CSI

STRUCTURAL INVESTIGATIONS

# COMPANY PROFILE

# OUR WHY

CSI STRIVES TO BE AN INDEPENDENT STRUCTURAL INVESTIGATIONS LEADER, SUPPORTING AN INFORMED AND SAFER CONSTRUCTION SECTOR.

STRUCTURAL INVESTIGATIONS

# OUR EDGE

## OUR CREW

Highly skilled non-destructive and structural investigative professionals, with a shared desire to see a safer construction sector.

## OUR SERVICE

Accurate, reliable and job specific solutions, driven to exceed expectations, backed up with a focus on building long term relationships.

## OUR CAPABILITY

The highest analytical standards, documented in comprehensive reporting, supported by the latest international technology and software advancements.

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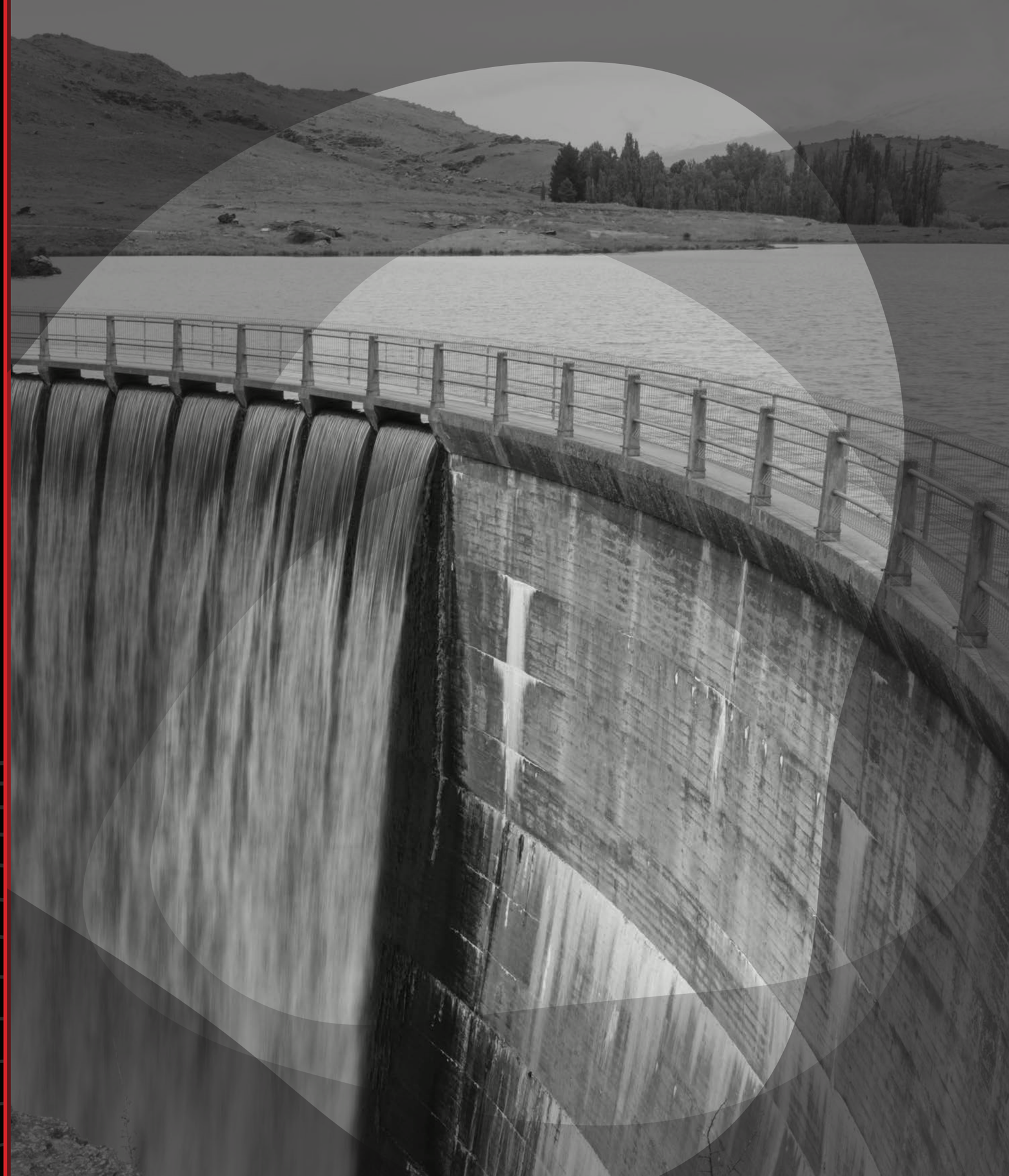

# OUR TEAM

MICHAEL ROACH-GRAY
DIRECTOR

JANE ROACH-GRAY
DIRECTOR

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GENERAL MANAGER

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WELLINGTON LEAD

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ANUJITH SUKUARAN
INVESTIGATOR

JAIZ JOY
INVESTIGATOR

MATTHEW FENNESSY
INVESTIGATOR

SALIM ROSALES
INVESTIGATOR

# HOW WE HELP

BRIDGES · BUILDINGS · RESERVOIRS · WHARFS

## NEW BUILDS

- VOID DETECTION
- AS BUILT CONFRIMATION
- INTEGIRTY CONFIRMATION

## POST BUILDS

- STRUCTURAL ASSESMENT
- REINFORMENT & COVER IDENTIFICATION
- DESIGN & SPECIFICATION CONFIRMATION

## PROACTIVE QA

## REACTIVE ANALYSIS

CONCRETE NDT · STRUCTURAL TESTING · INTRUSIVE INVESTIGATION

# CONCRETE NDT

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# GPR AND FERROSCAN

Ground Penetrating Radar (GPR) and Ferro scanning are non-destructive testing technologies used to evaluate concrete structures. GPR uses electromagnetic waves to detect both metallic and non-metallic features, while Ferro scanning employs electromagnetic induction to accurately locate metallic objects like rebar. Together, they provide a comprehensive, damage-free assessment of concrete integrity.

# ULTRASONICS

Ultrasonics technology is based on the principle of acoustic wave propagation by transducer emitted soundwaves reflected from objects of different density. The return signals enable a specialized analyst to make conclusions about the quantity and quality of the objects and structures. It is possible to perform localized testing as well as area analysis.

# CORROSION SURVEYS

A corrosion survey assesses the extent and severity of corrosion in structures, typically metal, by using various techniques to detect and measure corrosion damage. It helps identify areas at risk, estimate the remaining service life, and plan maintenance to prevent structural failures.

# STRUCTURAL ASSESMENTS

A structural assessment involves evaluating the condition, safety, and integrity of concrete structures. This process includes visual inspections, non-destructive testing methods (like GPR and ultrasonics), and analyzing structural components to identify damage, deterioration, or weaknesses, ensuring the structure meets safety standards and performance requirements.

# STRUCTURAL TESTING

STRUCTURAL INVESTIGATIONS

# PILE INTEGRITY TESTING

A Pile Integrity Test (PIT) evaluates the condition and integrity of concrete piles by analyzing stress waves generated by a small hammer impact. This non-destructive test detects defects like cracks, voids, or changes in cross-section, ensuring the pile's structural soundness and load-bearing capacity.

# ANCHOR TESTING

An anchor test, or pull test, involves applying a controlled tensile load to an anchor embedded in concrete to assess its load-carrying capacity and bond strength. This test ensures the anchor's reliability and safety for structural applications.

# CORE & LAB TESTING

A sample of concrete can be investigated by extracting a cylindrical sample from a structure, which is then sent to a lab for testing. Laboratory tests on the core sample determine the concrete's strength, composition, and other properties, providing detailed information about the material's condition and quality

# CRACK MONITORING

Crack monitoring involves using tools and techniques to measure and track the width, length, and movement of cracks over time. This helps assess the severity, causes, and progression of cracks, informing maintenance and repair decisions to ensure structural safety and integrity.

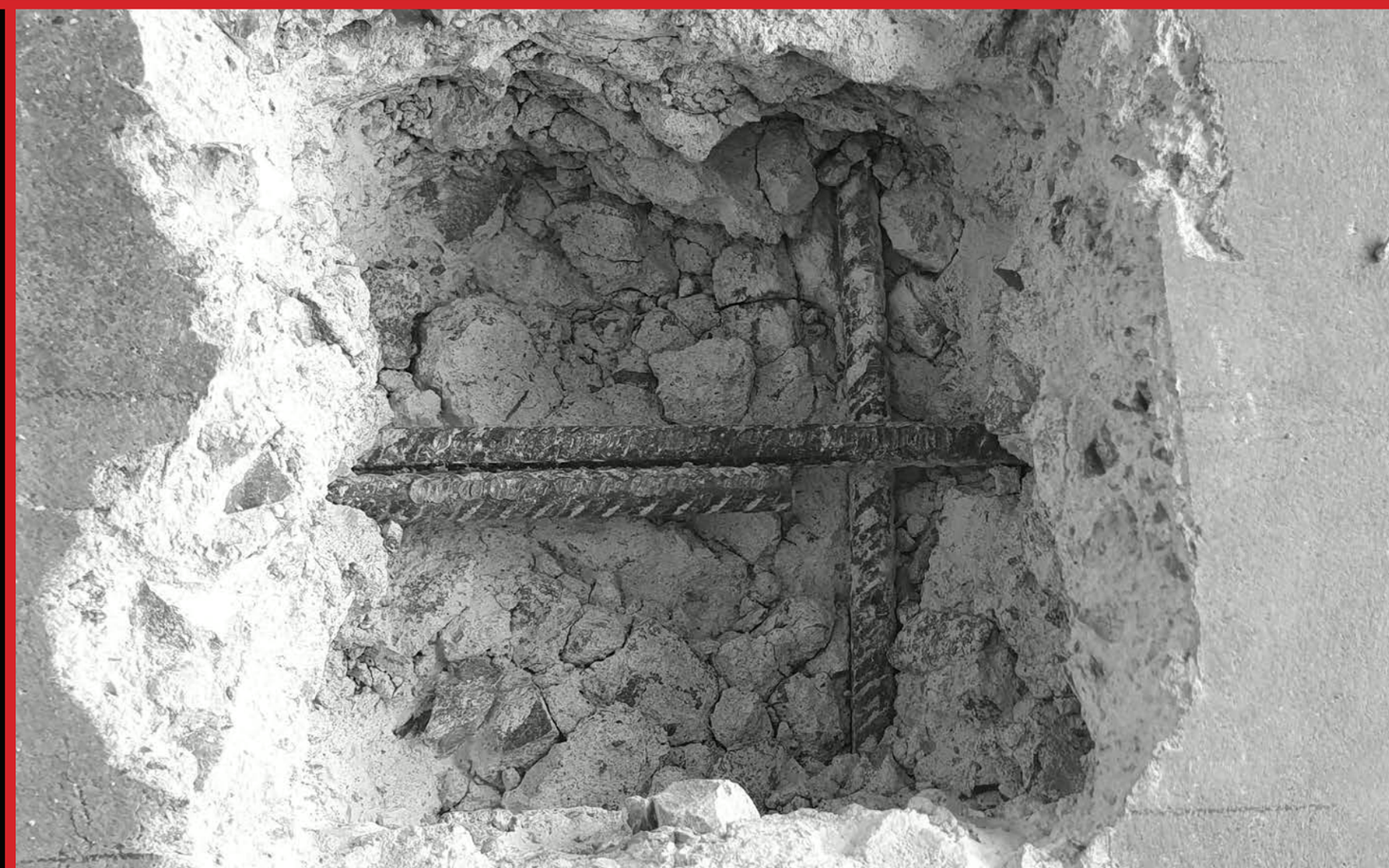
# INTRUSIVE INVESTIGATION


# CORE DRILLING

Core drilling involves using specialized equipment to extract cylindrical samples from concrete structures. Before drilling, a Ground Penetrating Radar (GPR) scan is conducted to map the location of rebar, conduits, and other embedded objects. This pre-drill GPR scan ensures precise placement of core holes, minimizing damage to structural components and avoiding unnecessary disruption to the concrete's integrity.

# BREAK-OUTS AND MAKE GOOD

A "breakout" involves selectively breaking or removing concrete to access and confirm internal conditions, such as rebar placement, concrete quality, or the presence of defects. After assessment, necessary repairs or improvements ("make good") are then implemented to ensure the structural integrity and safety of the concrete element.



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