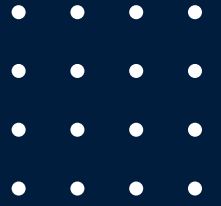




Klohn Crippen Berger



INFRASTRUCTURE



Down to Earth.
Up to the Challenge.

Klohn Crippen Berger (KCB) is an engineering, geoscience and environmental consulting firm with over 70 years of experience. We provide a full range of services in engineering, geoscience and environmental disciplines to deliver a winning combination to meet your specific needs.

Our team includes some of the most respected and experienced professionals in the industry who work on challenging infrastructure projects. Our knowledge includes the application of alternative technologies, which has allowed us to successfully meet project requirements in harsh, remote and physically challenging environments.

KCB integrates the application of engineering and geoscience with environment, community and safety-by-design principles. This approach drives our reputation as a leading-edge provider of professional services.



INTEGRATED TEAMS & TECHNOLOGIES

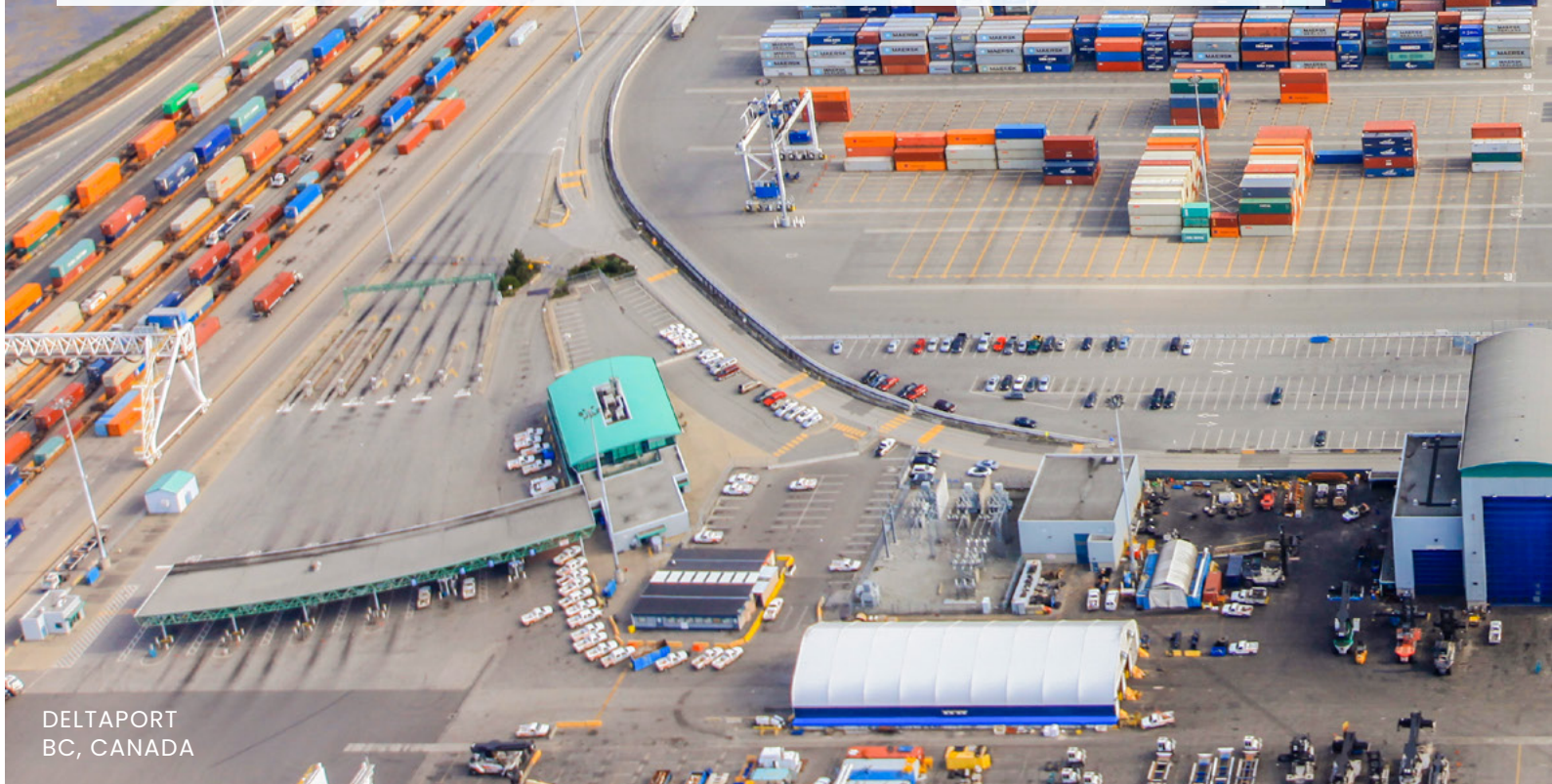
STRUCTURAL
GEOTECHNICAL
CIVIL-MARINE
HYDROTECHNICAL
ENVIRONMENTAL
MECHANICAL
ELECTRICAL

PORTS & HARBOURS

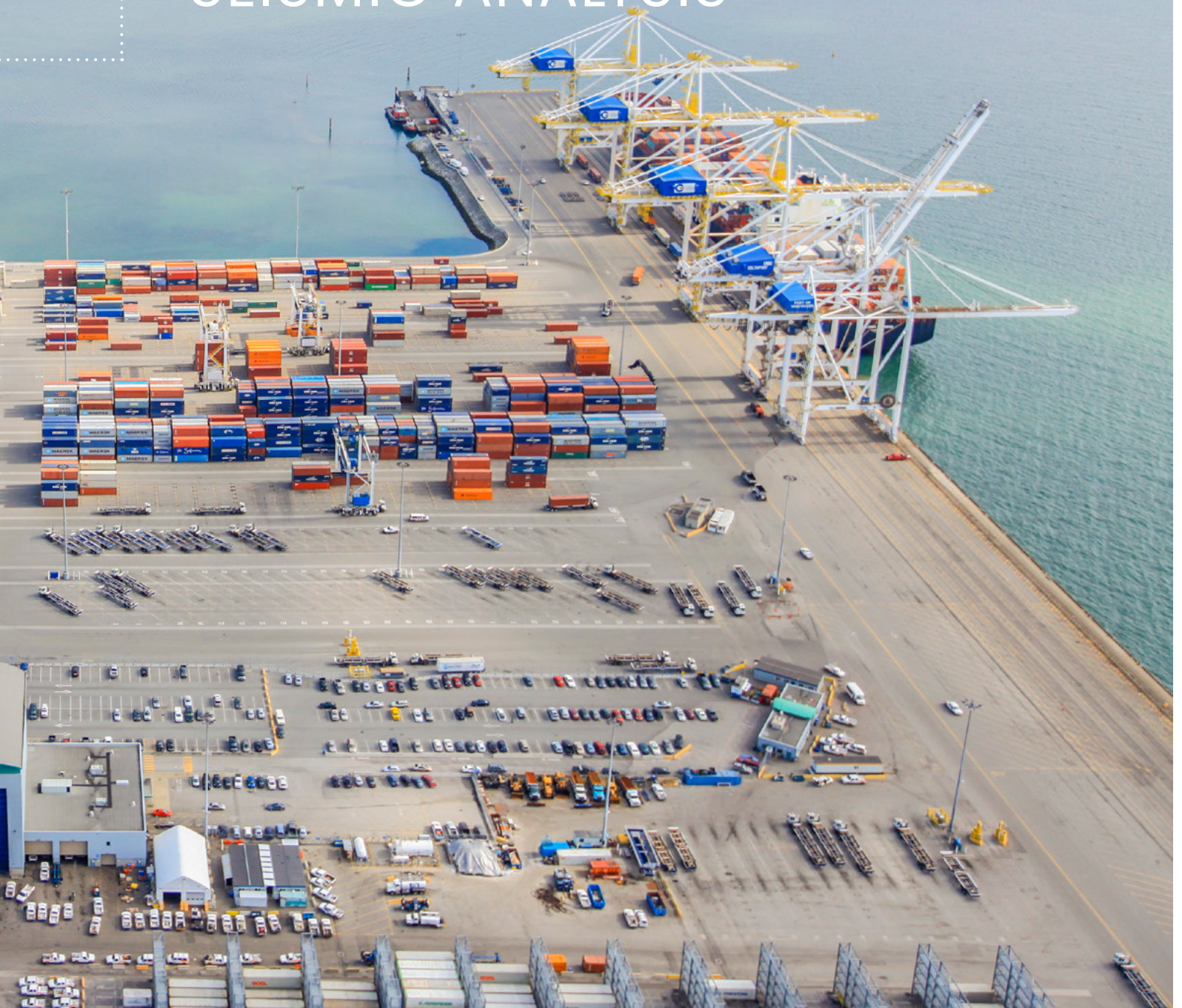


For over 70 years, KCB has been active in the planning, design and construction of a wide variety of ports, harbours, and marine terminals.

Our experience ranges from economic evaluations, structural assessments and remedial designs, through to site development, wharf design and site services for major new terminals. Our extensive marine engineering experience will add significant value to your port projects.



○..... BERTHING & MOORING DESIGN
○..... COASTAL & RIVER ENGINEERING
○..... CONSTRUCTION MANAGEMENT
○..... FEASIBILITY & PLANNING
○..... SEISMIC ANALYSIS



WATER RESOURCES

KCB delivers a complete range of engineering services that enable us to take your projects from conception through to operation. These services include feasibility studies, detailed designs, field investigations and monitoring, contracting, construction administration and inspections, commissioning, site impact assessments and regulatory approvals submissions and support.

Our water resource professionals provide solutions for your hydropower and water management projects, including water diversion and conveyance facilities, water treatment projects, and flood mapping for emergency preparedness. Our environmental assessment services include design of fish passage facilities and monitoring of streamflow, water level and the local climate.

HYDROLOGY & HYDROTECHNICAL

RIVER ENGINEERING

STORMWATER MANAGEMENT

SURFACE WATER MANAGEMENT

WATERSHED MANAGEMENT



GLENMORE DAM
ALBERTA, CANADA

RESOURCE INFRASTRUCTURE

KCB can help design and develop the necessary resource infrastructure to move people, transmit power and deliver commodities to your processing plant and tailings storage facilities.

Our project experience includes a wide range of resource infrastructure support, from port upgrades to pipelines, roads and bridges. In addition, our mechanical and electrical groups can handle a variety of mine equipment and infrastructure, from flotation cell upgrades to conveyors, control systems and electrical supply.



- TAILINGS DELIVERY SYSTEMS & PIPELINES
- FLUID TRANSFER SYSTEMS & SIPHONS
- POWERLINES & CORRIDORS
- ELECTRICAL, INSTRUMENTATION & CONTROLS
- GEOTECHNICAL & GEOSCIENCES
- MULTI-DISCIPLINE, WATER MANAGEMENT & HEAVY CIVIL



MUNICIPAL

KCB offers a complete suite of engineering, geoscience, environmental and stakeholder engagement services for municipal projects, while keeping in mind the goals of our clients and their communities. We deliver cost-effective solutions for urban stormwater management, transportation systems, pumping facilities, river engineering, foundation design and slope stabilization.

Our professionals have the skills and experience to investigate soil and groundwater conditions, generate models to simulate and analyze complex processes and design issues, conduct environmental assessments, and obtain regulatory approvals, while applying sustainable best practices.



- FOUNDATION DESIGN
- PUMPING FACILITIES
- RIVER ENGINEERING
- SLOPE STABILIZATION
- STORMWATER MANAGEMENT
- TRANSPORTATION SYSTEMS



TUNNELS

KCB is one of Canada's leading tunneling and underground engineering consultants. We are involved in many challenging tunnel and underground engineering projects, including railway, hydropower, water supply, mining, highway and transit tunnels.

KCB incorporates the latest tunnelling technologies and practices and tunnel ventilation design. We utilize the most advanced design methods including finite element and finite difference programs. We have experience on projects with diverse and challenging geological conditions including gas-bearing strata, extreme in-situ stresses, swelling rock and infiltrating groundwater. Our tunnelling designs have included drill and blast, tunnel boring machine (TBM), roadheader, hydraulic breaker, hand mining and cut-and-cover methods.

- CONCEPTUAL & PRELIMINARY DESIGN
- GEOTECHNICAL INVESTIGATION & DESIGN
- CUT & COVER TUNNEL DESIGN
- CONSTRUCTION SUPERVISION
- TUNNEL VENTILATION DESIGN



NAM THEUN 2 HYDRO PROJECT
LAOS

WHERE WE WORK

PROJECT LOCATIONS

AMERICAS

Argentina
Brazil
Canada
Chile
Colombia
Costa Rica
Ecuador
French
Guiana
Guatemala
Panama
Peru
USA
Venezuela

ASIA

China
Indonesia
Kazakhstan
Mongolia
Pakistan
Philippines
South Korea
Sri Lanka
Thailand
Vietnam

EUROPE

Andorra
Finland
Netherlands
Romania
Spain
Sweden
Turkey
United Kingdom

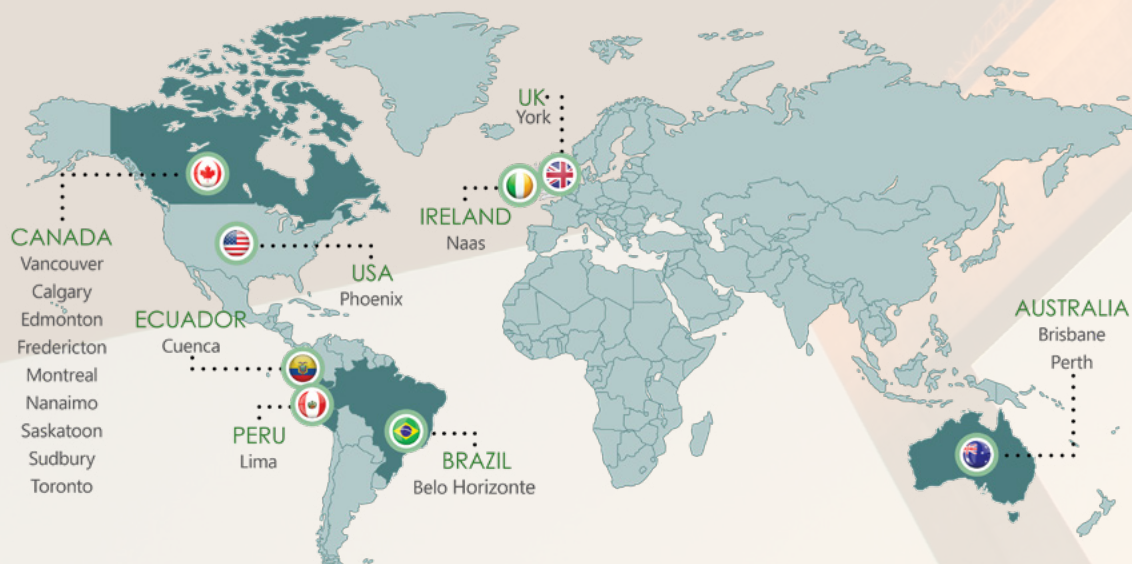
AFRICA

Egypt
Kenya
Madagascar
Mauritania
Saudi Arabia
Uganda

AUSTRALASIA

Australia
Fiji
New
Caledonia
Papua New
Guinea

WE HAVE OFFICES IN STRATEGIC LOCATIONS ACROSS THE GLOBE



HOW WE WORK



Platinum member



ISO 9001
14001
45001

QUALITY
ISO 9001

ENVIRONMENT
ISO 14001

HEALTH & SAFETY
ISO 45001

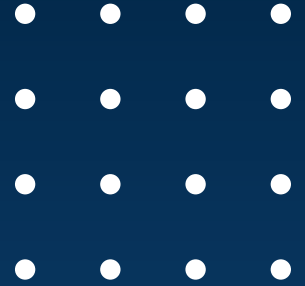
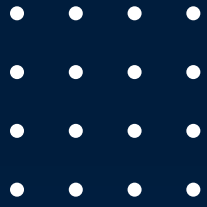
KCB has a strong reputation for quality work and technical experience in a range of services. Our commitment to excellence is the driving force behind everything we do and, as a result, we are the recipient of multiple national and international awards for major projects and corporate governance. We are committed to sustainability in our business operations and professional services, and we publish our progress in an annual Sustainability Report on www.klohn.com. We strive to balance social, environmental and economic considerations to meet the needs of our clients, the community, our employees and other key stakeholders.

Our business is governed using an integrated management system consisting of quality, health and safety, and environment (QHSE) procedures. Our management system, which meets the requirements of the ISO 9001, 14001 and 45001 standards, steers our business conduct and the manner in which we undertake our projects. Our QHSE policy includes our goals of fostering quality services, promoting a safe and healthy culture, reducing our environmental impact and committing to sustainability.

In addition to the ISO standards, we are guided by the frameworks developed by the Global Reporting Initiative, the Institute for Sustainable Infrastructure, the International Council of Mining and Metals, and the Mining Association of Canada's Towards Sustainable Mining, among others.

To meet our clients' requirements for health, safety, and the environment we subscribe to several subcontractor management systems. We are an approved contractor on Avetta, ISNetworld, Contractor Qualification Network, ComplyWorks and BROWZ.

klohn.com



GLENMORE DAM
ALBERTA, CANADA