



JAMES BURLEY
STRUCTURAL ENGINEER
CURRICULUM VITAE

JAMES BURLEY CV



PROFILE

James is a highly driven Structural Engineer who has worked on a variety of projects within the industrial, commercial, transport and seismic design space. Through these experiences he has liaised closely with vast consulting and contracting disciplines.

James provides a strong technical ability across a broad range of structural engineering components, positive attitude and enthusiastic communication when delivering a project.

James has proven experience in site supervision of complex construction projects. Through these challenges, he has developed a strong practical ability and approach to design allowing to deliver efficient and timely solutions that meet the clients' needs.

QUALIFICATIONS

BEng (Hon) – Bachelor of Engineering (Civil) with First Class Honours, University of Auckland 2015

CAREER HISTORY

Present, Structural Engineer – Structus Consulting Limited

2015 – 2018, Structural Engineer – Beca Limited

2012 – 2015, Structural Engineering Internship, Fraser Thomas Ltd

MANAGEMENT SKILLS

- Strong understanding of the end goal and project drivers to get there. Provides ability to efficiently scope a project to deliver the solution that meets the client's needs.
- A strong passion for team work and ability to take charge of a team and lead the way for co-ordination of multi-discipline projects.
- Comprehensive knowledge of New Zealand Design Standards and Codes
- Great communication skills. Works well with all forms of clients from site contractors to other consulting teams.

TECHNICAL SKILLS

- Experienced in the structural design of steel, insitu reinforced concrete, timber and masonry buildings
- Ability to undertake new building design as well as proficient experience in seismic assessments of existing buildings
- Proficient user of engineering software such as SAP2000, SAFE, Space Gass, and ETABS.

- Ability to apply practical and innovative engineering knowledge to challenging opportunities.
- Experience in construction supervision, with the ability and willingness to help contractors and solve complex and often unavoidable problems faced during construction.

PROJECT EXPERIENCE

EDUCATION

B907 Exercise Sciences, University of Auckland, Structural Engineer and Job Manager, 2016 – Jan 2018

This project involves the redevelopment of an existing warehouse at the University of Auckland Newmarket campus. The original building comprised large 30m span LVL timber roof trusses spanning onto a reinforced concrete frame with URM infill. James was responsible for structural design of which the scope included; strengthening the roof trusses with steel plates for larger roof loads and code level seismic forces, roof lateral bracing system, new design of a mezzanine floor supported on Posi-strut joists and detailed seismic assessment of the lateral load resisting system and subsequent remedial design of the URM infill walls and shallow pad foundations. James additionally assumed the job manager role and supervised the construction liaising closely with the project team.

B415 Project Gateway, University of Auckland, Structural Engineer and Work Package Manager, Jan - Oct 2018, >\$150M

This project proposes a development on the corner of Wellesley St. and Symonds St at the University of Auckland. The building comprises a 12-storey tower structure, for wet labs and office space, along Symonds St with

a 3-8 storey podium structure for breakout and teaching space connected to the Eastern side. Both structures comprise composite concrete slabs supported on Cellular/tapered steel beams with BRB lateral bracing systems. James was responsible for the concept design of the tower structure including; the gravity load system, lateral load system, ground retention and foundation system and building services co-ordination. The building is to be the 'gateway' to the university, therefore requiring creative design solutions.

B405 Engineering School Peer Review, University of Auckland, Structural Engineer, Mar - Sept 2017

James was part of the structural team providing the verification for an external firm's structural design for the new engineering school at the University of Auckland. The project involved complex problems and structural details that needed refining through into the late stages of design including; lower level diaphragm and foundation systems, basement shear wall design, gravity load system, roof plant structure and the façade support system. Through this job James advanced his technical ability and interpersonal consultancy skills through a series a meetings and design discussions with the project managers and structural engineers on the job.

ACG Egress Stair Structural Strengthening, ACG Pathways, Structural Engineer and Work Package Manager Jan - Oct 2018

James' role for the project was Structural Engineer for the strengthening scheme of the facilities emergency egress systems. The scope included the structural strengthening of the timber stairs for gravity egress and lateral seismic loading. The job was confined to a

small geometric space and a number of site constraints requiring modelling analysis to be undertaken and the development of highly detailed solutions.

FOOD AND BEVERAGE

Hawkes Bay Winery, Delegat, Structural Engineer, 2015 - 2016

The project involved the fit-out structure throughout the winery plant. James was responsible for the structural design of large pipe racks, walkways, platforms and tank supports. The project included complex co-ordination challenges with mechanical, hydraulic and electrical services as well as existing structure, developing James' ability to provide unique solutions.

Project Spark, Lion Brewery, Structural Engineer, Oct 2015 – Oct 2016

This project was the relocation of the sparkling wine plant to Lion's "The Pride" brewery in Ormiston, directly adjacent to the main building. The structural scope was to design a steel portal frame superstructure housing the wine tanks that sit on a large raft foundation pad. The raft was supported by 40m deep steel piles bearing onto rock. James was responsible for all the structural works involved in the project which additionally included pipe racks and services supports into the main building. James was also tasked with a portion of the construction management.

RETAIL

Pak'nSave Botany Refurbishment, Auckland, 2018-present, \$5m

Refurbishment and extension of the existing store for Foodstuffs North Island, including new entry area structure. Structural

engineering design, Revit documentation and construction monitoring.

COMMERICAL

NZICC (New Zealand International Convention Centre), Fletchers Ltd, Structural Engineer, Jan - Oct 2018

James was responsible for the detailed design for several structural components on this large project. James' focus has been towards the secondary structural elements such as large 70m long canopies spanning the full width of the building and detailed analysis of deflection head details for fire rated walls. The tasks had short time frames, co-ordination challenges and strict aesthetic requirements requiring innovative design solutions to be adopted.

AMA Continuing Services, Auckland Motorway Alliance, Structural Engineer, Oct – Dec 2016

James was responsible for the SH1 bridge barrier structural upgrade. The barrier was to be installed onto an existing bridge and required a detailed SAP analysis and understanding of the structural load paths.

Sky City On-Going Services, Sky City, Structural Engineer, Jun - Oct 2018

James was the structural engineer responsible for a number of structural fit-out jobs for Skycity Auckland. The works included the preliminary through to detailed design of mezzanine floors, outdoor canopies and secondary structural support of operable walls. As part of this role James co-ordinated directly with the Architect, client representative and site contractors undertaking the works.

Norval Medical Centre – Concept Design, Structural Engineer, Oct - Nov 2018

New three storey Medical centre and retail at ground level on street frontage. Structure typically comprises a steel gravity support structure with precast concrete double tee floors. The lateral load system consists of precast panels in both directions. James was responsible to the structural conceptual design.

INDUSTRIAL

El Kobar and Underwood 2500 Units, Auckland, 2018 - present, \$20m

New high specification warehouses – 3 no. for the El Kobar project and 1 no. for the Underwood 2500 project – with associated two storey offices for each warehouse, constructed on high profile sites along Highbrook Drive. The warehouses typically contain large spans for the hot rolled and welded beam section portal frames and spine beams to create large open warehouse space. There are canopies to each warehouse. Site retaining walls required to overcome the site topography. Hard stand paving throughout the development for heavy vehicles. Structus are engaged for structural engineering design and construction monitoring from concept through construction.

CIVIC

Manukau Bus Station, Auckland Transport, Structural Engineer / Work Package Manager, Oct 2016 – Oct 2017

The Manukau bus Station is to be the main transportation hub for South Auckland. The building comprises a complex geometry and has a strong architectural persuasion. James was the structural representative responsible for supervising the construction. This task involved liaising closely with the client and

project team, additional design work and co-ordination of structural components with architectural, civil and building service aspects. The building was to be constructed in tight time frame of 10 months; demanding precise, practical and efficient decision making. The construction supervision allowed for the development of practical design thinking and the ability to apply them to of future projects. This ultimately ensures the delivery of buildable solutions and a well co-ordination system.

SEISMIC ASSESSMENTS

Countdown Tauranga, Detailed Seismic Assessment, C&C Trustees Ltd, Oct 2018– Present

The project involved the Detailed Seismic Assessment for the Countdown building in Tauranga. The building comprises a large steel portal frame superstructure which sits on a concrete car park basement structure. The basement structure comprises a TT slab spanning onto Deep RC beams supported by RC columns. James was responsible for assessment of all the structural components within the building.

Golden Bay Cement (GBC) Seismic Assessment, GBC, Jan – Jun 2016,

This project involved the seismic assessment of over 30 buildings throughout New Zealand, including the main manufacturing plant in Portland. James had job manager role for the project and was responsible for seismic evaluation of all the buildings. Various materials and types of structures were assessed including concrete block, steel structures, reinforced concrete and timber framed buildings.

217 Broadway Seismic Strengthening, Smith and Caughey, Jul 2016 – Jul 2017

The building was originally constructed circa 1950 and was an earthquake prone unreinforced masonry structure. James was responsible for the structural design of the strengthening system. He also supervised the construction of the retrofit.

Air New Zealand Seismic Assessments, Air NZ, Structural Engineer, Oct 2017 – Jan 2018

James was the structural engineer responsible for the Detailed Seismic Assessment of some of the buildings located at the airport. The job required a strong understanding of seismic engineering and application of the NZ Seismic Assessment Guidelines.

Marist Colleges Seismic Assessment, Marist Brother, Structural Engineer, Sept – Dec 2016

James was responsible for the Detailed Seismic Assessment of a URM structure at Marist Boys College. The Job involved structural site inspections and detailed seismic analysis through the NZ Seismic Assessment Guidelines.

POWER

Deer Park, AusNet Services, Structural Engineer, May – Sept 2015

James was the structural engineer responsible for the foundation design of large transmission towers. The job required a detailed understanding of the geotechnical parameters and interaction between foundation structures and the ground. The geotechnical engineers, contractors and transmission line engineer representatives were all based in Australia, providing communication challenges.

MINING AND METALS

NZ Steel Engineering services, NZ Steel, Structural Engineer, Jan - Jun2015

The project involved ongoing engineering services for operation and maintenance of the manufacturing plant in Glenbrook and mining site in Taharoa. James was responsible for several structural designs including tanks & large machinery supports, pedestrian platforms and a reclaim tunnel repair at the mining site.

