

CORBIN MILLS

APPRENTICE OF THE YEAR 2018

JOB SUBMISSION

INTRODUCTION:

Since applying for apprentice of the year in 2017 I have continued to develop as a foreman, gaining confidence and learning the organisation of a building site every day. I am thoroughly enjoying myself in my trade. In February 2018 I became a qualified carpenter and it really has opened up the world to me. I have made inquiries into starting the supervisor qualification through BCITO. This will give me the knowledge and experience to work for myself one day which is part of my long term plan. I have been looking forward to this years competition. Last year I gained a lot of confidence. I am extremely motivated and excited to see where it will take me this year.

In late September 2017 I was allocated site foreman on a 280 sqm architectural build at 541 Perth Road, Okato. Prior to this I was site foreman on a rotary dairy cowshed (which was my apprentice of the year application last year). I organised site amenities, a container for storage, toilet for all the contractors and a temporary power box. I do all of the health and safety on site, namely: inductions, toolbox talks, and organising a health and safety book. This makes all trades on site aware of our daily activities and hazards that come with it. I take health and safety very seriously as it plays a big role in our industry. I have also taken it upon myself to gain an updated first aid certificate. Taking on the role as site foreman over the past year has developed my organisation, communication and practical skills further. I have evolved and believe now I am working and organising a site in an efficient way. I love organisation. I believe in our industry it is the most important aspect above communication and a good work ethic.



3D computer image of residence. Photo supplied from Andrew Crawshaw Architecture.

PROFILES, FOOTINGS AND SLAB:

First day on site required finding and working off boundary pegs to locate the main construction perimeter. The clients required a resource consent as the building runs parallel to a paper road, this meant we had to be extremely accurate with the site set out. Once the site was identified we began excavation. During excavation we required a council amendment as the land had more fall than planned. We had to step the house to garage an extra 150mm and also drop the reduced level an extra 400mm to get the house working better with the land. Setting up profiles was a matter of working out several squares, it was all fairly straight forward.

Footings were a standard 300x200mm size. As I mentioned above the land has a fair amount of fall which required stepping our footings in block modules to keep half a block below ground level. We had a footing plan to work off and also a detailed engineers plan which showed four 3000x1500x300mm footings in each corner of the living area with D16 cages and starters to provide foundation for a 3500mm high masonry bracing wall. The house also contains a cantilevered exterior corner unit. This required engineered footings to take three 90x90mm steel box section posts, one cast in a 1200mm square footing the other two sitting on a thickening in slab and cast with epoxy chemset.

Once the blocks were up we began backfilling and slab preparation, all standard building practise so I won't go into too much detail. We have underfloor heating on the job which is all controlled by ground temperature. The ground heats water in our pipes which run in a field beside the house roughly 1500mm below ground. At this depth the sun has no influence on the temperature of the soil. The pipes run 6 months behind the season so in the summer the underfloor stays cool, and in the winter it keeps warm. A fairly interesting concept I believe. The day of pouring the slab I took part in everything from screeding to finishing.



FRAMEWORK:

All our pre-nail frames and trusses were supplied from Carters New Plymouth. We always get our pre-nail from them as it always comes to a high standard and goes together fairly straight forward. We are located in a very high wind zone. All exterior frames are 6x2 @ 400mm centres. There is also excessive amounts of hardware around the whole build. There is about three times the amount of bracing that is required in the house which is a good peace of mind for the owners. Above the dining area we have a 500x90mm Glulam beam exposed in the ceiling sitting on polished stainless brackets. Our rafters bear on this beam and several others. Setting up these beams were vital. Theres a TPO membrane on the roof so we spent extra care making sure our roof plane was a good as can be. We believe we achieved that. Rafters were 200x50 LVL Hyspans. Setting them out at 400mm centres to work with sheet joins of ply on the roof was just another thing to be keeping on your mind whilst framing. I gave the measurements of the 6m long 300MM PFC beam to cantilever the corner window to the engineer/welder, which then fit with precision. I like to take little jobs like that into my own hands so I know it will come as we need it. All rafters needed dwanging around the perimeter of every sheet of 20mm H.3 CD ply. Laying the roof involved putting down 145 sheets of ply. It was a big day but as we had forward thought as we were setting up rafters/trusses and purlins it all ran very smoothly.









EXTERIOR CLADDING AND LININGS:

A 230x30 cedar fascia board runs the perimeter of this job. I love working with cedar. You have to take care and get every join and mitre perfect. I believe little things like this shows a good carpenter from a bad.

An awesome feature of this house is the negative detailed joints in the 6mm hardiflex soffits. We spent a lot of time and a lot of care setting these up and planning them to get them looking the best we could ie; lining soffit details up with negative joints in the plaster cladding. We also have two 4m x 5m soffits which a lot of thought and effort went in to get the best job possible, as it does with everything we do. Before lining soffits in certain areas we required to clad first then run a soffit flashing above the soffit and down the face of the cladding to waterproof the junction as it has the raking soffits falling to the building. This required organisation and forward thinking as certain areas of the house were all at different stages.

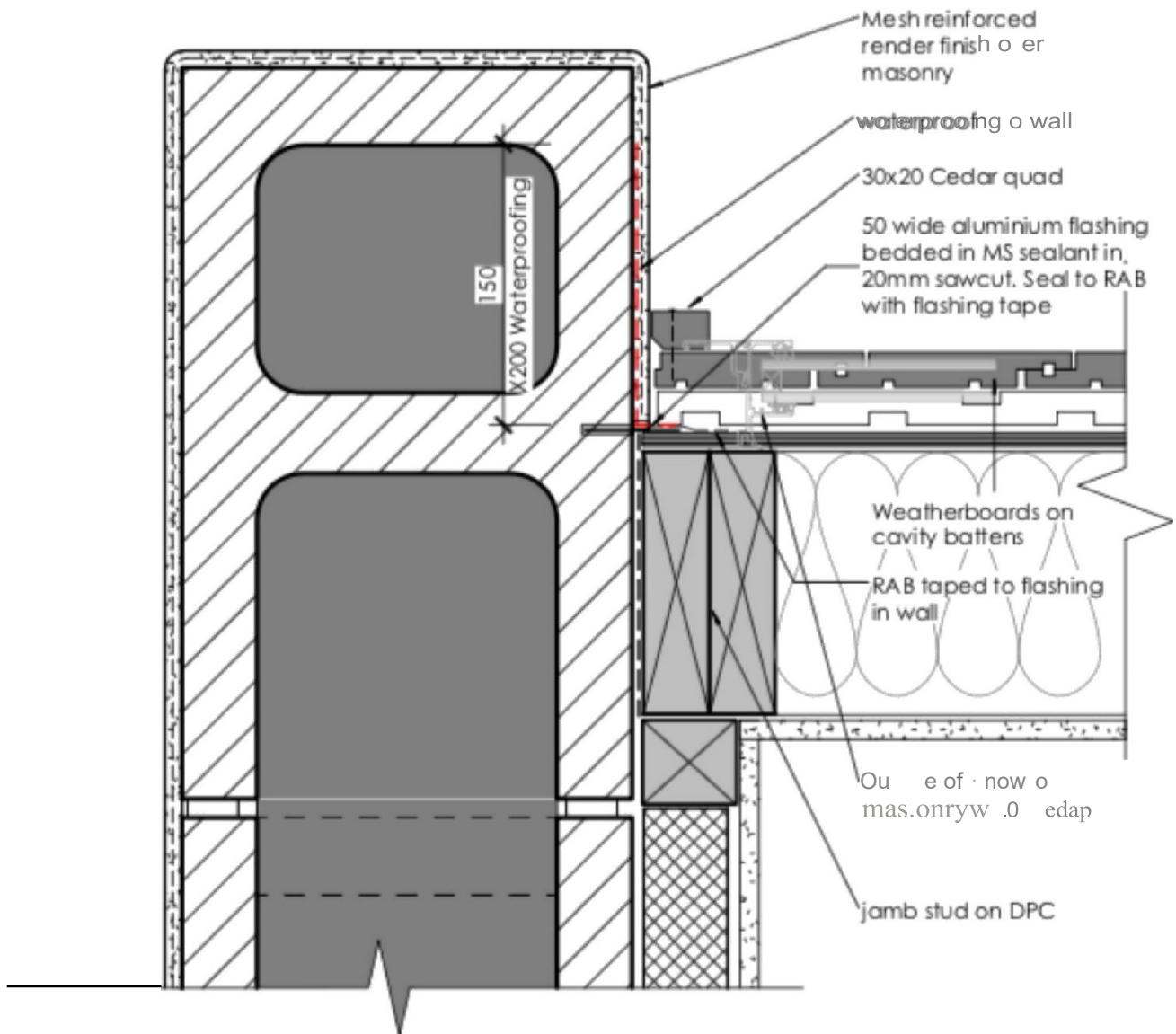
We installed 80% of the aluminium exterior joinery. It was a different approach for us this time as we had no jambs on the joinery. All our gib runs into an adapter which is fixed to the joinery. Measuring the doors and windows involved getting precise measurements off concrete rebate to ceiling batten as we had no tolerance whatsoever as some units run floor to ceiling. Another awesome challenge if you ask me. Head flashings and the

systems that go along with it were all overseen and completed by myself. I installed the corner head flashing which was something new. I did my research and asked around to try and get the best possible result on something I wasn't too sure on and the end product has ended up being a mitred corner which is extremely weathertight and looks good as well!!!

Running up the side of the 3.5m block walls is a 50mm strip of aluminium chased and sealed onto the block, then taped onto the ecoply. This system awesome for eliminating any moisture penetration the junctions.

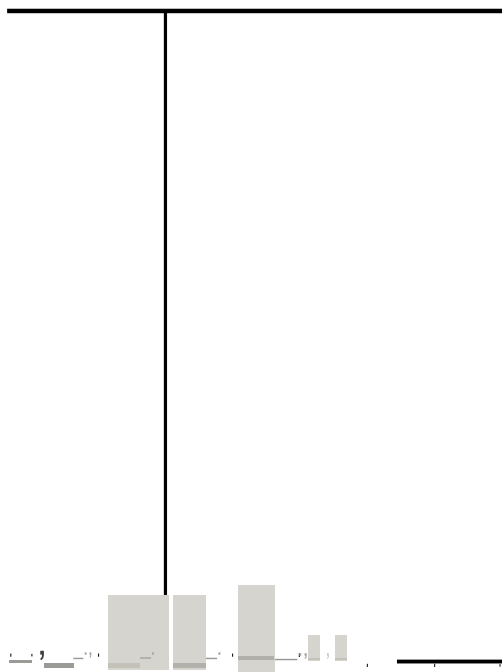
Exterior claddings involve vertical shiplap cedar and specialised EPS plaster. Our cavity behind the cedar involves 7mm ecoply, taped and flashed, with a 20mm castellated horizontal cavity batten. We used PVC foldable flashings for internal/external corners. On the EPS plaster system around the garage we wrapped in thermakraft paper, the 50mm polystyrene then got nailed through a polystyrene 20mm batten to fix onto the wall. All majority of cedar weatherboards were installed by myself. The contrast between the black plaster and cedar is outstanding.





4 - SHIPLAP - MASONRY

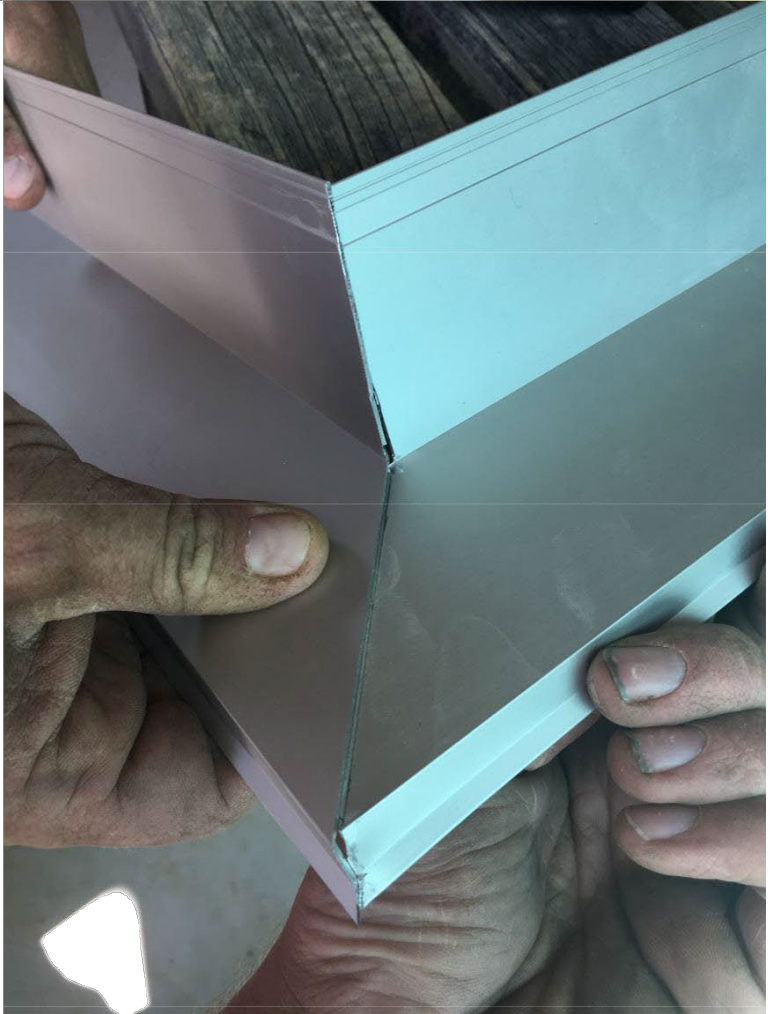
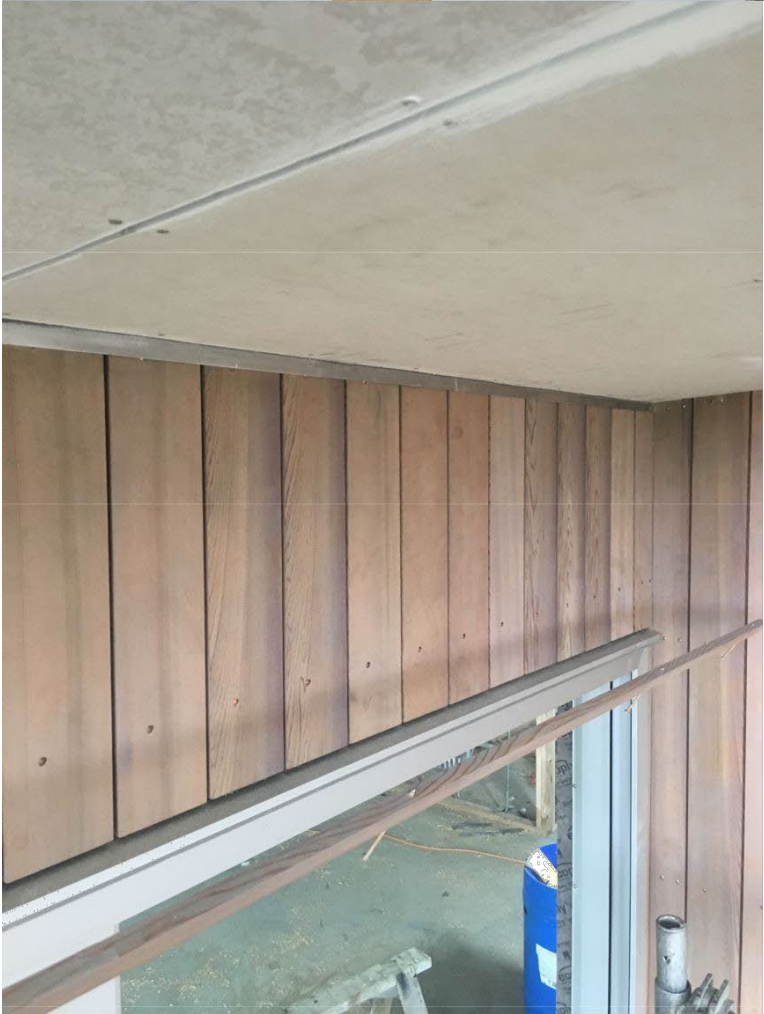
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INTERIOR LININGS/FINISHINGS:

Before lining I organised a meeting with the client to get fixings in the wall. I allowed them plenty of time to thinking about what was required in the way of towel rails, pictures, televisions, speakers and built in mirror units. We then located where they were going and installed fixings according. I then look several photos and kept a good document trail for down the track. This just makes sure we have exactly what we require and it allows the client to get exactly what they want and keep them really involved with us builders.

Interior lining was a simple fit out. I ordered all linings, picking up where brace line and aquiline were required. I believe I worked it out as best I could to minimise waste. We decided to back block every join in the ceiling as there is no ceiling cavity to get to later. This extra work shows the care taken to provide clients with a high quality building that will last. We have a few different aspects around all exterior and interior joinery with our linings wrapping around acting as a jamb and finishing flush with joinery. I was exceptionally pleased with how the concept has turned out as I have never seen it done before. I love seeing new ideas and innovations you pick up working on a construction site. Being around a group of people that very hands on and have different ideas and opinions provides the job we are doing with the best possible finish and result. We have a negative detail running each side of the Glulam beam and around the stainless brackets. All architrave and skirting board is all standard building practise also. I have to organise what areas need skirting board and what areas don't yet as we are getting timber overlay flooring which requires the expansion and movement against the wall. Once installed I can continues finishing. I have been working and being in contact regularly with subcontractors at this point to keep them well in the loop.





CONCLUSION:

I am extremely proud of the new build I have run. The team has finished it to a very high standard and I know the clients are overly pleased with the result thus far. I am thoroughly enjoying running a job and managing the day to day activities. The location is amazing but building so close to the sea required several elements that were non corrosive and hard wearing as its such a harsh environment. This is something that needed to be applied throughout the build.

I have just purchased my first home with my partner which we are both overly excited about. The skills I have learnt over the course of my apprenticeship can now be applied in my personal life to increase the value of my assets. I will be working alone and for myself, and making decisions all falls on my shoulders. I will also be able to learn other attributes ie; budgeting the job and getting together quotes and prices. Also working with the council to get consents. This is all a very exciting time for myself.

I wish to see you on site so I can showcase my new build. I believe you will enjoy viewing some technical and architectural building elements within. This house is such fantastic stepping stone for me and I'm excited to see what lies next. I believe I am a prime candidate for apprentice of the year as year as I show so much passion and ambition towards the construction industry. Every day I get faced with a new challenge and standing back at the end of the day is so rewarding. I want to further my career in the industry.

