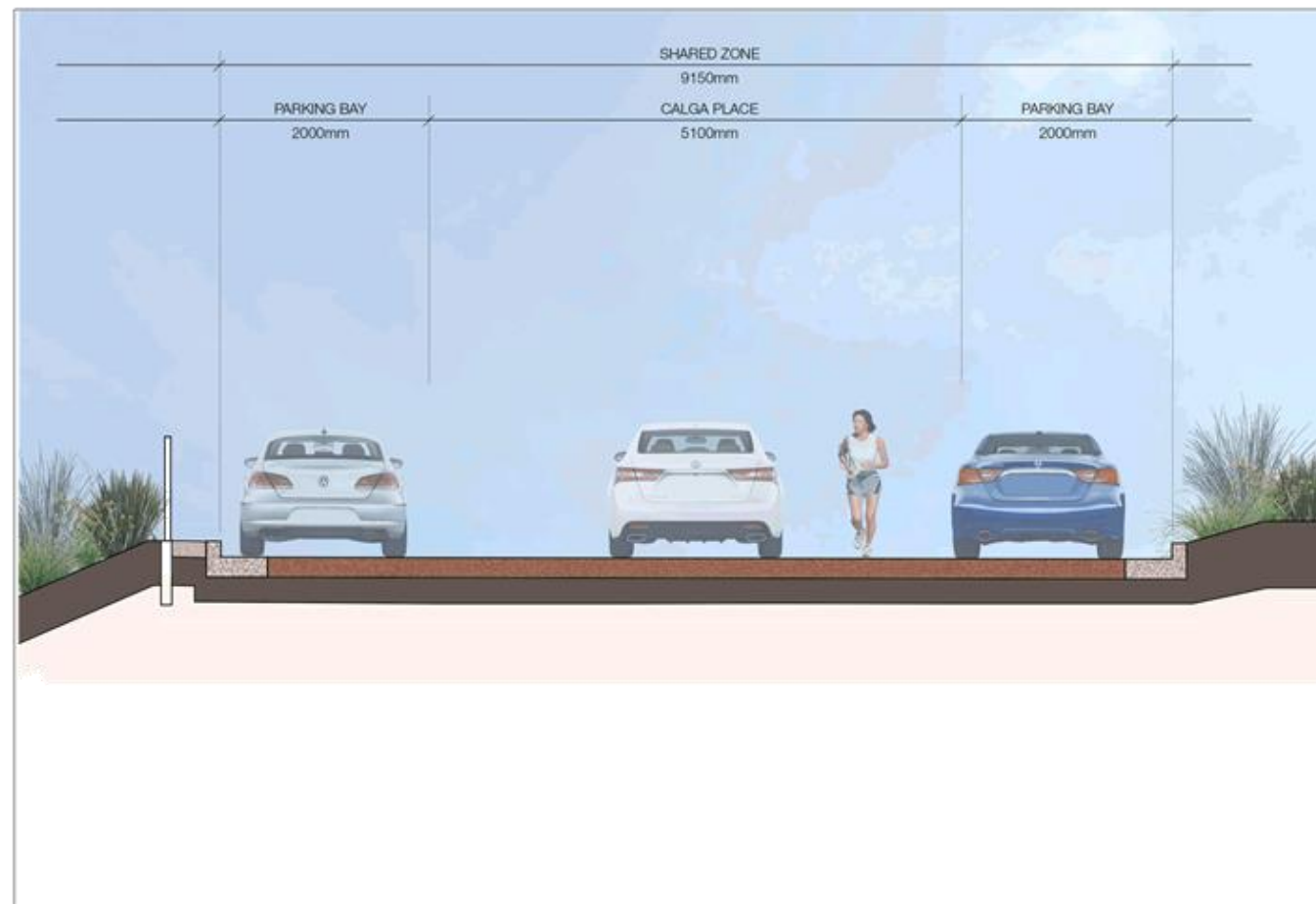
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Plotted by: Rachel Venter

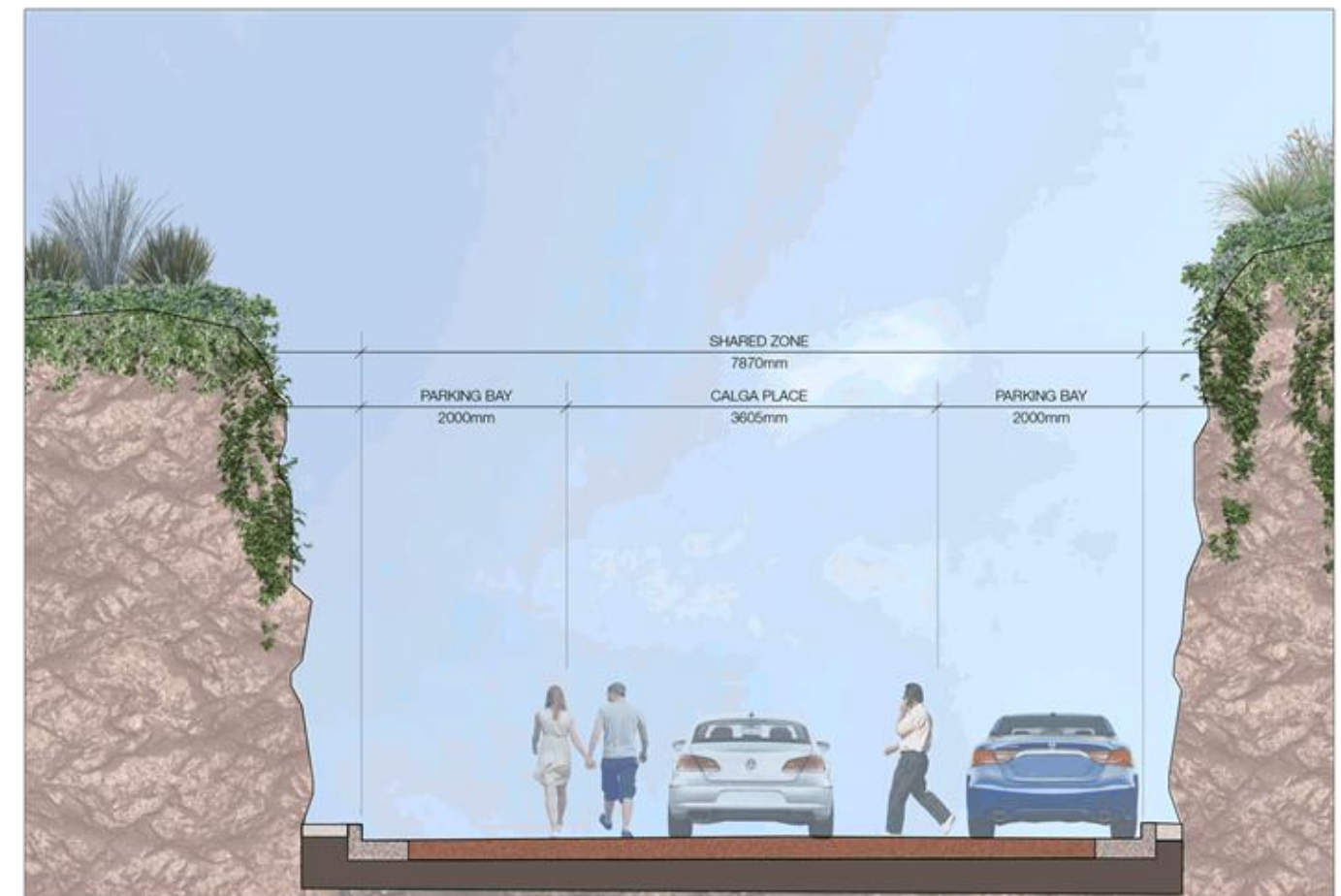
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WAVERLEY COUNCIL BRONTE CUTTING SAFETY UPGRADE 12526408



OPTION 2- SECTION A- SHARED ZONE



OPTION 2- SECTION B- SHARED ZONE

PRELIMINARY

A	OPTION ASSESSMENT		NA	GdS	MP	10.07.20
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	Approved (Project Director): M. PRESSWELL	Date: 01.07.2020	Title: OPTION 2- SHARED ZONE
	Scale: NTS	This Drawing must not be used for Construction unless signed as Approved	Original Size: A1
			Drawing No: 12526408-LS-004
			Rev: A

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Bronte Cutting - Options Assessment Report.docx

Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
Draft A	Guillaume de Swardt	M Presswell		M Presswell		10/07/2020

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