CLL Seismic Upgrades

CLL
SERVICE & SOLUTIONS

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

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.

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.

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.

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.

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.

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.

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.

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SERVICES & SOLUTIONS

CLL
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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.

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SEISMIC UPGRADES

The need for ‘safe’ and resilient workplaces remains a top priority, as clients require assurance that their buildings are fit for purpose and comply with acceptable seismic safety standards, as defined by the New Building Standard (NBS).

Earthquake Ratings – What Do They Really Mean?

The NBS rating (% NBS) reflects a building’s expected seismic performance compared to a new building designed and built under current building standards and codes. This rating is calculated as part of a seismic assessment.

Understanding the Basics

A 50% NBS rating indicates that the building is expected to perform similarly to a new (100% NBS) building, but only under half the level of seismic shaking - assuming all other conditions are equal.

At 50% NBS, a building should be able to withstand a moderate earthquake, such as a one-in-100-year event, with comparable level of reliability (note: the seismic scale is exponential).

The New Zealand Society for Earthquake Engineering (NZSEE) considers a building rated above 67% NBS to be acceptable in terms of seismic risk.

What About Buildings with Lower Ratings?

Buildings rated below 34% NBS meet one of the criteria for being classified as Earthquake-Prone Buildings (EPBs) under the Building Act 2004. Those rated below 67% NBS are considered Earthquake Risk Buildings (ERBs).

Recent legislative changes have introduced measures to identify EPBs and set mandatory time frames for necessary seismic strengthening.

CLL CAPABILITY

CLL has significant experience in seismic strengthening, underpinning and reinforcing an existing structure’s foundations.

The underpinning and strengthening is performed in stages to avoid compromising the overall integrity of the structure.

Underpinning reinforces existing foundations and strengthens the soil by introducing an expanding filler or extends the foundation to redistribute the load over a greater surface area.

CLL has extensive experience in the five main methods of underpinning:

- Mass concrete
- Beam and base
- Mini-piled
- Expanding resin injection
- Screw pile

CLL will advise on the most appropriate solution depending on the requirements, the site and the specific situation.

Whatever the situation, whatever the space constraints CLL has the equipment and expertise to underpin any structure.

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.

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PROJECT INFORMATION SHEET

CHELSEA SUGAR FACTORY

LOCATION	BIRKENHEAD, AUCKLAND
CLIENT	CHELSEA SUGAR
START & FINISH DATES	DECEMBER 2021 - APRIL 2022
VALUE	CIRCA $500K

DESCRIPTION OF WORKS

The Chelsea Sugar Factory required seismic strengthening beneath its bulk silos, presenting significant challenges due to unfamiliar soil strata, a narrow single-lane road workspace, and the factory's operational demands.

The project involved reinforcing five distinct pads by installing four anchors, each drilled 12 meters deep into the unfamiliar soil. To facilitate the installation, the Melthouse was stripped down, and excavation was conducted with a 14-tonne digger.

The confined workspace was successfully managed, ensuring all sugar residues were steam-cleaned to prevent interference with the concrete. Despite needing to work beyond operational hours and navigate Covid-19 restrictions, the team successfully completed the project on time.

PROJECT INFORMATION SHEET

205 HOBSON STREET

LOCATION	205 HOBSON STREET, AUCKLAND CBD
CLIENT	HOBSON GARDENS BODY CORPORATION
START & FINISH DATES	FEBRUARY 2023 - MAY 2023
VALUE	CIRCA $366K

DESCRIPTION OF WORKS

In Auckland's bustling CBD, CLL were tasked with addressing the structural integrity issues of a sinking building plagued by subsidence of up to 21mm in certain floor sections. The site location on Hobson Street presented additional complexities, including confined dimensions (7.4m x 6.5m) and limited parking space, making conventional structural reinforcement methods impractical.

The project commenced with the careful removal of the buildings concrete slab which required removal of the front window and doorway to facilitate access. Our team then deployed our TD75 micropiling rig to install 12m anchors (micropiles). This state-of-the-art compact rig was crucial in navigating the restricted space and efficiently drilling through the substrate.

PROJECT INFORMATION SHEET

THE STRAND PARNELL

LOCATION	THE STRAND, PARNELL, AUCKLAND
CLIENT	WAIDE CONSTRUCTION
START & FINISH DATES	MAY 2021 - JUNE 2021
VALUE	CIRCA $100K

DESCRIPTION OF WORKS

Our client required a comprehensive structural retrofit and seismic upgrade to enhance the integrity of their Parnell building and enable potential expansion. The project involved preserving and reinforcing the existing eight columns supporting the structure, amidst constraints of limited headroom and engineering risks.

CLL's solution focused on preserving and reinforcing the existing eight columns. This intricate process involved excavating the ground beam and pad to pour new piles on two opposing sides of each column. We collaborated with a specialised subcontractor to carry out core-drilling of the 800mm deep concrete pad.

CHALLENGES AND INNOVATIONS

To address the challenge of limited headroom (4.5 meters), we used our specialised GEAX XD8 drilling rig, which operates efficiently within the confined spaces.

To mitigate engineering risks associated with column stability, we performed drilling on one side of each column at a time, ensuring at least one pile connection to the building's structure throughout the process. The 5.5m piles were poured with mid-installation cage splicing to navigate spatial limitations. A one-week curing period was carefully observed for the drilled areas before progressing to the other side of the column.

The Parnell project site presented challenges in size and location. Limited parking on the busy street required careful manoeuvring of concrete trucks into the narrow building entrance and concrete coring took place during night-time hours to minimise disruptions to nearby workplaces.

Throughout the piling process, we prioritised the protection of polished floors, exercising utmost care to avoid any damage.

Strata material was meticulously bagged for removal, and diesel fumes were effectively extracted to adhere to strict adherence to air quality regulations.

Despite the complexities, the project was successfully completed, delivering a stable foundation and setting the stage for future expansion.

PROJECT INFORMATION SHEET

94-96 QUEEN STREET

LOCATION	94-96 QUEEN STREET, AUCKLAND CBD
CLIENT	WAIDE CONSTRUCTION
START & FINISH DATES	20 WEEKS
VALUE	CIRCA $320K

DESCRIPTION OF WORKS

CLL's challenge was to lay the foundations in a low headroom confined space underneath an historical building requiring a seismic upgrade.

The design had to be changed because the ground conditions were found to be extremely dense with hard rock beneath the buildings. The design was changed from 32 micropiles of 150mm diameter to 12 conventional piles of 400mm diameter. CLL assisted in the redesign to make it faster and easier for the client.

A low headroom piling rig, capable of drilling up to 600mm diameter piles to 15m deep in 2.7m headroom, was used. This is a unique piece of equipment which CLL owns specifically for this type of low headroom project.

This was an extremely difficult job with the CLL team working in a confined space with contamination, fumes and water. The location in Queen St was an additional challenge due to the restrictions on hours, parking and traffic management. Despite the challenges, CLL successfully completed the project.

PROJECT INFORMATION SHEET

MELANESIAN MISSION BUILDING

LOCATION	**40-44 TAMAKI DRIVE, MISSION BAY, AUCKLAND**
CLIENT	**SALMON REED**
START & FINISH DATES	**2017**

DESCRIPTION OF WORKS

The Mission building underwent significant upgrades to the structure, architecture, and services under the supervision of Salmon Reed Architects. The structural improvements achieved a minimum of 67% NBS and included:

- The installation of new concrete ground beams within the existing floor.
- A steel framework integrated into masonry walls, roof construction secured to the tops of masonry gable walls.
- A reinforced concrete core added to the chimney.
- A plywood diaphragm attached to the existing ceiling.

Mitchell Vranjes, structural engineers, were responsible for the seismic strengthening of the Melanesian Mission and developed a lime injection solution to bond the inner and outer skins of stone and rubble core together preventing them from collapse in an earthquake. The strengthening also involved some discretely placed structural steel members and existing sarking and plywood diaphragms.

CLL worked with Mitchell Vranjes to assess the situation and design the most appropriate method for underpinning the heritage wall.

The solution required a controlled excavation, then stiffening the ground with a cement and mortar mix to strengthen the soft sand beneath the wall and stabilise the structure. This was performed by carefully excavating sections beneath the wall and filling the excavation with a mix of cement and mortar to support the existing structure.

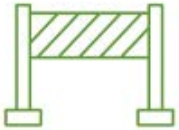
Careful planning was required for the excavation and backfill, to ensure the specific characteristics of the heritage wall and surrounding area were preserved.

NON-NEGOTIABLES

NO LIFT IS TO BE DONE WITHOUT A LIFT PLAN IN PLACE

GEOTECH APPROVED PILING PLATFORMS MUST BE IN PLACE

NO MACHINE OR VEHICLE MOVEMENT WITHOUT A SPOTTER



ISOLATE PILING ZONE USING SIGNAGE AND BARRIERS

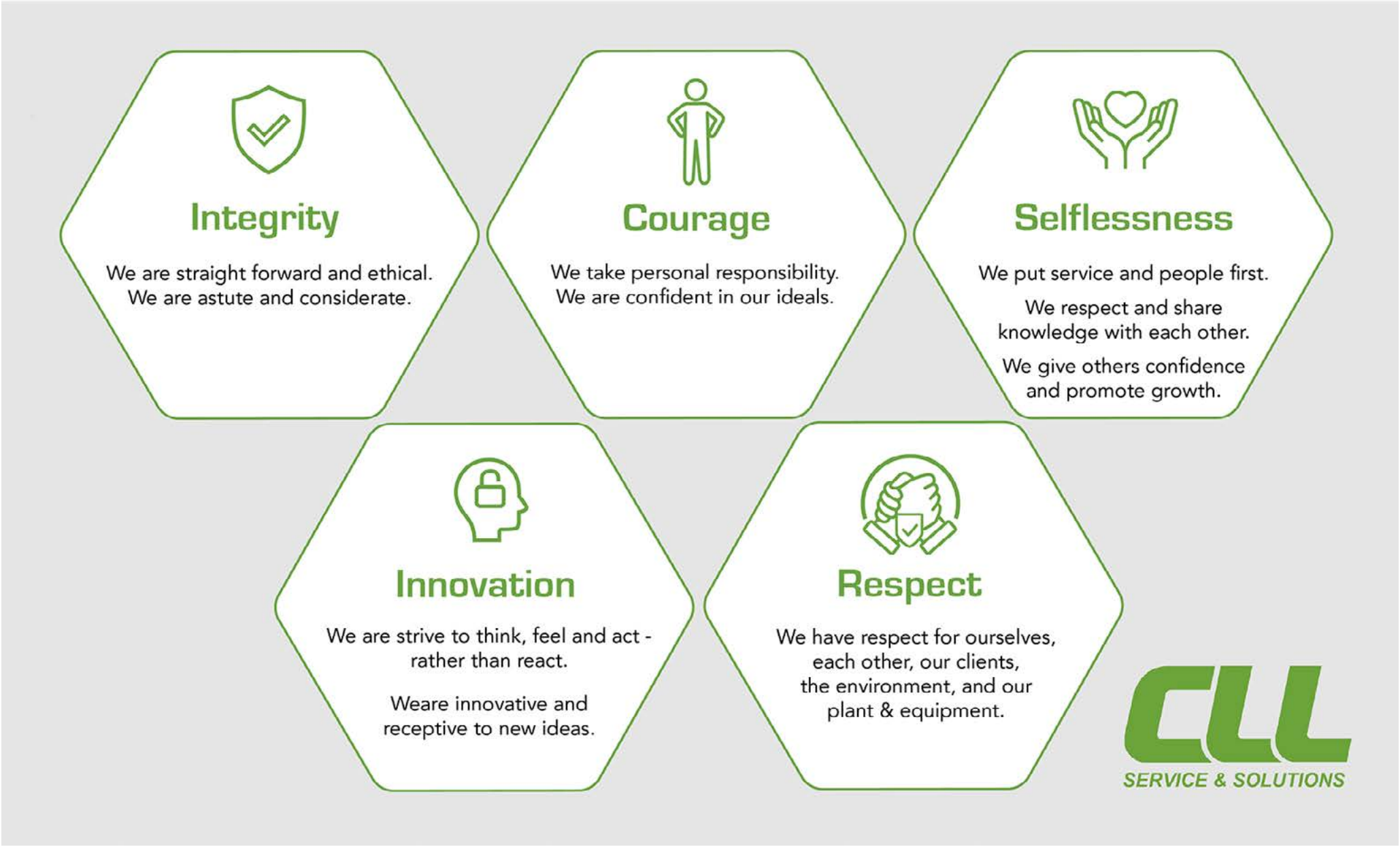
NEVER LEAVE OPEN HOLES UNCOVERED

DO NOT BREAK GROUND UNTIL PERMIT TO DIG HAS BEEN ISSUED

NO CELL PHONE USE WHILE DRIVING OR OPERATING

CLL SERVICE & SOLUTIONS

CORE VALUES


Integrity
We are straight forward and ethical.
We are astute and considerate.
Courage
We take personal responsibility.
We are confident in our ideals.
Selflessness
We put service and people first.
We respect and share knowledge with each other.
We give others confidence and promote growth.
Innovation
We are strive to think, feel and act - rather than react.
Weare innovative and receptive to new ideas.
Respect
We have respect for ourselves, each other, our clients, the environment, and our plant & equipment.
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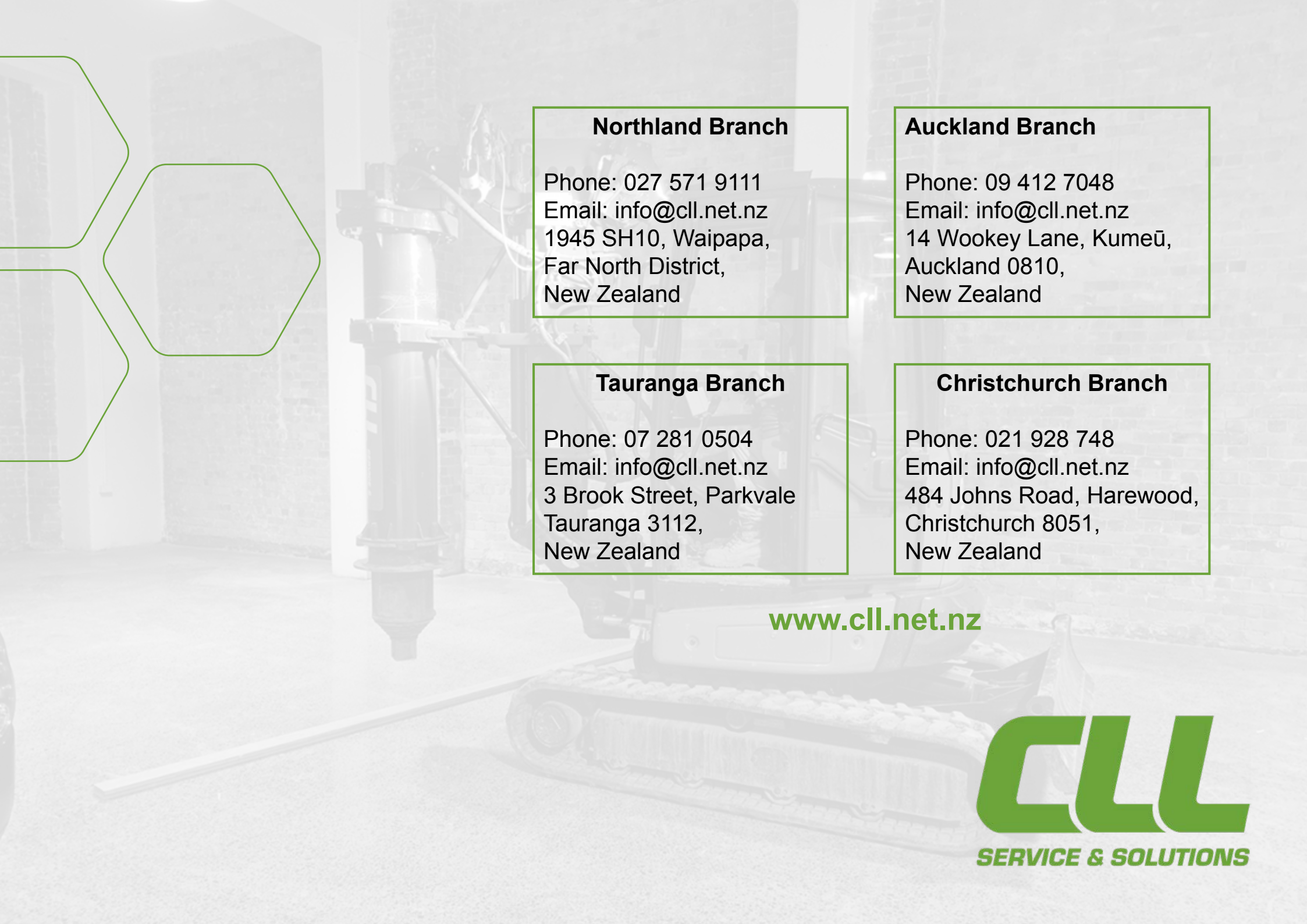

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