

Apprentice Of year 2020 Matt van Bohemen

# Why Apprentice of the Year?

Coming to the end of my apprenticeship I have realised my ability as an apprentice and want to really test myself against some of the country's best. Apprentice of the year will be a great opportunity to gauge myself against other applicants in similar positions and hopefully provide a massive step forward in my confidence.

# **About Beck Building:**

Beck Building is an excellent team of experienced and passionate builders, including two owner operators. We pride ourselves on treating each project as our own build. Providing competitive pricing systems like fixed contract and cost plus which are honest and transparent. Our skilled team is dedicated to producing homes of the highest standard. We take a holistic approach to the whole building process and encourage sound environmental practices. These range from utilising passive solar design and energy efficiency to encouraging sustainable materials. We also aim to reduce site impact and recycle material waste during construction.

https://www.beckbuilding.co.nz/about/

Brent Knight Jamie Beck Owner-Operator Owner-Operator

# About me:

I started with Beck building in Feburary 2017. I started with no idea on the process of building a house. After completing a trial period and being exposed to a few different projects at different stages, I was signed up with BCITO in June 2017 to start my apprenticeship.

From there, my theory work started to progress as I was slowly learning more about the process of building and how each individual task had a knock on, effect if not done correctly.

Jamie and Brent are patient and thorough with teaching me making sure I understand what I am doing, why I am doing it and made sure I know the standard that my work should be at.

I have proven my ability to Beck Building with a hard work ethic giving everything I do my best. As I have progressed through my apprenticeship, Beck Building had given me more responsibility with different small jobs to help me gain confidence

I have recently been given the opportunity to manage a build with Jamie, one of the bosses. Jamie's time is often spent off site where he has been leaving me to manage the day to day task's on site and creating week by week targets to drive the job to deadlines.

This job, currently in progress is a 3 bedroom, study and 2 bathrooms with an internal double garage located in Richmond Heights, a residential suburb of Taupo This has allowed me to manage sub contactors and running an apprentice on site.

The opportunity to run a job has taught me the importance of leadership and to run a smooth safe site. Health and safety's another aspect of the job I have taken over. Running tool-box meetings with staff about our changing site, updating our hazard register, enforcing safe practice, and doing proper inductions.

Running my first job with Jamie has opened my eyes up to the responsibility required of a foreman and has developed me personally as a person. Reading plans and creating my own workload rather than being told what to has made me take the next step and back myself. It has confirmed my theory knowledge and allowed me to put it into practical use. Jamie has been a huge backbone in my learning's throughout this build. He has been able to provide guidance and been a port of call if I required confirmation on any problems.



## The Project: Johnson's Job 7 Korokia Way Taupo

Site Area : 957m2

A Maximum Building coverage of 35% Giving a total of 334.95m2 This Dwelling has a total building coverage of

Dwelling	221.493m2
Carport	18.769m2
Entry Porch	2.445m2
Rear Porch	14.618m2
L'Dry Porch	1.887m2

Total Building Coverage 259.212m2

Complies by 7.91%

Maximum total coverage of 50% giving a total of 478.5m2

Building Coverage	259.212m2	
Proposed Deck area	31.329m2	
Concrete Driveway	165.114m2	
Total Building Coverage	455.655m2	Complies by 2.4%





#### Proposed Finishes Plan Scale 1:50



TAU Al PL

## **Site Preparation**

The start of this job began with setting up the site. Jamie and I went up to the section and had a look at what needed to happen before any building work could begin. A Safety sign was erected and temporary fencing installed.

The site was up a narrow road so front access was restricted but there was a council reserve behind the site which would allow us to direct any large deliveries away from the surrounding houses.

The initial section had a steep gradient from the two neighbouring fence lines which would require retaining to secure the elevated building plot.

The groundworks were carried out by GGL, a local earthworks company. The section was cut to find good ground. The section had a lot of top soil above the hard fill. Rather than rebuild the hard fill which is an additional cost to the project the clients were happy to drop the finished floor height by 200mm to better suit the surrounding environment.

Dropping the finished floor height decreased the gradient from the house to the boundary's which meant that the retaining walls will not be required and the section provides more usable ground.

Soak hole locations were found and the decision was made to install these prior to any building work starting because we didn't want access to become a problem for them in the future.

The site was laser graded so we had a perfectly flat site to start with. A quick check with a laser level confirmed the GGL had done an awesome job so we had a solid base to start with.

The section had two fences to follow as boundary lines, the rear boundary pegs were located and a sting was put up to identify our last boundary.

A rough outline of the building was marked on the ground which allowed us to set up the profiles following the building. Profiles were set back 2 meters giving us plenty of room to setup and brace future boxing.

## The Start:

I set this house out with Jamie and he helped me answer any questions and furthered my knowledge on the process of finding the house position and what to check for. He made sure that I took on some of the responsibility through-out the setting out process so he could test me, but more so, I could test myself and ask for guidance if I got stuck. This set out was the first set out which I could look at the plans and have an understanding of what we were working towards, making sure our final building outline matched what was on the site plan for consent.

## Firth Rib Raft Foundation

This house has a Firth Rib-Raft Concrete slab, which was the first 'pod floor' system I had worked on. Having previously only experienced ring foundation's and conventional concrete slabs me and Jamie had a quick look at the foundation plan and a read up on the firth website to understand how the rib raft system works. The foundation was specifically designed for this house. The system is made up of polystyrene pods which are mapped out around thickenings required for load bearing walls with reinforcing steel tying it all together. Firth have made a very straight forward system which is user friendly and easy to understand.

The slab is 330mm thick as the house has a natural gas underfloor heating system installed. This allowed more concrete throughout the top part of the slab above the pods to make room for the underfloor heating pips. Rather than being 85mm above the pods in a normal rib raft slab we were 110mm to ensure we didn't have any surface cracking with the extra materials inside the slab.

The slab prep was straight forward. Boxing was placed and braced to height along the building outline checking with measurements to double check string lines were correct. Once boxed the DPM was installed. Overlaps and Penetrating pipes were sealed and we could start laying the pods and steel on top. Once all our steel and pods were set up with the correct thickenings, bar chairs and mesh was put down. Underfloor heating was then installed by Renewable Energy Limited.

Once the slab was poured my responsibilities started to grow.



## Framing, Trusses and Rafters:

Before we stood any frames we marked a line 100mm off our hallway wall line from our profiles on our slab so we had a reference line to measure to help set up our frames.

We had a set of pre nail frames delivered to site with the Studlok system and DPC installed to help speed up the process, which were positioned around the slab.

Starting on an external corner we slowly made our way around the slab standing and bugle screwing them together. Screws allow us to easily adjust any frames if something needs to move. Once all our frames were stood and in position we started to stitch them together and installing the top plate straps.

After the frames were all tied together the bottom plates were shot down making sure the corners were in the correct position in reference to the datum line and the floor plan. Bottom plates were then shot down and straightened.

I was able to be left to shoot down the frames but myself following the plans and using running measurements to make sure the frames were positioned correctly.

Jamie help go over the frames once I was finished and moved onto bracing the walls for plum and straight ready for Trusses.

The Dwelling consist of 3 different pitch roofs to give the house a point of difference amongst the surrounding houses.

Trusses were straight forward. They were long and a low pitch which were easily stood and connected to the framing with the required hardware with no problems. Working from one side of the house we quickly had the trusses in position and braced.

A flitch beam was lifted into place and set up by Jamie to form a valley and bear the rafters over the kitchen/living area. Rafters were installed by two other builders from beck building to help get a push so we could get a roof on. Once the trusses were set up we started with the roof framing which included setting up the outriggers, fly rafters and forming the valley out of valley board. The final facia framing was completed and straightened so facia could go up. As Jamie put the fascia up I worked out the purlin spacings and started running purlins.

Once all the Framing was complete and purlins were straightened, the roof was installed by Roofing and Waterproofing Taupo.

Soffits were installed up to the high end of the roof planes, as cladding had to go on first for a soffit flashing to sit on the face of the cladding creating a water tight seal. Once the roof was installed we were at the end of 2019





## Joinery, Cavity and Cladding

The start of 2020 bought a new apprentice to the Beck Building team. He was brought to my site where I was, in charge of our workload and the day to day running of the job. Jamie was still involved but was spending less time on site.

The external walls were straightened and adjusted where needed to make sure our cladding wasn't going in and out.

The house was wrapped in Thermakraft wall underlay and wrap strap was installed to ensure the cavity wasn't compromised by insulation bulging.

All corners were taped with Aluband tape prior to any flashings or battens going on. This ensures that the corners which are the point of weakness in a cladding system have an added layer of protection if water ever got through the flashings.

Windows were cut out and flashing tape was installed according to the plans. Sill bars were set to height and screwed into place. Once windows arrived we could place them in the holes and set them in the middle ready for head flashings. Windows against Linea required a 30mm over hand each side to allow for a 10mm scriber. Windows against Axon only required a 20mm overhang but had window seal foam installed behind the fin to seal against the cladding.

The house has two cladding systems which required two different cavity systems.

### Axon

Prior to starting this cavity system I made sure I had a thorough understanding on the correct method of installation, sourced from the James Hardies website.

The Axon cladding was to be installed on a CLD Cavity system to meet manufacture specifications. This system was a lot of work as the batten is made from a fibre cement product which means that framing had to be perfectly plum and straight as it was not easy to adjust the CLD batten's. The batten' is the structural aspect of the cladding fixed off at 250mm centres and the cladding is just brad on with sika 11FC adhesive sealant being the main form of fixing to the batten.

Once the CLD batten was complete we could set up the 9mm boxed James Hardies flashing to create the external corners. Internal corners flashings were installed behind the CLD batten.

### Linea

The Linea was installed on a timber cavity system which was straight forward and fast compared to CLD. The battens were easily cut, installed and could be adjusted with ease if required with the planer.

This house has boxed internal flashings and soakers for the external corners for the Linea areas. When we finished all the cavity systems with the required flashings an inspection was booked and passed with no problems.

Cladding began with no real problems or challenges.

Axon took some thinking as it is a grooved product, so spacings between corner flashings had to be thought about for a even finish.

Axon will have an Eve's Mould to finish and seal against the soffit. The Linea boards were cut carefully against the raking soffits for a clean finish. Scribers were installed on the Linea to seal off the windows.

The job is currently fully clad with the painter having filled and sanded most of the cladding ready for the exterior painting process to start. Work was interrupted and suspended at this stage due to COVID 19.



## Things this job has taught me:

## Planning

Thinking ahead is a crucial part is a project running smoothly. Having to think a few days ahead to ensure we stay on the timeline. The required materials are on site ahead of time. Making sure the job that was being completed wasn't going to effect the next job in a negative way.

## Time Management

Look at the jobs to do and give myself a timeframe I want to finish them by. Having other workers on site was a test for me as I had to make sure we all had the correct understanding on what was required and how the tasks had to be done in correspondence with the plans and manufacture specifications. All working together to meet goals and get the jobs done quickly but to a high standard.

### Taking some initiative

Taking some initiative and reading plans or finding answers in specification manuals to solve my own questions. Also looking at the job at hand and thinking about what way is going to result with the best outcome.

## **Back Yourself**

Being tested is an awesome opportunity. Having the ability to really test yourself with making decisions and ensuring that the work being complete is done with pride and correctly. Having a younger apprentice asking questions helped develop my confidence as I was able to lead him in the right direction and could answer his questions from past experiences and knowledge gained working through my apprenticeship.

### **Subcontractors**

Having and understanding what they are doing. Making sure that their work wasn't going to impact any of our future work. Communicating with them about what we need to do so they could work in with us.

### **Priorities**

Every Build has inspections, inspecting different work at different stages. Making sure that the job keeps moving forward by prioritising the correct jobs first. Working in a methodical manner to also make sure that jobs are not left out making them harder to complete at a later date.

### **Preparation**

Preparing for a job correctly and planning how to do it. Asking myself simple questions.

Think about the final product, is one way going to look better than another? What needs to be done and is a job going to be easier if done before the current job is complete.? How can you do the job, is there any better way?

## Personal slogan: Clear Communication Creates Clean Construction

Communication is the biggest thing I will take away from this build. Being able to give clear instruction to anyone involved with the building process whether it's the man delivering the skip bin or a worker in the local hardware store. Being clear with all communication helps minimise any possible errors as everyone is working together and all on the same page with the job.

## Future of the Job

Once we can return to work we will be able to start working towards our pre line inspection, framing out for the ceiling with ceiling battens and installing all the insulation in accordance with climate zone 3 and our plans.

A challenge ahead will be framing out the raking ceiling over the living/dining to meet a flat ceiling over the kitchen.

The lining of the house will be very straight forward with 10mm gib walls and 13mm gib ceilings throughout the entire house with the garage walls to be lined in plywood.

Interior doors will need to be hung and set up with a dummy lock so the door stops can be added to the jams prior to painting.

Two showers and one bath will need to be installed once we have installed the Gib aqua line to the bathrooms

Once lining is finished and all the doors are hung, we can install skirting and architraves and let the painter start the interior painting leaving only the fitting off work to do inside.

Porch and deck framing can begin and 140mm vitex decking can be laid.

Carport slates to be installed on the back of the posts.

Drive way to be formed, boxed out and install reinforcing mesh.

I have enjoyed this job and will be proud when it is finished. It has been the challenge that I have wanted as it has tested my ability, and developed me personally especially in the skill sets of organisation, planning, supervision and instruction. I have liked having additional responsibility and being accountable for the completion of many aspects of this job. I look forward to the next job with Beck Building, and hope I will be given even greater responsibility.