# CLL Capabilities Bridge & Civil Construction



### Clients benefit from this depth and breadth of services in key areas

#### PROVEN TRACK RECORD

Rely on our established reputation backed by a track record of successful projects. From intricate piling assignments to complex infrastructure developments, our expertise has consistently delivered quality results, earning the trust of our clients.

#### INNOVATION AND TECHNOLOGY

Stay ahead in the industry with our commitment to innovation and technology. Our company embraces cutting-edge advancements, ensuring that your projects benefit from the latest methodologies, materials, and equipment, leading to increased efficiency and project success.

### VERSATILE EXPERTISE

CLL offer a comprehensive suite of services beyond piling and ground stabilisation, as our company excels in a wide range of civil construction disciplines.

Whether it's foundation work, structural engineering, or infrastructure development, we offer a one-stop solution for all your civil construction needs.

AT CLL, we extend our footprint across New Zealand, operating seamlessly through specialised divisions strategically established in key regions such as Northland, Tauranga and Christchurch with our head office based in Auckland. Our centralised approach from Auckland allows us to efficiently coordinate and manage projects throughout the country, ensuring a consistent and high-quality service delivery.

#### CLIENT-CENTRIC APPROACH

Experience personalized service with our client-centric approach. We prioritize open communication, collaboration, and a thorough understanding of your project goals, ensuring that our solutions are tailored to meet your expectations and contribute to the overall success of your endeavours.

#### COST-EFFECTIVE SOLUTIONS

By consolidating various civil construction services under one roof, our clients experience streamlined project management, reducing the need for multiple contractors. This not only enhances overall project efficiency but also leads to potential cost savings.

#### ADAPTABILITY TO PROJECT SCALE

With over 200+ employees, whether you're undertaking a small-scale project or a large-scale development, our team is equipped to adapt to the unique requirements of each endeavour. Enjoy the flexibility and scalability of our services to match the specific needs of your civil construction projects.





# **CLL GROUP (CLL)** is a well-established construction company specializing in piling, ground improvements, slip stabilization, ground anchors, retaining walls, civil structures, drainage, and contaminated site remediation. With extensive experience across these disciplines, CLL has built a strong reputation as a reliable and innovative industry leader.

At CLL, we pride ourselves on being at the forefront of ground improvement and piling techniques, leveraging advanced European technologies that set us apart. These cutting-edge systems allow us to tackle complex challenges efficiently, often eliminating provisional tags from tenders and streamlining project delivery. Our collaborative approach ensures that we work closely with your design consultants to develop cost-effective, fit-for-purpose solutions for in-ground challenges.

As part of our commitment to strong partnerships, we offer our expertise and time at no cost—providing indicative pricing and tailored recommendations to help achieve project goals efficiently.

CLL employs 250+ professionals, including engineers, project managers, estimators, machine operators, tradesmen, and skilled labourers. Our workforce includes specialist piling crews and industrial rope access teams, as well as tradesmen such as carpenters, mechanics, and formwork specialists.

### **OUR EXPERTISE**

### **Geotechnical & Civil Engineering Solutions**

- Piling solutions (Olivier Piling, CFA, Bored, Driven, Sheet Piling)
- · Retaining and stabilization systems
- Ground anchors and soil nailing
- Deep foundation and ground improvement techniques

### **Critical Slip Rehabilitation & Drainage**

- Earthworks and slope stabilisation
- Cross road drainage and culvert installation
- Swale and water diversion systems
- Manhole and bored drain installations

### **Specialized Construction Services**

- Bridge and structure foundations
- Marine piling and coastal protection
- Infrastructure resilience solutions
- Sustainable construction initiatives



### WHY CHOOSE CLL?

- Industry Leadership: Cutting-edge European piling and ground improvement technologies.
- **Experience & Expertise:** Decades of experience in delivering large-scale infrastructure projects.
- Innovative Methods: Leaders in advanced piling and geotechnical stabilization.
- **Sustainability Focus:** Commitment to environmentally friendly construction practices.
- Safety & Quality Assurance: Adherence to the highest industry standards.
- **Project Delivery Excellence:** Proven track record of delivering projects on time and within budget.

### LET'S WORK TOGETHER

We welcome opportunities to collaborate on upcoming projects. Get in touch to discuss how CLL can bring value to your project by contacting the person who gave you this brochure or via our branches located on the last page of this document.



# Key Project Information & Client Reference Sheets

CLL has successfully delivered projects for government agencies, local councils, and private sector clients across New Zealand. Our portfolio includes major infrastructure projects, slip remediation, and specialized piling solutions that have improved the resilience of transport networks and essential infrastructure.

We are able to provide you with our up-to-date presentations, demonstrating our cutting edge technologies and case studies should you require, and you can visit our LinkedIn page and website for more visual content, or at your request we can provide you with links to these.



### **PEACOCKE BRIDGES**

LOCATIONWHATUKOCLIENTDOWNERSTART & FINISH DATESMARCH -VALUE\$2.6M

WHATUKOORURU DRIVE, HAMILTON DOWNER CONSTRUCTION MARCH - JUNE 2023 \$2.6M

### **DESCRIPTION OF WORKS**

CLL successfully completed the construction of two bridges in Hamilton: the Eastern Gully Bridge and the Mangakotukutuku Gully Bridge, both situated on Peacocke Road. The project comprised the installation of a total of 28 piles, including abutment piles (900mm in diameter, 25m deep) reinforced with permanent casings and pier piles (1.2m in diameter, 30m deep) equipped with a permanent sleeve.

To accomplish this task, specialised equipment such as the LB24, a 110-ton crane, and excavators weighing 36T, 14T, and 8T were used.

Challenging access conditions meant manoeuvring this equipment down a steep ramp, which demanded exceptional efficiency from the team. The soft ground conditions, caused by the site's proximity to a river, also necessitated the use of a bentonite slurry system during the drilling process to bolster pile shaft stability. Stringent sediment control measures were implemented to mitigate pollution risks arising from this proximity to this river.





### LOOP ROAD

LOCATION CLIENT START & FINISH DATES VALUE SH1 OTAIKA BRIDGE GROUND STABILISATION AND PILING WORKS OXCON CLL JANUARY 2024 - NOVEMBER 2024 \$4M

### **PROJECT OVERVIEW**

CLL was subcontracted by Oxcon CLL (sister company) to carry out ground stabilisation and bridge piling works for the SH1 Otaika Bridge project. This project required a range of piling techniques to ensure the structural integrity of the bridge and surrounding infrastructure, particularly given the challenging proximity to the river. Despite the complexities, the project was successfully completed on time and within budget.

### SCOPE OF WORK AND KEY FACTS

The project involved four distinct piling methods, each tailored to specific structural and geotechnical requirements:

- Full Displacement Piles: 189 piles, each 14 meters deep and 450mm in diameter.
- **Rammed Aggregate Piers (RAPs):** 586 RAPs installed at depths ranging from 12 to 16 meters, with a diameter of 600mm, using 2,400m<sup>3</sup> of GAP40 material.
- **Bridge Piling:** 8 piles, each 1,500mm in diameter and 20 meters deep, forming the foundation of the new bridge structure.
- **Retaining Wall Piling:** 50 reinforced concrete piles, averaging 11.5 meters in depth and 750mm in diameter, ensuring slope stability and long-term resilience.



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### CHALLENGES AND EXECUTION

- Proximity to Waterways: The site's location near and within the river presented environmental and logistical challenges. Mitigation measures were employed to ensure stability and minimize impact.
- Varied Ground Conditions: The use of multiple piling techniques allowed for tailored solutions to different soil and load-bearing conditions, ensuring structural integrity.
- **Timely Delivery:** Despite the challenges, CLL delivered the project efficiently, meeting all schedule and budgetary constraints.

### CONCLUSION

The SH1 Otaika Bridge ground stabilisation and piling works demonstrate CLL's capability in delivering complex geotechnical solutions with precision and efficiency. By successfully implementing a variety of piling techniques in a challenging environment, CLL reinforced its reputation as a leader in foundation engineering, ensuring long-term stability for a critical piece of infrastructure.



### **MEDALLION DRIVE LINK BRIDGE PROJECT**

LOCATION CLIENT START & FINISH DATES VALUE MEDALLION DRIVE LINK BRIDGE PROJECT DEMPSEY WOOD CIVIL AUGUST 2020 - JANUARY 2021 \$2.2M

### **PROJECT OVERVIEW**

The Medallion Drive Link Bridge project is a critical infrastructure development aimed at improving connectivity and accommodating increased traffic flow. The project required the construction of key structural elements designed for long-term durability, stability, and functionality.

#### **SCOPE OF WORK AND KEY FACTS**

CLL was responsible for delivering core construction elements, ensuring structural integrity and adherence to engineering standards. The project was completed on time and within budget, exceeding client expectations.



### **KEY STRUCTURAL COMPONENTS**

- Bridge Piling: Installation of eight piles, each 1,200mm in diameter and extending 11 meters deep, providing foundational support for the bridge abutments. These piles underwent Crosshole Sonic Logging (CSL) testing to confirm they were free of defects.
- Abutments Construction: Included excavation, reinforced steel installation, formwork placement, concrete pouring, and backfilling to ensure structural stability and load-bearing capacity.
- Super T Beams: Eight beams, each measuring 30 meters in length, 2.3 meters in width, and 1.3 meters in height, installed on rubber bearing pads to allow controlled movement and load distribution, mitigating thermal expansion and seismic activity.
- Settlement Slabs, Wingwalls, and Retaining Walls: Precision reinforcement and formwork placement, followed by concrete pouring, ensuring long-term resilience.
- Scour Protection Measures: Implemented to safeguard against erosion and potential water damage, enhancing structural durability.
- Barrier Installation, Electrical & Drainage Works: Completion of critical safety and functionality components, including pedestrian footpaths for improved accessibility.
- Anti-Graffiti Protection: Applied to maintain the bridge's long-term appearance and durability.

### **PROJECT EXECUTION AND KEY ACHIEVEMENTS**

- **No Design, Construct-Only Approach:** CLL successfully delivered the bridge based on provided specifications, demonstrating construction expertise.
- **400-Tonne Super Lift:** Successfully executed as part of the bridge installation, requiring precise coordination and technical expertise.
- **Client Satisfaction:** CLL completed the project on time and within budget, surpassing client expectations in terms of quality, efficiency, and project execution.

#### CONCLUSION

The Medallion Drive Link Bridge project stands as a testament to CLL's capability in delivering complex bridge construction projects. With meticulous execution, rigorous quality control, and innovative construction techniques, CLL ensured the successful completion of a critical infrastructure project that will serve the community for years to come.





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### **BAYFAIR TO BAYPARK**

LOCATIONTAURANGACLIENTCPB CONTRACTORS PTYSTART & FINISH DATESMARCH 2020 - 07 MAY 2021VALUE\$4.5M

### **DESCRIPTION OF WORKS**

The Bayfair to Baypark link (Baylink) project, situated on State Highway 2 south of Tauranga, required an upgrade of two major state highway intersections. This critical infrastructure development posed significant challenges, particularly the need for foundational work for bridge piers near a busy intersection with active traffic.

To address these challenges, CLL carried out a comprehensive foundation solution. 1,289 CFA piles were installed in double rotary mode, each with a diameter of 750mm and depths ranging from 10m to 15m. The use of double rotary drilling ensured that debris was contained within the shroud, allowing for safe and efficient drilling operations close to live traffic.

Our efficient site management was noteworthy, achieving a daily pumping capacity of approximately 250 linear meters. Our coordination of spoil removal and concrete delivery also culminated in an peak production rate of 468 linear meters per day.





### AUCKLAND CYCLEWAY

LOCATIONGLEN INNES TO TĀMAKI DRIVE, AUCKLANDCLIENTNZTA - AUCKLANDSTART & FINISH DATESJULY 2020 - APRIL 2022VALUE\$30.8M

### **DESCRIPTION OF WORKS**

The Glen Innes to Tāmaki Drive Shared Path - Te Ara Ki Uta Ki Tai (the path of land and sea) was a collaborative project with Oxcon-CLL that delivered a 7km-long pathway connecting Auckland's eastern suburbs to the city centre.

The project comprised two pre-cast concrete bridges totalling 300 meters, with one spanning the Eastern Line of the rail network.

Additionally, it included over 800 meters of timber board walks and nearly 2 kilometres of 4-meter-wide concrete pathways.

We successfully completed Section 2 of the total project, extending from St Johns Road to the Orakei Basin, along with an additional connection to John Rymer Place. Approximately 20% of the work was carried out by selected subcontractors.

This impressive project was delivered ahead of schedule and under budget, representing a significant achievement for both CLL and Waka Kotahi. It now stands as an enduring asset, ready to be enjoyed by the public and local communities for years to come.



### **NELSON STREET CYCLEWAY BRIDGE**

LOCATION CLIENT CANADA STREET, AUCKLAND (OLD NELSON STREET) HAWKINS

### **DESCRIPTION OF WORKS**

The project aimed to transform Auckland's old Nelson Street off-ramp into an iconic shared footpath and cycle way, connecting upper Queen Street via a new bridge off Canada Street and continuing through to Nelson Street with a separate cycle way.

CLL played a pivotal role in the project, completing all piling works, grouting the joins of the bridge panels, and constructing the settlement slabs at both the Eastern and Western ends of the bridge (Canada Street and Nelson Street ends).

The renovated off-ramp has become a shared footpath, enhancing connectivity and promoting cycling in the area.

The cycle way earned the prestigious Chicago Athenaeum Museum of Architecture and Design Award, recognising it as one of the world's top international distinguished building, landscape architecture, and urbanism projects.



### WELLESLEY STREET BRIDGE, CYCLEWAY AND UNDERPASS

LOCATION CLIENT AUCKLAND CITY HAWKINS

### **DESCRIPTION OF WORKS**

On behalf of Hawkins Infrastructure CLL completed works for the Wellesley Street Bridge cycleway and underpass.

The works involved constructing an underpass beneath Wellesley street, which is one of Auckland's busiest streets.

All works were to be completed between Anzac Long weekend and Easter weekend working seven days a week, 15 hours a day to meet the required program.

The scope of work included UC retaining wall along the cycleway, the underpass and wing walls involved with this was 8no reinforced concrete piles, 2,500m3 of bulk excavation placing 2no 60T pre-cast abutments, placing bridge hollow core beams, in-situ deck and placing TL4 barriers.

The project was successfully completed within the allocated time and budget.







### **COWIE STREET BRIDGE**

LOCATION CLIENT START & FINISH DATES VALUE COWIE STREET, NEWMARKET AUCKLAND TRANSPORT NOVEMBER 2017 - JULY 2018 \$7.9M

### **DESCRIPTION OF WORKS**

This project involved removal of a level crossing and construction of a new dual lane single span hollow-core bridge over live rail. Associated works included comprised MSE Stone Strong faced abutments, internal piling, road works and landscaping. The primary goal was to boost the efficiency of the AT Train Network by enhancing connectivity between Britomart and Newmarket train stations, two vital segments of the Auckland rail corridor.

In partnership with Fraser Geologics, we redesigned Auckland Transport's initial design, resulting in a solution that saved the client over \$500,000 while significantly reducing environmental impact. As the lead contractor, we managed all aspects of the bridge construction, and carried out 95% of the construction work, subcontracting the installation of handrails.

The constructed bridge was a 22 metres long and 10 metres wide featuring Urban Design embossed concrete-faced MSE wall bridge abutments, with six 750mm diameter reinforced piles drilled 19 metres deep within the abutments.

Extensive collaboration with KiwiRail and engagement with local residents and stakeholder groups were essential. Despite the complexity of the urban environment, the project was completed with minimal disruption to stakeholders, and on-time within an accelerated time-line to facilitate AT's Public Transport time table changes.

In close partnership with KiwiRail, stringent Safe Systems of Work were implemented to facilitate operations near their critical 25,000V OLE structures, supported by a robust 'Permit to Enter' process.





### PROJECT INFORMATION SHEET COWIE STREET BRIDGE

### **DESCRIPTION OF WORKS (cont)**







### Additional Project Components Include:

- · Bridge beam and barrier procurement
- Typical bridge detailing including TL5 barriers, Texas rail, wing wall tie-ins, etc.
- Timber board-walk
- Timber & Steel Architectural Fencing
- New Stormwater assets and connections, including rain gardens and planted swale
- Seeded Rip-Rap and Gabion rock gardens
- Footpaths & stencil applied patterns
- Basalt Handcut Cobble Thresholds
- Re-vegetation and Specimen Tree planting

### **Client Feedback:**

"The construction environment adjacent to the rail corridor and the consent conditions culminated in a challenging construction environment and it is unlikely a different contractor would have provided the same outcome to Auckland Transport to meet the project requirements. It is also noted that feedback from the community, reiterated throughout construction, was extremely positive regarding both CLL's performance and communication."

- Melissa Feather (AT Project Manager)



### WAIRERE-COBHAM BRIDGE

LOCATIONHAMILTON, WAIKATOCLIENTFULTON HOGANSTART & FINISH DATESJANUARY 2021 - FEBRUARY 2021VALUE\$860K

### **DESCRIPTION OF WORKS**

Fulton Hogan required the installation of large-diameter reinforced concrete (RC) bridge piles for the Wairere-Cobham bridge construction.

CLL installed 17 reinforced concrete bridge piles, each with a diameter of 1200mm and reaching 30 meters deep. Challenging ground conditions necessitated the use of the IMT Drilling Rig paired with bentonite slurry for effective pile shaft stabilisation. The operation also involved a 24-ton excavator and an 80-ton crawler crane for vibrating the 6-meter temporary casing and lifting the pile cage and tremie pipes.

Despite the challenges posed by the COVID-19 pandemic, including delays in material and labour deliveries from Auckland, the project for the Wairere-Cobham bridge construction was completed successfully.





### WOODCOCKS ROAD BRIDGE

LOCATION CLIENT START & FINISH DATES VALUE WOODCOCKS ROAD, WARKWORTH NORTHERN EXPRESS GROUP CONTRACTOR SEPTEMBER 2020 - OCTOBER 2020 \$600K

### **DESCRIPTION OF WORKS**

Our client enlisted CLL to carry out bridge piling and groundwork for the construction of the new bridge on Woodcocks Road in Warkworth, as part of the Puhoi to Warkworth motorway initiative. The project faced several challenges, including high groundwater levels and varying founding rock depths.

Using the SR45 crane and a 14T excavator support machine, we installed ten bridge abutment piles, each measuring 900mm in diameter and 26m-34m in depth, using temporary steel casings with an additional sleeve outside the casing. Addressing the challenges posed by high groundwater levels and varying rock depths, each pile was installed with sonic tubes for sonic logging testing, ensuring the bridge's structural integrity.



### DAIRY FLAT ROUNDABOUT

LOCATION CLIENT START & FINISH DATES VALUE CORNER OF DAIRY FLAT HIGHWAY & COATESVILLE-RIVERHEAD HIGHWAY DEMPSEY WOOD CIVIL LTD AUGUST 2019 - NOVEMBER 2020 \$1.3M

### **DESCRIPTION OF WORKS**

The construction of a new roundabout at the intersection of Dairy Flat Highway and Coatesville-Riverhead Highway was initiated to address safety concerns at one of New Zealand's top 100 high-risk intersections. CLL was responsible for installing ground improvement piles at seven distinct locations, with Dempsey Wood subsequently erecting MSC walls to establish the road construction foundation.

The piles varied in depth and required different socket configurations into the East Coast Bays Formation (ECBF). All ground improvement piles were constructed without reinforcement, using 10 MPa concrete. During the project, Wall 3 was found to have a historic slip, necessitating additional remedial work. This phase involved constructing a 30-meter palisade wall comprising 30 piles of 750mm diameter and reaching depths from 15m to 18m. Additionally, a 1250mm x 715mm ground beam was installed, accompanied by 15 13-strand cables ranging from 30m to 40m in length, with bond lengths between 10m and 15m.

The project required multiple set-ups and dismantling due to the diversion and relocation of existing roads as it progressed. Each location presented unique challenges, necessitating the allocation and adaptation of plant machinery to optimise drilling operations.





## **NON-NEGOTIABLES**



# **CORE VALUES**



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