



*ELEMENTAL / TANGIBLE*

**QUANTITY SURVEYORS**  
*/ CONSTRUCTION ECONOMICS*

**BQH**



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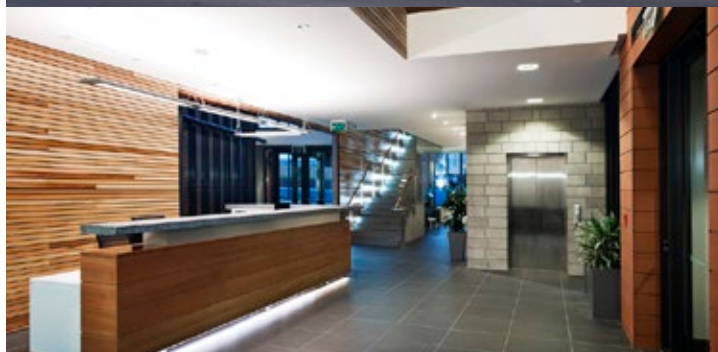
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[www.BQH.co.nz](http://www.BQH.co.nz)



# **QUANTITY SURVEYORS** **/ CONSTRUCTION ECONOMICS**



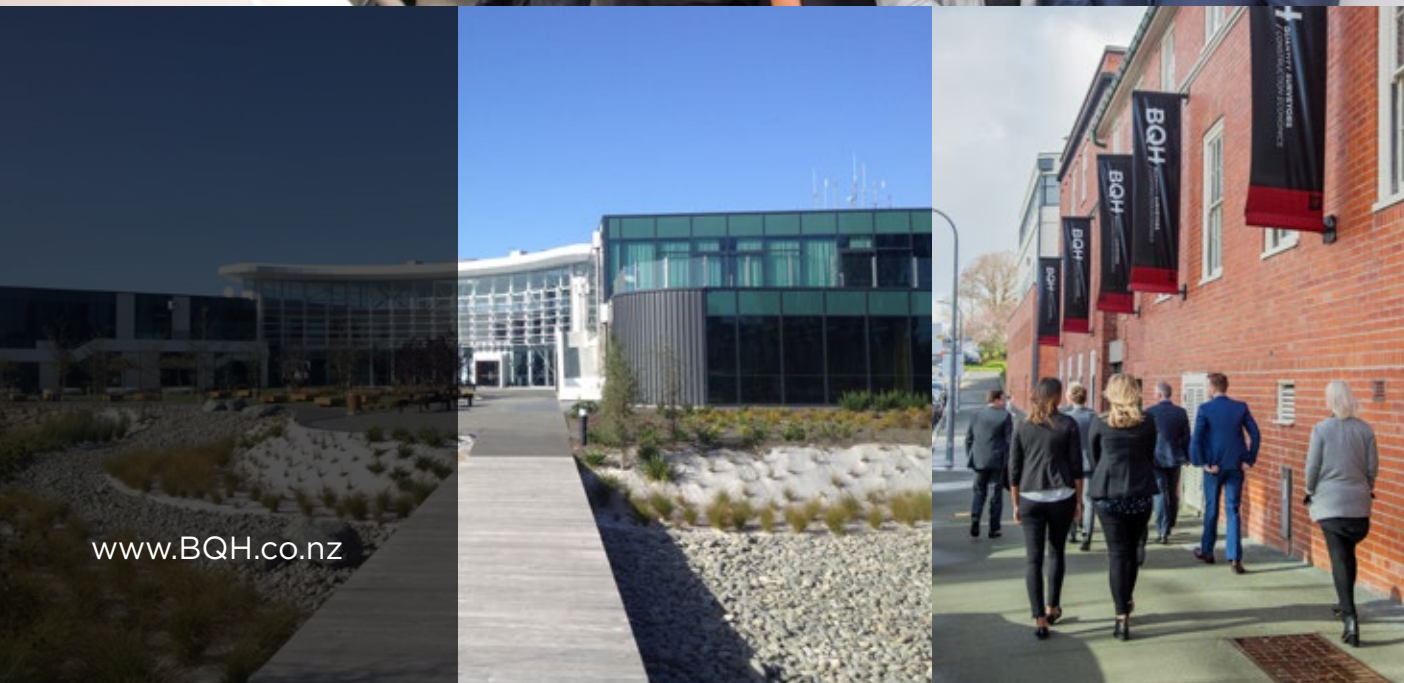






# BQH

/ BQH provides dynamic cost planning, value management and project control using tested methods and practical experience. With our advice, you can confidently plan and execute your project with a firm understanding of cost and value.



[www.BQH.co.nz](http://www.BQH.co.nz)

## QUANTITY SURVEYORS

BQH Limited is an independent New Zealand based quantity surveying firm. Our broad range of skills promotes value for money and protects client interests in the built environment. BQH Services are delivered by highly skilled, motivated and experienced people in a professional framework that provides peace of mind to clients, colleagues and collaborators.

## */ CONSTRUCTION ECONOMICS*

Our primary focus is management of financial processes in construction projects. Our professional approach provides certainty throughout the project life cycle. From recommending strategies to determining budgets or approving payments we have proven techniques for ensuring accuracy, consistency and transparency.

## / PRINCIPLES

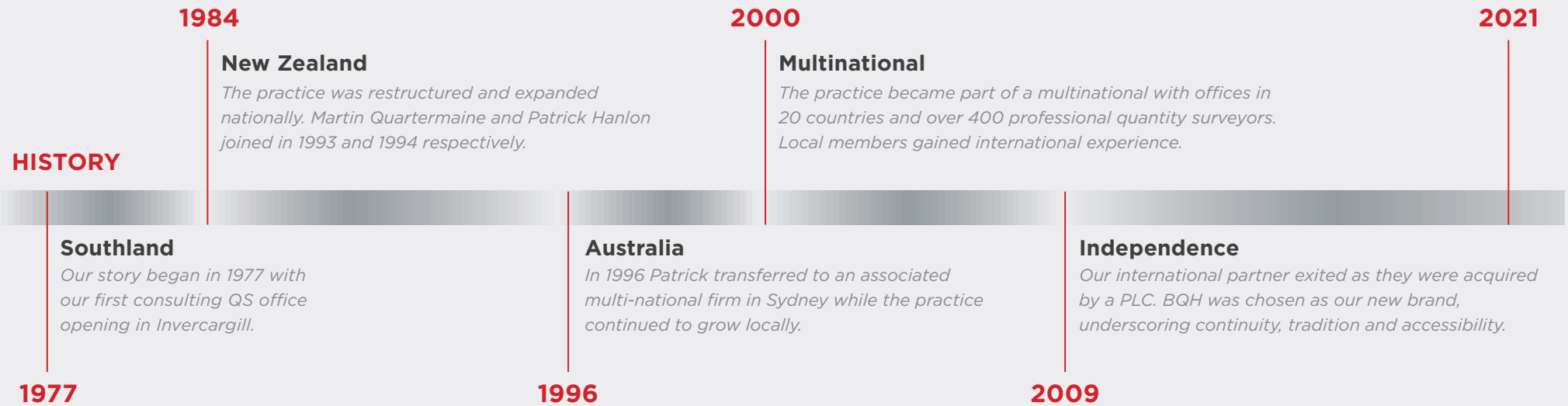
At BQH we take our professional responsibilities seriously. This means we have an infrastructure in place to protect and promote the interests of our clients and colleagues on all projects. Specific aspects of this infrastructure include:

- Our project teams are led by qualified, experienced people
- We are professionally and personally ethical in all our dealings
- Details of PII and PLI can be provided to on request
- Services are delivered by a team, meaning built-in peer review
- Quality is assured with efficient and documented procedures
- All of our people are site-safe accredited
- Sustainable solutions are a key part of our thought process
- We take care with your information and our records with modern, robust infrastructure
- We use specialised software capable of 2D and 3D takeoff and BIM mapping
- We have a substantial archive of cost data across a wide range of industry sectors.
- Our people participate in industry and professional groups





## / HISTORY



**BQH people hold competency based membership of national, regional and global professional societies.**

This means we have completed academic qualifications, post-graduate training and experience requirements and that we have been elected by our professional peers based on an assessment of competence. It also means we maintain our skills through continuing professional development and life-long learning programmes.

**PATRICK HANLON**  
/ DIRECTOR



MBA MB(CE) BB(CE)(Hons) FRICS FAIQS  
CQS FCIQB MNZIQS Reg. QS  
QS Since 1993  
NZ, Australia, UAE

**TIAAN VAN HEERDEN**  
/ DIRECTOR



B.TECH(QS) MNZIQS Reg. QS MRICS  
QS Since 2009  
SA, NZ

**MARTIN QUARTERMAINE**  
/ EXECUTIVE CONSULTANT



B.Sc(QS) FRICS MNZIQS Reg. QS  
QS Since 1971  
NZ, UK

**IAN MORTON**  
/ REGIONAL MANAGER



B.Sc(QS) MRICS MNZIQS Reg. QS  
QS Since 1980  
NZ, UK, UAE, South Africa

**CLARE WOOD**  
/ DIRECTOR



B.Const(QS) B.Sc(Geo) GradDipEng (C&E)  
MNZIQS MRICS Green Star Practitioner  
QS Since 2015  
NZ

**RICHARD VAN ZYL**  
/ DIRECTOR



B.Sc(QS) (Hons) MRICS Reg. QS, MNZIQS  
QS Since 2005  
SA, NZ

**RORY LEONARD**  
/ REGIONAL MANAGER



B.TECH(QS) MRICS MNZIQS Reg.QS  
QS Since 1995  
SA, NZ

**PETE FORBES**  
/ REGIONAL MANAGER



MCM B.Sc(Arch) NDQS MNZIQS MAIPM  
QS Since 2016  
NZ





**RICHARD MEAKIN**  
/ SENIOR ASSOCIATE



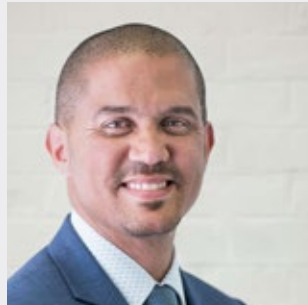
B.SC(QS)(HONS) MRICS MNZIQS  
QS SINCE 2005  
UK, NZ

**TANYA TAN**  
/ ASSOCIATE



B.Const(CE) BA NDQS MNZIQS MRICS  
QS Since 2014  
NZ

**SHAUN JARMANN**  
/ ASSOCIATE



B.TECH(QS) MNZIQS  
QS Since 2006  
SA, NZ

**KELLY HUTT**  
/ ASSOCIATE



B.Const(QS) MNZIQS Green Star  
Practitioner  
QS SINCE 2018  
NZ

**CHRISTINE LAW**  
/ ASSOCIATE



B.Sc(QS)(Hons) MAIQS MNZIQS  
QS Since 2012  
NZ, UK, Brunei

*We participate fully as members of the project team. By leveraging knowledge gained from national and international projects, we help you optimise value, competitively.*



[www.BQH.co.nz](http://www.BQH.co.nz)

*Our project teams are led by qualified, experienced people. We maintain comprehensive ethics policies and maintain insurance to protect client, company, and public interests.*



[www.BQH.co.nz](http://www.BQH.co.nz)

**APRIL LIN**  
/ QUANTITY SURVEYOR



B.Const(QS) B.Art NZIQS(Affil)  
QS SINCE 2019  
NZ

**MATT HYDE**  
/ GRADUATE QS



NDQS B.Const(QS)  
NZIQS(Affil.)  
QS SINCE 2021  
NZ

**SINEAD GRADY-JONES**  
/ QS TECHNICIAN



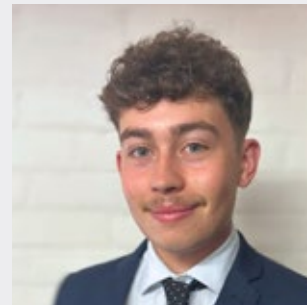
NDQS  
B.Const.(QS) in progress  
QS Since 2023  
NZ

**CAITLIN RUSLING**  
/ QUANTITY SURVEYOR



B.Const(QS) NZCRE(Sales) NZIQS (Affil.)  
QS Since 2018  
NZ

**OLLY MCGHEE**  
/ GRADUATE QS



QS Cadet (B.Const(QS))  
QS Since 2022  
NZ

**DARIA FECHNEY**  
/ OFFICE MANAGER



BA(Hons) BusEcon GradCertOHSMT



*/ BQH Limited is an independent New Zealand based quantity surveying firm with history spanning five decades, from the 70s forward.*

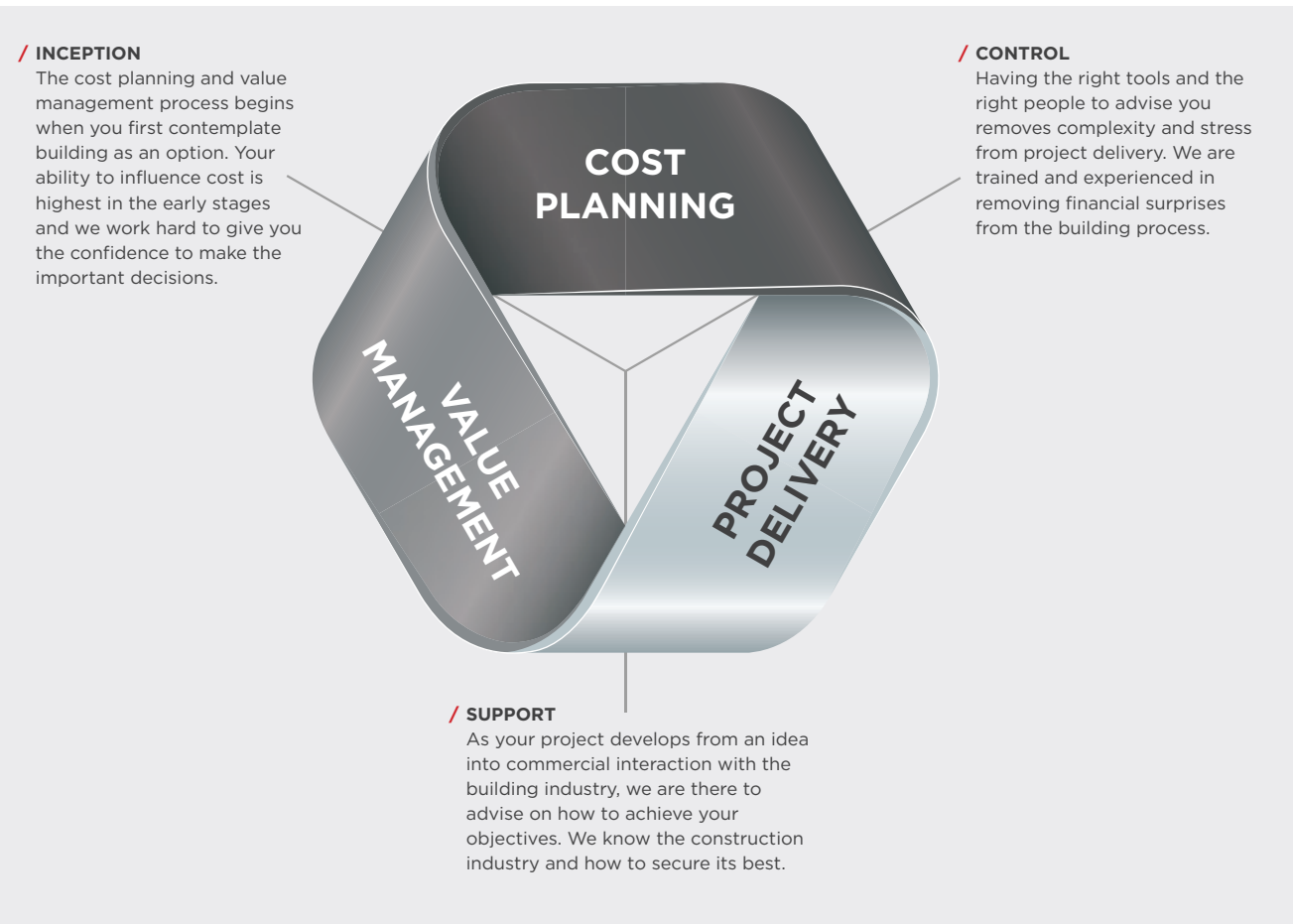
*/ We provide dynamic cost planning, value management and project control using tested methods and practical experience.*



/ Working from a construction economics and quantity surveying base, we provide a broad range of commercial management services for the built environment.

## / SERVICES

Our primary focus is management of financial processes in construction projects but our professional interest extends throughout the property life cycle. From recommending strategies to determining budgets or approving payments we have proven techniques for ensuring accuracy, consistency and transparency.







/ CREATE YOUR DIGITAL TWIN

## 3D BUILT ASSET SCANNING

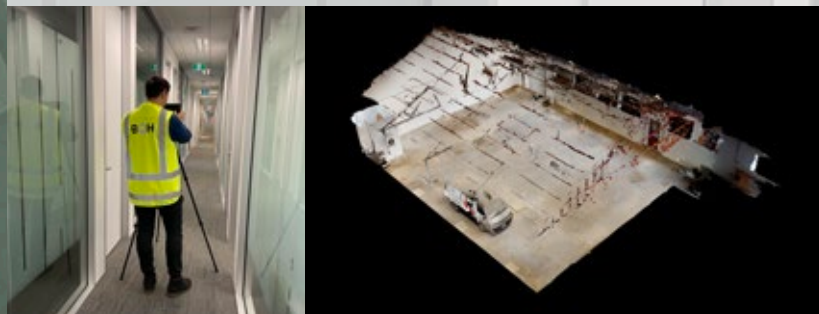
The indisputable source of truth

### 3D Scanning ensures the highest accuracy in capturing built assets in their current environment.

The scan creates a digital twin that records all data to point cloud as well as a photographic view at 4k enabling anyone to walk through the building as if they were there. The ultimate source of the truth with the ability to measure to an accuracy of 99%. This is far more accurate than a manual survey.

**An example scan can be viewed here:**

**<https://my.matterport.com/show/?m=nCpiifHWYFc>**



### Has a variety of uses in:

- Architecture, Engineering & Construction
- Hospitality
- Insurance
- Real Estate
- Facilities Management
- Property Management
- Renovations
- Retail and many more

### Some advantages are:

- Increase operational transparency with the ability to share links of 3D spaces to different stakeholders.
- Add additional notes and details.
- Train and educate remotely with photo-realistic 3D experiences that are more cost effective than VR studios.
- Create court admissible documentation with spaces that cannot be manipulated.
- Guarantee confidentiality and authenticity with face blurring and time stamps.
- Scans can generate point cloud files which can then be exported to various BIM interfaces as the base for design information, particularly useful for renovations.
- Increase collaboration with the ability to share 3D models to any interested party.





### PROJECT STRATEGY

Monetary and non-monetary cost-benefit analysis

Feasibility studies, bulk and location estimates

Site selection studies, comparative estimating

End user / tenant acquisition support, fitout / base building cost calculations

Value engineering including time, cost, quality analysis



### PROCUREMENT

Procurement strategy – Analysis of ECI, D&B, Traditional, Management opportunities

Tender lists / pre-qualification questionnaires and evaluation

Tabulation and documentation of tag / qualification resolutions

Reporting on tender costs including risks and unit rate effects

Recommendations for selection of tender bids



### LIFE CYCLE COSTING

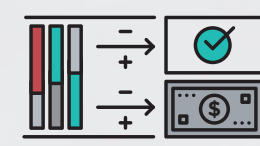
Analysis of whole life of options for sustainability and value engineering

Quantification of Capital, Maintenance, Cleaning, Energy, Replacement and other costs

Discounted cashflow analysis to establish net present value and break even points

Calculation of sinking fund contributions and Long Term Maintenance Funds

Sensitivity analysis for funding costs, cyclical durations



### COST PLANNING

Estimate development through concept, preliminary, developed, detailed design

Budget reconciliation and cost control advice

Elemental, trade, resource, functional estimate presentation

Cashflow forecasting, earned value analysis and comparison

Cost allocation and cost centre / budget format establishment



### POST CONSTRUCTION

Replacement cost / sum insured valuations

Depreciation schedules and asset registers

Lease reinstatement, end of lease cost negotiation

Operational budgeting and estimating  
Long term maintenance fund estimates



### TRAINING AND EDUCATION

Mentoring under NZIQS partnership scheme

Lecturing in Measurement and Estimating for Unitec degree programme

Commercial management training to construction firms

Assessors, chairs, mentors and supervisors for APC candidates

Contribution to industry forums



### CONTRACT ADMINISTRATION

Construction Contracts Act 2002 / CCA Amendment Act 2015 compliance

Payment schedules, progress valuations, interim assessments, final accounts

Variation price assessment and negotiation, entitlement and contract review

Time related cost calculation, delay and disruption assessment

Financial reporting budget vs. forecast, cost control recommendations



### EXPERT WITNESSES

Qualified, experienced, recognised experts

Track record in CCA adjudication, high court trials, arbitration, mediation

Advice on costs (quantum), industry economics and practices

Practitioner perspective on application of contract terms

Evidential quality, referencing published and unpublished knowledge base





### **BUILDING REMEDIATION AND LEAKY BUILDINGS**

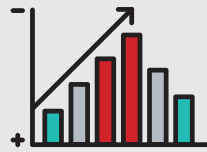
Experience 250 projects costing over \$1.2 Billion in the past decade

Large cost database drives faster recognition and solutions

Apportionment of costs for UTA s.74 schemes

Work with MBIE on Financial Assistance Package (FAP) projects

Certification of project establishment and funding drawdown for escrow



### **RISK MANAGEMENT**

Monte Carlo simulation using Pallisade Decision Tools (@Risk)

NZS4360 risk management process, register establishment and input

Quantification of financial magnitude of risk events

Data analysis and benchmarking to establish reasonable contingencies

Crime prevention through environmental design (CPTED) cost quantification



### **BUILDING INFORMATION MODELLING (BIM)**

iTwo CostX certified partner – benchmark for BIM in quantity surveying

Production of basic models in-house for geometry and measurement

Familiarity with Revit, Archicad and other modelling formats

BIM used for estimates, schedules, measurement checks, contract admin

Standard operating procedures, coding and phraseologies



### **SUSTAINABLE PRACTICES**

GreenStar accredited professionals and practitioners

Advice on targeting free and cheap GreenStar points

Estimate / value engineer to lower sustainability costs

Comparative assessment of whole-life costs

Quantification of recycled / sustainable content



### **CONTRACT DOCUMENTATION**

Schedules (Bills) of Quantities to ANZSMM-2018 and NZS4202: 1995

Estimation of provisional quantities for contingent work / re-measurement

Selection of general and special conditions of contract

Collation of contract document set, recommendations on content

Issue of digital files to facilitate tender process and pricing



### **ENGINEER TO THE CONTRACT**

Industrial, residential, education, commercial, remediation, public facilities

Suite of communication templates developed over many years

Specific training in NZS3910 and acting as an engineer to the contract

Problem solving approach – mitigation, value engineering, rapid resolution

Acceleration / prolongation analysis, responsive approach to notices



### **BANK / FUNDING CERTIFICATION**

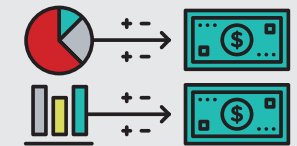
Initial reporting and construction project reviews

Progress drawdown reporting

Cost to complete, progress against targets

Escrow establishment and drawdown reporting

Advice on market conditions and project risks



### **VALUE MANAGEMENT**

Multiple criteria value quantification – time / cost / quality


Life cycle cost and discounted cashflow analysis

Change management / assessment of external impacts

Value for money analysis

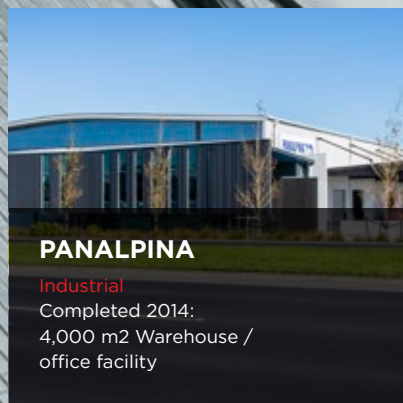
Identification of premiums and opportunities

## / COMPANY INNOVATION

	<b>3D SCANNING</b>	<b>METHOD:</b> We use the Matterport 3D scanning system to create measurable 3D models of buildings. The 3D models we create are convertible to point clouds and IFC models.	<b>OUTCOME:</b> Fast compilation of as-built site surveys, accurate records for insurance and dilapidation.
	<b>GOPRO</b>	<b>METHOD:</b> Our GoPro Max 360 degree cameras are used for progress payment inspections and for general record-keeping.	<b>OUTCOME:</b> Detailed progress records, accelerated site inspections, desktop review and response to questions.
	<b>LASERS</b>	<b>METHOD:</b> We use Bosch laser range finders for site measurement.	<b>OUTCOME:</b> Accurate measurement and reduced site resources – faster measurement, no requirement for assistant to hold tape ends.
	<b>BIM</b>	<b>METHOD:</b> The primary tool we use for BIM is CostX, which allows model mapping and harvesting of quantities based on object properties. We also use Autodesk products to inspect and review designs.	<b>OUTCOME:</b> Better understanding of building geometry and layout, accelerated measurement and bulk checking of 2-dimensional measures; Improved accuracy and coverage with enhanced reporting and presentation.
	<b>DRONE</b>	<b>METHOD:</b> Aerial video and photo records are provided with our DJI drones.	<b>OUTCOME:</b> Safer site inspections, particularly for building envelopes and scaffolding; accurate record keeping and ability to inspect inaccessible areas.
	<b>EXCEL</b>	<b>METHOD:</b> Excel is among the most frequently used tools in quantity surveying offices. We require all staff to attend a consecutive series of formal skill development and maintenance courses.	<b>OUTCOME:</b> Improvements in data analysis and ability to analyse and compile wide ranges of scenarios.
	<b>@RISK</b>	<b>METHOD:</b> We use Palisade @Risk software for quantitative random number risk simulations (Monte Carlo analysis).	<b>OUTCOME:</b> Modelling effects of changes in quantity, rate, timing and other variables in building projects to understand and determine ranges of possible outcomes and make informed contingency recommendations.
	<b>COSTX</b>	<b>METHOD:</b> Since 2009, we have worked with iTwo (formerly Exactal), the makers of CostX quantity surveying software. Our firm has achieved “CostX Certified Partner” status and features in CostX advertising literature.	<b>OUTCOME:</b> Consistent estimating and presentation including standard phraseology libraries, indexed historical rate database and bespoke templates. Reduced risk in contract documentation through standardisation and familiarity.
	<b>SKETCHUP</b>	<b>METHOD:</b> Where design documentation is unavailable, such as for proposed renovations, we create our own three-dimensional models in Sketchup.	<b>OUTCOME:</b> Enhanced understanding of building geometry, greater accuracy in quantities and accelerated estimating process.

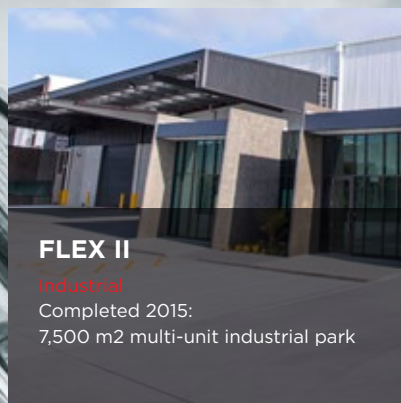


	<b>CLOUD</b>	<b>METHOD:</b> Our databases, files, applications and correspondence are hosted on commercial cloud servers, secured with two factor authentication. We also host our own cloud servers for specialist software and remote access.	<b>OUTCOME:</b> Ability to work anywhere – office, home, site, in transit; full access and functionality, managed knowledge, tools and applications for consistent service and robust record retention.
	<b>MOBILE</b>	<b>METHOD:</b> All BQH staff are provided with Microsoft surface and Apple iPhone devices.	<b>OUTCOME:</b> Internal and external collaboration using widely compatible systems.
	<b>HOME</b>	<b>METHOD:</b> Staff are provided with furniture and equipment for home offices.	<b>OUTCOME:</b> Business resilience and service continuity, improved lifestyle and health, reduced commute burdens, comfortable and productive remote working.
	<b>DASHBOARD</b>	<b>METHOD:</b> Our company vehicles are equipped with Dashmate Dual (front and rear) cameras.	<b>OUTCOME:</b> Safety and record-keeping, complaint handling and accident documentation.
	<b>VIDEO</b>	<b>METHOD:</b> Meeting rooms, workstations and home offices are equipped with high-quality video-conferencing hardware.	<b>OUTCOME:</b> Remote meeting attendance, full team meetings with staff in office, at home and elsewhere; reduced travel requirements, improved health and safety.
	<b>STANDING</b>	<b>METHOD:</b> Motorised standing desks are standard equipment in all BQH offices.	<b>OUTCOME:</b> Collaboration improvements, healthier posture, reduced stress and fatigue.
	<b>TRAINING</b>	<b>METHOD:</b> Our main work areas are equipped with a large screen visible from all desks for training, conferencing and information.	<b>OUTCOME:</b> Participation in group training from comfort of own desk, participating in important events (news, sports, amusements); shared experience and better job satisfaction.
	<b>SUSTAIN-ABILITY</b>	<b>METHOD:</b> Many of our staff are accredited greenstar professionals and practitioners.	<b>OUTCOME:</b> Understanding of important initiatives improving the quality of buildings, ability to provide expertise to internal and external teams for implementation.
	<b>SAFETY</b>	<b>METHOD:</b> We are a long standing member of site safe, Impac Prequal certified and ACC accredited.	<b>OUTCOME:</b> Well-trained, well-equipped and above all, safe staff.



## PANALPINA

**Industrial**  
Completed 2014:  
4,000 m2 Warehouse /  
office facility



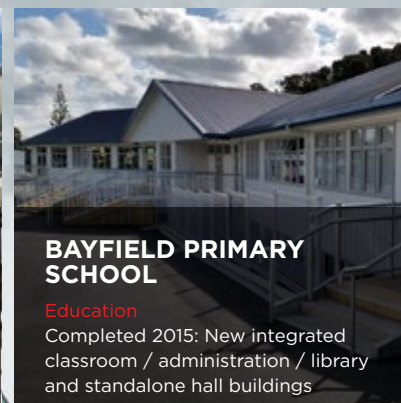
## FLEX II

**Industrial**  
Completed 2015:  
7,500 m2 multi-unit industrial park



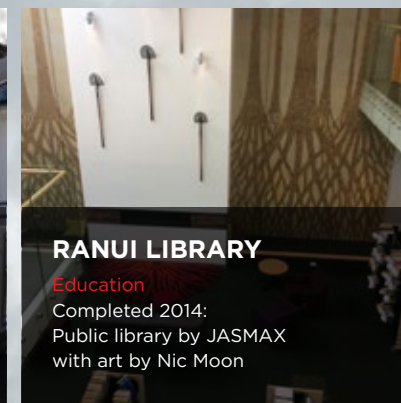
## ST HELIERS PROJECT ENDEAVOUR

**Education**  
Completed 2010: 1600m2 school  
building, plus administration block



## BAYFIELD PRIMARY SCHOOL

**Education**  
Completed 2015: New integrated  
classroom / administration / library  
and standalone hall buildings



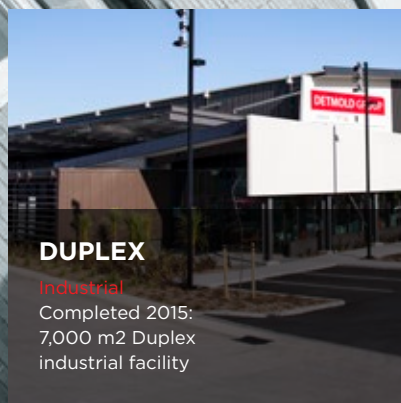
## RANUI LIBRARY

**Education**  
Completed 2014:  
Public library by JASMAX  
with art by Nic Moon



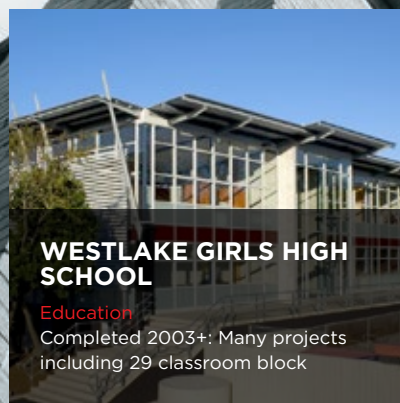
## CEVA

**Industrial**  
Completed 2015:  
7,000 m2 office / warehouse and  
4,000 m2 warehouse extension



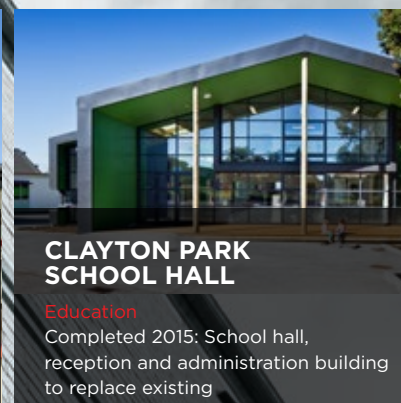
## DUPLEX

**Industrial**  
Completed 2015:  
7,000 m2 Duplex  
industrial facility



## WESTLAKE GIRLS HIGH SCHOOL

**Education**  
Completed 2003+: Many projects  
including 29 classroom block



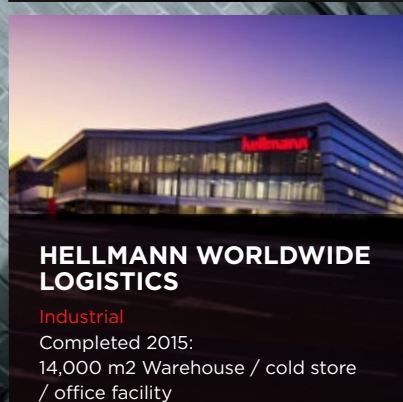
## CLAYTON PARK SCHOOL HALL

**Education**  
Completed 2015: School hall,  
reception and administration building  
to replace existing



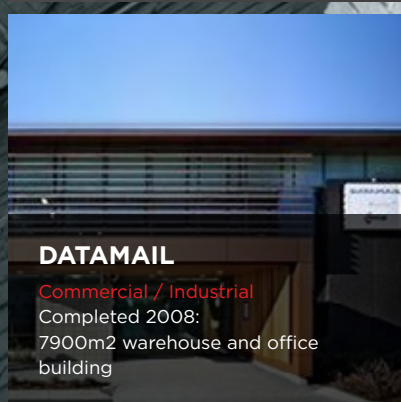
## WARKWORTH JUNIOR SCHOOL

**Education**  
Completed 2016:  
16 MLE teaching spaces,  
new administration and school hall



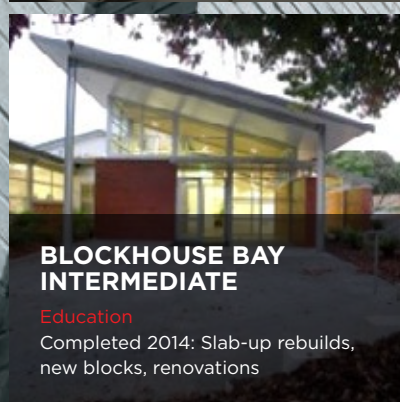
## HELLMANN WORLDWIDE LOGISTICS

**Industrial**  
Completed 2015:  
14,000 m2 Warehouse / cold store  
/ office facility



## DATAMAIL

**Commercial / Industrial**  
Completed 2008:  
7900m2 warehouse and office  
building



## BLOCKHOUSE BAY INTERMEDIATE

**Education**  
Completed 2014: Slab-up rebuilds,  
new blocks, renovations



## KERERU PARK SCHOOL

**Education**  
Completed 2014:  
Administration and library  
building replacement



## ST CUTHBERT'S COLLEGE CENTENNIAL CENTRE

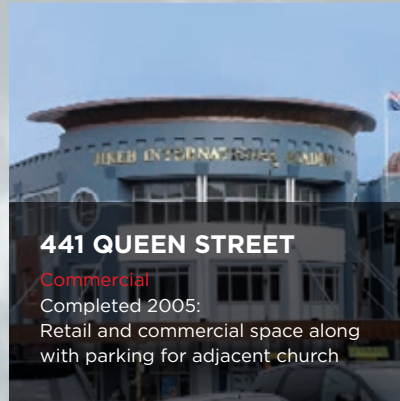
**Education**  
Completed 2014:  
Pools, Gym, Student Counselling





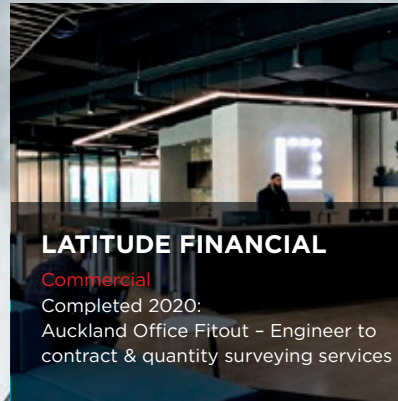
### TAIT COMMUNICATIONS

**Commercial**  
Completed 2014:  
7,000m2 post-quake commercial facility in Christchurch



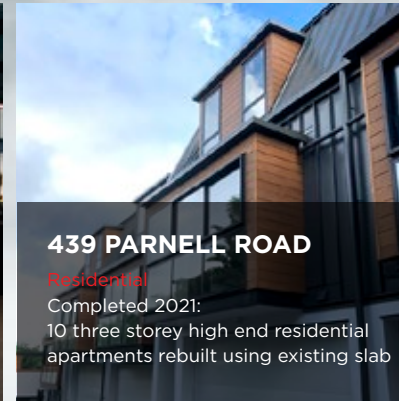
### 441 QUEEN STREET

**Commercial**  
Completed 2005:  
Retail and commercial space along with parking for adjacent church



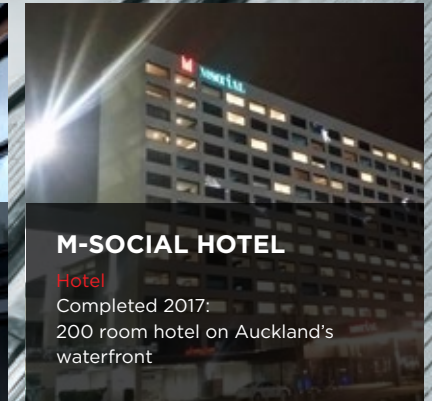
### LATITUDE FINANCIAL

**Commercial**  
Completed 2020:  
Auckland Office Fitout – Engineer to contract & quantity surveying services



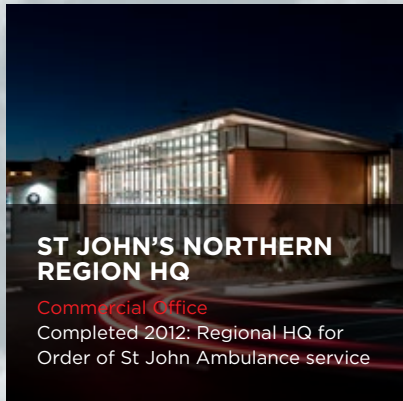
### 439 PARNELL ROAD

**Residential**  
Completed 2021:  
10 three storey high end residential apartments rebuilt using existing slab



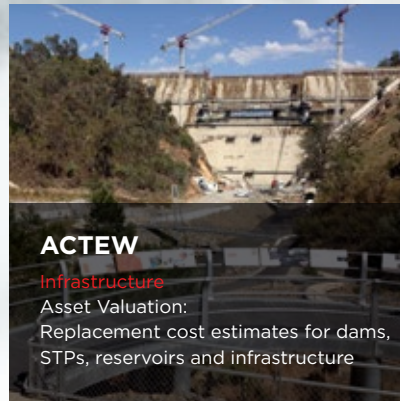
### M-SOCIAL HOTEL

**Hotel**  
Completed 2017:  
200 room hotel on Auckland's waterfront



### ST JOHN'S NORTHERN REGION HQ

**Commercial / Office**  
Completed 2012: Regional HQ for Order of St John Ambulance service



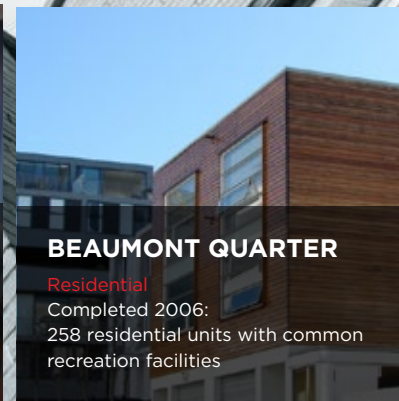
### ACTEW

**Infrastructure**  
Asset Valuation:  
Replacement cost estimates for dams, STPs, reservoirs and infrastructure



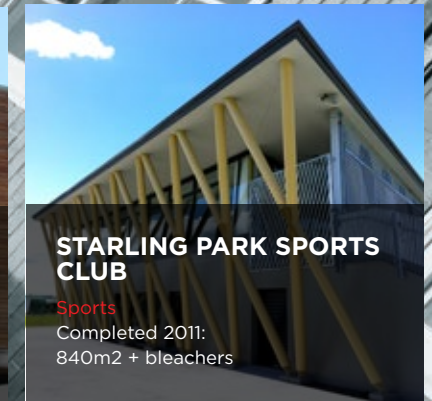
### ATEED

**Office Fitout**  
Completed 2012:  
500m2 in two sites



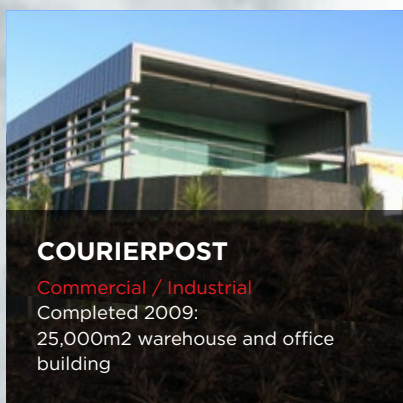
### BEAUMONT QUARTER

**Residential**  
Completed 2006:  
258 residential units with common recreation facilities



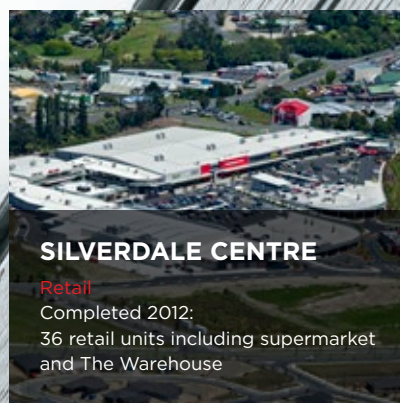
### STARLING PARK SPORTS CLUB

**Sports**  
Completed 2011:  
840m2 + bleachers



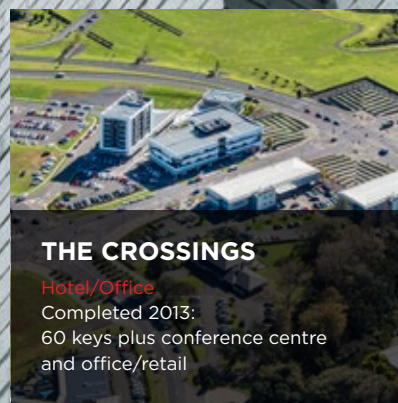
### COURIERPOST

**Commercial / Industrial**  
Completed 2009:  
25,000m2 warehouse and office building



### SILVERDALE CENTRE

**Retail**  
Completed 2012:  
36 retail units including supermarket and The Warehouse



### THE CROSSINGS

**Hotel/Office**  
Completed 2013:  
60 keys plus conference centre and office/retail



### 10 AUGUSTUS TERRACE

**Residential Refurbishment**  
Completed 2013:  
12 Apartments



### STUDHOLME MILK POWDER PLANT

**Food Manufacturing**  
Completed 2008:  
Milk powder production plant



[/ www.bqh.co.nz](http://www.bqh.co.nz)

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