PROJECT IMPLEMENTATION TEAM

To ensure successful delivery and meet its timelines for the SPSC project, SPSC has brought together a highly qualified and experienced team to implement its chosen innovative construction technologies to deliver a world class destination campus housing. a life skills and education development centre and an international standard equestrian centre,

SOUTHERN PARALLEL PROJECT TEAM

PROJECT DIRECTOR - CATHERINE STUART

SPSC Project Management

FERGUS WADDELL HOMES LIMITED – SPSC Director

Campus Accommodation Build Project Director

MATT YOUNG

Interior design Project Manager

VANETIA BINGHAM – SPSC Director

Hospitality advisory, implementation, and management

On receipt of consent SPSC will employ further project team members to manage key aspects of the project.

SPSC CAMPUS MASTERPLANS

CHILTON & MAYNE ARCHITECTS (ex-Studio 4)

BOFFA MISKELL LANDSCAPES

CONTRACTED PROJECT TEAM

SPORTS CENTRE AND EQUESTRIAN CENTRE

APOLLO PROJECTS LIMITED

Sports and Equestrian Centres Build with supplier:

SPRUNG STRUCTURES LIMITED

Sports and Equestrian Facility Structures manufacture

URBAN SOLO INC.

Solo technology supplier

EQUESTRIAN CENTRE

Equestrian Sports New Zealand ESNZ – JV Advisory

Eru Barlow – Polo field preparation specialist

Kevin Hansen – EventPro Equestrian arena and requirements advisory

RESIDENTIAL AND ACCOMMODATION

FERGUS WADDELL HOMES LIMITED – PROJECT MANAGEMENT

HECTOR EGGER LIMITED

Passive House Manufacture and Build to lock-up.

CHILTON AND MAYNE

Master Architectural design (ex-partners in Studio 4 Architects)

ENGCO LIMITED

Residential engineering design working closely with Hector Egger

SPSC will employ and contract local trade businesses.

CIVILS AND SITE

DAVIS OGILVY

Engineering, Civils and Site Management

GREG DONALDSON CONTRACTING

Earthworks and Civils (directed by Davis Ogilvy)

BIOGILL SYSTEMS
implementation of an innovative plug n' play scalable black and grey water processing system.

LIGHTING DESIGN AND INSTALLATION

CONNECTICS LIMITED
Lighting and utilities working closely with sub-contractors/suppliers:

ECOPOINT LIMITED (LED lighting specialists)
ABACUS UK LIGHTING (Telescopic filed lighting)

LANDSCAPING - TBA

SPSC is engaged with the following landscaping contractors to determine the best entity to achieve SPSC goal in being a destination campus showcasing New Zealand native and indigenous flora.

- Ashburton Contracting Limited
- Natural Habitats Limited
- Boffa Miskell Landscapes Limited

HOSPITALITY DESIGN AND IMPLEMENTATION

ELEMENT 17 LIMITED (www.element17.co.nz)
Fitout design and management

Attached are profiles and project delivery reports for review.

8th April 2023

FERGUS WADDELL OF FERG WADDELL HOMES LIMITED

I have been building in the Residential Building industry for the past 38 years. For the past 18-20 years I have been both building and project managing quality new home builds for clients. From 2004 – 2016 I have been a company director employing up to 16 staff during the Christchurch Earthquake rebuild, contracting to group housing companies within the Canterbury region along with building new homes for our own clients.

Since 2017 I moved away from the Group housing builds and concentrated only on new home builds for my own clients under Ferg Waddell Homes Ltd. Over the many years I have built up a strong working relationship with recognized major trade suppliers. PlaceMakers, ITM, Carters, Hagley Windows and Doors, Mico plumbing, The Flooring Centre, Harvey Norman Commercial, just to name a few. I have many more quality suppliers and trade personnel that I can trust to deliver a high-quality standard in the Residential Industry.

For over a decade now my role has transitioned from hands-on-tools to project management. Since forming Ferg Waddell Homes Ltd I have been responsible for taking control of all my client's construction projects. Time management is a key part of this role. Over the 12-18 months' time management has been challenging to say the least. However, I feel I have faired better than others due to the strong working relationships I have with my trades people and trade suppliers. Timelines and real time supplies are easing up and things are looking more positive than a year ago.

To measure one's success with project management I guess you can only ask my clients. I have had the good fortune to have clients who realize the pressures and demands of late but have been patient and understanding.

Project management is more than just organizing trades and suppliers. As mentioned, time scheduling is crucial, even if there are delays, being able to adapt is important. Health and safety are another key area and is integral to any construction site. Job costings and streamlining of billings is also important. Dealing with Architects, Engineers, Councils is all part of what I call a complete wrap-around management style that I undertake daily.

What helps most for me as a project manager is my 38 years of building experience and being a Member of the Master Builders Association. This alone resonates with all my clients.

Kind regards, Fergus Waddell

Ferg Waddell Homes Ltd

138 Waterholes Road, RD4 Christchurch 7674. m: 0274461866

MATT YOUNG

PROFILE

Contact

✆ s 9(2)(a)

✉ s 9(2)(a)

s 9(2)(a)

Allenton 7700
Ashburton

With over 30 years experience in the construction industry I have a broad understanding of what's required to bring projects to completion.

I begun my working life as an apprentice painter/decorator for Bradfords Construction in Ashburton. In the early years of my apprenticeship my manager had me leading projects. I have continued to build on those early management skills through study and through various management roles.

I developed a passion for the industry. An interest in interior decorating led me to further study at the completion of my apprenticeship. I believe that creating spaces that are functional and aesthetically pleasing enhance the quality of people's lives.

I have worked both in NZ and abroad (7 years in Ireland) on small medium and large scale construction projects.

My roles have included Painter & Decorator, Finishing Foreman(300 apartment complex overseeing plastering and painting), Project Manager and for the past 13yrs a business owner. In 2011 I started Paintcraft. Paintcraft is a painting & decorating company based in Ashburton. We work in new residential construction & residential decorating.

My expertise is in the area of interior finishing. I have a broad understanding of application techniques and finishing processes.The finishing stage in the construction process is a sensitive stage of the project. A large number of sub trades are involved making communication extremely important. This coupled with working to deadlines I have developed the necessary skills to manage the demands.

Over the years I have understood the value of building strong working relationships. Within my own business I have built a loyal customer base. 70% of Paintcraft customer base is repeat which I put down to my ability to deliver and focus on quality.

BUILDING EXPERIENCE & CAPABILITY STATEMENT

CHILTON + MAYNE
ARCHITECTURE

SOUTHERN PARALLEL
SPORTS CAMPUS

a: 75 Burnett Street, Ashburton 7700 & 36 Grant Road, Frankton, Queenston 9300 **p:** P.O.Box 6021, Ashburton 7740
t: 03 307 1126 **e:** info@cmarchitecture.co.nz **w:** www.cmarchitecture.co.nz

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OUR STUDIO

ASHBURTON
The Ashburton Studio is ideally located for us to reach all our amazing clients. We have embraced online collaboration software, so if we can't meet face to face for whatever reason we use the online mediums such as Microsoft Teams to discuss your project no matter where you are.

Renovations to the original building were undertaken to bring it up to current building standards. This provided an opportunity to amend some of the existing renovations since its construction in the early 1950's. The biggest change was to the front of the building where a new dark stained cedar clad façade was added, this treatment to the existing building remains harmonious due to its careful consideration of proportion, symmetry, and quality of finish.

Internally the front of the building comprises of two meeting rooms, reception and waiting area. Feature walls in the meeting rooms have been clad in dark stained timber feature walls reference to the front facade.

Internally, the studio has two meeting rooms, reception and waiting area. We have a large collaborative workspace to consider your next project.

QUEENSTOWN
We have a studio based in Frankton where we are able to service our Queenstown and Wanaka clients. We are committed to applying our design expertise in the Queenstown Lakes Region. It is an exciting place to be and being able to create long lasting unique architecture for generations to come.

STUDIO CAPABILITY

STRUCTURE & LEADERSHIP
C+M have two directors / leaders in David Chilton & Garry Mayne.

NUMBER OF STAFF
We have a dedicated full-time personnel of 7 staff made up of Architectural Designers, Landscape Architect, Drafting Staff.

OFFICES & LOCATIONS
C+M main studio is based in Ashburton on Burnett Street and we also have office space in Building 8, 36 Grant Road, five mile Frankton, Queenstown. Both directors are in the Queenstown office frequently.

LOCAL PRESENCE
The C+M team is largely based out of the Ashburton studio & service the Canterbury and Southern regions.

Our local presence in Queenstown allows us to provide a comprehensive service to the project particularly during the design and construction phases of the project.

Project Directors, David Chilton & Garry Mayne are frequently in Queenstown and will ensure the broader C+M team is leveraged to support the project delivery.

CAPACITY RELATED RISKS
No Capacity related risks to be aware of. SPSC is a priority project within the office.

IN-HOUSE COORDINATION
In addition to the regular client meeting C+M will have in-house meetings and will be in regular if not continual communication with the project team on the specific design requirements.

ORGANISATIONAL CAPABILITY

PROVIDE AN OVERVIEW OF YOUR ORGANISATION'S CAPABILITY INCLUDING:

+ ***A BRIEF HISTORY INCLUDING NUMBER OF YEARS OF OPERATING IN THE RELEVANT MARKET/REGION***
+ ***PROFESSIONAL MEMBERSHIPS / ACCREDITATIONS***

HISTORY OVERVIEW

C+M are committed to provide tailored architectural solutions for all of our clients' needs, no matter the project. Our office skill set is comprised of Architectural Designers, Landscape Architect and Interior Designer, with a combined work history of over 30 years providing Architectural services within Mid Canterbury and the South Island. David & Garry have worked on a large cross section of jobs ranging from house alterations through to large commercial developments. We have a dedicated personnel and resources to successfully complete the design of many major developments.

Our practice culture of 'commitment and accessibility' is part of an inclusive client-focussed design approach. Every commission is customised at an early stage of the project to ensure the service provided is evenly matched with client's expectations. It is important to us all that you enjoy your experience, that you know you are listened to and your needs are correctly identified and met, both in our designs and in the process of the project.

C+M place a strong emphasis on buildable, cost effective, economic systems and innovative solutions. The level of service offered to clients and their commitment to project deadlines are areas of justifiable pride to both practices. Innovative design solutions, strong working relationships with clients, and enthusiasm for all of our projects are the strengths of C+M.

C+M offer a service of fully detailed drawings. This minimises the risk to the contractor, thus ensuring more competitive pricing and reduces the risk of variations through construction. We have successfully completed a wide range of educational complexes, including preschool, primary and, secondary schools. Therefore, we have an in-depth understanding of the various considerations to be made when it comes to such facilities.

PROFESSIONAL MEMBERSHIPS / ACCREDITATIONS

C+M as a practice holds the following memberships and accreditations:

Both Garry and David are professional members of the Architectural Designers of New Zealand (ADNZ)

Garry is an affiliated member of the New Zealand Institute of Architects (NZIA)

C+M are members of NZGBC (New Zealand Green Building Council)

C+M are members of NKBA (National Kitchen & Bathroom Association)

ORGANISATIONAL CAPABILITY

PROVIDE AN OVERVIEW OF YOUR ORGANISATION'S AND KEY PERSONNEL'S SKILLS IN THE FOLLOWING AREAS

+ ***DESIGN MANAGEMENT***
+ ***PROJECT MANAGEMENT***
+ ***STAKEHOLDER MANAGEMENT***

DESIGN MANAGEMENT

Both David and Garry are skilled at assisting clients in developing and refining their project briefs. The ability to facilitate, listen, question, and concisely translate responses into a clear brief is essential.

David's and Garry's reputation stems from a truly collaborative approach to design. We enjoy working in teams and learning from others to produce designs that meet complex needs, often using techniques and ideas in new ways, transferring knowledge from one industry to another.

C+M offer fully detailed and designed documentation.

The design risk element has been removed by the fully coordinated design process.

Ambiguity is removed by the high level of detailing on the drawings.

The outcome of our fully detailed documentation is of great benefit to the client with a higher quality final product, reduced construction time, no surprises and budget surety.

C+M use the latest version of ArchiCAD as their BIM modelling programme.

The we both enjoy using the TeamWork add-on for the ArchiCAD BIM server which allows design staff of both C+M and most other engineering practices also using ArchiCAD to work concurrently on the model, i:e we can have the consultants access and work on the our model remotely through their server. This ensures both parties are working on one design only and are acutely aware of where the other party is going with the design.

PROJECT MANAGEMENT

During the construction period, there will be regular site meetings, where C+M will be in attendance.

C+M, with its subconsultants, will review shop drawings, respond to contractor's queries within the agreed timeframe and update drawings as required.

On completion, a final inspection will be carried out for practical completion. C+M will generate defects lists for contractors to address during the defect's liability period. We will submit such a list for each building completed.

The contractor will compile all necessary documents such as operation and maintenance manuals, a maintenance plan, as-builts and the Certificate of Public Use. The project manager will issue the practical completion documentation.

STAKEHOLDER MANAGEMENT

The project scope can mean stakeholder interest groups are broad and diverse. The importance of the project to all groups will require careful mapping of groups, understanding both those who need to be engaged and those who need to be informed.

Fundamental to the C+M's delivery approach, is clear, consistent and most importantly, relevant engagement with stakeholder groups. It's imperative with all projects to formulate a stakeholder strategy from inception and meet the unique needs and concerns of each of those groups in a format that is relevant to them.

From project initiation, the C+M team will engage with the Board to understand the various interested parties, before devising a series of presentations, throughout the concept, developed design and detailed design phase of the project to assist in the engagement process.

ORGANISATIONAL CAPABILITY

PROVIDE AN OVERVIEW OF YOUR ORGANISATION'S PROCESSES IN THE FOLLOWING AREAS:

+ ***QUALITY ASSURANCE***
+ ***COMMUNICATIONS***
+ ***PROJECT CONTROL PROTOCOLS***

QUALITY ASSURANCE

Our proven Quality Assurance procedures govern every aspect of our design and documentation processes. They include scheduled peer reviews by members of C+M's senior management team at the end of each design phase. We also actively consult with stakeholders at all project milestones to confirm project direction and budget as required.

COMMUNICATIONS

At project inception the C + M team will identify key stake holders and organise a communications register. This is key to having a clear and succinct information flow to all stakeholders. A transparent flow of information is our way of ensuring that all parties are kept up with the latest project developments and are aware of any project risks and management solutions.

PROJECT CONTROL PROTOCOLS

In addition to the regular client meetings C+M will have in-house meetings and will be in regular if not continual communication with the project team on the specific design requirements. It is not unusual for project briefs to creep due to unforeseen circumstances, with a clear communication process these can be managed and incorporated at an early stage into our design solution as and where required.

ORGANISATIONAL CAPABILITY

PROVIDE AN OVERVIEW OF YOUR ORGANISATION'S SUSTAINABILITY / ENVIRONMENTAL CONSIDERATIONS INCLUDING, BUT NOT LIMITED TO:

+ **EXPERIENCE**

+ **AFFILIATIONS**

+ **ENVIRONMENTAL POLICIES / PROCEDURES**

EXPERIENCE

For our larger commercial projects like Burnett House we worked closely with TM Consultants who provide all the stake holder options for the area building energy consumption (space and water, heating and cooling, ventilation, controls, electrical), including the pros and cons, capital and running costs, EECA funding and payback period comparisons of each option. By undertaking these processes, it allowed us to advise the major stakeholders and make informed decision resulting in a large commercial building running at optimal efficiency.

TM Consultants then design these systems for optimal layouts and efficient use of space. Part of this includes 3D modelling using ArchiCAD which gave us an advantage as they are modelled the services directly into our CAD model, fully utilising the BIM system. Coordination does not get better than this resulting in much reduced variations during construction and the dollar savings are passed onto the client.

Thermal building performance modelling and electrical systems modelling play a key role in ensuring the building will work efficiently and optimally in all situations.

AFFILIATIONS

C+M Architecture are members of the NZGBC (New Zealand Green Build Council)

A group of progressive businesses from all aspects of the building and property industry, with an aim to accelerate the development and adoption of market-based green building practices.

SUSTAINABLE DESIGN SOLUTIONS

Where feasible, we will look to adopt sustainable solutions (such as solar panels and rainwater harvesting) and choose resilient building materials to create a durable building with low-operational and maintenance costs.

We believe that the integration of sustainable solutions into the new buildings align with every projects individual values.

We actively encourage empathy towards our environment as we believe that this will help safeguard the sustainable future of New Zealand.

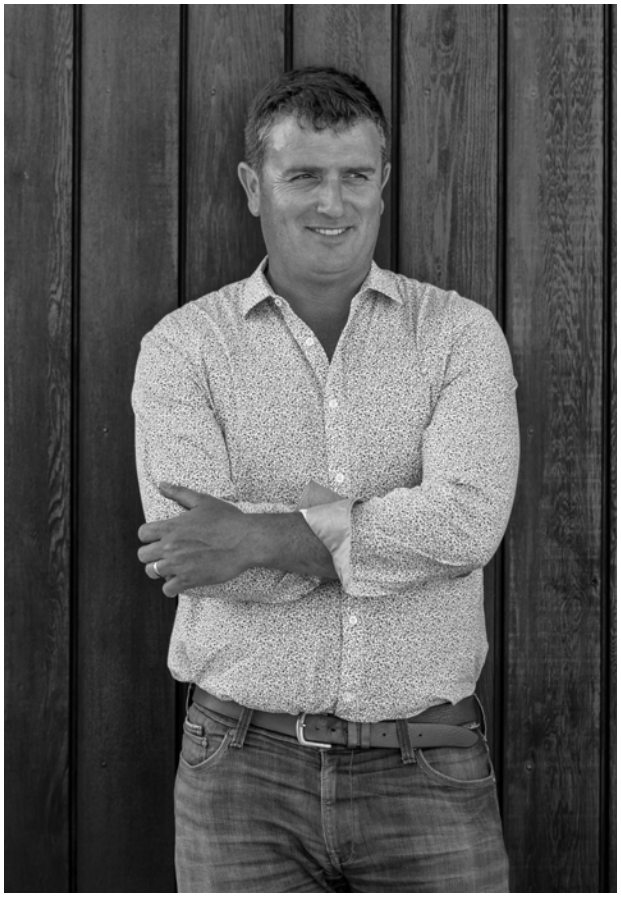
DAVID CHILTON

Director at Chilton + Mayne Architecture Ltd

Bachelor of Landscape Architecture BLA,
ADNZ Professional Member
Licenced Building Practitioner LBP (Design 2)

David has broad knowledge and a proven track record of working with and effectively engaging with stakeholders, clients and the general public in producing thoughtfully designed and successfully implemented developments.

David grew up on a farm not too far away from Chertsey and as spent most of his life in the Ashburton district. David attended Chertsey School moving on to Ashburton Intermediate and finally Ashburton College for his secondary education. In 1997 David attended Lincoln University gaining a Bachelor of Landscape Architecture in 2000. In 2002 David came back to Ashburton to work for a local Architecture firm as a Landscape Architect. Whilst working in an Architecture office David's attention became increasingly drawn to 'Building Architecture' and after several years of distance learning in 2009 David became an Architectural Licensed Building Practitioner (LBP)



David founded Chilton + Mayne Architecture Ltd in the August of 2010 with Garry Mayne and as a founding Director has been involved with many of the projects Chilton + Mayne Architecture Ltd have produced. He has a broad experience in successfully designing and delivering a range of building types.

David has designed and been involved in numerous of large residential projects and commercial projects including the large extensions and total re-fit to the PGG Wrightson Kimihia Research Facility, Hunting & Fishing Rangiora New Build, RD1 Methven New Build, CRT Rangiora New Build, Housing NZ Apartment Building Christchurch New Build, Redpaths Electrical Rangiora New Build, Burnett House Ashburton and the PGG Wrightson Rangiora New Build.

Where possible David likes to give back to the Local community and has provided free architectural services for the Ashburton Fire Museum Extensions and the Celtic Rugby Grandstand.

David also believes that the senior members of our society are a vitally important piece of our community fabric. For this reason, he was made a trustee of AHAST (Ashburton Housing and Support Trust) a non for proffit housing provider to those who require quality affordable housing for people over 60.

Outside the office David is a keen outdoorsman and family man. David loves spending time exploring the district with wife and two young daughters.

GARRY MAYNE

Director at Chilton + Mayne Architecture Ltd

NZDAT
ADNZ Professional Member

Garry is enthusiastic about creating exciting and immersive public environments through good design and collaborative consultation. Whether this is high-end residential, commercial or educational design, Garry has the capabilities to create innovative, memorable spaces for everyone.

Garry was born in Ashburton and has spent most of his life in this town. Started at Fairton Primary School and moved onto Ashburton Intermediate and then to the Ashburton College. From there he graduated from Design & Arts College in 2000 with a National Diploma in Architectural Design.

Garry founded Chilton + Mayne Architecture Ltd in 2010 with David Chilton and as a founding Director has been involved with many of the projects Chilton + Mayne Architecture Ltd have produced. He has a broad experience in successfully designing and delivering a range of building types.

He has designed a number of large residential projects and commercial projects including, the Burnett House Building, Ashburton, Tennyson Street Retail Development, Rolleston, Stake Glass Office & Warehouse, Christchurch, Ray Mayne Hose & Fittings Office & Workshop, Ashburton, Precision Cutting Office & Workshop, Ashburton, TS Holdings Commercial Building Upgrades & Re strengthening to 100% NBS, Ashburton, The Canterbury Biltong Headquarters, Christchurch, Housing NZ Apartment Complex, Christchurch,

Garry has also been involved in many residential projects in the Mid Canterbury and wider South Island area.

Outside the office Garry enjoys travelling, all sports and is a playing member and committee member of the Ashburton Squash Club.

RESOURCE MANAGEMENT

OUTLINE YOUR PLAN FOR ENSURING THAT THE LEVEL OF SERVICE EXPECTED BY THE CLIENT WILL BE MET WITH AT LEAST A SUFFICIENT LEVEL OF RESOURCING THROUGHOUT ANY PROJECT(S) YOU WORK ON, INCLUDING AT LEAST PROVIDION FOR:

+ ***CONTINGENCY PLANNING OF ILLNESSES, ANNUAL LEAVE AND DEPARTURES***

+ ***HOW YOUR ORGANISATION WILL MANAGE THE COMPETING DEMANDS ON YOUR RESOURCES WHEN YOU ACROSS MULTIPLE MINISTRY AND/OR NON MINISTRY PROJECTS (INCLUDING WHEN PROJECTS NEED TO ACCELERATE***

+ ***HOW YOUR ORGANISASTION WILL MEET AD HOC REQUIREMENTS WHEN UNDER TIME PRESSURE***

+ ***HOW WILL YOUR ORGANISATION WILL MANAGE UPCOMING RESOURCE COMMITMENTS FROM TENDERS FOR OTHER PROJECTS AND***

+ ***HOW YOU WILL MANAGE COMMUNICATION WITH YOUR CLIENTS TIMES OF INTENSE PRESSURE.***

CONTINGENCY PLANNING

Having two directors working on our projects help make them run smoothly. There will always be one director involved on the project at any one time. Commercial work is a large portion of our daily work and we look to make this work a priority within the office and forward planning.

RESOURCES AVAILABILITY

C+M confirm that we have allocated sufficient resources to ensure delivery of the services of the design and documentation for this projects.

The Lead on the project will be one of the two directors and will be assigned with each stage of the project. The Directors with work closely with another senior staff members to prepare the concept plans and detailed design work on the project. Fellow Director David Chilton will also be involved in the project so that if Garry Mayne is unable to attend meetings David can attend and will be familiar with the project.

Should the project require additional resources (say to meet an accelerated programme) or reduced resources due to programme/project delays, we can adjust our team size to meet these requirements without requiring recruitment.

AD HOC REQUIREMENTS

C+M can accommodate any additional ad hoc requirements, provided they fall within the agreed scope, project timeline and project brief. C+M's goal is to meet all these criteria first and foremost - so whilst we can be flexible to an extent, we will need to create an additional fee statement for anything outside those parameters.

The C+M team has the capacity and professionals to draw on and will be able to accommodate increased capacity requirements whilst ensuring continuity of design through our internal design management systems.

RESOURCE COMMITMENTS

Should this project require additional resources (say to meet an accelerated programme) or reduced resources due to programme/project delays, we can adjust our team size to meet these requirements without requiring recruitment.

MANAGE COMMUNICATION WITH CLIENTS

C+M are skilled at keeping an open and transparent line of communication between all parties involved. This extends to the construction firm undertaking the work.

We thrive on the challenge of difficult problems.

REMOTE WORKING

IN RESPONCE TO COVID-19, THE CLIENT WOULD LIKE TO UNDERSTAND YOUR ORGANISATION'S ABILITY TO WORK REMOTELY.

+ ***PLEASE IDENTIFY THE SYSTEMS AND PROCESSES YOU HAVE IN PLACE THAT SUPPORT WORKING REMOTLEY.***

+ ***PLEASE OUTLINE HOW FILES CAN BE SHARED, UPDATED, AND MANAGED ACROSS A PROJECT TEAM WORKING REMOTELY***

+ ***PLEASE IDENTIFY THE TOP 3 RISKS THAT YOUR ORGANISATION MAY EXPERIENCE WITH REGARDS TO REMOTE WORKING AND YOUR INTENDED MITIGATIONS FOR EACH***

SYSTEMS AND PROCESSES IN PLACE THAT SUPPORT WORKING REMOTLEY

C+M have embraced online collaboration software, so if we can't meet face to face for whatever reason we use online mediums such as Microsoft Teams. All staff at C+M can work remotely and access project files from the office server system.

HOW FILES CAN BE SHARED, UPDATED, AND MANAGED ACROSS A PROJECT TEAM WORKING REMOTELY

C+M have the latest ARCHICAD software package. The software has a Teamwork portion, and this helps our design team collaborate, allowing the team to work together while working remotely to produce a Virtual Building model and associated drawings and documentation.

To enable collaboration with consultants and stakeholders we generally set up work files on cloud storage platforms such as Dropbox and OneDrive. This enables real time accessibility and accountability for all parties no matter you geographic position.

TOP THREE RISKS THAT YOUR ORGANISATION MAY EXPERIENCE WITH REGARDS TO REMOTE WORKING AND YOUR INTENDED MITIGATIONS FOR EACH

COMMUNICATION ISSUES AND BEING OUT OF THE LOOP

When the bulk of your communication happens via email and the like, it doesn't take much for bad blood to develop unless everyone is making their best effort to the contrary. Small misunderstandings that could have been nipped in the bud with the wink of an eye or a certain tone of voice can quickly snowball into drama. Remote work needs extra communication. People can feel paranoid that others are having meetings and making decisions without them. The only real solution is to communicate as much as possible-clarifying anything that could be a misunderstanding-and to be proactive in speaking up.

TECHNOLOGY HICCUPS

An internet outage or a broken computer are both problems to solve, even with a decent internet connection, video conferencing apps aren't always reliable, so virtual meetings can be an exercise in frustration. C+M have a backup plan. All staff have a mobile hotspot device or a cell phone plan that allows tethering that can be used when the internet goes out, we also have a backup computer in the office for staff to use until their computer is fixed. All of C+M's data is located on a central server and this is backed up every 12 hours to cloud storage.

PRIORITIZING WORK

When working remotely C+M has team meetings with staff to organise and prioritize workflow. Its an office policy to identify the days most important task and work diligently to resolve it. We also believe that whilst working remotely that we need to limit the number of tasks per day in order to minimise unnecessary time-wasting tasks and know which tasks to do next.

EXAMPLES OF COMPLETED WORK

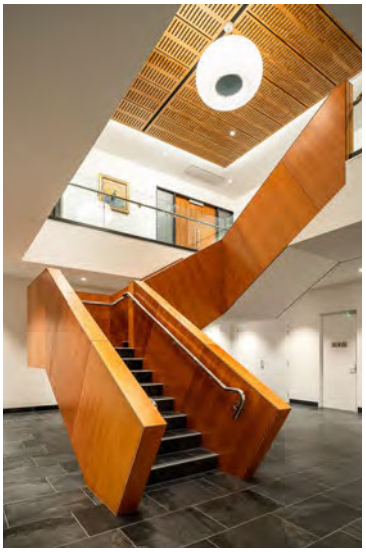
BURNETT HOUSE

Burnett House is a mixed-use complex encompassing retail & office on the ground floor. The first-floor office area features a central business hub layout for multiple tenancies. Our goal for this project was to deliver a strong and dynamic spatial experience for tenants and passers-by, both structurally and through selective interior detail.

This building to be both welcoming and functional for its tenants. The large open plan entry foyer has been designed as a circulation space for the entire building, both ground and first floors.

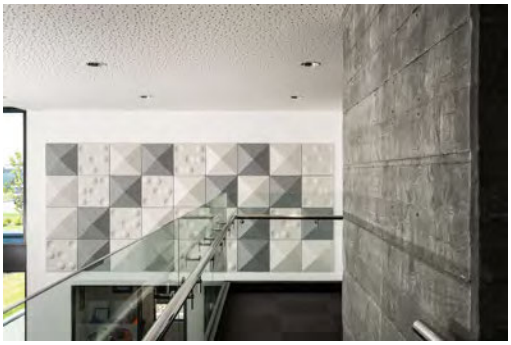
The collaborative first floor business hub has generous proportions offer places where people can relax or have work meetings, facilitating a more collaborative atmosphere.

A mixture of materials to the exterior include precast panels and cedar fins that form the main structure of the building which is broken up by glazing to make the most of the sun. The first-floor business hub area has fully opening windows to the streetscape which are shaded with dual purpose vertical cedar fins that also act to soften the corner of the building with a radius that follows the street veranda.



RAY MAYNE HOSE & FITTINGS HQ

New commercial headquarters for an industry leading Irrigation Company located in the new Ashburton Business Park. This 3,050m² development is comprised of a large storage warehouse and workshop. With the use of Steltech portal frames the facility was able to have a clear span of 40m. To soften the large warehouse the design solution was to create a two-story office block towards the street. With the use of varied construction materials this creates a contemporary look for the offices. Precast textured concrete panels and standing seam wall cladding creating strong vertical elements that gives this office a real presence on the site. Large glass facade elements let in generous amounts of light and provide extensive views of mountains beyond.



PRECISION CUTTING & PROCESSING LTD

This new office and factory located in the Ashburton Business Park is comprised of a large Cutting and Processing facility for the manufacturer of steel plate profiles. The 1,500m2 facility houses two 10-tonne gantry cranes running the full length of the 60 x 25 metre workshop and was designed with the emphasis on maximum plate storage and profile cutting efficiency. Alongside the processing facility is an attached 238m2 modern single level office building has been designed to project the character and brand of Precision Cutting and to sit within the context of the Business Park. The interior fit-out uses a limited palette of materials to create a modern uncluttered interior.

STAKE GLASS CANTERBURY

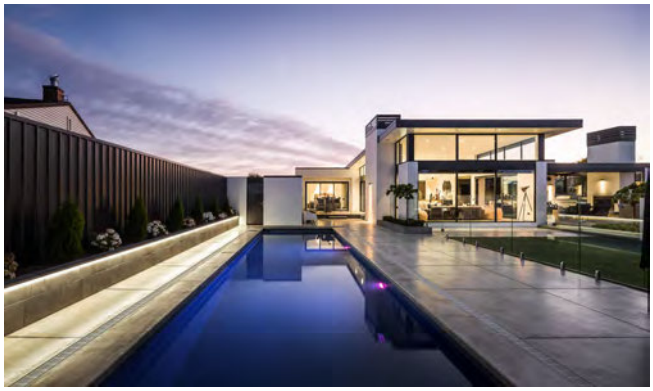
The clients were looking for a new headquarters to reflect their new business and brand. This new office and factory located at Distribution Lane, Sockburn, is comprised of a large glass manufacturing plant, administration and dispatch offices. The 2,500m2 facility has been designed to meet Stake Glass's specific requirements and retains the ability to be expanded or reconfigured for their needs. The two-story office building makes its presence known with its bold use of glass and exposed structural steel and aluminium prefinished cladding. The building was opening by Rt Hon John Key in June 2016.

GLENITI OASIS

This home strikes the perfect balance of private personal and social spaces. The open plan domain is made for entertaining with a state of the art kitchen being the center piece of the space. This home sets a crisp architectural statement within the semi-rural site and surroundings.

With the inclusions of a swimming pool and sheltered outdoor living these spaces maximize the external environment of this home.

Feature Timaru Bluestone cladding details add depth alongside sleek white plaster cladding.





TWIN GABLES

The house comprises of two main pavilions, with gabled roofs facing east to west. Pitched ceilings open up the interior and plenty of glazing throughout encourages engagement with the great outdoors.

Extensive use of cedar and glass allow this home to rest naturally on its site while remaining open to the impeccable outlook. Canal and mountain views provide a serene backdrop from the living, kitchen dining, lounge and master bedroom spaces. The cedar cladding from the exterior has been added to the interior to create features between the kitchen and living areas and master bedroom.

The Living Pavilion and the master bedroom wing open out to a series of outdoor living areas that provide plenty of shelter from the heat of the sun and breezes in summer. These outdoor areas face west and overlook the canal.

LONGBEACH HOUSE

Set in a rural environment this house is spread across the north facing site in a series of gable wings. The designer open-plan living space is well connected to the outdoors via extensive glazing. Wall-to-wall windows welcome natural light and warmth into the interiors. Stunning natural timber ceilings create a rich, warm ambience throughout.

Designed for elegant entertaining and easy everyday living these areas flow freely to covered outdoor living to take advantage of the views and the evening sun.

OUR DETAILS

TRADING NAME	CHILTON + MAYNE ARCHITECTURE LTD
PHYSICAL ADDRESS	75 BURNETT STREET ASHBURTON 7700 & 157 GLENDA DRIVE FRANKTON QUEENSTOWN 9300
POSTAL ADDRESS	P.O.BOX 6021 ASHBURTON 7700
REGISTERED OFFICE.	75 BURNETT STREET ASHBURTON 7700
BUSINESS WEBSITE	www.cmarchitecture.co.nz
TYPE OF ENTITY	LIMITED LIABILITY COMPANY
REGISTRATION #	3019863
COUNTRY OF RESIDENCE	NEW ZEALAND
GST NUMBER	105-049-099

CONTACT PERSON

REPSONDANT'S CONTACT PERSON

CONTACT PERSON	GARRY MAYNE
TITLE / POSITION	DIRECTOR AT CHILTON + MAYNE ARCHITECTURE LTD
EMAIL	s 9(2)(a)
PHONE NUMBERS	p: (03) 307 1126 s 9(2)(a)

CONCLUSION

CLOSING REMARKS

Chilton + Mayne Architecture Ltd confirm that we:

+ Have significant experience with to achieve this project.

+ Have a proven past record of excellent performance on projects.

+ Have the personnel resources for continued performance.

+ Will perform to agreed programmes.

+Provide high quality, clear, concise and complete documentation.

+ Both hold current Professional Indemnity Insurance and Public Liability Insurance.

+ Are proactive, innovative and forward thinking in their approach to all aspects of our commercial projects.

THANK YOU

The Directors David & Garry at Chilton + Mayne Architecture Ltd thank you for considering our proposal.

We will maintain excellent communication and delivery throughout the project as we work closely with all project teams.

Please feel free to contact us for any queries and regarding how we can formalise this partnership.

Chilton + Mayne Architecure Ltd		**Chilton + Mayne Architecure Ltd**	
Full Name:	David Chilton	Full Name:	Garry Mayne
Signature:		Signature:	
Date:	2023	Date:	2023

Apollo PROJECTS

PROFILE & RECREATION FACILITY PORTFOLIO

INTRODUCTION

Apollo Projects is pleased to present this brief portfolio in support of the Southern Parallel Campus. Our team would love the opportunity to partner with SPC to deliver this exciting community project.

We believe that our approach and skillset is perfectly suited to this development. As New Zealand's leading design and construction specialist in the sports and aquatics sector, we have an unrivalled portfolio and successful track record of delivering outstanding facilities on time and on budget.

Apollo has assembled a team with extensive experience working together on the design and delivery of sports and aquatics centres across Aotearoa. The project team is excited by this opportunity and ready to progress forward if successful.

THE APOLLO WAY

At Apollo, we work differently. Our approach is based on developing trusted relationships with our clients, consultants, and construction partners. We look forward to the challenge of working with SPC to produce a facility that exceeds your expectations and has a significant and positive impact on your community.

Within this ocument you will find evidence of how we deliver our projects in "The Apollo Way". The Apollo Way is best summarised by our focus on what we call the five C's:

- **Clients**
- **Community**
- **Consultants**
- **Contractors**
- **Colleagues**

For every project we work on, we are committed to maximising the outcomes for all stakeholders. Critical relationships form part of the success of a project, and we recognise the wider outcomes involved. It is simply not good enough to just build something, there must be wider benefits achieved to each of the five C's in order to consider a project successful.

We believe the buildings we build and the SPC project is more than just a building for sport. There is a strong requirement to provide lasting community benefit - both during the project and into the future. Following you will find examples of how we have delivered successful outcomes on past projects.

Evidence of our projects typically highlights:

- Use of local resource
- Demonstrated track record in the design and construction of community recreation facilities
- Delivering a sport and recreation facility that grows participation in core and potential codes
- Reducing the environmental impact of the facility
- Ability to deliver using safe work practices

Lastly, with Apollo's unique experience in the delivery of design and build projects, we can achieve the right combination of fit for purpose, quality, on time delivery and quantity for the target price. Apollo is very excited about the prospect of delivering this project.

> ***"Despite the additional complications posed by COVID-19, Now, I have to say as a former cabinet minister and as the mayor of Christchurch, I love those words more than just about anything else - "within budget" and "ahead of time."***
>
> ***Mayor Lianne Dalziell***

APOLLO PROJECTS PROFILE

Safety Above All Else

Apollo Projects is committed to creating safe environments for all to enjoy. “Safety Above All Else” is part of our moral foundation and remains so for the lifecycle of the building. All aspects of the project are considered; from design and construction, through to operation, maintenance and deconstruction, Health, Safety, and Wellbeing is recognised.

Apollo work closely with the Client, Consultant(s), Contractor(s), and public, in order to deliver projects safely and efficiently. We want everyone to go home without harm, each day. We want everyone to feel protected on site, and we value “Safety Above All Else”. Protecting people is the cornerstone of Apollo’s Safety culture. Highlighting our commitment to H & S, Apollo Projects has achieved the following accreditations and Certifications:

Apollo Projects are accredited through IMPAC’s PREQUAL Contractor Prequalification Management tool has been a Level One Site Wise administrator since 2017. All Apollo sub-contractors must meet the site wise (or similar) pre-qualification standards: Please refer to appendices for our certificates.

A copy of Apollo’s IMPAC current grading report has been attached in the Appendices, indicating “An excellent health and safety policy is in place” and “presence of robust Hazard Management processes” for;

- The identification, control, and review of hazards
- The management of key potential emergency scenarios
- Permit to Work system (regarded as comprehensive)
- Job Safety Analysis
- Isolation of energy sources
- Management of Hazardous Products and Substances
- Carrying out health hazard monitoring
- PPE provided, maintained, and replaced at appropriate times
- Incident Reporting, Training, and quality Investigations
- Conducting Audits and Inspections
- The induction, supervision, and training of employees
- Contractor prequalification and monitoring

COMMUNICATION AND COLLABORATION

Central to Apollo’s construction philosophy is collaboration - a successful build requires input from many parties. We involve the contractors early to find the most efficient and safest way to do the build. The front-end design discussions weave safety and buildability to develop a methodology that meets the project needs.

Communication is the single biggest safety process on site. Apollo foster this through daily site coordination meetings. Coordination meetings build relationships between contractors and provide the opportunity for contractors to ‘speak up’ and ‘use their voice’ which reinforces work safe’s ‘use your mouth campaign’.

By meeting daily, a greater understanding of the job and the critical path is established, and positive relationships are developed between the site team. The simple process of knowing each other on a first name basis breaks down barriers and grows a culture of comradery where each person looks out for one another.

Our clients, consultants and contractors will be kept informed of safety on site through Apollo’s weekly updates. The weekly update is a critical tool in keeping the client abreast of all aspects of the design and construction process. It is issued at the end of each week to all stakeholders. Other methods used to communicate Health & Safety information to the workforce include:

- Hazard notice boards
- Inductions
- Safety conversations during the issuing and receiving of JSA's and permits
- Meetings, including toolbox talks, H&S meetings, and Contractor Co-ordination meetings

SAFETY BY DESIGN

The most critical component of any project is the Health and Safety of all employees, contractors, suppliers etc as well as the end users once completed – both in the construction phase and once the facility is handed over to the client for operation.

Safety by Design

The lens used to design a project influences the outcome of the decisions made. Apollo's expertise in sports and aquatics is combined with our Safety by Design expertise to create a facility that identifies how a building will be 'safely' constructed and operated.

"Safety by Design is good design"

It is a legal requirement that facilities constructed must be safe to use, operate, maintain, and deconstruct. This is 'Safety by Design'. Apollo maintain a conscious review of the design to consider the safety of people throughout the lifecycle of the building.

Throughout the design process decisions are made. Apollo ensure that decisions made consider the safety aspects. For example, the flow of persons into and around a facility, the position of HVAC units and accessibility, or the floor coatings required to prevent slips, trips, and falls.

So How do Apollo 'do' Safety by Design?

As the client, you will be involved in this process throughout the design stage. Prior to the completion of detailed design, a team workshop, involving the designers, design build contractors, Apollo, and you the client, will be held to review the design decisions made. At this stage, it is easy to make changes and gives us the opportunity to add value to the building by getting the design right first time.

By consulting with the client, design team, construction specialists, operation staff, and maintenance specialists, Apollo and the Principal can better understand the risks associated with operating the asset and then attempt to eliminate or mitigate risks through good design.

A proactive approach saves Client's time and money and reduces the chance of harm

During our design process Apollo initiate a Safety by Design workshop involving representatives from all stakeholders including the client, designer, builder, and operator. The purpose of the workshop is to ensure the integration of control measures early in the design process to eliminate or, if this is not reasonably practicable, minimise risks to the health and safety of the structure.

Constructability

The people who are building the building are the best at identifying the most efficient way to do it. Apollo work closely with our key sub-contractors, especially the design and build contractors to ensure what is designed is safe to build.

Throughout the design process, we will collaborate with our contractors to develop the construction methodology. The construction methodology identifies potential risks and mitigates them. The result is a building that is designed to be built efficiently, and safely, using details that work. The effect of this is the reduction in design clarifications during construction which adds value by minimising lost time.

Sustainability and Environment

Apollo's environmental systems and practices are embedded in the design and construction of our facilities. We are committed to providing sustainable solutions that will benefit generations, now and in the future. Apollo has built and continue to build facilities that meet Green Star requirements, and we are constantly looking for ways to minimise a facility's total cost of ownership. Rather than maintaining the status quo, Apollo finds new opportunities and ways to set new benchmarks. Recently, we began work delivering the first Green Star Six coldstore ever built. As one the world's largest CO^2 refrigeration coldstores, our team is involved in the implementation of technology never been seen before in New Zealand.

ENVIRONMENTAL MANAGEMENT

As a Design and Build construction company, Apollo Projects manage and control all areas associated with Environmental Management. Highlighting this as a priority area, the consultants and subcontractor we work with all understand that environmental management must be front of mind.

1. Apollo is committed to understanding the impact both the design and build process, and the final facility has on the environment
2. Apollo will comply with applicable environmental legislation, consents and regulations during the design and build process, and apply responsible standards where relevant regulations do not exist
3. Apollo will achieve sustainable, innovative, and energy-efficient solutions to benefit our clients and the environment
4. Apollo is a member of the NZ Green Building Council
5. Driven by the company's Board of Directors and to ensure compliance with our commitments, Apollo will undertake regular reviews of this policy and of our operations
6. Apollo will endeavour to further improve our practices and commitment to minimising the impact on the environment, particularly as new technology continues to be introduced

ENVIRONMENTAL MANAGEMENT POLICIES, STRATEGIES AND TARGETS

Apollo Projects is committed to protecting the environment we live in and the challenges our world is facing. A key focus at Apollo Projects is climate change. Our team actively looks at ways we can reduce greenhouse gas emissions and keep within the 2degrees target set at the Paris Agreement.

At Apollo, we support the Paris Agreement and look for ways to ensure the buildings we construct reduce the carbon footprint for the client, our environment, and future generations. Apollo recognise that the biggest impact we can make is through the design. Apollo's design and build approach enables us to challenge the design team [and our contractors] to ensure the best materials are procured for the facilities we build. Apollo has in-house expertise in Green Star and carbon assessment processes.

The expertise of the team focuses on key areas where value can be added to the project and positive environmental decisions made. Apollo's environmental management policies and strategies are tailored to each project. Each project is unique, and all sites have specific environmental concerns that must be addressed.

QUALITY SYSTEMS

Apollo's systems are based on a range of standards and quality systems. For instance, our document management system; Procore, follows ISO compliant process. Apollo has not submitted our systems to ISO for verification, however, we provide the following commentary on our systems.

QUALITY MANAGEMENT SYSTEM

Apollo has a bespoke internal Quality Management System. It has been developed by the Apollo team to best serve our projects and clients. Apollo's quality system is embedded in our inhouse Project Delivery Manual (PDM). The PDM is based on Apollo's best practise systems which have been developed over the last 21 years. Apollo's systems have been applied on projects for government departments, Treasury, city councils, multi-national companies, publicly listed companies, and private businesses throughout New Zealand.

Apollo's quality starts at the top. Apollo's Directors and Shareholders, Paul Lloyd and Craig Waghorn are actively involved in the business and lead the quality systems. This provides assurance to the client that Apollo's comprehensive systems will result in the delivery of high-quality projects.

Quality is a key component in project delivery and one which Apollo stakes its reputation on. It is paramount that quality is not compromised by time or cost. Quality is managed through the build using the Apollo Quality Management Plan and the Apollo Project Delivery Manual.

The Waitaki Sports Centre construction will be managed through the Apollo Project Delivery Manual (PDM). The PDM has been developed by Paul and Craig through their experience working under ISO quality systems. The systems developed by Apollo are based on the ISO seven quality management principles. The Apollo system is highly efficient and professional, encapsulating all processes and procedures from concept through to design, pre-construction, construction, and post-construction. The PDM sets the benchmark for quality and ensures the highest level of professionalism, communication and quality are maintained.

PROCORE

Apollo have partnered with Procore, an internationally recognised integrated project management platform for the construction industry. Procore is a cloud-based product that manages all aspects of construction including the client contract, sub-contractor tendering, contracts, communications, drawing and document management, Health & Safety, and quality. Procore will be utilised to ensure construction quality is continually monitored and frequently followed up. Procore follows an ISO compliant process.

Apollo will provide the client, consultants, key stakeholders, and sub-contractors access to parts of Procore throug the project's construction. The system is easy to use, provides a high-level of reporting, and ensures all parties have the correct/relevant information. Importantly, the system also provides a tracking tool for project communications between key stakeholders. More user-friendly than the other similar systems in the market, we believe this system will make everyone's lives easier across the project.

As an overview, Procore provides:

1. Integration across all our project management systems
2. Real time access onsite and in the office
3. One source of information
4. A user-friendly interface
5. Easily accessible communication and documentation
6. Greater accountability
7. Availability across all PC and mobile devices

QUALITY ASSURANCE SYSTEMS

The Apollo Projects Quality Management Plan is based on the fundamental concept that the control of quality is a team obligation, and something that is built into every aspect of the project. Quality starts with design and the quality plan flows through the project. Our team will provide quality products and services that meet or exceed client expectations. Quality work will be the responsibility of every individual performing a task and will be obtained through appropriate planning and operational control. Specific quality control activities such as reviewing, checking, inspecting, testing, and quality surveillance/auditing will also be implemented.

A Project Quality Group (PQG) is formed to cover Quality Control (QC) activities. The PQG, under the direction of the Apollo Senior Project Manager (SPM) includes design and ongoing construction monitoring with consultants and sub-contractors. The PQG will provide the QC procedures and QA review, testing, and inspections necessary to ensure the project quality meets contract requirements.

Quality Hold Points (QHP's) will be established prior to the start of the design process, right through to when the project is handed over. QHP's are developed for each individual project and provide an opportunity to evaluate the acceptability of work before the next portion of work begins.

Apollo will maintain a consistent on-site presence and will conduct documented quality inspections to suit work stages. At the conclusion of relevant work stages, work will be checked against the scope of works, site-drawings, and specifications. Equipment delivered to site will be checked against the original order and, where applicable, will be verified against drawings and specifications as prescribed in the QMP.

Statutory requirements are a key part of the quality process. All inspections by statutory bodies and related consultants are stored and submitted as part of the consent process. Monitoring of consent conditions and regular reporting against resource and ECAN consent conditions are built into the quality plan.

Apollo internal audit systems:

1. Safety Compliance System – Procore
2. Pre-qualification of contractors – Site Wise
3. Internal contractor review
4. Work package plan reviews and pre-acceptance meetings
5. Weekly Project Update
6. Monthly Project Review
7. Monthly PCG meetings with stakeholders

Contract Management systems:

1. Apollo has an in-depth internal management system, including tender analysis and client approval processes, internal and external communications, reporting, budgets, claims, consents, insurances, programming, etc.
2. The processes are managed by Procore, the integrated management system that all sub-contractors and stakeholders will have access to
3. Procore will be used to manage the engagement of consultants and contractors, the creation of programmes and management of drawing registers, all project communications, the project structure and resourcing of the project, the contractor procurement strategy, consents, insurances, tender awards and contracts, payment schedules, variations, snagging, project completion and defects liability, O&M manuals, and budgets
4. All Contractual documents are based on either NZ 3910; NZ3915; NZ3916

OVERVIEW OF OUR SOLUTION

The new Southern Parallel Campus promises to be an incredible asset to the Ashburton community, and the South Canterbury region. We recognise, however, that there is also a significant opportunity to ensure that the project utilises local resources and develops the skills and talents of the community.

The facility will be of significant benefit to the growth, development, and wellbeing of the community. With the ability to have a fantastic impact on the region's future, it is imperative that every opportunity for this project to create more value is explored.

Apollo is a 100% design and build construction company and through our model, we have an unmatched record in the delivery of recreation and aquatic facilities. Our ability to deliver projects of high quality and function, to tight budgets and programmes has been our hallmark. This capability will be demonstrated through the many projects referenced in this submission.

In parallel to this, Apollo continues to deliver numerous projects every year in the form of commercial buildings, food and processing facilities, wineries, cold storage facilities and distribution and logistics facilities. Aside from our commitment to delivering on our promises, one of the key elements to our success on the above listed projects is our internal design expertise and knowledge about sports and recreation facilities. We work alongside experienced and trusted consultants and subcontractors who understand our approach and are motivated to achieve success for our clients. Apollo's internal capability combined with that of our proposed consulting and construction teams is unique in New Zealand and, most importantly, has been proven time and time again.

PROACTIVE COMMUNICATION

- We will keep WDC informed about all aspects of the project through regular project reporting and weekly updates. The weekly update is a critical tool in keeping the client abreast of all aspects of the design, contractual items, Health and Safety, and construction progress. Proactively drive procurement of materials by locking in long lead items and materials subject to pricing fluctuation as soon as possible in contract. Our team de-risks projects through our early design and procurement process. We identify key trades, involve them in the design process early, and lock in key items that might be a supply risk.
- Review and manage the budget throughout construction and identify potential savings or opportunities to incorporate additional scope as the construction proceeds.

SAFE AND SUSTAINABLE OUTCOMES

- Environmental impact will be considered throughout the design process and will consider how the project will impact on the environment during construction through to its operation.
- Safety in Design and Health and Safety in Construction are a fundamental part of any project and Apollo Projects ensures that this is at the forefront of the project team from the start of the project right through until operation.

COMMUNITY CONTRIBUTION

- Utilise locally based resources throughout the project, where possible, and ensure proactive contributions are made in the local community through our sponsorship of the School Sport Programme
- In prioritising more equitable outcomes, Apollo is also a proud partner of the supplier diversity intermediary – Amotai, who connect Māori and Pasifika businesses with those in need of goods and/or services.
- Giving back to the regions we work in is a priority for Apollo and we are delighted that as we have grown, so too has our involvement and support of local communities. Apollo recognises that not everyone has the same chances in life, and we are passionate about increasing opportunities and reducing barriers for young people wanting to play sport. Apollo has provided significant financial contribution to young people in secondary schools across the Hawke's Bay, Taranaki, Gisborne, Hamilton, and Christchurch regions. Working alongside Waddell + Associates, funding is distributed for athlete scholarships/grants, school sport uniforms, equipment, transportation, and other associated costs. It has been heart-warming receiving a range of feedback from the schools who have benefited from our School Sport Programme. Fraser High School, for example, put together this amazing video highlighting the impact Apollo's sponsorship has had on their school – https://www.youtube.com/watch?v=OhWnDDHWqrE
- Alongside our school sport programme, Apollo is also the Principal Sponsor of Swimming New Zealand. Swimming is a skill for life, that not only saves lives but also provides positive lifelong benefits for health, wellness, and fun. As a Principal Sponsor of this fantastic organisation, we thoroughly enjoy supporting talented swimmers, building awareness of water safety, and encouraging more people to learn to swim. As avid supporters of learn to swim initiatives, in lieu of corporate gifts, Apollo has also been sponsoring life-saving swimming lessons.
- Finally, Apollo supports a number of other community initiatives, including the Hawke's Bay Hospice through its annual wine auction, the Graeme Dingle Foundation who provide numerous programs in primary schools, and most recently, we helped fund a documentary about Olympic Para athlete, Topou Neiufi. An incredible story, Tupou is an amazing athlete and role model.
  https://www.youtube.com/watch?v=VJa5amM88EE

TRACK RECORD

TEPOU TOETOE LINWOOD, CHRISTCHURCH CITY COUNCIL, CHRISTCHURCH		
Date	Start – June 2020 Finish – July 2021	
Total Project Cost	$22,000,000	
Referees	Kent Summerfield Senior Project Manager, Christchurch City Council Cell phone: 027 520 3011 Email: s 9(2)(a) Nigel Cox Head of Sport and Recreation, Christchurch City Council Cell Phone: s 9(2)(a) Email: s 9(2)(a)	
Project Description	This project was a Design and Build (D&B) tender for a community aquatic and recreation facility. The client's concept design and specifications formed the basis of the tender. All the selected tendering companies were a minimum of 20% plus ($4m) over the client's specified budget. Apollo, however, was selected as the preferred contractor and our key challenge was to deliver the same brief but finding savings of $4m to minimise/remove the financial impact for the client. **The Scope of works included:** › 25m main pool › Learn to Swim pool › Large Community Spa Pool › Splash pad/water toys and toddlers pool › Communal kitchen and large meeting/community space › Outdoor basketball, tennis and muti-use courts › Landscaping and outdoor eating areas. › Community artwork feature › Carparking, landscaping Apollo was chosen for this project based on our reputation and ability to provide new/improved solutions and innovative ways of doing things. As a D&B specialist and with our aquatics knowledge we were able to achieve bring this project within budget, without any scope reduction. We were also even able to provide some enhancements over and above the original design. **Cost Controls** › Apollo uses Prostat as its cost control system. This allows the PM to oversee and control all project-related costs. This is a critical part of the formal monthly project review and tracking process. Robust systems and processes help minimise risks. › COVID-19 added another layer of risk and challenge to this project, with supply issues, increased costs and shipping delays. Costs were managed through early procurement and effective communication with all stakeholders. We worked with CCC to order overseas equipment early, minimising the risk associated with exchange rate fluctuations and supply. › The biggest attribute to the management of project cost was Apollo's relationship with our contractors. We chose practical contractors who we trust and have spent years working with. Such contractors were involved from the design stage - understanding requirements	

and able to provide design and pricing to align with the budget, minimising the risk of project variations.

- On this project there were only 30 variations with a total cost of $45,000. These client driven variations were well managed and negotiated with the client. As a team, when a variation is proposed the best solutions are discussed and avenues explored. We work alongside the client to work out how to offset that cost in the budget, or perhaps even find an alternative solution. There is always clarity around cost implications.
- The reality is costs can increase, scope can change, and oversights or mistakes are made. We find that being open and honest early and being proactive with solutions as a team - is the best approach.

Cost Savings

On Linwood we were able to test and challenge some of the design thinking and come up with alternative solutions to get costs down. This is a key strength of the experienced design and build contractor. The design and the construction methodology ultimately dictate the cost.

Good design helps cost control

Building depth/Bombing pool

- We raised the building height as the water table was high on site and constructing the pools to the original depth would have been costly in terms of structure and dewatering. The bombing pool placement was a resultant issue of the building height adjustment which was successfully worked through by raising it 600mm above concourse. This also resulted in a better outcome by having the bombing pool separate rather than part of the main pool, which would have been disruptive to other users.

Stormwater

- The client-side stormwater design was another area that we were able to a utilise a different approach to achieve a compliant outcome but with a significant cost saving.

Wastewater

- CCC originally requested a heat recovery system off the wastewater system, a design that was very expensive and with a very long payback period. Apollo focused on designing a more thermally efficient building and upgrading thermally broken aluminium joinery to minimise heat losses in the pool area and reduce energy use that way.

Roof and Building Design

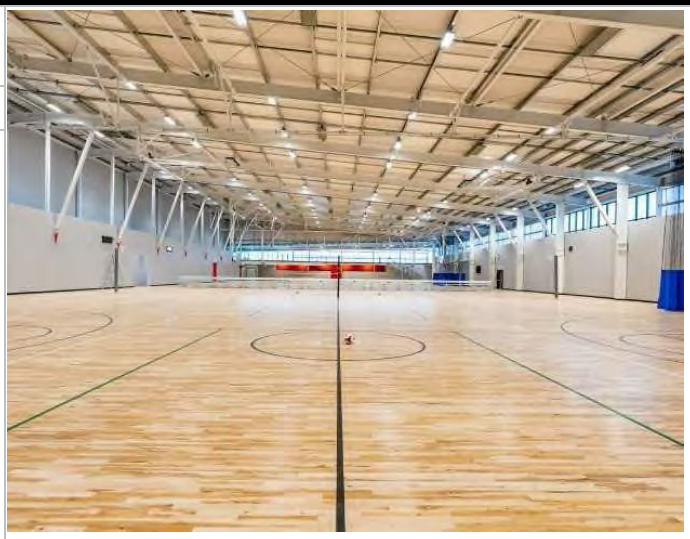
- The original design reflected a strong connection and engagement with Matapopore, an aspect that was crucial to maintain through the VE process. The building was designed to be conceived as a Manu Tukutuku(kite), with the triangulated geometry acknowledging the Paitiki (flounder) and underpinned by weaving patterns of colour. To reduce cost, Apollo retained the form, simplified the rainwater management system, proposed an efficient cladding option, removed skylights yet enhanced the dynamic window placement and reduced the number of external battens. This enabled cost to be significantly decreased, including future maintenance and cleaning cost whilst focusing the pattern of colour on a pivotal communal area of the build.

Plant relocation.

- The concept drawings had the mechanical plant on the roof. By removing this to the service yard, we reduced the amount of structural steel required and the accessibility for servicing and maintenance became less of a user risk and more regularly visible.

	› This also reduced acoustic implications to neighbouring properties as a block wall was able to be constructed around the service yard, upon which a mural was painted to represent the local community and add further colour to the building Head of Recreation Sports and Events at Christchurch City Council, Nigel Cox provided the below feedback following project completion: **"The Apollo Projects team were amazing. This is the fourth project (Norman Kirk Pool, He Puna Taimoana, QEII and Te Pou Toetoe: Linwood Pool) we have partnered on. Always great to work with. Thanks team."** Recently, Christchurch City Council shared that more than 135,000 people have visited Te Pou Toetoe: Linwood Pool in the twelve months since its opening. Importantly, it has been heart-warming to also hear that thousands of these visitors have been involved in lifesaving swim education programmes.
Awards	Gold Award in the tourism and leisure category at the 2022 New Zealand Commercial Project Awards. These prestigious awards celebrate collaboration, innovation, and the contribution of the full project team. Judged on aspects including, contract management (procurement, time, and cost), design (aesthetic and functionality) and construction (quality, safety, and challenges). To win gold, projects were required to earn at least 90% of the points available. Delighted to achieve this, Apollo scored especially high in contract management – an achievement we were particularly proud of given the current construction environment. 2022 National Aquatics Awards Aquatic Innovation Award, Merit Award 

SELWYN INDOOR SPORTS CENTRE, CHRISTCHURCH

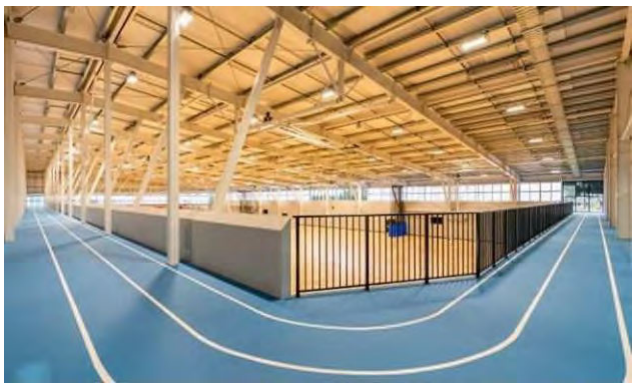
Date	Start November 2019 Finish-March 2021	
Total Project Cost	$21,000,000	
Referees	Dave Tippett Facility Manager, Selwyn District Council s 9(2)(a) s 9(2)(a) Sam Broughton Mayor, Selwyn District Council s 9(2)(a) mayor@selwyn.govt.nz	
Project Description	After a design and build tender process, Apollo was chosen as the main contractor for the design and build of the new Selwyn Sports Centre. An innovative approach, the Selwyn District Council put forward a design and build contest where teams were given a brief which highlighted the scope and scale. Teams were then sent away to create a solution that would best meet the brief. Apollo formed a specialised team, and	

our innovative design went over and above the client brief without exceeding the council's $20 million budget.

The scope in the brief included

- 4x indoor timber sprung courts and 4x enclosed courts that could be used for farmer's market. - asphalt or similar
- Court netting and seating
- Sports equipment and scoreboards
- 2 x premier football changing rooms
- Indoor courts change and amenities
- Dual purpose outdoor field and indoor overflow change and amenities.
- Large meeting/conference/clubroom space with kitchen
- Staff and reception areas
- Meeting rooms and event control rooms
- Sports house hot desk meeting/admin
- Spin room
- External access public amenities, covered outdoor meeting area and large welcoming lobby
- An additional civils package of $1.5m was later added to the contract for the external works outside of the building footprint.

Apollo was able to deliver all the above and in addition an internal 270m mezzanine jogging track, a superior solution for the 'enclosure' with fully closed-in insulated sports hall with an innovative flooring solution better suited for sport recreation activities, solar panels to meet 80% of the summer power requirements, and an interactive digital gaming wall.



Achieving Timelines

The project was originally scheduled to be completed by the end of October 2020. However, the practical completion date was extended by three months due to COVID19 Lockdowns and an additional two months added based on an increase scope of works, relating to the Selwyn District Council adding an additional civils package to our scope.

The key to Apollo's successful delivery of projects is our people and systems. The Apollo team and our consultant and contractor partners are highly capable with their skills and knowledge. With a team that has high respect for each other we create a productive working culture with open communication which allows us to resolve most issues that arise, quickly.

The systems

Apollo has a very comprehensive project delivery process fully described in our project delivery manual. This is our blueprint for managing projects.

Programme

The construction programme is the roadmap for the delivery of the project. From this, rolling programmes are developed by the SM's. This programme forms part of the Project Control Group reports.

Construction, Client & Rolling Programme

Apollo uses Microsoft Project for producing all programmes.
Apollo's programmes include

- Client decision making steps and timeframes/milestones – e.g., funding approval, project signoff etc.
- Design stages including developed design, working drawings etc.
- Approvals required and the timeframes for each
- Tender and procurement stages for the key trades
- Site establishment and all associated items such as site survey, site set up etc.
- Overall high-level construction activities
- Specific procurement and lead time dates where applicable – e.g. Kingspan, plant, tanks Practical completion and signoff

Weekly Design/Project Update (for the Client)
The Weekly Design and Project Updates are critical communication pieces and a contractual tool that must be used on all projects.

The content of the updates will change slightly depending on the type of project (size, complexity, stage of the works etc), but the main aim of the update is to:

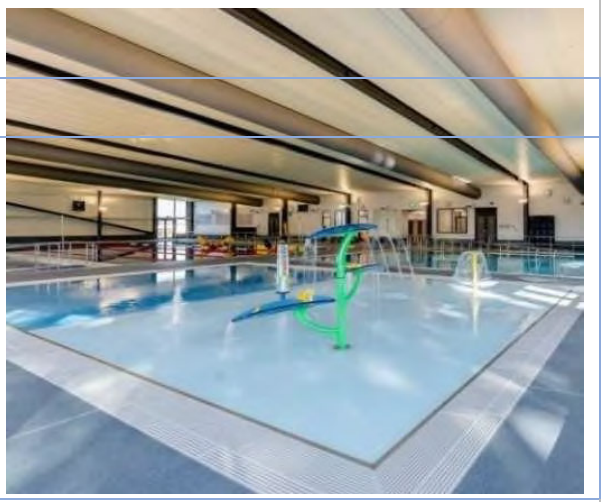
- Ensure the client is kept up to date on progress and project activities for the following week
- Highlighting what information Apollo is waiting on from the client RFI's VO's, RC's)
- Advise on any major issues or concerns –
- Provide H&S information on the project
- Provide a summary of contractors on site
- Provide information on days worked, design progress and progress photos
- Identify any actions that are to be carried out by Apollo or the **client.**

MONTHLY PROJECT REVIEW
Monthly Project Reviews are an internal review meeting held by senior management with the Project Manager & Site manager (if required), the meeting can be held on site or in the office. The meeting provides a comprehensive review of the project looking at financial performance, H&S, programme, quality, risks and a review of project goals outlined in the previous month's review.

Prior to the meeting the Project Manager in conjunction with the project team will review and update the review form. The form uses a traffic light system to provide an overview of what areas are on track and what needs attention. The Monthly Project Review form needs to be completed and available at least one day before the meeting to allow time for review.

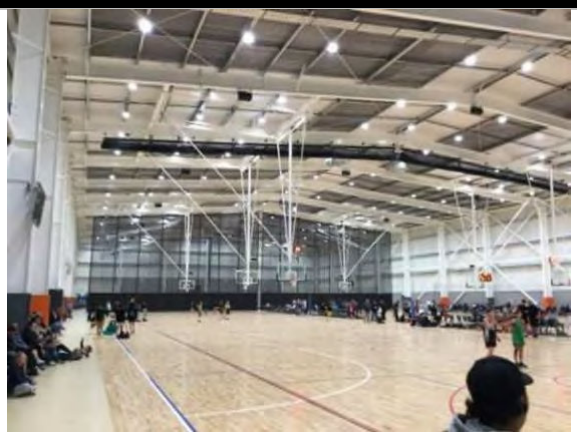
The Review covers the following areas.

- Health & Safety – The info comes from data recorded in the Daily Site Report & Weekly Project Updates.
- Budget & Cost Control – The info comes from Prostat (Project Financial Management System) & Intech
- (Accounting software)
- Programme – This section checks the Master Programme, and the Rolling Programme are up to date and looks at how they are communicated to the contractors
- Design – Review of design process and documentation
- Client Relationships – Ensuring the Client contract is in place and the client is happy with how the project is going.
- Procurement – Ensuring the tendering process is being followed
- Construction Management – Reviewing Apollo site procedures
- Project Completion – Planning for completion, following Apollo's close out procedures & processes Apollo Team – Check the project team is happy & in good spirits
- Item requiring attention - 3 Item that require attention over the next month
- Risk - 3 current project risks and how these can be mitigated

TEPOU TOETOE LINWOOD, POOLS AND OUTDOOR COURTS, CHRISTCHURCH		
Date	Start – June 2020 Finish – July 2021	
Total Project Cost	$22,000,000	
Referees	Kent Summerfield Senior Project Manager, Christchurch City Council Cell phone: s 9(2)(a) Email: s 9(2)(a) Nigel Cox Head of Sport and Recreation, Christchurch City Council Cell Phone: s 9(2)(a) Email: s 9(2)(a)	
Project Description	Please refer to previous project profile for project description and scope. Linwood was an example of a very well executed plan and testament to the outstanding site team and PM to deliver this project **2 months early** and under budget, (after $4m over-budget when first engaged).and especially in a Covid environment.  **ACHIEVING TIMELINES** Linwood benefited from a lot of the learnings of other aquatic and recreation facilities we have built. As mentioned in the Selwyn example above, a lot of the efficiencies are driven by our systems and people. Something that was programmed to take 6 weeks because that's what it took on the last job, may have been delivered in 5 weeks, because the team was more efficient this time around. You can multiply that across a range of learnings and efficiencies. **Systems and Experience matters.** There were many efficiencies in building and programme methodologies that the team have benefited from and improved on from earlier projects. For example We utilised a birdcage scaffold we had first tried on Taiora QEII project, and the team found it to be a lot more efficient way to do overhead work but still be able to install the pool at the same time. Using lots of access gear had proved problematic when constructing the pool, especially once the walls were up. This time around, having experienced how it could best be implemented, the team were that much more efficient, and knew how best to schedule and co-ordinate the sub-trades. Meaning that multiple work fronts can occur at once, whereas previously a sub-trade may have had to wait until another one was completed.ie the pool installers can work at the same time as the acoustic panel /ceiling installer and the lighting and fire contractors. The efficiency has improved to the point that when a section goes up sub-trades can start working while more forward sections of birdcage are still being constructed. And vice versa, once a section of work is complete the birdcage can start coming down. A great example of transferring learning and improving methodologies. **Learning matters**	

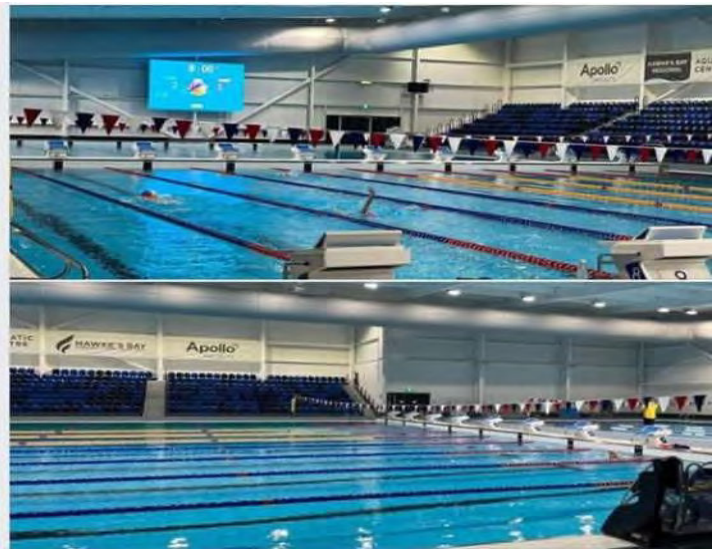
	› Our key sub-trades, some of which were first time partners in the aquatic environment on the early builds when there was lots of learning going on, are now well-oiled machines. The level of new learning is dramatically less. The team knows what materials and finishes work, the learnings are now about efficiencies rather than basic on the job learning. › Buildability- improving general efficiencies from design right through to buildability. The teams are very good at problem solving and finding ways to be more efficient especially for those aspects of jobs that have people thinking- there must be a better way?? › Ultimately the client doesn't want to be paying for the contractors to learn the basics. **Teamwork matters** › A really strong team has developed. The various contractors now know each other and what their roles are and how the best interface together. Our construction and site managers are like the coach and captain of a team. When you know your players well and how they interact it is easier to produce a quality performance. In a ceremony marking the facility's opening, Christchurch Mayor Lianne Dalziel praised the project's result ***"Despite the additional complications posed by COVID-19**, **Now, I have to say as a former cabinet minister and as the mayor of Christchurch, I love those words more than just about anything else - "within budget" and "ahead of time."***
Awards	› Gold Award in the tourism and leisure category at the 2022 New Zealand Commercial Project Awards. › 2022 National Aquatics Awards - Merit in the Aquatic Innovation Award

PETTIGREW GREEN ARENA EXTENSION, REGIONAL INDOOR SPORTS, AND EVENTS CENTRE TRUST, TARADALE

Date	Start – March 2021 Finish – August 2022	
Total Project Cost	s 9(2)(b)(ii)	
Referees	Craig Waterhouse Chairperson PGA Trust s 9(2)(a) Janene Dixon-Smith General Manager s 9(2)(a) s 9(2)(a)	
Project Description	In 2020, new funding from the Government's Covid Response and Recovery Fund through the Infrastructure Reference Group made the PGA Trust's plans to add an additional 6 courts to the existing 3 court PGA Arena possible. Apollo Projects was chosen as the Design & Build main contractor for the project that included the following. › 8 basketball/netball courts, › 8 international volleyball courts and 4 international futsal › Hardwood sprung timber floors › Also included are associated plant, - ventilation, changing and admin/reception plus amenities, storage. › All sports equipment, scoreboards, netting solutions. › A temporary car park solution was required on the adjacent property › A permanent carpark solution was being proposed on the river side of a stop bank and was to be included in the package **Client needs** The client was adamant that the facility needed to cater for international volleyball and thus required a 12.5 m ceiling clearance height and the pre-requisite run offs spaces for volleyball. When this was costed at tender time it was well over the client budget. Apollo investigated the options and spoke with national bodies to confirm that it was clear that the facility would be unlikely to support any IVBF events due to lack of seating (5000 seats required for an international tournament.) The minimum height to host NZ senior national events would be 9m. We cost modelled this solution at this height which would still allow the 8 courts to be achieved and keep open the other sport events that an additional 8 courts would be attractive to secure. The client reviewed and decided they would stay with the 12.5m height acknowledging they would only be able to afford a 6-court solution and may add 2 courts in the future. A new solution was provided for the 6-court option now designed in such a way, to be able to add on courts in the future. But the volleyball solution was their key 'must have.' The 6 court 12.5m clear height solution was signed-off.	

	The Resource consent filed by the Trust for the proposed car-parking solution was rejected, so we were able to come up with an alternate solution for them, which required relocating the building slightly, and siting the carpark where the proposed court extension may go. This was in part dictated by the Council requirement for number and location of car parks. The extension was being built over a large number of existing overflow/event car park spaces for the existing arena. This was always going to be a solution that needed to be found, as the Trust and Council proposed solution hadn't had the regional council resource consent approval prior to tendering. In the end a great community facility has been produced, and we have a very happy client. Ironically, they did say 'we should have listened to Apollo' re the height decision, as with the growth in the sport now they chose to alter the layouts well into the build to add 2 more marked up courts into the facility, which ironically meant that none of the courts now meet international standards. The final outcome is a stunning 6 court facility, with basic amenities (as the existing facility supports event type changing rooms). At the end of the day all you can do is present the solutions and rationale and the client need to make the final decisions- it is their facility. We do our best to convey an 'independent' view of their desires and look to bring in external advice if needed to support /test the solution from the likes of Sport NZ. The expansion makes Pettigrew Green one of New Zealand's largest indoor sports complexes. The increased capacity of the facility will make it possible for events and large tournaments to be hosted.
Awards	Recently completed, we have not yet had the opportunity to receive any awards for this amazing project. Recognising the input of everyone in the project team and the new facility's community benefits, we are looking forward to entering this project in future awards.

HAWKES BAY REGIONAL AQUATIC CENTRE, HAWKES BAY COMMUNITY FITNESS CENTRE TRUST, HASTINGS

Date	Start – March 2021 Finish – August 2022	
Total Project Cost	s 9(2)(b)(ii)	
Referees	Bruce McTaggart Founding Trustee Company Hawkes Bay Community Fitness Centre Trust s 9(2)(a) Sir Graeme Avery Chairman and Founder Company Hawkes Bay Community Fitness Centre Trust s 9(2)(a)	
Project Description	Apollo was awarded the contract for the design and build of the Hawke's Bay Regional Aquatic Centre in 2020 after funding for the project was approved by the Government's Shovel-Ready initiative. The project was put forward by local councils, iwi, and community groups. The aquatic centre adds to the community health and sports facility at Mitre 10 Park in Hastings. Hawke's Bay Community Fitness Centre Trust chairman Sir Graeme Avery has called the project a "game changer" for the region.	

Apollo was chosen as the design and build main contractor for the project because of their extensive sports and aquatics experience in New Zealand. The facility, which includes a 51.5m 10 lane 2.2m deep Olympic sized pool (including moveable bulkhead) and a 25-metre x 6 lane learn-to-swim/event warm up pool, hydrotherapy facility, community meeting and office space.

Targeted use is for swimming training, waterpolo, school sports and competition events, aquarobics classes, water education and other community activities. As the build progressed and the budget stayed on track the client also included an additional two pool hydrotherapy facility for elite athlete recovery and swim technique analysis, and also to be fully accessible with hoist to be utilised by hospital patients.

A further extension was added which included office and meeting/seminar rooms as part of the connecting wing from the reception to the hydrotherapy centre. The new facility had to be designed to fit the look of the existing fitness and health centre and provide a direct link and connection to the existing cafe. (And minimise the disruption to the normal operations of the cafe during construction.) The project was delivered within budget and to schedule in August 2022

Client needs.
It is always important to listen to what the client wants/needs, what their key drivers are, what the critical elements are and what the nice to haves are. It is important to understand who the stakeholders are and who has had influence or been engaged in consultation to input.

The client wanted a high-quality FINA (international body for aquatic sports) level aquatic event facility capable of hosting international level events, particularly swimming and waterpolo.
When we first met, they already had an architectural concept done, had no money but a strong track record of raising resource.

As stunning as the architectural concept was it was pretty clear that it would be horrendously expensive to build, and the design was not suitable for hosting elite sporting events. At this point the client realised we knew what we were talking about and asked us to come up with a high-level concept. The first challenge to was to provide a more fit for purpose concept and a high-level budget which we did, with a likely 4-year horizon until commencement. Then along came Covid and a unique opportunity through Shovel Ready funding to secure the funding and go live!

The facility was primarily designed to meet FINA standards and to have all systems and equipment to support international and national level events. But equally, it had to be attractive to and suitable to support public use and learn to swim programmes. With the facility being operated by a Trust and not a Council, this had to be state of the art and as efficient and cost effective as possible to run and operate. Apollo was entrusted to lead and meet all the requirements. The client had little aquatic experience, and the trust had never operated a pool before.
A lot of trust was placed on us. Apollo's in house experience includes significant operational and event expertise in sports and aquatics facilities. It is a key point of difference. Construction companies normally just build what the architect tells them. We build what the client needs to meet the functionality they require and get the architect to design to that.

Primary focus to deliver

1. FINA specifications for the pool- built to demanding tolerances to be surveyed for certification.
2. Event friendly layout, extra wide pool decks, high tech event control room
3. Seating/event capacity to attract key events. We liaised with Swimming NZ to confirm seating/event requirements for their key meets from Age Group nationals through to Open nationals-850 permanent and 1250 with temporary seating
4. Filming platforms for televised events.
5. High quality lighting with capacity to upgrade for TV quality specs.
6. Specifications for national and international waterpolo
7. World class/international timing and touch pad systems and ensuring their integration with media, scoreboards etc.

	a. We elected to in deck cable these so no unsightly and dangerous cables to be run for events- just plug in. 8. Large LED screen for event /video display 9. Local event displays for community meets 10. All event equipment, lane ropes, start blocks, pool flags, waterpolo equipment etc. 11. More interestingly we had to recommend and source all the basic pool operational equipment e.g. rescue tubes, water testing equipment, disability hoist, safety equipment, CPR, learn to swim and water safety kit. 12. Turnkey -buy a pool and be able to walk in and operate for public use and host an international event! A unique situation. "**The aquatic complex is the best of its kind in New Zealand; the 50 metre is really impressive while the broader offering such as resistance flume training, the high-performance fitness centre, café and hostel accommodation are second to none**". Lewis Clareburt -Olympic medallist. The feedback has been that the facility is amazing and that the pool was very fast with many swimmers swimming personal bests. There were lots of happy kids and it was great to test the pool and the other facilities. The starter blocks, touchpad timing technology and the use of a dedicated control room helped create the atmosphere of a larger event.' Swimming official. The feedback to date has been quite remarkable and certainly a privilege to have been involved in what is quite a unique facility. What we couldn't deliver on which was a couple of wish list items, at the very early stage a diving pool was on the nice to do list, as was incorporation of solar power. It became pretty clear very early on due to a relatively high-water table that the engineering cost to put in a diving well could potentially scupper the entire project. So, this got parked to a future stages concept. The client also prioritised the later additions of hydrotherapy and the connecting meeting room extension. We had also proposed a number of cutting-edge technology elements, underwater filming, tracking camera, in pool pacing lights, AI athlete tracking and monitoring for training analysis which would have been the icing on the cake, and provided another edge for the facility. These are still on their shopping list and will be considered when their use will be supported by key coaching staff, yet to be appointed.
Awards	Like the Pettigrew Green Arena Expansion, this project has only recently been completed, so we have not yet won any awards for it. With practical completion achieved in time, however, we did recently enter the Hawke's Bay Regional Aquatic Centre in the 2022 New Zealand Commercial Project Awards. With judging getting underway early in the new year, we look forward to seeing this application progress.

TAIORA QEII, CHRISTCHURCH CITY COUNCIL, CHRISTCHURCH

Date	Start January 2017- Finish June 2018
Total Project Cost	$35,000,000
Referees	Mark Noonan Project Director, Christchurch City Council Cell phone: s 9(2)(a) Email: s 9(2)(a) Nigel Cox Head of Sport and Recreation, Christchurch City Council Cell Phone: s 9(2)(a) Email: s 9(2)(a)

Project Description

After a long association and several previous council aquatic projects, Christchurch City Council selected Apollo Projects to build the new Taiora QEII Recreation and Sport Centre. Our scope of works was to produce a replacement community aquatic and recreation facility due to the old facility demolished post-earthquakes.

As the area suffered major liquefaction in the quakes, a significant programme of work was undertaken for ground remediation through the installation of gravel rammed aggregate piers (RAPS). The pools are Stainless Steel walled technology as this is more seismic friendly and allows the pools to be re-levelled up to 50mm in the event of future earthquakes.

Features

- 25x25m 10-lane deep sport pool
- The 10-lane pool accommodates a moveable floor, a first for Christchurch.
- Aqua-sphere is a 120-metre signature ride hydroslide atop a 12m high tower, Lazy River,
- Splashpad and adjoined toddler's pool
- Large aqua dunker and water toys and waterplay structure
- Learn to swim pool
- Spa
- Steam room and sauna
- Café
- Birthday party room.
- A comprehensive fitness centre with a large weights area, fitness studio and spin room.
- Staff and administration spaces
- Community meeting spaces
- Large well-appointed reception area and retail area

Whole of Life Costs and consideration.

On Taiora QEII Design team leaders engaged in collaborative discussions regarding the operational carbon and financial footprints. Operational costs in all areas across the facility were targeted as areas for the design team to focus on. Feasibility studies had been carried out to identify operations and maintenance costs. The below aspects are considered to be significant lifecycle cost saving components that were included in our tender bid.

- Optimisation of the main roof geometry to balance the benefit of passive solar heating and the risk of summer overheating.

- Enhanced building fabrics, air tightness and solar shading.
- Dimmable pool hall lights which respond to natural daylight levels.
- Heat recovery in ventilation systems.
- Improved efficiency of mechanical and electrical systems, focused on providing a comfortable environment at the pool and for spectators rather than conditioning the entire pool hall.
- A low velocity displacement ventilation system to minimise pool water evaporation.
- Water use reduction has been achieved through the specification of low-flow fixtures and fittings.
- Apollo projects have a strong desire to integrate grey water recycling on site. We have had extensive discussions to date with our hydraulic engineer on how this can be easily integrated into the project and used for simple activities such as pool deck wash down, toilet flushing and plant irrigation.

Below is a sample section of the list that was developed and provided at tender time of all the main building components together with comment about their lifecycle cost. It should be noted that in most cases the materials used are industry standard and there are sometimes few if any alternatives – therefore no lifecycle information is provided. The intention of this section is to show that lower cost and lower quality materials or products have not been used, and that products that require more ongoing maintenance or upkeep are not incorporated.

The information below should show that Apollo's design has been based on providing the lowest total cost of ownership – not lowest cost of build. The table below titled "Alternative Superior Products Available" notes if other products with a lower total cost of ownership (TCO) are used in a similar situation or if this is not the case the answer is 'No'

Trade 11	Alternative superior products available	Superior alternative product or comments
Building Works		
Concrete Work	No	None
Blockwork	No	None
Precast Stairs	No	None
Structural Steel	No	None
Structural Steel Coating – Pool Area	No	The epoxy system being proposed is as good a coating as could be sourced from the suppliers – the code limits warrantee to 25 years.
Structural Steel Coating – Dry Area	No	The epoxy system being proposed is as good a coating as could be sourced from the suppliers – the code limits warrantee to 25 years.
Structural Steel Coating – Hydroslide Tower	No	This structure is hot dip galvanized and provides a coating as good as is possible for this area. With HDG is the only real choice
Hydroslide stair treads and landings	No	These are pultrusion, which is inert and will not be affected by the pool environment.
Timber Purlins and Girts – laminated	No	Laminated purlins provide the most effective option in the pool environment – steel is an option however the risk around damage to the coating with purlins is high.

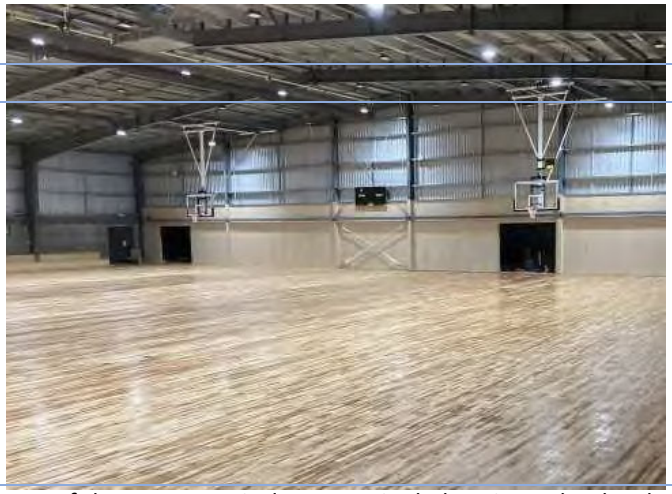
Awards

Best in Category Award (tourism and leisure section) at the 2019 Property Industry Awards r The Award recognises property projects, developments, or substantive refurbishments that provide an outstanding return and/or delivery of service potential on investment of funds

Described as, "the most prestigious property awards programme in New Zealand," this award was fantastic recognition of the calibre of this new facility and the project team's hard work.

	2018 Civil Trust Awards – Commendation Award. "A project that has made a material and beneficial change to the city environment, involving either development on a new site, or re-development of an existing site or structure." 2019 Commercial Project Awards – Silver Award. These prestigious awards celebrate collaboration, innovation, and the contribution of the full project team. 2019 Recreation Awards – Merit in the Outstanding Project Awards section. These awards recognise excellence, innovation, and effectiveness of outstanding activity within the recreation sector 

KING COUNTRY SPORT CENTRE, WAITOMO DISTRICT COUNCIL, TE KUITI

Date	Start – February 2022 Finish – November 2022	
Total Project Cost	$8,000,000	
Referees	Referee Bruce Maunsell Project Lead Company Game On Trust s 9(2)(a) s 9(2)(a) Referee Shane Brodie Spaces and Places Consultant Company Sport Waikato s 9(2)(a) s 9(2)(a)	
Project Description	The King Country Sport Centre is one of those not atypical community led projects that has be going for over a decade. Nearly seven years ago we met the Project Driver Bruce Maunsell at a presentation we did in Cambridge on *Affordable Sports Facilities- Function over Form*. The Trust was a community/school mix as the facility desired was a 2-court facility and a commercial gym to enhance the community engagement and to replace the old single court school single court facility. **How we lead the design process** Apollo's goal is to simplify delivery and maximise long-term outcomes by developing the most effective and efficient design. To accomplish this, we partner with industry experts – at the outset and throughout the design stage – and develop a collective understanding of the project objectives across all stakeholders. This project is not to be the result from one architect or one engineer, but from a collective understanding across all stakeholders of what the legacy is to be once the project concludes. **Developing an accurate project brief** Apollo considers the client as key to the design process. They have a deep understanding of the project objectives, functional requirements, and the benefit of historical learnings. Apollo's job is to align closely with the client team, suggest fresh ideas, identify efficiencies, and develop an accurate project brief. Throughout the design process, we will remain. Cognisant of the community, particularly around on-going maintenance, future proofing, and Total Cost of Ownership (TCO). In the design meetings, Apollo will discuss TCO options with the client and develop a client brief, which will be used to guide design Apollo will consider the running costs of the facility during the design stage, including consideration for safe and easy access to plant equipment for ongoing service. We developed a	

	concept proposal with a key driver being total cost as the primary consideration as well as total cost of ownership. A concept was produced and priced at $6m. **Key features** › 2 x court sprung timber floor › Built in and portable seating options › Large public fitness/gym › Large meeting/community room › Kitchenette to support functions meeting › Admin and reception/lobby › Change and amenities for school users and for public gym users. › Large storage areas to support indoor and outdoor activity › Civil works/carparking **Total cost of ownership considerations** › A high school facility so needed to be robust › Materials Concrete dado around the courts to 3m for ball protection and external security/robustness. Ply lined internal walls in heavy traffic areas. Colour steel cladding- low maintenance. › An insulated building and roof to mitigate temperature swings and reduce need for HVAC. › Insulate build also helps protect the timber floor by limiting the expansion and contraction extremes if in a non-insulated facility. › Court space heating was not an affordable option. IR heating options provided to be able to point heat or isolate to spectator areas only rather than heating the entire volume. › Actual site location- saved in the order of $700,000 by moving the building to a more level section so markedly reduced earthworks and material to be removed. › Tenancy income options with gym, and a physiotherapy tenancy. (Later removed). › Orientation and use of windows for natural light into working areas, gym space. › Separate entrance and change facilities for school use versus public/gym users. All available for event use but capable to be shut down/isolated for cleaning non-use times. › Shower low flow heads and restricted access to school users in normal use mode. The trust then set about raising the funds over next few years and were very successful. The MOE decided to become more actively involved once the project looked like it would start. The project was delayed almost a year as an internal Council/School MOE review of the operating model was reconsidered. With some changes to the Trust and the Waitomo District Council also now coming on board, the delays saw the budget climb to $8m. With MOE now more actively involved they made a few changes, i.e. removed the physio tenancy and downsized the gym and some other spaces to try and keep costs down. Some of their material selections were also changed to align better with their education sector experience and product familiarity. It was a good opportunity to share in their facility portfolio learnings, and to see potentially a better outcome for the initial trustees who had done all the hard work and raised the money, but now could feel more secure in that the operations and ongoing support were more secure under the new model and partners.
Awards	Given project completion is not expected until early 2023, we have not yet entered this stunning project in any awards. We are, however, excited to put this community facility in for future awards

SELWYN SPORTS CENTRE, SELWYN DISTRICT COUNCIL, ROLLESTON

Date	Start November 2019– Finish March 2021
Total Project Cost	$22,000,000
Referees	Dave Tippett Facility Manager, Selwyn District Council s 9(2)(a) s 9(2)(a) Sam Broughton Mayor, Selwyn District Council s 9(2)(a) mayor@selwyn.govt.nz

Project Description

Similarities to Waitaki DC proposal

- A significant project for the Council. Not just another large city council project.
- Passionate community interest in the project
- Will be constructed within an existing sports hub/ sports field precinct
- Some desire to connect/support an adjacent key sports field -Selwyn football number one field.
- Multi-purpose sport and recreation facility
- Consideration to wider event use, large gatherings, conference, dinners.
- A desire to look beyond just the traditional sport users
- A place for community and well-being, welcoming recreation, and casual use.
- Similar scale with respect to $$ and scale of build
- Emphasis on function more so than form. The usage drives the design.
- Accessibility important
- Environmental and sustainability considerations important.
    - Solar power, daylighting panels, insulated wall and roof panels, rainwater harvest
- Internal environments, HVAC, considerations etc. to consider operational costs.
- Functionality of layouts and impact on operational elements i.e. divider curtains

Key considerations at Selwyn in addition to the above

- Consideration of sports surface types and quality for different activities, i.e., farmers market
- The setup of the main conference /multipurpose fitness space with a kitchen and suitability to double up as the 'clubrooms' for Saturday sport.
- We had some good ideas on how to use the outside of the building as a sport and recreation space-not just the inside. Potential additions in the future.
- The layout and functionality relating to usage

Outcome:

We were delighted to see this facility being well utilised after its completion. According to Selwyn District Council visitor statistics, there were more than 37,000 visitors per month in the facility's first five months. With COVID-19 lockdowns and strict social distancing in place during this time, these were particularly impressive numbers

Awards

It has been amazing seeing the Selwyn Sports Centre be the recipient of a wide variety of awards.

2020/2021 Recreation Awards, Merit Award in the Outstanding Project Category.
The awards recognise, "the innovative build, excellence of achievement, strong community use and support of building, efficiency, and sustainability. Especially noted in the judge's feedback was the facility's sustainability elements, including the solar panels, rainwater collection tank, Kingspan insulating cladding and use of natural light.

	2021/2022 Commercial Project Awards – Silver Award in the Tourism and Leisure Category. 2022 Property Industry Awards – Merit in the Holmes Group Tourism and Leisure Property Award. Merit is said to be, "awarded to projects through the judging process that are deemed to have something distinctive about the way in which the development or project was undertaken". 

NETSAL, CHRISTCHURCH NETBALL CENTRE, CHRISTCHURCH		
Date	Start – August 2022 Finish – Under construction	
Total Project Cost	s 9(2)(b)(ii)	
Referees	Gabrielle Fuller Project Manager TSA s 9(2)(a) s 9(2)(a) Robbie Harlow Transition Manager CHRISTCHURCH NETBALL CENTRE s 9(2)(a) TRANSITION@CNC.ORG.NZ	
Project Description	The Christchurch Netball Centre has operated club netball outdoors at Hagley Park for decades. A rather inhospitable place on some harsh Canterbury winter mornings, a generous donation from an anonymous benefactor keen to help support the well-being of Canterbury youth post-earthquakes, has given the impetus to follow the lead of many other cities and move netball indoors. There is a fair bit of history with this project, like many sporting facility projects being driven by trusts. The project has ended up with Christchurch City Council providing land at Ngā Puna Wai - which makes for a great addition to what is already a thriving community sports hub. The Trust is funding the building, and the Council is funding the civils/carpark roading package. Separately awarded contracts with two entities, to a total value of approx s 9(2)(b)(ii) for the facility and s 9(2)(b)(ii) for the civils. The tender requested scope and budget for an eight-court facility with consideration of an additional extra two courts in the future. Apollo's bid was able to achieve a ten-court option within budget and we were excited to be awarded the contract to Design and Build this amazing sporting asset. After Council delays with the civils package, Construction is now underway. **Final Scope** › Insulated, robust community and cost-effective sports facility › 10 court indoor netball /futsal facility › Volleyball and other sport secondary users › Sports netting, scoreboards, divider netting › Changing and public amenities › Admin office, and reception	

	› Lobby and cafe › Mezzanine floor › Car parking and roading works **Similarities to Waitaki DC proposal** › Passionate community interest in the project › Will be constructed within an existing sports hub/ sports field precinct › Integrating additional car parking and potential new road works for alternate connections › Traffic/roading considerations for bus access › Multi-purpose sport and recreation facility › A desire to look beyond just the traditional sport users › A place for community and well-being, welcoming recreation and casual use › Similar scale with respect to $$ and scale of build › Emphasis on functionality. Value for money solution › Accessibility important › Environmental and sustainability considerations important. › Internal environments, HVAC, considerations etc. to consider operational costs. › Functionality of layouts and impact on operational elements i.e., divider curtains › Consideration for show court set up for events/finals. **Key considerations at Netsal in addition to the above** › Consideration of netting types and fixings due to their layout and ensuring safety when futsal is being played › The inclusion of a cafe, where to locate and provide viewing without restricting court seating. › Manging two entities and the risk of a potential third-party providing civils in a separate contract. › Project delays impacted by Council delay in decision making for their part of the project. › Integrating the car park to be less obvious as a car park- and more park like. A very extensive landscaping and planting programme.
Awards	Given that the project completion is not expected until 2023, Apollo have not entered this amazing community project into any awards yet. We are, however, excited to nominate this facility in for future awards.

HAWKE'S BAY REGIONAL AQUATIC CENTRE

Date	Start November 2020 Finish July 2022
Total Project Cost	s 9(2)(b)(ii)
Referees	Bruce Mactaggart Trustee, Hawke's Bay Community Fitness Centre Trust s 9(2)(a) operations@hbcfct.org,nz Rob Waddell Director, Waddell + Associates s 9(2)(a) s 9(2)(a)

Project Description	Pioneered by the Hawke's Bay Community Fitness Centre Trust and Crown Infrastructure Partners, we were approached to build a centre which would be a national and international showcase for aquatic sport in the Hawke's Bay, as well as a functional, family-friendly facility for the local community. Such a facility they envisaged would provide amazing social and economic outcomes and we are delighted with what has eventuated. Very much a community project, in completing this facility it was a priority for our team to use local consultants and contractors. Sharing in the economic benefits of a project is important to our team and we wanted to include the community as much as possible. In total, approximately 90% of all sub-trades were sourced locally – a number, Apollo and our client were very proud of. We find a successful build usually involves collaboration between many parties and Hawke's Bay Regional Aquatic Centre was no exception. Our collaboration tools included daily site meetings to help build vital relationships on site and help everyone understand the critical pathway for the project. Clients, consultants, and contractors were kept in the loop through weekly updates. Our key collaborators on this project were our client HBCFCT and their stakeholders, including the local Council and the community. Involvement from the local community extended to the design of the facility and what would be included for local whānau. The world-class training and events centre at Mitre 10 Park, Hastings was built with community needs at heart. It's highly accessible, sustainably built, and fit for small to very large events and activities. At the top of the Trust's wish list, when planning the facility, was to have accessibility features wherever possible so that everyone in the community could enjoy it. After consultation with members of the community, this has seen the fit out include state-of-the-art single and double hydrotherapy pools, a ramp in the learn to swim area; the installation of a pool pod for accessibility into the main pool; and hoists to assist people with changing and getting into the pools. This extraordinary shovel-ready project, commissioned by Hawke's Bay Community Fitness Centre Trust (HBCFCT) was a fantastic opportunity for local contractors to work and build their skills on a world-class facility.

	Some of the innovative parts of the facility they worked on include: › The 50-metre FINA World Championship/Olympic-sized pool divided into two 25-metre competition pools › The 25-metre, learn-to-swim pool that meets FINA warm-up standards › Permanent seating for up to 888 spectators and temporary seating for 1662 › Swiss timekeeping equipment – the world's best › Electronically linked starting blocks › A marshalling room for events › Elevated camera platforms. Along with involving local contractors throughout the project, it was also a priority for our team to give back and support the wider community. As part of this we implemented a range of initiatives. Firstly, a key example of our commitment to the Hawke's Bay region, was our recent playground donation to the Waiohiki Marae. After the Napier City Council said they no longer has use for it, our team set to work finding the adventure playground an alternate location. Recognising it would be a wonderful community asset, we decided to approach the local marae and were delighted when they gratefully accepted! After a bit of maintenance and relocation work, the playground was transported to its new site and we all thoroughly enjoyed attending its recent blessing. Realising that not everyone has the same opportunities in life, Apollo has also provided substantial sponsorship to secondary schools across the Hawke's Bay region. Working with Waddell and Associates, schools were chosen based on their relevant need and funding has been distributed to assist with attendance at events, uniforms, equipment, transportation, and a range of other associated costs. It has been wonderful seeing the impact this sponsorship has had on young people in the Hawke's Bay. Hastings' Boys High School, Rob Sturch, for example, provided the below quote: "Being a low decile school in a low socio-economic area, we know that our families struggle financially on a day-to-day basis, let alone trying to pay for activities like sport. With this sponsorship, we can lessen the burden to some families and help the boys to get to their full potential both on the sporting field and in the classroom." Alongside our School Sport Programme, Apollo is also the Principal Sponsor of Swimming New Zealand. Swimming is a skill for life, that not only saves lives but also provides lifelong benefits for health, wellness, and fun. As Principal Sponsor of this fantastic organisation, we thoroughly enjoy supporting talented swimmers, building awareness of water safety, and encouraging more people to learn to swim. As avid supporters of learn to swim initiatives, in lieu of corporate gifts, Apollo has also been sponsoring life-saving swimming lessons. A resounding success, over the last two years we have sponsored more than 1000 free swimming lessons for young people. With Apollo-sponsored lessons soon to begin at the new Hawke's Bay Regional Aquatic Centre, we are looking forward to seeing children in the region benefit from these life-saving water skills. In terms of growth of swimming participation, this is evidenced by the Greendale Swimming Club membership increasing by 50 members in four weeks from opening. We are delighted with the outcome of the Hawke's Bay Regional Aquatic Centre and the opportunities it will provide. As Pool Trustee, Bruce Mactaggart said, "This pool is one of the best in New Zealand – arguably one of the best and most modern in the world. There is not a swimming event in the world we aren't able to host here." A first for the region, the new facility is set to host four national swimming events over the next two years, and has already hosted the NZ Masters Waterpolo Championships
Awards	Given that the project has only recently been completed we have not yet won any awards. We did, however, recently enter the Hawke's Bay Regional Aquatic Centre in the 2022/2023 Commercial Project Awards.

KIWA POOLS, GISBORNE		
Date	Start – July 21, In Construction	
Total Project Cost	$40,000,000	
Referees	Nedine Thatcher-Swann CEO, Gisborne District Council (06) 869 2414 ceo@gdc.govt.nz Rob Waddell Director, Waddell + Associates s 9(2)(a) s 9(2)(a)	
Project Description	Working in collaboration with Ngāi Tāwhiri, Gisborne District Council and Crown Infrastructure Partners, Apollo is thoroughly enjoying this fantastic community project. Set for completion early next year, we can't wait to see the community enjoying their updated facility.  A very special project, the co-design team of Ngāi Tāwhiri, Gisborne District Council and Apollo have worked hard to ensure that the cultural narrative has been woven into the Kiwa Pools design. The below information was provided by Gisborne District Council on the cultural significance of the site: "Kiwa Pools sits on the shores of Te Moana Nui a Kiwa, the Pacific Ocean, and remind us of our ancestors that came to settle this land in their sea-faring vessels. It's a nod to the strength and resilience they possessed. Turanganui-a-Kiwa Gisborne is significant in our nation's navigation and settlement histories. Close to the place Kiwa Pools will stand is a landing spot of the Horouta waka on which Kiwa was the navigator. The Captain of the Horouta was Paoa, and his sister Hinehākiriringi brought the kumara with her to our region and this began our agricultural heritage. Kiwa Pools will be in line of sight of Te Kuri a Paoa - Young Nick's Head, which was the landfall spotted by the watchman aboard The Endeavor. Turanganui-a-Kiwa is said by some to be the birthplace of our nationhood." It has been a pleasure working alongside local iwi, Sir Derek Lardelli of Lardelli Arts and Architecture HDT to incorporate a design that reflects this special site. As Gisborne Mayor, Rehette Stoltz says, "the design is not only stunning, it reflects the significance of the whakapapa of where the pool sits. The functionality of the design meets the aspirations of our many sporting and recreation communities and provides a world-class facility, one that will be enjoyed by everyone". The design is also recognised in the name - Kiwa Pools. Gifted by Ngai Tawhiri hapu, iwi representative Thelma Karaitiana says Kiwa Pools, and its branding reflects Ngai Tawhiri and Rongowhakaata hapu, and the story of the land where the pool is located. "Calling it Kiwa Pools reflects the history and traditions of the people of Turanganui-a-Kiwa," she said. Along with community involvement in the design, we have also prioritised the use of local contractors throughout the build. It's always a priority for our team to share the economic benefits of a project with the wider local community and this project was no exception. It has	

	been a real pleasure working with a wide range of local subcontractors. With the updated facility set to include a 50m x 20m multi-use pool with movable floor, learn-to-swim pool that doubles as a hydrotherapy pool with hoist and leisure + toddlers pools, it has been a wonderful opportunity for local contractors to learn new skills and be involved in the delivery of an amazing community asset. As discussed above, Apollo is committed to giving back to the communities we work in, and along with working alongside locals in Kiwa Pool's design and build, we have also invested heavily in the wider community. As part of our School Sport Programme, we have provided significant sponsorship to local Gisborne High Schools. This funding has helped with a wide range of needs, including direct student funding through athlete scholarships, school sport uniforms and equipment, transportation, and other associated costs. It was heart-warming to receive the below feedback about Apollo's School Sport Programme from Andrew Turner, Principal of Gisborne Boys' High School. "Being able to provide and support educational opportunities outside of the classroom is critical to ensuring our young men have a well-rounded education. With the generous support from Apollo Projects, these opportunities become a reality. It truly does take a village to raise a child! Thanks, Apollo."
Awards	With Kiwa Pools still under construction, the project has not yet been nominated for any awards.

"We are glad to partner with Apollo Projects, the specialists in eco-friendly design and construction, lessening the project's environmental impact and reducing its carbon emissions, and providing green and sustainable logistics solutions for our customers." *Robert McLeod-Maersk Oceania.*

MAERSK COLD STORE, MAERSK, HAMILTON

Date	In construction 2022
Total Project Cost	s 9(2)(b)(ii)
Referees	Robert McLeod Product Manager Company Maersk s 9(2)(a) Stuart Cox Client Project Manager TMX s 9(2)(a) s 9(2)(a)

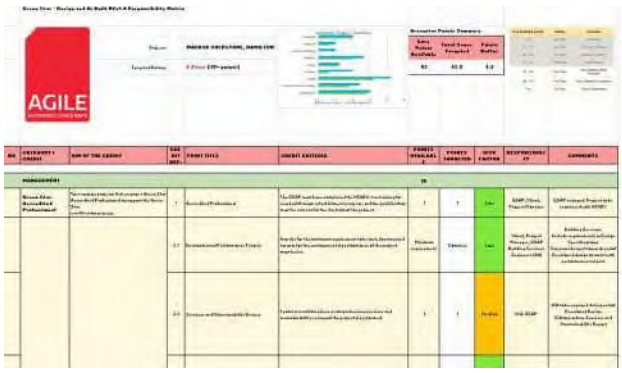
Project Description

Apollo Projects was recently appointed to lead the design and build of a new facility at the Ruakura Superhub for global shipping and logistics company, Maersk. Their facility is set to cater to national and international supply chains. The 18,000m² building is Apollo's largest cold store project in New Zealand to date and has a strong focus on environmental sustainability. Apollo is leading the way by working closely with Greenstar to better develop the standard for industrial buildings.

We are committed to working with Maersk to make this a world class facility and to lead the way in environmentally efficient design and construction. Our goal is to help them achieve a six-star Green Star rating and introduce new technology never seen before in New Zealand.

To meet these targets, the Maersk facility includes a full CO2 refrigeration system, which is one of the largest of its type in the world. It will also have specific dehumidification to reduce moisture, and a controls system providing a level of management rarely, if ever, seen. The environmental footprint of the project will also be reduced through solar panels on the roof that will cover well over one hectare. Through solar alone the potential is to reduce up to 301,844 kg per annum CO2 Emissions.

Other features include the collection and reuse of rainwater from 200,000 litre storage tanks, and the ability to charge electric scooters, bikes, cars, and trucks.



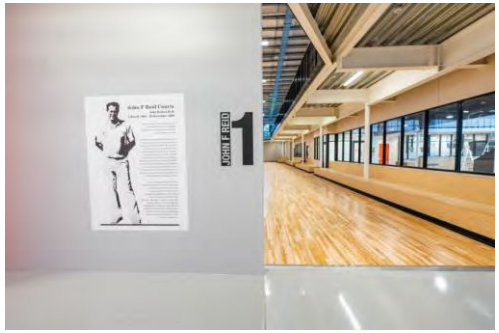
Maersk Oceania Product Manager of Cold Chain Logistics, Robert McLeod, said sustainability will be a focus when designing and building this integrated cold chain facility, which will feature advanced energy-efficient elements. "We are glad to partner with Apollo Projects, the specialists in eco-friendly design and construction, lessening the project's environmental impact and reducing its carbon emissions, and providing green and sustainable logistics solutions for our customer." To the right is a snapshot of the Greenstar Matrix for Maersk:

Awards	As this project is currently in construction there is no awards at present, However, on completion we are looking forward to putting this outstanding cold store facility in for awards

NAENAE, HUTT CITY COUNCIL, WELLINGTON		
Date	In construction 2022	
Total Project Cost	$58,000,000	
Referees	Name Andrew Quinn Project Manager Hutt City Council s 9(2)(a) s 9(2)(a) Lauren Hudson Head of Aquatics Hutt City Council s 9(2)(a) s 9(2)(a)	
`Project Description	Aquatic Centres are very energy intensive buildings. They create a warm, humid and corrosive environment, and require intensive maintenance. Recognising this, all of our aquatic facilities that we design alongside our consultants pay due consideration to sustainability, total cost of ownership and carbon footprint. The operational cost, whole of life analysis including both embodied and operational carbon, materiality, and total cost of ownership become a critical driver to the design of the facility. We recently partnered with Norman Disney Young to design NZ's first ever Carbon net zero aquatic centre. The council for whom this was for is pushing a Carbon net zero target by 2030. Unfortunately, the additional cost to achieve this standard was one of the reasons we weren't successful in that bid. However, we were very excited to have developed that and the learnings for us have been fantastic. Another example of this is the business case of the Naenae Pool where a Passivhaus Feasibility Study was completed and part of the summary of the report which had a $3.4M upgrade of the $56M facility to reduce the operational cost by $155,000 per year with a net saving to operate and maintain the facility of $4.8M over the life of the asset (in today's dollars). Our achitecture partner HDT have direct and relevant experience in this area carrying out whole of life analysis on the Naenae Recreation & Aquatic Facility The exercise included analysis of the whole of life operational costs, including estimating staffing costs, energy costs, plant maintenance and replacement costs and council depreciation over the 50 year life of the facility. This exercise was completed for a 'Passivhaus' certified design and a 'Greenstar 5' certified concept design and the two studies compared in terms of total cost of ownership. A key extract from the Deloite financial report is included below showing how the team concluded that investing in a Passivhaus certified facility would achieve best long term value for council and it's ratepayers, demonstrating a $6.9m net present value saving over the Greenstar 5 concept. The team also quantified this in terms of reduced carbon emissions as per figure 1 below allowing council to visually understand the cardon emissions in tonnes of CO2e comparison of the two options. This exercise was completed in December 2021. The key success outcome is council have a clear business case to inform decision making and achieve best value for their community when viewed through a 50 year whole of life lens. Unfortunately, the PassivHaus option wasn't selected this time, however, the project is targeted to be NZ's first Greenstar 5/6 aquatic facility. The thermal envelope, vapour barrier, and mechanical plant design and efficiency, along with smart controls and heat recovery maximisation are key to energy cost reduction in aquatic facilities. As heat pump technology advances, and Coefficient of Performance (COP) improve, alongside new lower GWP refrigerants, these will all start to have significant impact on energy	

	cost. We are in early discussions re a process where pool pumps are controlled automatically by the water quality as opposed to just running on a prescribed cycle. If the water quality is good and or periods of low use the pumps will cycle down, until a change in quality is detected and then switch back to normal mode. For some time now our aquatic centres have been fully electric, and predominantly from Hydro sourced clean energy. Australia have just started celebrating a new full electric facility saying, 'this is possible'! In NZ we have been doing it for years. We certainly always consider what we can do better from a carbon perspective and are actively enthusiastic about learning and finding better ways. Ultimately, we also need to find a client who will also commit to the next step. We are having great success with larger scale commercial partners the likes of Maersk (above) which will also be able to leverage learnings across to the public sector. *Snapshot of the Greenstar Tracker documentation for Naenae*.
Awards	As this project is currently in construction there is no awards at present, However, on completion we are looking forward to putting this remarkable community facility into some industry awards.

SELWYN SPORTS CENTRE
INDOOR COURTS FACILITY



Selwyn is one of New Zealand's fastest growing districts. Selwyn District Council's forward-thinking saw a way to meet the current and future needs of the rising population with a new indoor sports centre in Rolleston. A competitive tender process led to Apollo being chosen to design and build the Selwyn Sports Centre.

Apollo formed a specialised team and their innovative design went over and above the client brief without exceeding the council's $21.5 million budget.

The 8,000m^2 design features eight courts: specialised surface courts for multi-use and four sprung timber courts, named the John F. Reid courts for the cricket great who championed this project. There is a 240-metre indoor jogging track on the mezzanine level, administration offices, multipurpose rooms with kitchen facilities, a spin room, and toilet and change facilities, including accessible facilities. The centre includes solar panels that will generate up to 80 per cent of the expected summer power consumption.

One of the highlights of this project is the Lü Uno interactive playground wall that can turn the gym into an immersive video game through lights, sounds, and videos—the first of its kind in New Zealand.

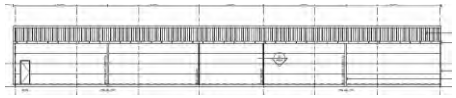
Selwyn Sports Centre opened May 2021 with thousands of people attending the facility's launch.

Selwyn DISTRICT COUNCIL

Apollo PROJECTS

CANTERBURY SWIM SCHOOL

LEARN TO SWIM & SWIM CLUB FACILITY

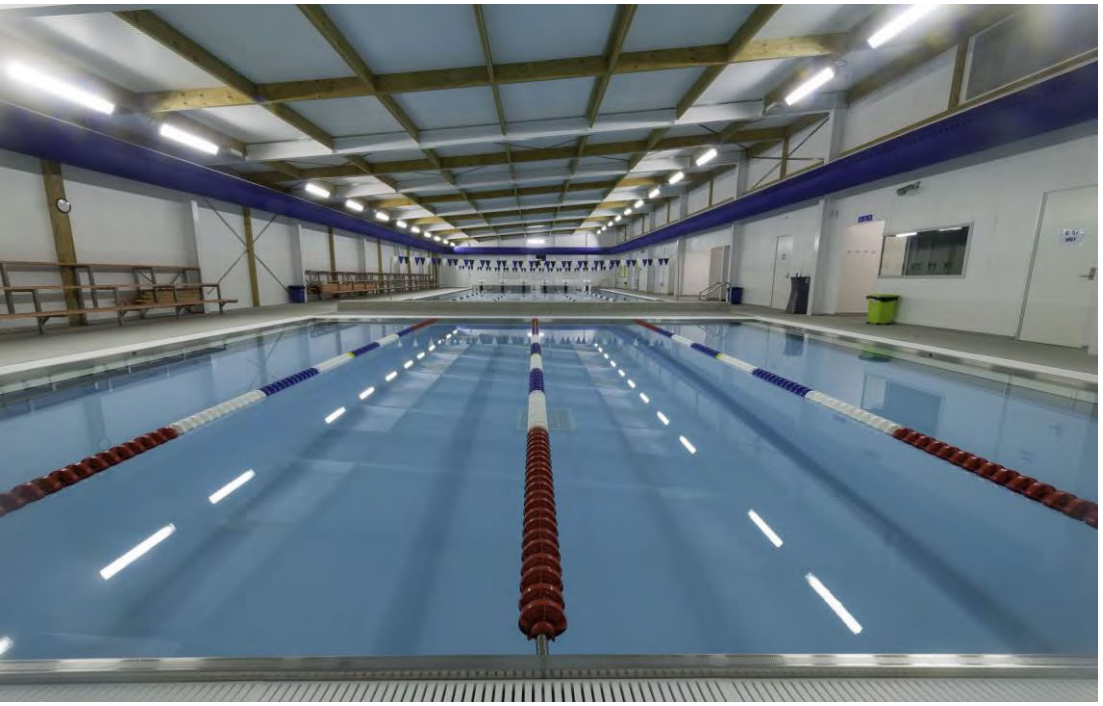


Apollo Projects was engaged in September 2012 to design and build a Learn to Swim and Swim Club facility for Canterbury Swim School. With limited pools located in the west of the city the facility will be a great place for students and members to learn, enjoy and excel in the sport.

The project included the installation of a 25m x 10m lane pool, offering 5 or 6 lane configurations, and a 10m x 10m learn to swim pool. Both pools are constructed with stainless steel sides and a concrete base and have integrated drainage and water supply as well as a state-of-the-art Natare filtration system.

The pools are primarily built to FINA regulations including tight tolerances on pool length and depth. An insulated and cushioned PVC membrane covers the base of the pools which has been well received by pool users, in particular coaches who have reported how comfortable it is.

Completed in July 2013 the full 950m2 facility was constructed from a combination of architectural and Firesafe Kingspan Insulated Panels and includes changing rooms, an ablution block, staff offices and amenities, and a reception/entrance area.

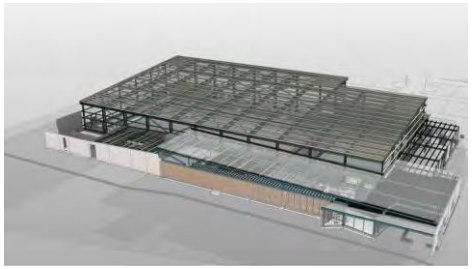


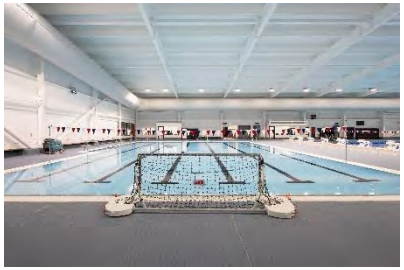
CANTERBURY swim school
PUAWAI | REALISING POTENTIAL

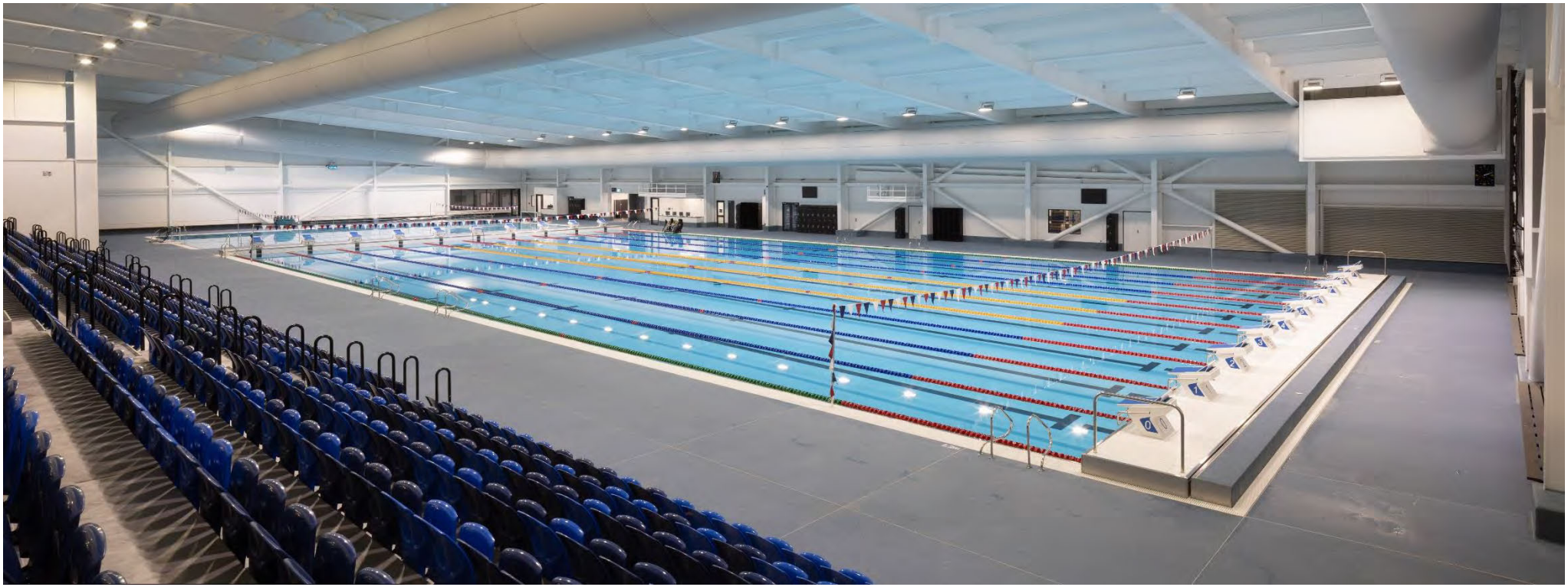
Apollo PROJECTS

HAWKE'S BAY REGIONAL AQUATIC CENTRE

LEARN TO SWIM &
SWIM CLUB FACILITY







Apollo was awarded the contract for the design and build of the Hawke's Bay Regional Aquatic Centre in 2020 after funding for the project was approved by the Government's Shovel-Ready initiative. The project was put forward by local councils, iwi, and community groups.

The aquatic centre expands the community health and sports facility at Mitre 10 Park in Hastings. Hawke's Bay Community Fitness Centre Trust chairman Sir Graeme Avery has called the project a "game changer" for the region.

Apollo was chosen as the design and build main contractor for the project because of their extensive sports and aquatics experience in New Zealand.

The facility includes a 50-metre Olympic sized pool and a learn-to-swim 25-metre pool, will be used for swimming training, waterpolo, school sports and competition events, aquarobics classes, water education and other community activities The facility was opened by Jacinda Ardern on 11th August 2022.

HAWKE'S BAY
COMMUNITY FITNESS
CENTRE TRUST

Apollo
PROJECTS

HE PUNA TAIMOANA
HOT POOL FACILITY

The seaside hot pools in New Brighton have been long advocated for by the community. Apollo Projects is proud to have ensured that He Puna Taimoana complex became a reality.

Developed by Development Christchurch Limited and run by Christchurch City Council, Apollo was engaged to build the facility and completed it in just under twelve months. The complex boasts five hot saltwater pools, a cold-water plunge pool, steam and sauna rooms, changing and toilet facilities, naturally lit reception and cafe areas, and First Aid and staff facilities. The landscaping, both internal and external, has been designed to bring harmony to the complex and provide a user-friendly space. The pools are all different shapes and sizes, ranging in temperature from 12C to 40C.

Apollo became involved with the project at the Tender stage and worked with DCL using value engineering to reduce costs and enhance the project's buildability. Because of the small site, sandy substrate, and exposure to weather, it was best to programme the build into phases. This allowed Apollo to manage any issues and co-ordinate planning with all sub-contractors. Every detail was planned carefully and, thanks to regular and effective communication with all parties, especially DCL and architect, Andrew Watson, the project has been a success.

Te Rūnanga o Ngāi Tūāhuriri and Matapopore gifted the New Brighton hot pools their name, He Puna Taimoana, meaning "seaside pools".

Christchurch City Council

Apollo PROJECTS

HIGH PERFORMANCE SPORT NZ
THE APOLLO PROJECTS CENTRE TRAINING FACILITY

Apollo Projects was engaged to design and build the new 2,300m^2 High Performance Sport NZ training facility located next to the Jellie Park Pool Complex in Christchurch. As specialists in the controlled environment area, Apollo were thrilled to be selected for the project by New Zealand's elite sporting organisation.

The high performance hub includes a gymnasium with cardio and weights areas, an indoor running straight, physiotherapy consulting rooms, medical consulting rooms, showers, recovery areas, an athlete lounge and general amenities, as well as office space for HPSNZ staff. The indoor training area includes a full-size netball court, which has become the new training base for the Canterbury Tactix netball team.

Using highly insulated Kingspan firesafe PIR Insulated wall and roof panels during construction ensures the training environment is kept at a consistent temperature from Summer through to Winter, reducing future heating and cooling costs and ensuring a more consistent training experience for the athletes.

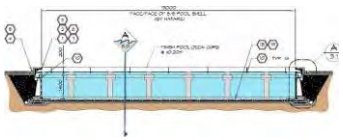
Furthering our commitment to elite sport in New Zealand, Apollo Projects has become a naming rights sponsor of the facility which is now known as the Apollo Projects Centre.

HIGH PERFORMANCE SPORT NEW ZEALAND

Apollo PROJECTS

CHRISTCHURCH CITY COUNCIL

NORMAN KIRK MEMORIAL POOL



Apollo Projects was successfully appointed by Christchurch City Council (CCC), to facilitate the Design and Build of the new Norman Kirk Memorial Pool in Lyttelton, after the original facility was destroyed in the Canterbury earthquakes.

Completed in February 2015, the facility reinstatement includes a new 25m long x 13m wide pool with accessibility ramp. With stunning vistas over Lyttelton Harbour, the facility also contains the office/reception, amenities and changing facilities, as well as new retaining walls and enhanced landscaping.

The state-of-the-art stainless steel pool with PVC membrane eliminates many of the problems commonly associated with pool construction such as deterioration, cracking and joint failure, and is ideal for poor ground conditions or areas with potential ground movement.

The filtration system for the main pool is world leading and does not require a balance tank or backwash tank, requires less plant room space, uses significantly less water during backwashing and provides exceptional water quality. The faster installation timeframes can save upwards of 2 months over a typical concrete based pool.

Apollo's Design and Build proficiency combined with specialist aquatic project delivery experience and expertise has resulted in an outstanding finished project for the CCC with world –leading technology.

Christchurch City Council

Apollo PROJECTS

PETTIGREW GREEN ARENA
EXTENSION PROJECT

The Hawke's Bay Regional Indoor Sports and Events Centre Trust has had plans of expanding the Pettigrew Green Area since 2014, but without funding, the project had stalled.

In 2020, new funding from the Government's Covid Response and Recovery Fund through the Infrastructure Reference Group made the Trust's plans possible.

Apollo Projects was chosen as the Design & Build main contractor for the project, which includes a large indoor timber spring sports floor sized to suit eight basketball courts, eight volleyball courts, five futsal courts, or eight netball courts. Also included are associated plant, changing, storage, and administrative facilities, and an entrance linking with the existing areas.

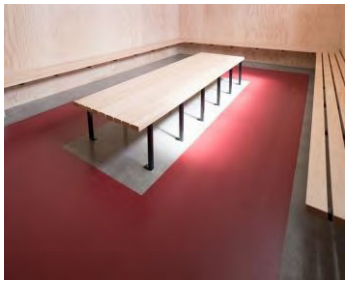
The expansion will make Pettigrew Green one of New Zealand's largest indoor sports complexes. The increased capacity of the facility will make it possible for events and large tournaments to be hosted.

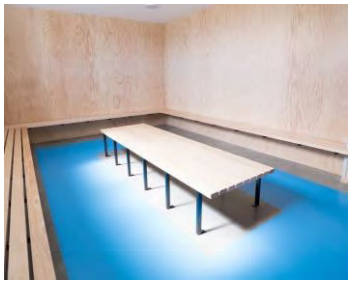
The project is on track to be completed in Spring 2022.

Pettigrew · Green ARENA
HAWKE'S BAY

Apollo PROJECTS

ST. THOMAS OF CANTERBURY COLLEGE
SPORTS HALL





> *Apollo Projects were the most outstanding company to deal with. From the initial discussion to the completion of the project, they were amazingly ofessional, very open, transparent, and honest, and prepared to go the extra yard to make sure all parties were full informed. Not only that, we were finished a month early and under budget.—**Mark Vincent, St. Thomas***

Apollo Projects was engaged by St. Thomas of Canterbury College for the design and build of a new sports hall in Christchurch. The 2124m² facility includes the sports hall and courts, bleacher seating, offices, physio room, weights room, four changing rooms and associated amenities, and foyer/reception area.

The facility has markings for three basketball courts, one full-size show court, and two community courts, as well futsal, badminton, and volleyball. The floor is a low maintenance polyurethane-on-rubber sports floor selected for its suitability for multi-sports and its use as the school assembly hall and community events.

The gymnasium is practical in design, layout, and construction, and robust in nature, befitting a boys' school. The single level layout provides a cost effective, energy efficient, and accessible facility for the school and community. The inclusion of a full tilt slab end wall makes the building functional by integrating outside sport activity, such as cricket and football. The modular structure of the building also allows for expansion in the future.

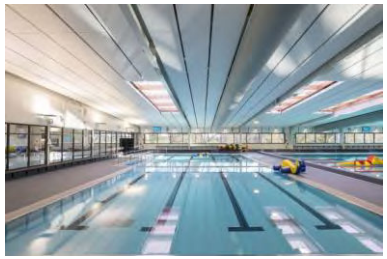
To reduce long-term operation costs, energy performance was considered in the design and build of the facility. Kingspan wall and roof cladding ensures that the highest levels of insulation and air tightness minimise heating costs. The reflective interior surface of the panels enhance the light reflectivity within the sports hall area. Making the most of natural light is a key to the building's efficiency. Incorporated into the design of the building are insulated "wall-lites". This modern technology is included as they allow for natural light to flood in without compromising the insulated properties of the building.

ST THOMAS
VIRTUTE SCIENTIAM COMPLETE

Apollo PROJECTS

CHRISTCHURCH CITY COUNCIL

TAIORA: QEII RECREATION AND SPORTS FACILTY



"I was out on site today and it is an absolute credit to you how it looks. I commented that I can't recall the last time a project was handed over looked so great and in such a completed state. " ***Mark Noonan, Project Director, Christchurch City Council***

After a long association and a number of previous council aquatic work, Christchurch City Council selected Apollo Projects to build the new Taiora: QEII Recreation and Sport Centre. This project was completed May 2018.

The facility boasts a lazy river, a splashpad and adjoined toddler's pool, a large aqua dunker which is always a hit amongst swimmers regardless of age. A 'learn to swim' pool, a 25x25m 10-lane deep sport pool, a spa, steam room and sauna, café, small retail area and birthday party room. The comprehensive fitness centre features a large weights area, fitness studio and spin room.

The Aquasphere is a 120-metre hydroslide where riders enter a sphere and bank around the walls before dropping back into the high-speed twists and turns for the rest of the ride. It is a first for New Zealand and the ultimate in excitement for hydroslide lovers.

The 10-lane pool accommodates a moveable floor, a first for Christchurch. It provides enhanced programming opportunities for the pools, meaning more can be done simultaneously in the pool. The moveable floor will cover half the pool so deep water activity can happen on one side and shallower activities such as aqua fitness or swimming lessons can happen on the other.

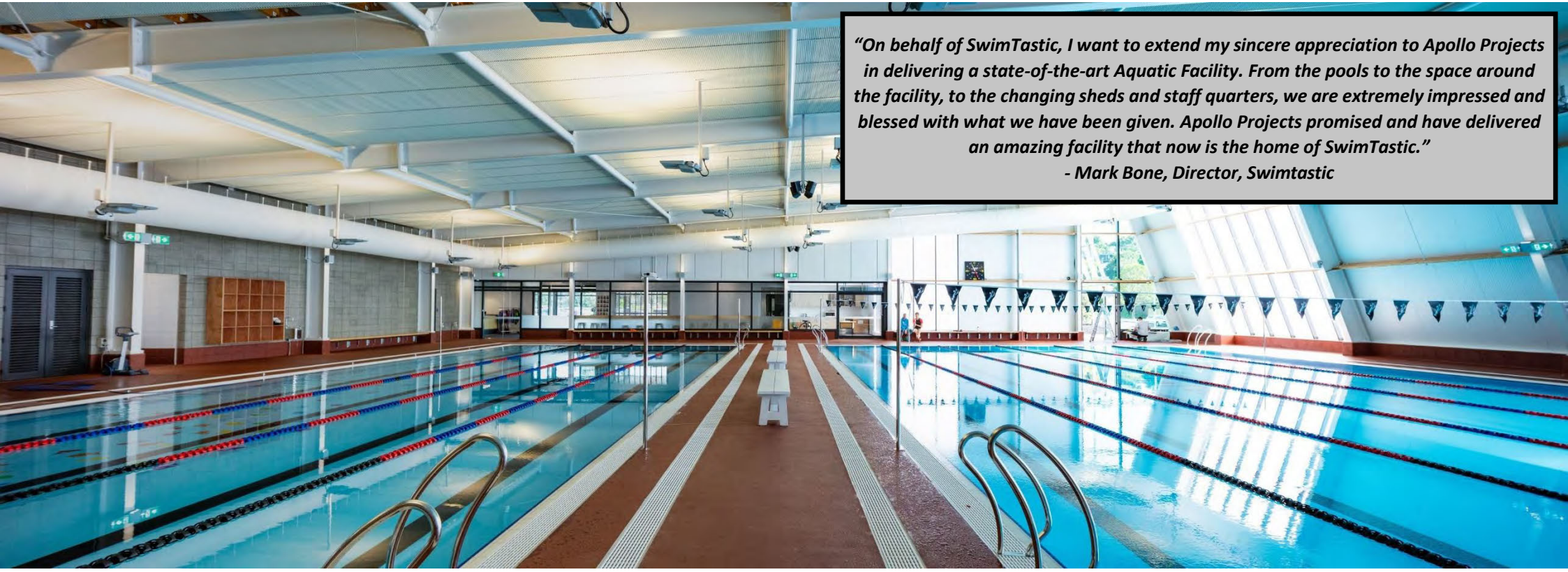
As the area suffered major liquefaction in the quakes, the new pools are Natare Stainless Steel walled. This technology is more seismic friendly and allows the pools to be re-levelled up to 50mm in the event of future earthquakes.

Christchurch City Council

Apollo PROJECTS

SWIMTASTIC
LEARN TO SWIM FACILITY



"On behalf of SwimTastic, I want to extend my sincere appreciation to Apollo Projects in delivering a state-of-the-art Aquatic Facility. From the pools to the space around the facility, to the changing sheds and staff quarters, we are extremely impressed and blessed with what we have been given. Apollo Projects promised and have delivered an amazing facility that now is the home of SwimTastic."
- Mark Bone, Director, Swimtastic

Officially opened in April 2019 after a 12-month build, SwimTastic is a purpose-built aquatic facility in Auckland, designed and built by Apollo Projects.

The new facility has an area of approximately 2,000m^2 comprising of two 25m Myrtha training swimming pools imported from Italy, changing rooms, offices, and staff amenities in addition to plant rooms housing the filtration equipment and mechanical ventilation.

SwimTastic
PROVIDING SWIM EXCELLENCE

As the Design Build Main Contractor, Apollo was responsible for everything from initial design through to handover of the project. This included developing the detailed design, sourcing competent sub-contractors, and managing the construction process through completion

Apollo
PROJECTS

DAVIS OGILVIE
ENGINEERS / SURVEYORS / PLANNERS

CAPABILITY STATEMENT

FOR SOUTHERN PARALLEL SPORTS CAMPUS

0800 999 333
hello@do.nz

Level 1, 24 Moorhouse Avenue, Addington
PO Box 589, Christchurch 8140
www.do.nz

Davis Ogilvie & Partners Ltd

COMPANY OVERVIEW

Davis Ogilvie (DO) is a multi-disciplinary engineering, surveying and planning company. DO provides services in structural, civil and geotechnical engineering, land surveying, resource management and environmental science. As specialists in infrastructure, water and development we work with a range of clients from homeowners and builders to architects, lawyers, local and region councils. We simplify construction, design and development by using collaborative processes that create better solutions for our clients.

With over 100 staff employed across four South Island offices (Christchurch, Nelson, Greymouth and Timaru), the company was established in Christchurch in 1932, when James Leonard Davis registered and founded the business J. L. Davis Registered Surveyor and Claims Assessor. In 1987 the company became Davis Ogilvie & Partners Ltd and has continued to expand by merging with established local businesses in Nelson, Greymouth and Timaru.

AREAS OF EXPERTISE

SURVEYING

The DO Surveying Team collects and interprets data which informs the way land development projects are planned. Our team utilises sophisticated computer systems and state of the art industry technologies delivering fast, accurate outcomes.

Our Land Surveying services include:

- Urban and rural subdivision
- Strata title subdivision
- Building setout
- Rentable area surveys (BOMA)
- Civil construction setout
- Unit title subdivision
- Easements surveys
- Deformation surveys
- As built surveys
- Zip level and verticality surveys
- Topographical surveys
- Laser Scanning

CIVIL ENGINEERING

Civil Engineering is the science of designing and constructing infrastructure for communities. Our civil engineers are renowned problem-solvers and experts in design, contract administration and construction supervision.

Our Civil Engineering services include:

- Roading, right of way and car park design
- Sewer reticulation, including gravity and pumped systems
- Hydraulic modeling of sewer, storm water and high pressure water networks

- Earthworks design, supervision and testing
- Storm water network design including detention basins, treatment systems and pump stations
- High pressure water reticulation and networks design and supervision
- Arranging power, telecommunication and landscaping services
- Contract administration including the preparation of tender documents, specifications and schedules
- Construction supervision and management

STRUCTURAL ENGINEERING

Our structural engineers are experienced in a wide range of projects, often working hands-on with other professionals and are able to assist with projects ranging from a single beam to high-end residential houses, commercial DSA's to new build office structures.

Our Structural Engineering services include:

- Design of timber, cross laminated timber (CLT), steel, masonry and concrete structures.
- Design of foundation systems for TC1, TC2, TC3 and mass movement sites.
- Design of commercial and industrial buildings, including portal frame and tilt panel construction.
- Design of structural members within architectural houses on flat and sloping sites.
- Insurance and purchasers reports to confirm the structural condition of residential, commercial and industrial buildings.
- Initial and Detailed Seismic Assessments (ISA or DSA) to determine the percentage of new building standard (%NBS).
- Design of structural strengthening of buildings.
- Damage reports and remedial works design for domestic, commercial and industry buildings.
- Design of retaining wall structures.
- Construction monitoring and project management.

PLANNING

Resource Management and Policy Planning means informing and including clients from the beginning of a project through to completion.

After ascertaining client objectives, plans are made to achieve the best outcomes. DO consult and negotiate with all stakeholders at all stages of a project, preparing necessary documentation and presenting evidence at both Council and Environment Court hearings where necessary.

We work collaboratively with other disciplines such as landscape design and environmental sciences. Our objective is to add value to all projects while complying with local, District and Regional Plans and the Resource Management Act. Clients reap the benefits of DO having carefully cultivated working relationships with these entities over time.

Our Resource Management and Policy Planning services include:

- Resource consent applications – subdivisions and land use
- Plan changes
- Scoping Reports
- Submissions
- Expert planning evidence

GEOTECHNICAL ENGINEERING

Geotechnical Engineers analyse sites to ensure that all hazards are appropriately identified and managed, ensuring that the client's objectives are met.

Geological conditions are identified and examined, and solutions are written into plans before work begins. During this process complex information is concisely detailed to ensure all parties understand potential hazards and the extent of necessary solutions.

Our Geotechnical Engineering services include:

- Geomorphological mapping
- Geotechnical investigations, including CPT, bore holes and SPTs, and the associated soil analysis
- Liquefaction and lateral spreading assessments
- Detailed assessment for TC1, TC2, TC3 and hillside sites
- Earth dam and irrigation system design
- Slope stability analysis
- Rockfall protection systems
- Rock and earth anchor design
- Foundation design for residential and commercial projects

ENVIRONMENTAL SCIENCE

Our Environmental Science Consulting Team helps to bridge the gap between client expectations, local authority requirements and engineering design. We work with all stakeholders and service providers to ensure environmentally sustainable outcomes that are realistic and cost effective.

Environmental Consulting services include:

- Assessment of environmental effects
- Contaminated land investigation and assessment
- Preliminary site investigations
- Detailed site investigations
- Environmental monitoring
- Environmental audits

- Discharge consents
- DOC concessions

These services can be provided as part of a multidisciplinary project involving planning, surveying and engineering or as a 'stand-alone' service for any project requiring environmental science input.

DAVIS OGILVIE POINT OF CONTACT

Russell Benge | Director, Licensed Cadastral Surveyor
BSurv, PCApplSc, MS+SNZ, RPSurv, Assoc.NZPI
Phone: s 9(2)(a)
Email: s 9(2)(a)

Russell is one of the Davis Ogilvie directors and is a Licensed Cadastral Surveyor with over 28 years' experience. Armed with a wealth of skills in project and stakeholder management, Russell has extensive experience managing private and public contracts. Combine this with technical surveying background means he ensures the bigger picture is conveyed in managing client expectations.

Russell has a comprehensive knowledge in concept design and feasibility studies, resource consent applications and hearings, engineering design for subdivisions, contract administration, project management, cadastral and engineering surveying and pre-purchase reports. He is personally investing in the New Zealand surveying profession having held the position OF Vice President for Survey and Spatial New Zealand and was a previous examiner for planning and design on the Survey & Spatial NZ admissions panel. Russell is also a member on the Christchurch City Council, Nelson City Council and Tasman District Council's Urban Design Panels. He has previously been involved at local branch level serving on the Canterbury Branch as committee member, Branch Secretary and Branch Chairman.

CVs for Russell and the wider team are available on request.

PROJECT EXAMPLES

RAVENSWOOD, WOODEND

Client: Infinity Investment Group

Dates: 2014 – ongoing

Website: https://www.ravenswood.co.nz/

DO provided multi-disciplinary covering planning, surveying, structural, environmental and civil engineering services for a proposed residential and commercial development within Woodend.

Ravenswood, a 150 ha development located 20 minutes north of Christchurch, has almost 25 ha of commercial and light industrial land available. Anchor tenants include New World, McDonalds and BP . The commercial area is key to service the 1350 lot residential development and the wider Pegasus-Woodend community.

We have worked with Ravenswood since November 2014 when Stage 1 commenced. The commercial stage began in February 2016, with both Stages completed in April 2018 and July 2019 respectively. Stage 2 design subsequently followed and was completed in February 2021. In the same year, the client requested fast-tracking of the remaining Stages 3 to 6 which we have delivered by being agile in allocating more resources. Stage 3 design commenced in August 2020, with completion of sub-stages in May, October and November 2021. Stage 4 design began in June 2021 with completion expected in August 2022. Stage 5 is near completion and Stage 6 is in the approval and consenting phase with construction expected in 2023-24. All projects have been delivered to agreed timeframes.

Close collaboration was key on this large project. Stakeholders included Ngāi Tūāhuriri, Waka Kotahi, Environment Canterbury, Department of Conservation, Waimakariri District Council and adjacent landowners who worked with us at each phase of delivery. A key achievement, highlighting the effectiveness of this consultation, was the stormwater discharge consents being granted non-notified, avoiding a costly hearing or Environment Court process.

Due to the cultural and ecological significance of the site, the project required a detailed archaeological assessment, with cultural monitors present during all excavations. Ecological surveys and fish relocations were undertaken, and continuous instream and groundwater monitoring sites set up. The external services crossed State Highway 1 which required consultation with Waka Kotahi.

We also worked with Ngāi Tūāhuriri to protect the water quality in the Taranaki Stream, Waihora Creek and downstream Tūtaepatu lagoon. Groundwater is shallow and enriched with iron, with several springs present. Together we developed comprehensive Erosion and Sediment Control Plans to mitigate these risks, which included a specific oxygenation and iron flocculant removal methodology.

SILVERSTREAM ESTATES, KAIAPOI

Client Name: H Investments Ltd

Dates: 2006 – ongoing

Website: www.silverstreamestate.co.nz

Built in picturesque rural surroundings, Silverstream offers a community environment to live in with facilities such as stream side reserves with walkways, fitness stations, playgrounds, a preschool and a beautiful shopping village.

Davis Ogilvie have been involved in the Silverstream development since 2006, having provided a full range of services to assist with the initial plan change applications, the new Residential 7 rule package and subsequent completion of the development and new arterial road to the west of Island Road. The initial stages of the Silverstream development included 1115 sections, and commercial units. The subdivision created abundant green reserves, playgrounds, cycle tracks, streamside walkways with activities and convenience shopping to create a community environment with old fashioned neighbourhood values.

Since 2018, we have been working closely with the developer on the expansion of the development to the east side of Island Road. This area will eventually comprise around The area that is currently being developed and will provide an additional 260 residential allotments. As an extension to the Silverstream community, a comprehensive care retirement village is proposed, creating a unique later living lifestyle with a range of living options.

Davis Ogilvie have provided a range of planning, surveying, geotechnical and civil engineering services to date, and will continue to do so throughout the project. Our planning team have worked directly with the developers to prepare and submit a number of resource consent applications including; subdivision, land use, large scale earthworks and a number of higher density comprehensive developments. In conjunction with the developers, our planning team have had a large involvement in the design and layout of the overall development.

Our civil engineers have provided technical input to the resource consenting process, primarily around stormwater discharges and effects on the environment. The civil team have also provided technical quality assurance for stormwater, sewer and water supply design, and have carried out modelling and design work for of the sewer system, potable water network and stormwater system including first flush treatment.

THE MEADOWS, NELSON

Client Name: Richmond West Development Company

Dates: 2018 – ongoing

Website: www.themeadows.nz

The Meadows development is a 700 lot residential subdivision located at McShane Road, Richmond. The land is being developed as a residential subdivision through a Tasman District Council (TDC) approved, Special Housing Area (SHA), covered by the Housing Accords and Special Housing Areas (Tasman) Order 2017.

Davis Ogilvie have been engaged to undertake the master planning, survey work, civil, hydraulic and geotechnical design. Davis Ogilvie have undertaken the master planning in collaboration with Canopy, and Landmark Lile Planning.

The geotechnical investigation revealed high groundwater, and DO have worked with TDC, Iota and Stantec designing a comprehensive low pressure sewer network for the development area, that is integrated into the existing gravity and low-pressure mains within the Richmond West catchment.

TDC prepared a Low-Pressure Sewer Servicing Master Plan in October 2015. Following the development of The Meadows Masterplan, DO determined what alterations to the conceptual model developed in 2015, would be required, with the key issue being the rezoning of the land from mixed business to high density residential, and a greater catchment area than anticipated in 2015.

In conjunction with EcoFlow and Iota, DO designed the DN 180Ø PE 100 low pressure sewer rising main along McShane Road and down Lower Queen Street to the existing TDC wastewater gravity network, and the internal PE 100 PN 16 wastewater reticulation pipes within the development.

Each lot will be provided with an individual sewer pump unit installed within the property boundaries. The EcoFlow pump units include a tank, pump, and a control system.

Do it once, do it right

GREG DONALDSON CONTRACTING LTD
COMPANY PROFILE

GDC
Greg Donaldson Contracting Ltd

COMPANY INFORMATION:

Greg Donaldson Contracting Ltd (GDC)	www.gdc.net.nz
2 Fords Road, Tinwald, Ashburton 7740 Mid Canterbury New Zealand	P O Box 439 Ashburton 7740
NZ Business Number - 9429036978571	GDC GST Number - 07840316

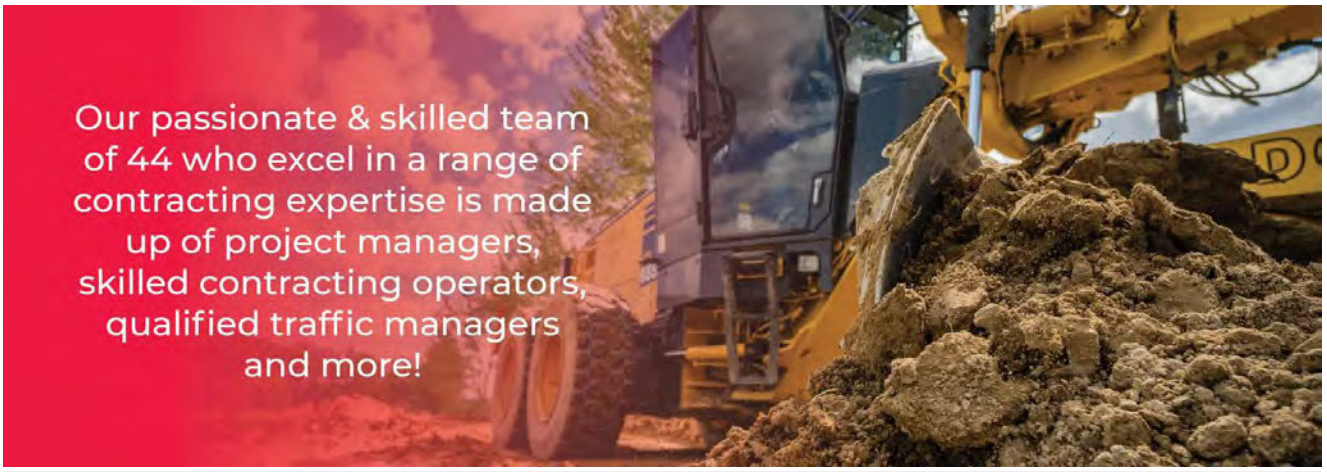
INTRODUCTION:

Greg Donaldson Contracting Ltd (GDC for the purpose of this document) was established in 1990 as a rural contractor "one man band" based in Mt Somers.
Greg's vision back then, and still remains today, is to offer a superior contracting service based on reliability, experience and family values along with the company moto *"DO IT ONCE, DO IT RIGHT"* it soon become the premier contracting business in the Ashburton district.
In 2001 GDC moved from Mt Somers and established in Ashburton Town, with all 5 full time staff members at the time.
Currently we have a team of 55 employees all living locally, we are also proud to have a diverse range of staff, 10% identify as Māori / pacific islander 15% women and 2% in the rainbow community.
GDC has 2 subsidiary company's, Directional Drilling Company NZ Ltd (DDC), Utility Detection Services (UDS) and also own and operate the Ashburton Eco park.

SERVICES:

- Sub-divisions
- Roading
- Rural Farming Infrastructure
- Flood Protection
- Drainage
- Civil Site Works
- Demolition
- Residential
- Directional Drilling
- Service Locating
- Mole Ploughing
- Aggregate Supply
- Landscaping

Leading Ashburton contractors



MEET THE MANAGEMENT TEAM:

Name:	Greg Donaldson
Role:	Managing Director
Phone:	s 9(2)(a)
Email:	s 9(2)(a)

Name:	Rob Taylor
Role:	Contract Manager
Phone:	s 9(2)(a)
Email:	s 9(2)(a)

Name:	Diane Booth
Role:	Health & Safety / HR Manager
Phone:	s 9(2)(a)
Email:	office@gdcgroup.nz

Name:	Chris Barham
Role:	Engineer / Contract Manager
Phone:	s 9(2)(a)
Email:	cs 9(2)(a)

Name:	Colin Wilson
Role:	Contract Manager
Phone:	s 9(2)(a)
Email:	s 9(2)(a)

CURRENT & RECENT PROJECTS:

ASHBURTON COLLEGE REDEVOLPMENT (STAGE 2 - $50,000,000.00)

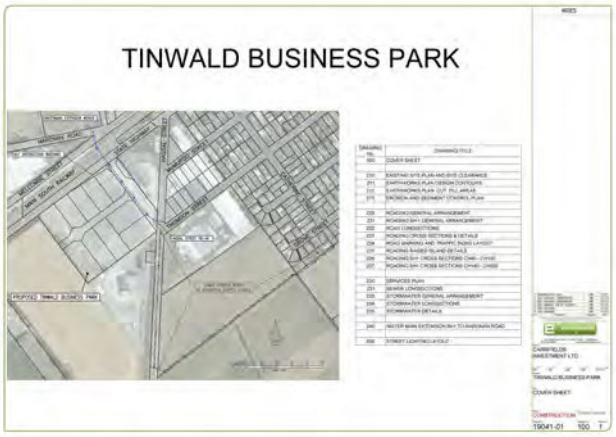
HAWKINS

Client	Hawkins Construction (MOE)
GDC Contract Value	s 9(2)(b)(ii) [redacted])
Duration	Stage 2 - October 2022 - Ongoing Stage 3 - TBC Stage 4 - TBC
Services Provided	• Block 1 bulk earthworks, excavation of 4000m3 of un-engineered fill and replace with approved imported hardfill material • Block 1 foundation works • All onsite drainage and water including connections to council mains • All concrete paving • Asphalt and landscaping • All civil site works • Roading • Contaminated material management
Contact	Andrew Hamers Project Manager - Hawkins s 9(2)(a) [redacted] s 9(2)(a) [redacted]

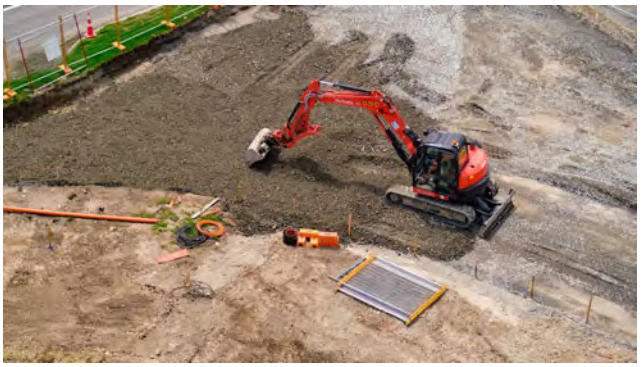
ASHBURTON CIVIC CENTRE ($56,000,000.00)

Client	Naylor Love (ADC)
GDC Contract Value	s 9(2)(b)(ii) [redacted]
Duration	March 2021 - Ongoing
Services Provided	• Bulk excavation and backfill • Foundation works • Drainage / water / Sewer • Civil site works • External Hydraulics - Bore reticulation
Contact	Tom Pyatt Project Manager - Naylor Love s 9(2)(a) [redacted] s 9(2)(a) [redacted]

TINWALD BUSINESS PARK (PRIVATE COMMERCIAL SUB-DIVISION)



Client	E2 Environmental (Carrfields Investments Ltd)
GDC Contract Value	s 9(2)(b)(ii)
Duration	July 2021 - January 2023
Services Provided	• Stormwater, sewer and water including mains connections with directional drilling under the railway with a DN450 PE100 watermain, new sewer pumpstation and onsite stormwater retention • Bulk earthworks • Demolition • Roading • SH1 slipway construction
Contact	Lindsay Blakie Partner & Principle Engineer - E2 Environmental s 9(2)(a) s 9(2)(a)



connetics

LIGHTING DESIGN CAPABILITY

Connetics Limited
11 Islington Avenue,
Islington, 8022
www.connetics.co.nz

Contact: Brendan Hayman
Mobile: s 9(2)(a)
s 9(2)(a)

CONNETICS' PURPOSE IS TO DELIVER ENERGY SOLUTIONS THAT ENABLE OTHERS TO POWER AOTEAROA

CONNETICS- THE DIFFERENCE

Connetics' core business is the construction and maintenance of power related infrastructure for the delivery of utility services. When combined with highly experienced design and engineering consultancy, and supply and logistics capability, Connetics can provide a full engineering, procurement, and construction package for turn-key solutions to our clients across all commercial and industrial spheres. Connetics' main office is in Canterbury, but company operations extend across the South Island and lower North Island.

Some of Connetics capabilities across the business are:

- **Contracting** - Underground, Overhead, High Voltage & Industrial, Lighting & Electrical, Glove & Barrier testing, and Calibration Testing
- **Design and Engineering** - Renewable Generation, Substations & Protection, Reticulation & Connections, Smart Cities, Lighting, Future Energy Solutions, 3D scanning, AMP, and Private Networks
- **Supply and Logistics** - Dedicated supply and logistics team with 5 locations across New Zealand

LIGHTING DESIGN TEAM KEY PERSONNEL

The Connetics lighting design team is comprised of 7 tertiary qualified lighting designers who are a part of the 40+ strong Design & Engineering department. Our lighting design team is made of exceptionally experienced individuals who are very familiar with both local and international trends & technologies.

BRENDAN HAYMAN - DESIGN TEAM LEAD

Brendan has been involved in the varying aspects of the lighting industry since 2001 and has experience in both interior and exterior lighting design. He places a very high emphasis on ensuring the quality of deliverable documentation is of a high standard and meets the brief of the client, within given timeframes and budgets. During his time at Connetics Brendan has been involved with various lighting projects for local councils, government bodies, developers and consultants, of which include Subdivision lighting, Motorway lighting, Amenity/ Decorative lighting and Sports floodlighting design

BARTHELEMY RIVES - SENIOR DESIGNER

Bart has over 16 years' experience in Lighting design and engineering in Europe. He has worked on major international projects across the Urban, Landscape, Heritage, Museum, Landmarks, Religious, Cultural, and Hospitality sectors. Bart designs high standard lighting in collaboration with architects, engineers, and artists, with the mindset that lighting has to support the global planning and the artistic views. He also designs custom lighting fittings that perfectly integrate with the architecture and illuminate the spaces.

ROBERT ST-DENIS - SENIOR DESIGNER

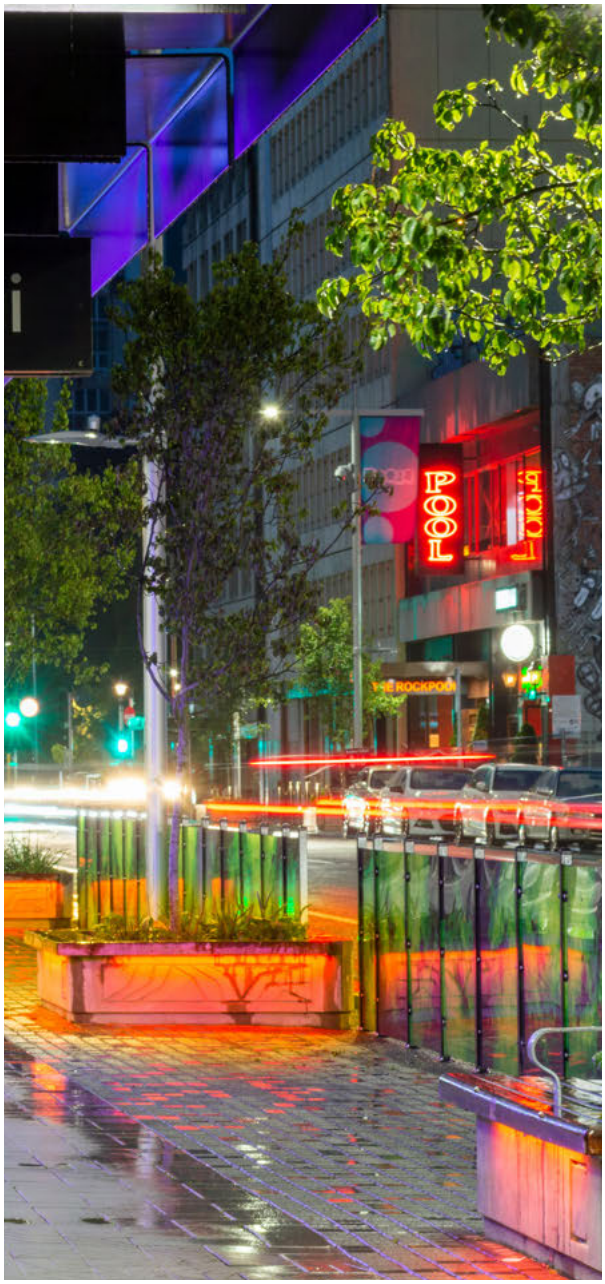
Robert is a highly professional lighting designer with a wide range of local and international experience. He has been involved in the lighting industry for over 20 years and left his footprints not only throughout New Zealand but also on the international market, being involved in designs for Australia and Canada. His technical knowledge and understanding of lighting has also been recognized with the IEASNZ award in lighting design for the Lyttleton Tunnel in 2009 and 2022 for the NZTA Christchurch Northern Corridor Overbridge Feature Lighting.

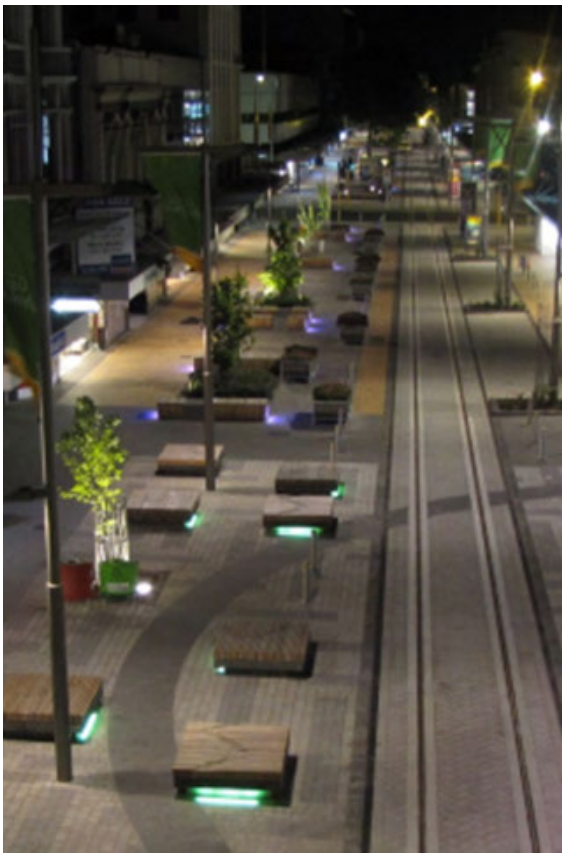
LIGHTING DESIGN SOLUTIONS

The Lighting Design group is a standalone consultancy within the Design and Engineering group of Connetics and are committed to ensure lighting is more than just fit for purpose. We have a passion for using light as a tangible element of the overall design.

We understand how lighting affects any environment and what the correct application will do for each space. Even the simple contrast between light and dark can create drama within an area.

Our experienced lighting designers combine established lighting principles with new technology, encouraging the use of the latest energy saving methods, balancing these elements with function, aesthetic and mood.





"Light is an integral architectural element it breathes life into spaces. It creates atmosphere and enhances our experience of the built environment"

Providing lighting design as a specialist service is considered to be a key deliverable in the design process. In an increasingly competitive Global Design Marketplace, provision of specialism provides an opportunity to add value to our clients, the project and the design brief.

OUR APPROACH

Connetics lighting engineers provide an integrated and practical approach to lighting design, from concept through the detail design process to completion of construction documentation.

Our experience covers a broad range of projects ranging in market sector, location, size and complexity and we are at the forefront of current lighting practices and technology. This provides our clients with a robust, efficient and independent design that is not influenced or bound by the use of any particular product or brand.

OUR CAPABILITY

- **Detailed modelling**

3D lighting application modelling to assist design and provide calculations to prove compliance.

- **AGI32 and Dialux modelling & rendering**

The accepted industry standard modelling software that can provide world class applications

- **Extensive product knowledge**
- **Light source technology**

Experts in applications of light sources – what to chose and what not to chose

- **Current best practices**

Skills upgrading and best practice learning to provide contemporary and correct design advice with application of local and international standard while meeting statutory obligations, and proving compliance

- **Audits and evaluations**

Post installation evaluations/audits to prove compliance and environmental Impact studies.

- **Interface with architectural elements**

Detailed design integration within the built environment.

- **Energy efficiency**
- **Commissioning**

Installation compliance and testing

WORK EXPERIENCE

Connetics Design & Engineering Lighting team have capability spanning:

- **Council Road Lighting**

CCC and SDC roads/streets for replacement and LED renewal.

- **Subdivision Lighting**

Many major subdivisions both residential and business.

- **Major Cycle Routes Lighting**

Many major cycle routes across Christchurch, often involving multiple contractors.

- **Feature Lighting**

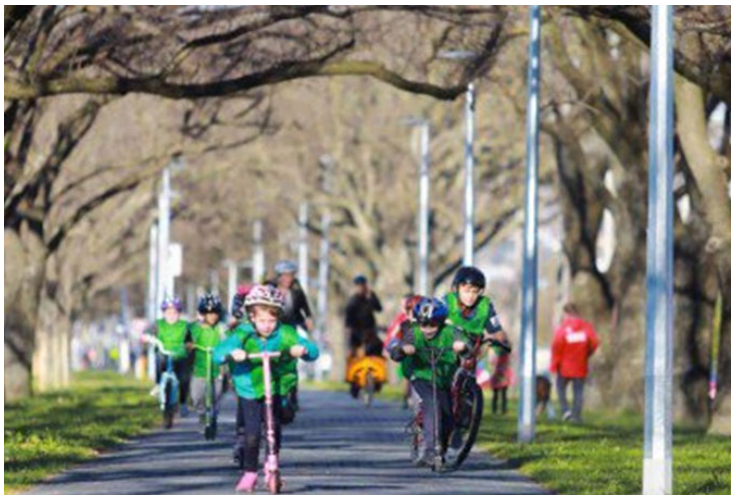
Street upgrade, heritage buildings/monuments, memorial lighting, landscape/street enhancements, Chch Cathedral square.

- **State Highway Road Lighting**

A number of NZTA Chch motorway projects

- **Sports Lighting**

Public and Private use sports courts



connetics

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New Zealand

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E: enquiries@connetics.co.nz
W: www.connetics.co.nz

HECTOR EGGER HOLZBAU

MOSIMANN HOLZBAU

Two Traditions. One Future.

From Paul Schär, CEO/Owner

Samuel Rudolf Hector Egger laid the foundation stone for today's Hector Egger brand in 1848. The Langenthal construction company achieved national recognition in the first half of the last century through the vision of the great architect and master builder, Hector Egger (1880-1956). He was known for his joy in experimenting with new techniques - not only in his industrial buildings but also workers' settlements and over 150 villas for wealthy industrialists.

In 1993, I was given the opportunity to lead the timber construction department of the then Hector Egger AG, and further develop the timber frame construction business launched in the 1960s. Our team was very successful which paved the way for me to take over the department in 2001 through a management buy-out. The result of this is Hector Egger Holzbau AG. Since that time, we have built Plant I (2003) and Plant II (2011) (picture above left), more than tripled our workforce and realized more than 900 fascinating timber construction projects throughout Switzerland.

In 2006, at the request of the owner family, we took over Mosimann Holzbau AG in Köniz as a form of succession planning. The company was founded in 1909 by Emil Mosimann and it has significantly influenced the townscape of Köniz and repeatedly attracted attention with its spectacular buildings. An example at the time (1967) was the construction (in timber) of the then largest ice hockey stadium in Europe. The significance of this building is seen in the ongoing preservation and refurbishment of the roof structure to this day. In the spring of 2013 we worked with Mosimann Holzbau AG in Oberwangen to establish a modern new production plant (picture bottom left).

Hector Egger Holzbau AG and Mosimann Holzbau AG have found a common corporate culture. We cooperate wherever it makes sense, and from administration to planning to production, the result is one of the most efficient timber prefabrication producers in Switzerland. Committed to tradition, wed to innovation and on a common path to the future.

Our motto:
Think. Plan. Build.

above:
Hector Egger Holzbau AG
The dream factory of Hector Egger Holzbau AG in Langenthal. Right: Plant I (2003). Left: Plant II (2011).

below:
Mosimann Holzbau AG
The home of Mosimann Holzbau AG in Oberwangen since 2013.

HECTOR EGGER **HOLZBAU**

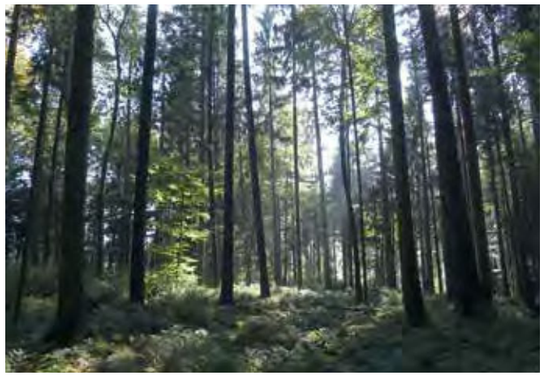
MOSIMANN **HOLZBAU**

Renewable Building Materials

In Switzerland the term sustainable originally stems from the forestry industry and translates to only cutting as much timber as can be sustainably grown. In the Swiss forests, there is enough wood produced every 3 minutes for a standard family home but only about 50% of the available resource is being used. Timber is structural and highly energy efficient, quickly installed and offers endless freedom of design.

above:
Holiday House Friolet, Murten
Apartment Building Kirchgasse, Jegenstorf,
Curtain timber facade in Douglas fir wood

left:
Family Home Disler Brunner, Balsthal



Health
Timber buildings not only create a fantastic feel-good climate, they are also positive for our health. Timber binds CO2 and saves a lot of heating energy thanks to first-class insulation properties and fewer cold bridges. Timber – if detailed properly - can be used without any chemical treatment and also exceeds other building materials in terms of fire protection.

Lifespan
Timber has an extremely long life and countless historic buildings testify to this. Timber ages well, does not rust and retains its outstanding structural properties for centuries.

High-tech
The age-old building material timber in conjunction with new technologies not only makes the unthinkable conceivable, but also feasible. Engineered beams, efficiently designed connections and the consistent use of CNC technology make timber structures possible today that were unthinkable just a few years ago. From high-end architectural homes, affordable housing projects, 6-storey residential buildings through to a full aircraft hangar, precision engineered timber solutions cover all of these possibilities.

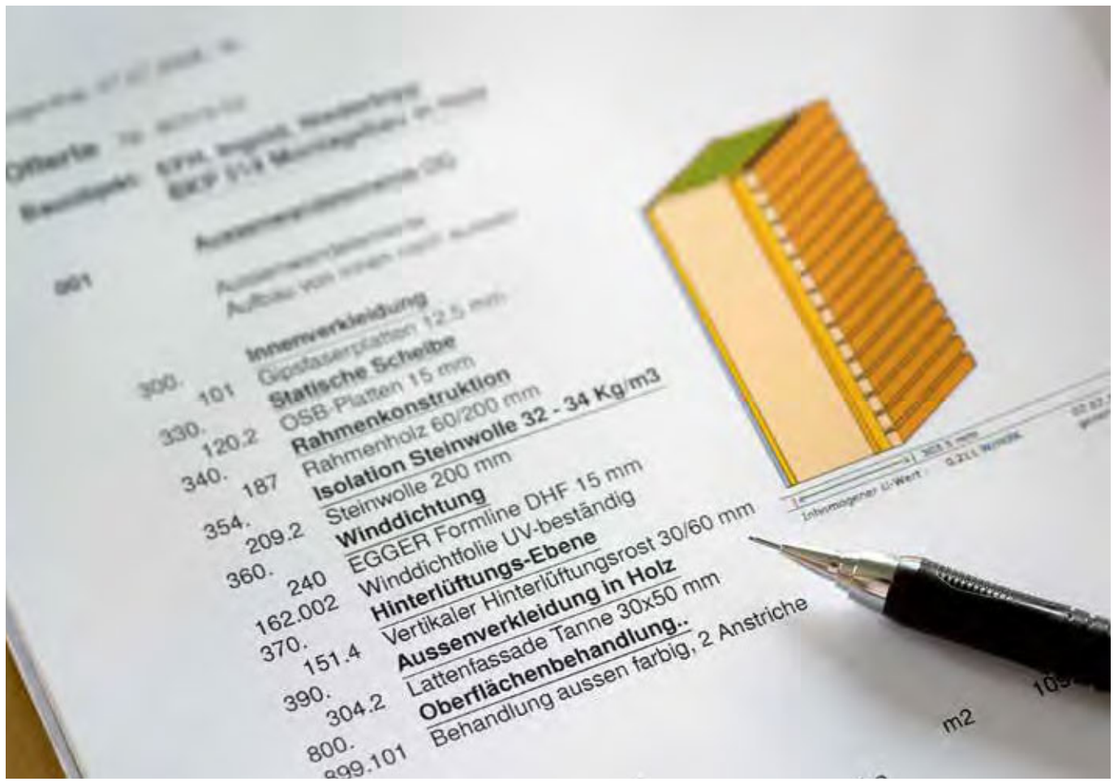
Net Usable Area
Timber naturally insulates better than any other building material which automatically results in a larger floor area with comparable wall thickness to other building materials. This is only one of countless budget-relevant advantages in modern high-tech timber construction.

Facade
Timber ages better than any other building material. The weathering and discoloration of a timber facade belongs to the essence of the timber construction. Whether it is large-format sheets, slats, paint or plaster: the maintenance costs of a timber façade are always more favorable.

Lightweight Construction
Timber is - in proportion to its structural characteristics - lighter than any other building material. This is a great advantage in extreme hillside or challenging site conditions as well as offering benefits to extensions, bridges or buildings in high alpine terrain.

Planning: the sooner, the better

Innovative engineered timber construction goes far beyond classic timber construction. It is a complex feat in the interplay of design, planning and logistics. Even in the pre-project phase, we provide important constructive, structural, economic, ecological and aesthetic analysis for decision-making. For the best quality outcome to your project, speak to us sooner rather than later.



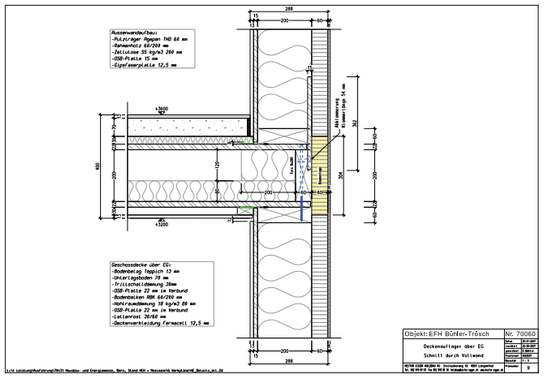
Pricing: More than one option
In order to optimally match your project to your budget, we always calculate several design options. This is done using sophisticated planning methods with our own software and a large library of finished drawing details. Our expertise and experience mean your project can be optimally adapted to your budget.

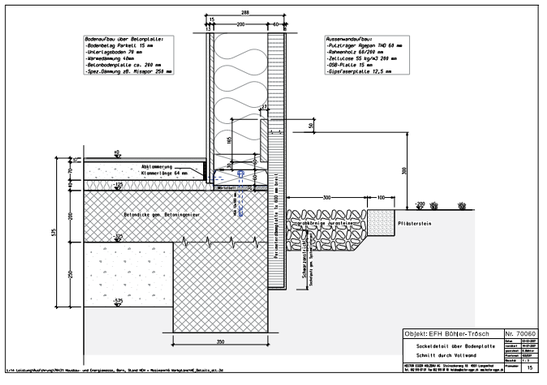
The Software: BauOffert
For over 10 years we have been developing our own cloud-based planning software BauOffert. More than 100 Swiss timber construction companies work with it today. It depicts the complex development steps, shows wall structures in 3D and allows a lot of scope for planning. BauOffert has been a product of the HEH subsidiary Contria GmbH (contria.ch) since 2005.

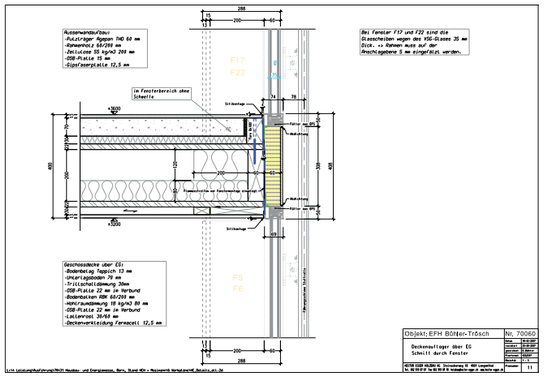
Interfaces are Connection Points.
Interfaces carry the danger of interruptions and surprises. This is why we consistently create personal and virtual connection points for a smooth preparation and implementation process across all types of work.

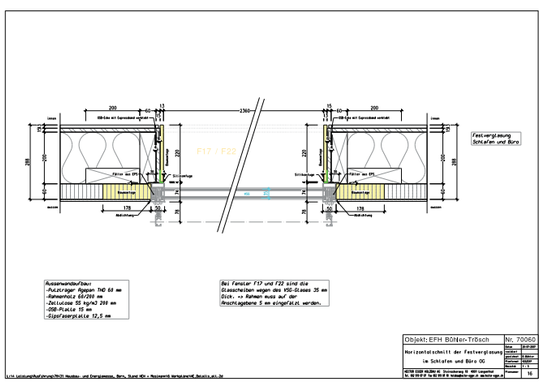
Our Solution is an Original

We have countless clever solutions ready for your creative refinements. Almost every one has been previously realised and the complex details, ambitious interleaving or constructive special solutions are part of our everyday life. They make your timber construction a true original.









The Attention to Detail

Perfectly resolved details, whether creative or constructive, are the nuts and bolts of any modern high-tech timber construction. With us you can choose from over 400 design solutions “off the shelf”.

Deadlines: More than a matter of Honour

Timber construction is a complex piece of art in the interplay of design, planning and logistics. This just-in-time production method allows planners to make binding deadlines which are always met.

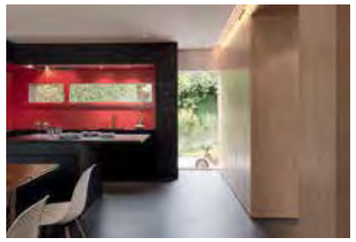
Budget: calculable and binding

Our processes are planned to the smallest detail - from production to assembly – and automatically yield calculable and therefore binding budgets. Budgets and final billing amounts are always in line with no surprises.

Residential Apartment Complex RIVA, Basel
The facades of all four buildings consist of self-supporting timber loggias on all sides. These help create bright, open apartments and allow clear views over the Rhine. All 86 apartments were realized in Minergie-P-Eco standard.

Family Houses

Houses constructed in timber not only offer a unique feel-good climate, they are also unbeatable in terms of ecology and energy efficiency. We use the latest in wood working technology to realise our clients dreams of a beautiful and energy efficient home. Wood is the material of the hour for modern housing.



Feel-good climate for Eternity
Timber buildings create a unique indoor climate, they contain no pollutants and are very energy efficient. Timber construction offers more usable living space as the walls are thinner and insulation is installed within the framing. Timber construction leads to lower heating costs because it is easier to insulate and fewer cold bridges exist. The maintenance is lower because timber ages better than a painted facade.

Minergie is Profitable
With constantly rising energy prices, the Minergie concept (see also: www.minergie.ch) is an increasingly worthwhile investment. The mechanical ventilation required is being compensated by a smaller heating system and hence lower heating costs. In addition, Minergie represents a protection of your long-term investment and helps preserve the value of your home.

left side:
Family Home
Dietlikon, Minergie® standard

from top to bottom:
Family Home Büeler, Mümliswil
Kaiser Duplex Homes, Unterengstringen
Family Home Bigler, Courgevaux
Family Home Rugirello-Studer, Aarau

bottom right:
Family Home Jäckle / Höhener, Hägendorf

Conversion, Expansion, Extension, Renovation, Windows

We also offer a wide range of classic carpentry services including conversion, expansion and extension, rebuilding, specific energy-related refurbishment and custom designed windows.

left side, top:
Increase SZU
On the existing station building of the Sihltal Zurich Uetliberg Train Station (SZU) four additional storeys using timber construction were created. The additional space is used exclusively for accomodation.

left side, bottom:
left: **Annexes EFH Wawer,** Fulenbach.
right: **Extension and conversion ZFH Dorfgasse, Langenthal,** Bern.

above:
Addition to Lustenberger, St. Erhard.
Increase HKK, Wohlen.

below:
Family Home Conversion Preibisch, Wabern
Conversion and renovation of an EFH.
For the attic, the existing wood construction was manually brushed with hand machines.

Renovation, addition, extension
Old properties are full of surprises. Renovations and extensions always carry a lot of (expensive) surprises, which we reduce to a minimum with our experience, broad specialist knowledge and comprehensive advice. Timber is also the material of the hour for vertical extensions. It is lightweight and can be easily put on existing support structures.

Energy efficiency Upgrades
Old properties are large energy consumers. With ever increasing energy costs, many clients seek to upgrade the energy efficiency of their home, and an energy-related renovation (insulation of floors, walls, ceilings and roofs) is a worthwhile investment. In addition, there are subsidies and tax relief available and we are very happy to explain how it works without obligation.

Windows
As a long-time specialist for windows, we offer all conceivable options for modern and energy-saving glazing. Our refurbishment windows are fast to install, well-detailed and inexpensive without painting or plastering. They provide light, create a well lit living space and save energy as well as increasing the value of your building.

Small Works and Maintenance Service
Our versatile joinery service handles large and small timber related projects for you. These include e.g. windows and doors, straightening, sealing, repairing or retro-fitting. Our service includes minor carpentry work such as shelves and cupboards , glazier work, service on skylights through to burglary protection.

Wylerpark, Bern.
On a existing two-storey substructure (a former SBB company building), 39 apartments were built in a 3-storey extension. Length: 110 m, Width: 23.5 m.

Apartment buildings

Timber construction is fast, flexible and ecological. Whether creating additional structures or a new 6-storey building, the acceptance of timber construction as a logical choice is growing. Wood is fast becoming the material of choice for high quality apartment housing.

High-rise Buildings
Through the use of new technologies such as engineered beams, cleverly designed connections and CNC technology in pre-production, we can build everything with timber that is possible with other building materials.

System Hector Egger Holzbau
Innovative engineered timber construction goes far beyond classic timber construction. It is a complex feat in the interplay of design, planning and logistics.
The result is highly efficient just-in-time production. In the pre-project phase we provide important constructive, structural, economic, ecological and aesthetic decision-making advice. Therefore, speak to us sooner rather than later.

Since 2000, multi-storey timber construction has become an increasingly popular choice. During this period, we have built housing estates, multiple dwellings, large extensions (Wylerpark) and numerous other projects throughout Switzerland.

left side, top:
Housing development Gutenberg 4, Rapperswil

left side, bottom left:
Apartment Building from Arx, Aarau.

left side, bottom right:
Housing Estate Sunny Watt.
The development in Watt (Canton of Zurich), which was carried out in Minergie-ECO, comprises 19 apartments.

right. from top to bottom:
Residential + Commercial buildings.
Mühlebachstr. / Hufgasse, Zurich
Apartment Building Trottenweg, Wohlen
Apartment Building Kuhn, Aarau
Apartment Building Sägemattstrasse, Köniz

Public Buildings

Public buildings have been under special public scrutiny since time immemorial. Architectural and urban design quality has always been a key requirement but there is now a new claim: the ecological sustainability of these buildings.

Build quality examples in timber
Energy efficiency is a requirement of our time and in public buildings it is required by law. It stops at the heating and starts with the building material used. The passive energy used to construct a building can equal the operating energy consumption of a building for well over 20 years. In timber construction we achieve opposing values: namely the maximum from the minimum. Timber is available regionally and in huge quantities. The journey from the forest to final construction material is unbeatably short and the value added remains in the region. The details in the heat insulation are easier to solve and there are fewer cold bridges. Timber buildings store CO2, create a healthy indoor climate and, even in case of fire, perform better than steel or concrete structures. In short: timber is the perfect building material with the highest acceptance amongst the population.

top left:
Gym Leuzigen
In order to bridge the large span, this building was covered with truss girders. The hall has a length of 32.4 m and is 24.8 m wide.

bottom left:
Double Kindergarten Ipsach
This structure comprises a total of four single-storey kindergartens, all of which were created using timber construction.

right from top to bottom:
Kindergarten Kappel
The kindergarten with gallery used element construction on strip foundations.
Extension of the school building, Langnau a. Albis
The addition of one floor level was erected within two days.
Neumattbrücke, Burgdorf
The longest curved truss bridge in Switzerland. The insertion by crane was a major community event and represents a pinnacle in timber construction.
Dive center of the archaeological service Kt. Bern, Sutz Lattrigen (Bielersee).
Built from local timber and erected in a day.

Industrial Buildings

Combining the age-old building material wood in connection with new technologies makes the unthinkable not only conceivable, but also feasible. Today we build hangars and soccer-sized production halls in timber and these large-scale structures are increasingly the way of the future.

Short Construction Times
On-time delivery and speed are fundamental to commercial-industrial timber construction. The weather independence in our pre-production (with a degree of prefabrication of up to 80%), the detailed planning and the sophisticated logistics allow us extremely short onsite construction times for your timber industrial building.

New Dimensions
By using new technologies, we are now building in dimensions that until recently could only be built in steel. Structurally almost everything is possible with engineered beams. Cleverly designed connections - from the CNC milled dovetail to a high-performance steel joint - allow sophisticated solutions for large-scale timber construction.

Fire Protection
In terms of fire protection, timber is far ahead of all other building materials and this without any additional treatment. Timber does not melt and structurally relevant timber beams keep their load capacity far longer than melting steel or heated concrete.

left:
Montagehalle Pilatus Flugzeug Werke AG, Stans
The column-free interior with a footprint of two football fields is highly flexible and functional. From the outside, the building, whose shape is derived from a wing, reflects what happens inside - the final assembly of aircraft.

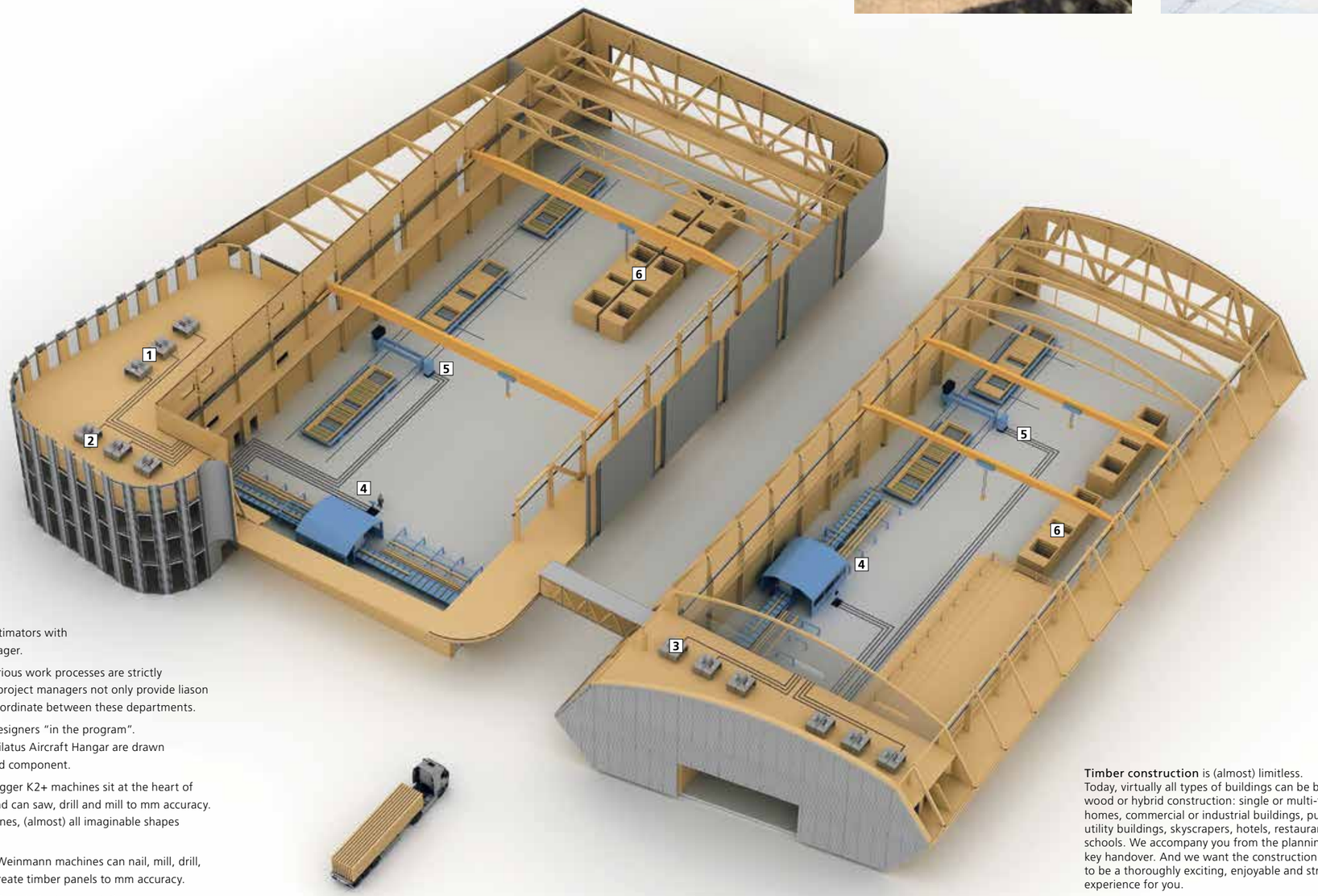
above:
Federal Roads Office ASTRA, Bern
The project includes an L-shaped shelter for trucks (85 x 13 m and 101 x 9 m), a gas station (16 x 8 m) and an office building with workshop and training rooms (140 x 40 m). The existing complex was gradually dismantled and replaced by the new buildings. In order to maintain the smooth operation of the business, the project was implemented in three stages over a total duration of three years.

below:
Lanz-Fronten AG, Roggwil
The elongated new building presents a striking, overhanging head structure comprising offices and showroom to St. Urbanstrasse in Roggwil. The generous production hall is located in the back with the full-height windows allowing natural light to flood the spaces.

Plant II of Hector Egger Holzbau AG
76 m long, 36 m wide and 15 m high.
At Rear: the beam processing center K2i.
Right: Element production with the Weinmann multifunction bridge.

Dream factory for high-tech timber construction

Since 2003 we have used the latest CNC technologies to reach a degree of prefabrication up to 80%. All processes are continuously optimized by our approximately 80+ timber construction professionals. The result is a complex feat in the interplay of design, planning and logistics - a just-in-time production system that meets even the largest timber construction projects.



Workflow

1. **Estimation Department:** 2 Estimators with the support of the Project Manager.
2. **Project Management:** The various work processes are strictly separated by department. Our project managers not only provide liason with the customers, but also coordinate between these departments.
3. **Construction:** We have nine designers “in the program”. Projects like the Wylerpark or Pilatus Aircraft Hangar are drawn over weeks to the last detail and component.
4. **Joinery Machines:** Our Hundegger K2+ machines sit at the heart of our timber processing center and can saw, drill and mill to mm accuracy. With the five-axis milling machines, (almost) all imaginable shapes can be produced.
5. **Multi-function bridges:** Our Weinmann machines can nail, mill, drill, screw, mark, glue, trim etc to create timber panels to mm accuracy.
6. **Finished panels** are stored and ready for transportation.

Timber construction is (almost) limitless. Today, virtually all types of buildings can be built in wood or hybrid construction: single or multi-family homes, commercial or industrial buildings, public or utility buildings, skyscrapers, hotels, restaurants or schools. We accompany you from the planning to the key handover. And we want the construction process to be a thoroughly exciting, enjoyable and stress-free experience for you.

The Locations

Our two locations are both think tanks and production facilities. Hector Egger Holzbau AG operates out of Langenthal in one of the most modern timber construction facilities in Switzerland - our dream factory. We are equipped with the latest CNC technology and all operations are carried out by 80+ passionate professionals in planning, production and assembly. We also produce for our subsidiary Mosimann Holzbau AG, our efficient offshoot and assembly site in Oberwangen b. Bern. Mosimann Holzbau AG has a team of 20+ employees managing high-tech timber construction and an upscale range of carpentry, renovation and window solutions.

The People

We started in 2001 (see page 28) with over two dozen enthusiastic timber construction professionals. Today we are 100+.
Our biggest asset. 5% of our team are apprentices. Our future.

The Machines

Since 2003 we consistently use the latest CNC technology. The 5-axis mills on our beam processing centers achieve the highest accuracy and work at a breathtaking pace on rising cerves, oblique holes, conical dovetails, trimming, etc.
On the multifunction bridges (nailing, milling, drilling, marking, trimming, gluing, screwing, etc.), we assemble the timber elements to the nearest millimeter and thus achieve a degree of prefabrication of up to 80%.

Hector Egger Holzbau AG

FACTS

Owner: Paul Schär, CEO

Founding
The original brand was founded in 1848 by Samuel Rudolf Hector Egger. In 2001 Hector Egger Holzbau AG was founded through a management buy-out of the timber construction department of Hector Egger AG by Paul Schär.

Members of the Executive Board
Manfred Beyer, Peter Sinniger, Hans Jufer, Michael Schär, Thomas Rosenberg.

Employees
More than 80 employees. 1/4 of the team is involved in construction with the rest in production and assembly. There are six people working in the administration and we are constantly training around 12 apprentices.

Know-how
High-tech timber construction for:
• Housing
• Public buildings
• Industrial construction
• Main Contractor

Quality Assurance: ISO 9001 (QM)
Turnover: approx. CHF 30 million
Action radius: All of Switzerland

CULTURE

Culture is important to us and that's why we are involved in various local projects.

Cinema Scala
As of May 1, 2012, we took over the time-honored Cinema Scala in Langenthal, rescued it from closure and equipped it with the latest digital technology. We show a current program from the latest blockbusters to small studio films and will build a second hall with an innovative extension.

Designers' Saturday
Since 2006 we have been a co-organiser of the Designer Saturday in Langenthal. Our workshops are one of the six exhibition locations.

Winter Cinema
We are both organizer and venue for the winter cinema in Langenthal. The multi-day event runs every year from 27-30th December in our Plant 1.

Summer Cinema
Since 2004 we are the main sponsor of the summer cinema in Langenthal. Every year we set up the timber construction stage for the adjustable big screen.

Jazz Days Langenthal
We have supported the Jazz Days Festival in Langenthal since 2009 as a co-sponsor.

CANTINE Z3
In our factory II (2011) we opened our public canteen Z3, which we also operate ourselves. The name is program: Z'nüni, Z'mittag, Z'vieri (Smoko, Lunch, Smoko)

Tour «Timber Construction Live»
Our production halls are open to all those interested and provide fascinating views of modern timber construction from their galleries at a height of six meters. There are several different ways to view our operation:

• Individual visits to PLANT II
From Monday - Friday, 8:00 -12: 00 and 1.30pm - 5pm; no pre-registration necessary.

• Factory tour in PLANT I + II
For groups of 10 people or more, we offer guided tours; Duration ca.1.5 hours. We are happy to take reservations at the following number: 062 919 07 07.

• Design Tour Langenthal
The factory tour can also be part of the designtour langenthal as a day trip or in combination to be booked with overnight stays and other activities. A collaboration between Création Baumann, Ruckstuhl, Glas Trösch, Girsberger and Hector Egger Holzbau. Information at www.designtour.ch. Detailed information and links to our cultural engagements can be found at www.hector-egger.ch> Kultur

COMPANY HISTORY

The history of the company consists of two parts – the original Hector Egger and the more recently established Hector Egger Holzbau AG. Paul Schär's father worked as a carpenter with the original company and Paul Schär himself completed his training with Hector Egger.

1848 - Hector Egger
The foundation stone for today's brand "Hector Egger" was laid in 1848 by Samuel Rudolf Hector Egger. Over the next 150 years, the company developed into one of the most important construction companies in the Oberaargau region. During his time, the great architect Hector Egger (1880-1956) turned the regional construction company into a recognised and highly respected Swiss brand. The architect Hector Egger wrote architectural history throughout his life and was known for his joy in experimenting with new techniques – in particular with his industrial buildings.

1955 - Oskar Richner
A year before his death, Hector Egger retired from management and appointed Oscar Richner as his successor at the head of the business. In 1961 the business was handed over by the Egger family to Oskar Richner.

2001 - Paul Schär
In 2001, the timber construction division was sold to longtime department head Paul Schär in the spirit of a management buy-out and is now continued as Hector Egger Holzbau AG.

2003 - New Construction Plant I
In September 2003 we moved into our new building on Steinackerweg 18 and put one of the most modern production facilities into operation. Production hall: 72 x 30 m column-free, height 15 m, crane hook height 10 m, Minergie®.

2006 - Mosimann Holzbau
As part of a succession plan, Hector Egger Holzbau AG took over Mosimann Holzbau AG in Köniz on 1 January 2006.

2011 - New Construction Plant II
In order to meet growing demand and to increase the degree of prefabrication, we built Plant II. Production hall: 36 x 76 m (column-free), indoor hall height 15 m, crane hook height 10 m. Annex for offices: 4-storey in timber construction, 4 x 400 m2, Minergie®.

2012 - Photovoltaic Plant II
On the roof of Plant II we built a solar plant with an annual output of 300,000 kWh

2014 - E-gas Station
To continue our solar strategy, we have installed an e-gas station. It is in operation 24/7, supplies electricity from renewable energy and is free of charge for all electric vehicle users until further notice.

2015 - Photovoltaic Plant I
As an extension of the PV plant at Plant II, this installation is even more efficient and we expect an annual electricity production of 375,000 kWh. Overall, we feed 20% more energy into the grid than we consume.

2018 - Expansion to New Zealand
Following our imminent upgrade to robotic machinery in November 2018, we are shipping our existing equipment to New Zealand and establishing Hector Egger New Zealand. Our partners are currently setting up operations with production commencing in February/March 2019.

Plant II (2011) Plant I (2003)

Mosimann Holzbau AG

FACTS

Owner
The Mosimann Holzbau AG in Oberwangen b. Bern is a subsidiary of Hector Egger Holzbau AG in Langenthal. This was part of a succession plan and the takeover took place on January 1, 2006.

Management
Hans Jufer, Delegate of the Management of Hector Egger Holzbau AG.

Employees
More than 20 employees. 3/4 of the team are carpenters and 1/4 in the GL / project management, plus 4 apprentices. The timber element production takes place at Hector Egger Holzbau AG in Langenthal.

Know-how
• High-tech timber construction (element production by Hector Egger Holzbau AG)
• Carpentry
• Window
• Renovations
• Service

Quality assurance: ISO 9001 (QM)
Sales: approx. CHF 6 million
Action radius: Bern and Western Switzerland.

COMPANY HISTORY

1909 - Emil Mosimann sen.
Emil Mosimann founds Mosimann Holzbau AG in Köniz.

1937 - Emil Mosimann jun.
Son Emil Mosimann takes over the company from his father. Mosimann, as a planner in Köniz, was responsible for the construction of many of the town's landmark buildings and played an active part in shaping the village. In 1956, the local church tower in Spiegel was built. In 1966, Mosimann Holzbau AG built the largest ice hockey stadium in Europe. The timber construction roof continues to impress and has undergone extensive renovation.

1974 - Peter, Emil & Jürg Mosimann
The management of the company goes to the sons Peter, Emil and Jürg Mosimann. From 1990, Mosimann Holzbau AG becomes the first timber construction company in the region with the planning and production of timber frame construction. In 1991, Peter Mosimann dies. His brothers continue the business until the sale of the company to Hector Egger Holzbau AG in 2006.

2006 - Succession
As part of the succession plan, Mosimann Holzbau AG is sold to Hector Egger Holzbau AG. The offices, joinery, window production and the prefabrication for the conventional carpentry are located in Köniz. The industrial prefabrication on CNC systems takes place at Hector Egger Holzbau AG in Langenthal. It is one of the most modern plants in Europe and opens up completely new dimensions for industrial timber construction.

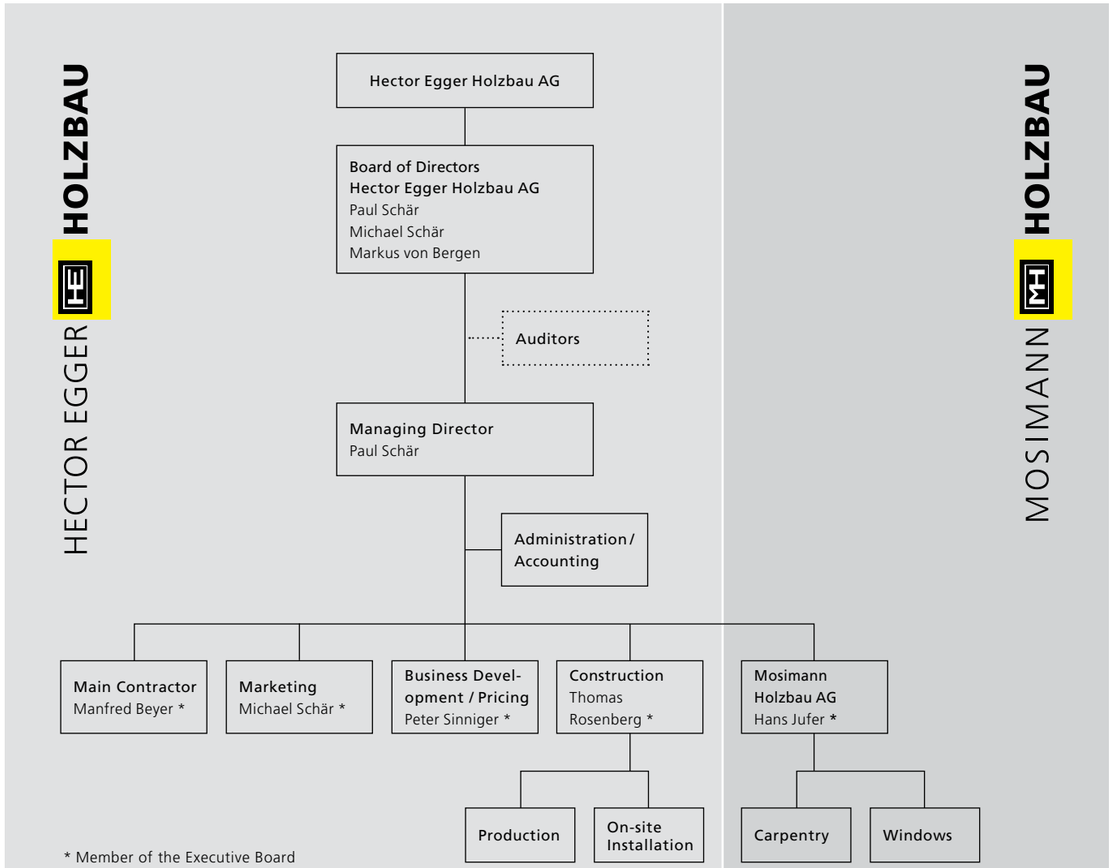
2013 - Mosimann Holzbau & Carpenter ring iron
Mosimann Holzbau AG moved into its new factory complex in Oberwangen near Bern on 1 April 2013. From now on, it will provide its services from a modern timber construction complex. The new domicile is "shared" with the renowned carpenter Ringeisen AG. This is a deliberate decision for a future-oriented collaboration model. We handed over our activities in the classic joinery to our colleagues at Ringeisen. Both companies have their own workshop, but they share the machinery. Both companies have their own offices, but they share the reception and meeting room. Both companies will continue to be self-employed. They see this cooperation as a contribution to a still efficient timber construction and joinery industry in the Bern region.

2013 - Complex Oberwangen
The complex Oberwangen is a timber construction with a usable area of 7500 m2. On the roof, a solar system with a capacity of 320,000 kWh was installed. The complex was built by Hector Egger Holzbau AG as the Main Contractor. The client is Logodom AG from Langenthal.

left:
Church mirror BE.
Church tower in wood, construction phase 1956.

right:
Ice Hockey Stadium, Bern
Europe's largest ice hockey stadium as a timber structure (built in 1967)

Organisation



Hector Egger Holzbau AG and Mosimann Holzbau AG are 100% owned by the Schär family as are the software company Contria GmbH, the Logodom AG (development and realization of construction projects) and the Kino Scala GmbH (70%), all in Langenthal. To bring all these activities under one roof, Paul Schär founded PM Innovation Holding AG in 2008, which is 100% family-owned.

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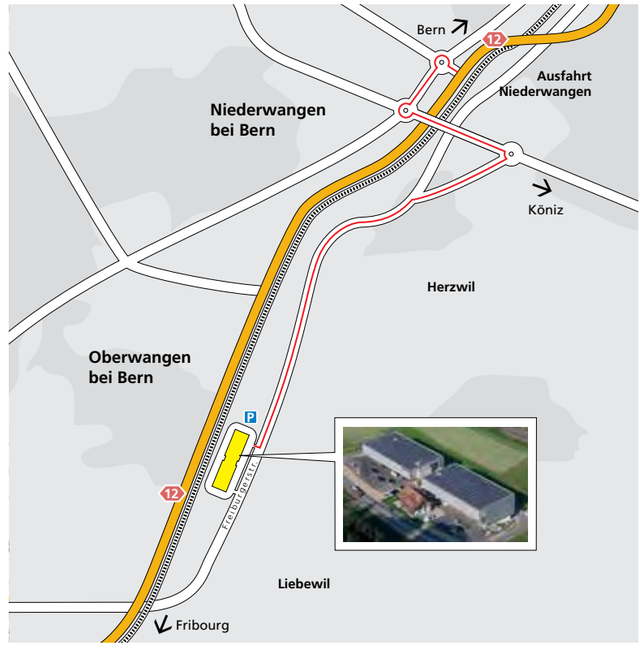

HECTOR EGGER HOLZBAU

MOSIMANN HOLZBAU

HECTOR EGGER HOLZBAU

NEW ZEALAND

Our Commitment to Environmental Sustainability

For millennia wood has provided people with warmth, comfort, and connected us directly with nature.

Increasing public awareness of environmental and energy issues have shifted the use of wood, as a sustainable construction material, to the forefront of modern, ecological building practice. This is for good reason as it is the only sustainable construction material growing worldwide which can enable the significant decarbonisation of the built environment and is energy efficient in every respect.

Globally the construction industry accounts for 38% of total CO2 emissions and uses 35% of global energy resources, as such, it is critical to understand that every cubic metre of wood that can be used, instead of another building material, potentially reduces CO2 emissions by an average of 1.8 tonnes.

Hector Egger Holzbau has for decades focused on promoting sustainability practices using wood from sustainably managed forests as a primary construction material.

The company has continually invested in high-tech timber processing and the latest fabrication technology and has a proven track record of timber construction innovation. Since 2003 Hector Egger has taken advantage of the latest CNC milling technologies so that today prefabrication levels of up to 80% can be achieved for timber frame building. This in turn translates into huge time and energy savings on the building site.

In addition to the utilisation of the latest technology, up-front planning and logistics play a key role in Hector Egger's construction methodology. Innovative prefabricated engineered timber construction goes far beyond conventional timber construction. The resolution of the complex interplay between design, planning and logistics can yield substantial efficiencies over conventional construction especially at scale.

Our design management team are involved from the outset and draw on their specialist knowledge of sustainable construction methods and materials to scrutinise every step in the pre-construction to construction process chain for optimisations to save materials, time, and energy. Our quality management system is aided largely by specialised cloud software that has been developed in-house.

Our timber comes from sustainably managed NZ pine forests through suppliers that are FSC and ISO 14001 certified.

We build High Performance, Low Maintenance Buildings

For well over a century Hector Egger has been building high quality, low maintenance buildings. Timber buildings not only create a fantastic warm, dry, feel-good climate, they also provide health benefits for their inhabitants. Wood saves a lot of heating energy thanks to first class insulation properties and fewer cold bridges. If detailed properly timber can be used without any chemical treatment and exceeds other building materials in terms of fire protection.

High-tech prefabricated construction using CNC technology, engineered beams, and efficiently designed connections makes the realisation of timber structures today that were unthinkable just a few years ago. From high-end architectural homes to affordable housing, aircraft hangers to 6 storey residential buildings, precision engineered timber solutions cover all of these possibilities.

HECTOR EGGER HOLZBAU NEW ZEALAND
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History - 170 Years Practising Sustainability

In 1848 company founder Hector Egger chose to use wood as a sustainable construction material. Since that time sustainable thinking and investment have been at the heart of Hector Egger's corporate culture.

A brief outline of our history illustrating our investment in sustainability practices is set out below.

1848	Founded by Samuel Rudolf Hector Egger in Langenthal, Switzerland.
1909	Emil Mosimann senior founds subsidiary Mosimann Holzbau AG in Köniz.
1916	Architect and company head Hector Egger starts experimenting with new construction techniques and promotes a design led approach leading to the Hector Egger brand gaining recognition throughout Switzerland and internationally.
1937	Emil Mosimann junior takes over Mosimann Holzbau AG and begins building many landmark buildings in Köniz.
1964	Hector Egger AG launch timber frame construction business.
1966	Mosimann Holzbau AG build the largest ice hockey stadium in Europe incorporating a large span timber roof.
2001	Hector Egger Holzbau AG, the successor to Hector Egger AG, is formed by new owner Paul Schär.
2003	Hector Egger's new state of the art Factory Plant 1 in Langenthal established. First ever wooden factory hall to achieve the Swiss Minergie certification for low energy consumption buildings.
2006	Hector Egger Holzbau AG acquires Mosimann Holzbau AG as part of succession plan.
2011	Factory Plant 2 in Langenthal established.
2011	Opened community canteen Z3 in Factory Plant 2
2012	Rooftop solar farm installed to supply 300,000kWh power to Langenthal Factory Plant 1 & 2.
2013	Mosimann Factory Plant (Oberwangen) refurbished
2013	Rooftop solar farm installed to supply 320,000kWh power to Mosimann Factory
2014	Installed E-gas Station to promote e-mobility with renewable energy. Supplies free energy to Langenthal electric vehicle users.
2015	Extension of Rooftop Solar farm at Langenthal Factory Plant 1 to upgrade supply to 700,000kWh which is 30% more energy than consumed by the factory.
2018	Partners agree to expand Hector Egger to New Zealand, the first factory outside Switzerland, together with Stephan Mäusli and Tristan Franklin.
2021	Cromwell (NZ) Factory Plant established, and production is started.

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HECTOR EGGER HOLZBAU

NEW ZEALAND

Selected Projects - Completed…

QT RESIDENCE – HENZ Installation Completed March 2020.
High-end, high performance residential home in Queenstown.

HECTOR EGGER FACTORY – Completed as Main Contractor November 2020.
Two level office building 450m2 / Factory Building 2,660m2.

LUGGATE COMMUNITY HALL – HENZ Installation Completed November 2021.
New Zealand's first Passive House Certified Community Building.

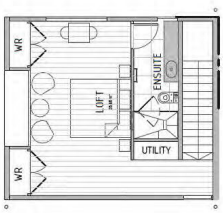
NORTH VILLAS – Completed as Main Contractor March 2022.
Residential development with twelve separate unit titles.

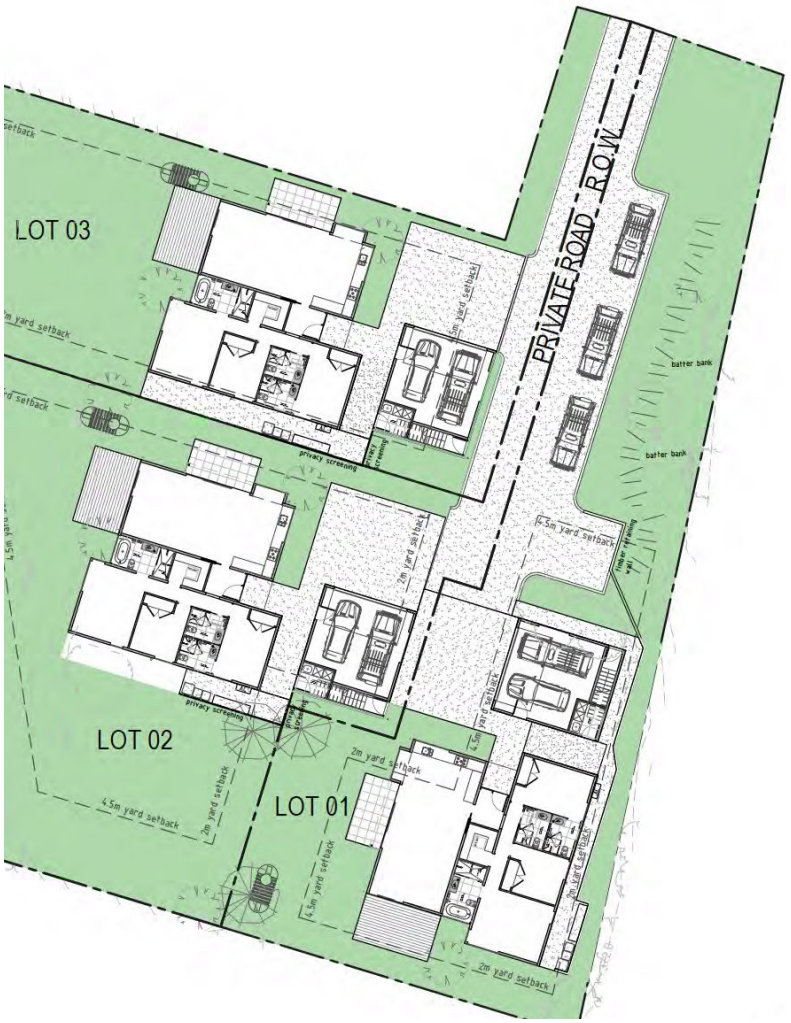
WILLOW POND – Completed as Main Contractor December 2022.
Residential development with 62 separate unit titles.

HECTOR EGGER HOLZBAU

NEW ZEALAND

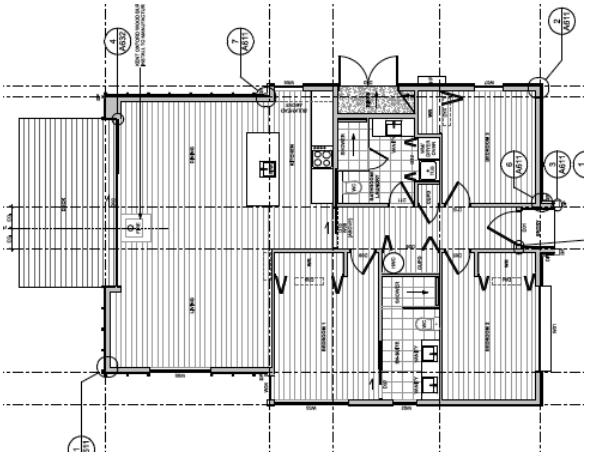
Selected Projects - in Progress…



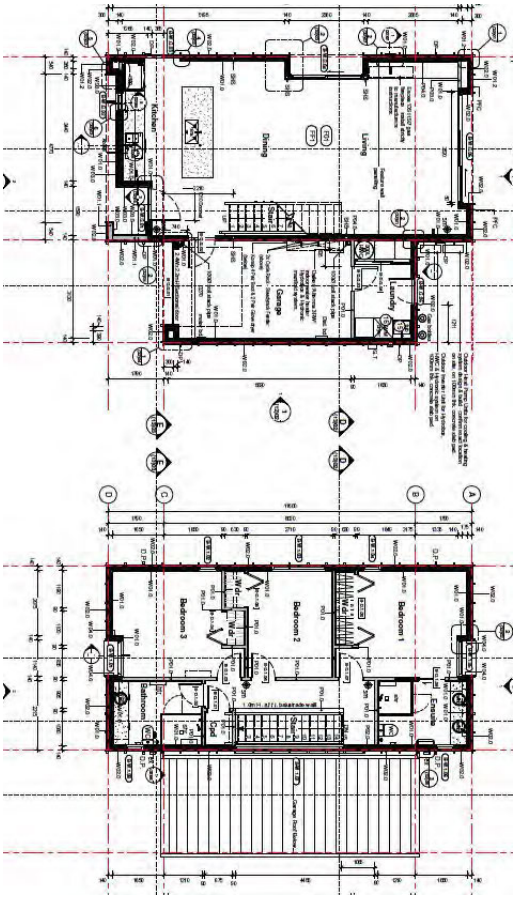


MCKENZIES SHUTE – Completion as Main Contractor June 2023.
Development with three high performance residential homes.

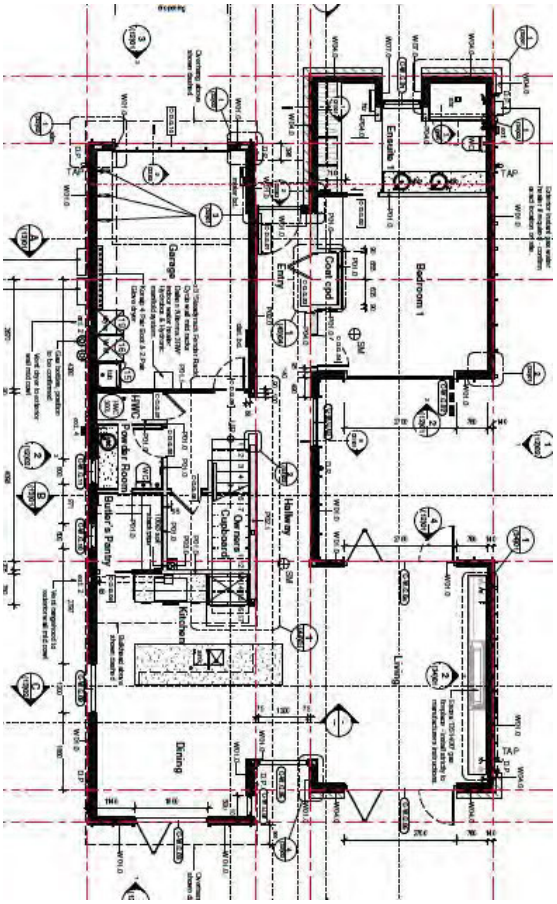
LOT 13 LOFT BUILDINGS – Installation underway since February 2023.
Seven commercial buildings with second floor prefabricated by HENZ.



CARDRONA HOUSE TYPE A – Production underway, installation starting Aug 2023.
Large scale residential development with repetative house typologies.



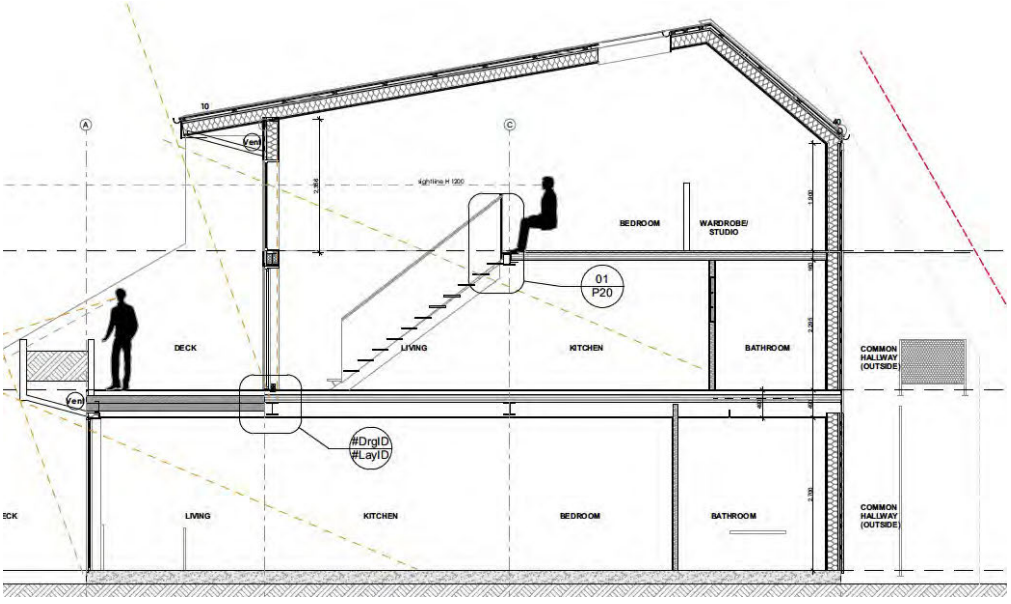
CARDRONA HOUSE TYPE B – Production underway, Installation starting May 2023
Large scale residential development with repetitive house typologies.

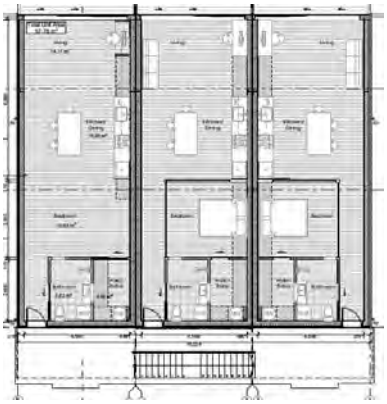


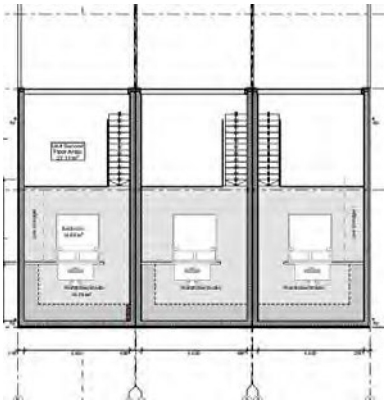
CARDRONA HOUSE TYPE C – Production underway, installation starting May 2023. Large scale residential development with repetitive house typologies.

LOT 13 QUARTERS BUILDING – Production May 2023, installation from June 2023.
Multistorey apartment building with CLT floors and HENZ walls and roof.

Boathouses – Production in June 2023, installation on site starting July 2023.
Townhouse development with six high-end, high-performance homes.







Urban Cocoon, Christchurch – Production anticipated late 2023.
Three story apartment building with six units. CLT floors, HENZ walls and roof.

Hector Egger New Zealand – Promotional Video.
Visit - https://www.youtube.com/watch?v=qliIoAbfFzI