

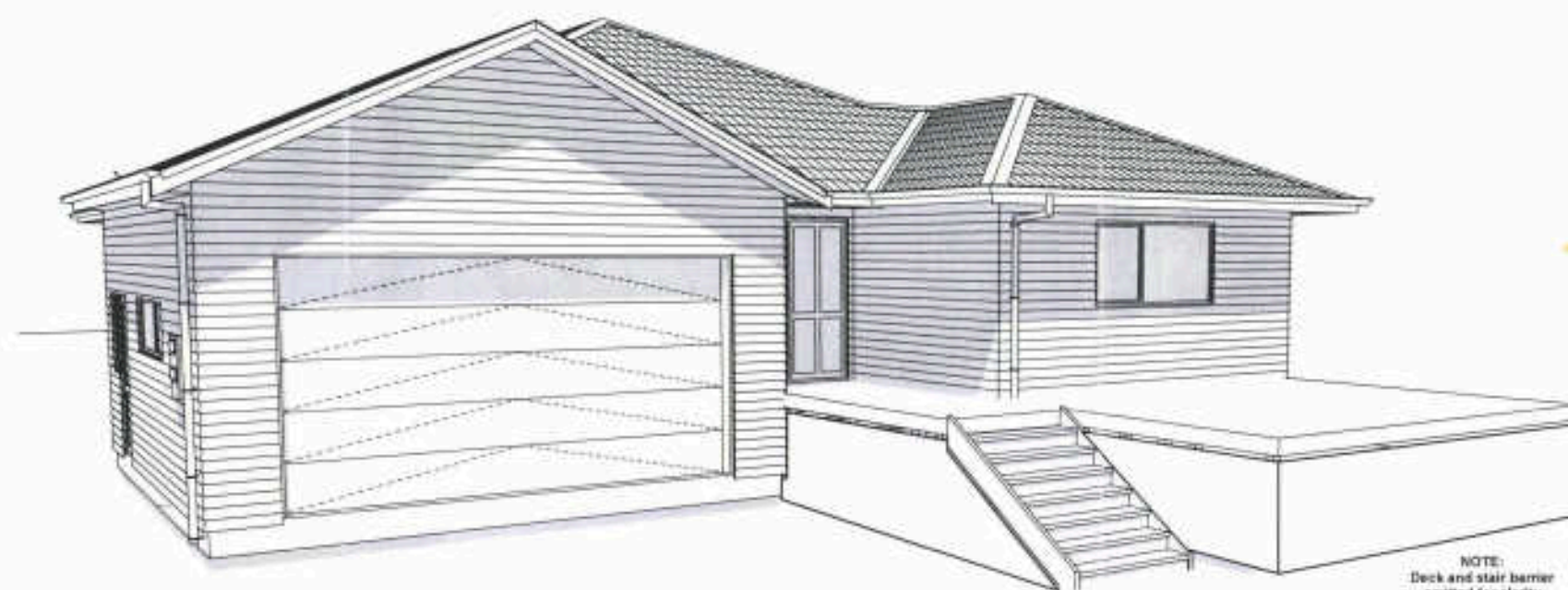
Gourlay Home - Mark Lam

Mark Lam

16 Oakland Place, Ngongotaha, Rotorua,

**COUNCIL
COPY**

Sheet Index	Layout Name	Sheet Index	Layout Name
01	Site Plan	26	Tiled shower Details
02	Services Plan	27	Bracing Calcs
03	Floor Plan	28	Truss Plan
04	Elevations	29	Truss Plan
05	Elevations	30	Engineers Sheet S0
06	Foundation Plan	31	Engineers Sheet S1
07	Floor Framing Plan	32	Engineers Foundation Design
08	Framing Plan	33	Engineers Sheet D1
09	Bracing Plan	34	Deck Balustrade / Handrail Details
10	Roof Plan	35	Electrical Plan (Blank)
11	Electrical Plan		
12	Floor Finishes Plan		
13	Section AA		
14	Section BB		
15	Section CC		
16	Section DD		
17	Floor Framing Details		
18	Cladding Details		
19	Cladding Details		
20	Joinery Details		
21	Roofing Details		
22	Fixing Details		
23	Fixings Details		
24	Linings Details		
25	Wet Area Details		



NOTE:
Deck and stair barrier
omitted for clarity

GH84 CONSENT



RFD002G1T3

Document Number: RDC-992920

Date Registered: 25/2/2020

Document Set ID: 3556115
Version: 1, Version Date: 25/02/2020

F5 Construction and Demolition Hazards
Where work exists is not completely enclosed and unauthorised entry by children is likely, it is acceptable for the specific hazards to be fenced when workers are absent from the immediate vicinity.
If the potential hazard requires a safety barrier, this barrier must comply with Table 1 of NZBC F5/A51.

BUILDING PLATFORM PREPARATION:

Site prepared to O'BRIEN GEOTECH - Geotechnical Assessment for Proposed New House
Project #: 583 - Rev A dated April 2019.
Listed in part below (to be read in conjunction with the Geotech report):
Cleared platform shall be examined and certified by Geotechnical Engineer, any firm to soft cohesive soils or very loose granular soils encountered shall be removed.
Light weight pumice fill approved by the Geotechnical Engineer shall be used to suit minimum floor levels.
A perforated pipe connected to the stormwater system shall be installed around the perimeter of the foundation in line with Geotech report.
A 100mm thick hardfill capillary break shall be provided to Geotech specifications.
A 2 layer enhanced damp proof membrane shall be provided to Geotech specifications.

WIND ZONE:
REGION: A
GROUND ROUGHNESS: Urban/Taman
SITE EXPOSURE: Sheltered
TOPOGRAPHIC CLASS: T1
WIND ZONE: HIGH

SOIL BEARING CAPACITY:
Site prepared to allow for min. 100kPa soil bearing capacity under foundations as per NCS 3604 Specific engineers design required for sites outside these soil conditions.

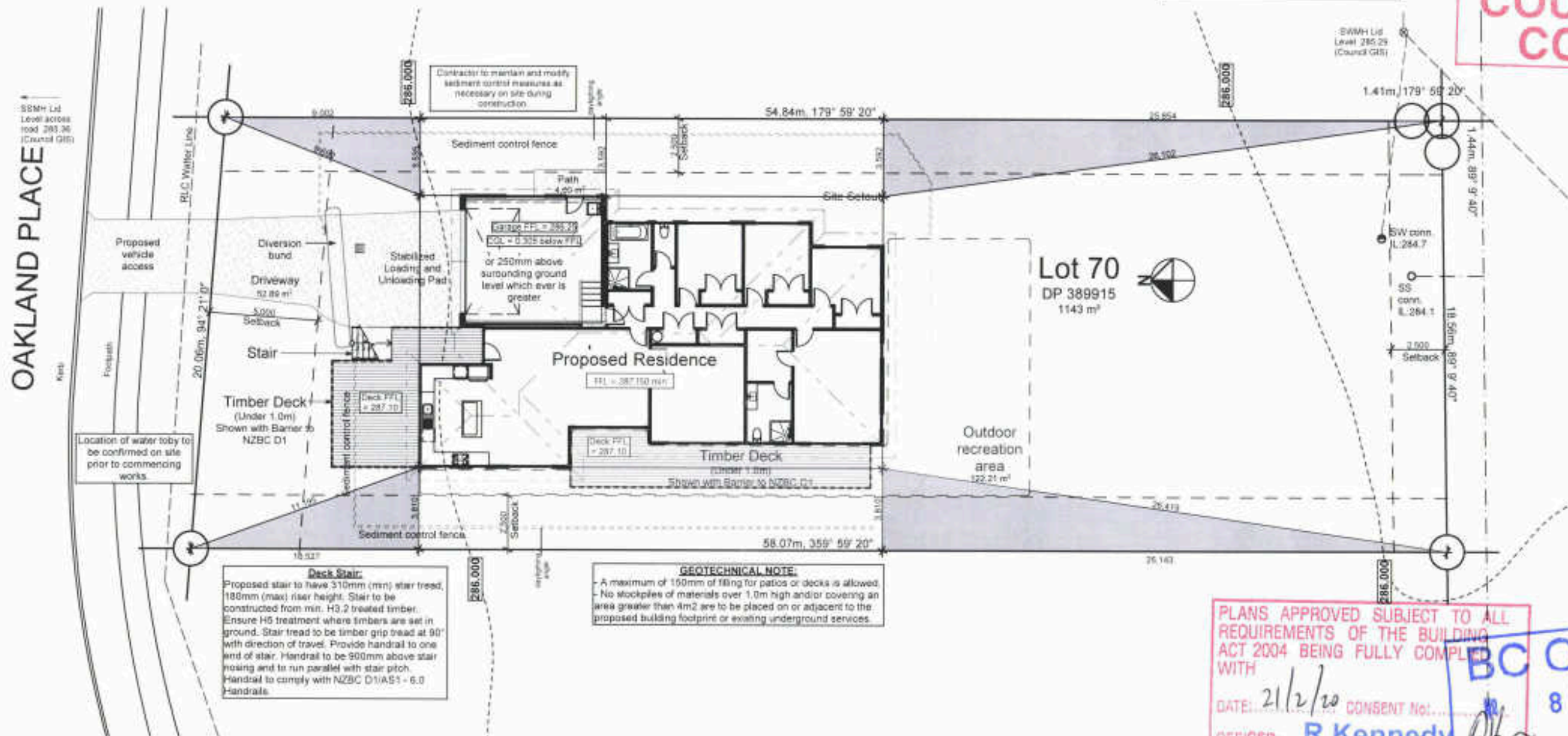
FINISHED GROUND LEVELS:
Finished ground levels adjoining the concrete slab on ground shall be formed to carry surface water away from the residence.
Finished Ground Levels should be a minimum distance below floor levels as detailed under the base details for the relevant cladding finishes.
In general allow 150mm to protected ground such as paving, allow 225mm for unprotected ground.

SLIP RESISTANCE:
Main issue is the entrance to have a slip resistance/friction coefficient of 0.4 as per NZBC D/A51.

SOIL MOVEMENTS:
Soil movements have been determined using the contour data provided. Volumes are for the soil movements to 1.0m outside the building platform and excavation to 150mm below natural ground. For detailed excavation requirements refer to the Geotechnical report under excavation recommendations.

AREA	
SOIL MOVEMENT AREA	281 m ²
SURFACE AREAS OF THE FOLLOWING:	
DRIVE AREA	53 m ²
HARDSCAPE AREAS	4 m ²
VOLUME	
SOIL MOVEMENT VOLUME	45 m ³

COUNCIL COPY



PLANS APPROVED SUBJECT TO ALL REQUIREMENTS OF THE BUILDING ACT 2004 BEING FULLY COMPLIED WITH
DATE: 21/2/20
OFFICER: R Kennedy

BC ONLY
80240

BISHOP ARCHITECTS
P.O. Box 908 ROTORUA
1159 Pukutahi Street, ROTORUA
07 929 9807
john@bishoparch.co.nz

TOTAL FLOOR AREA	213.71 m ²
TOTAL ROOF AREA	259.52 m ²
SITE AREA	1143 m ²
ALLOWABLE SITE COVERAGE	40 %
SITE COVERAGE AREA	219.48 m ²
SITE COVERAGE PERCENT	79.3 %

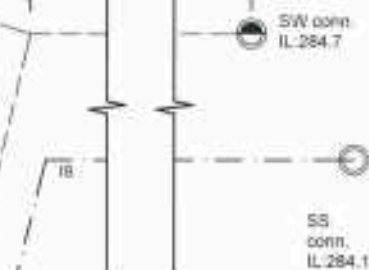
SITE COVERAGE:			
The site coverage of the building is based on the area measured over the foundation line. For covered areas it is based on the area up to 600mm inside the eave line.			
ZONE	ZONE	Residential 1	
WIND ZONE	High	LES ZONE	N/A
EARTHQUAKE ZONE	2	SOIL CLASS	D/E
CORROSION ZONE	B	SNOW ZONE	N0

CONSENT		Site Plan	
Client	Mark Lam	LEGAL DESCRIPTION	Lot 70 389915
Site Address	16 Oakland Place, Ngongotaha, Rotorua.	Job Title	Gourlay Home - Mark Lam
		Scale	1:200, 1:1
		Drawn	JWD
		Checked	MB
		Published	16/12/2019
		Job No	GH54
		Drawing Number	01

ALL DIMENSIONS TO BE VERIFIED ON SITE



1. Fill shall be:
 - Ordinary fill where drains are located below gardens and open country
 - Compacted selected fill where the drains are located below residential driveways and similar areas subject to light traffic



CONSENT

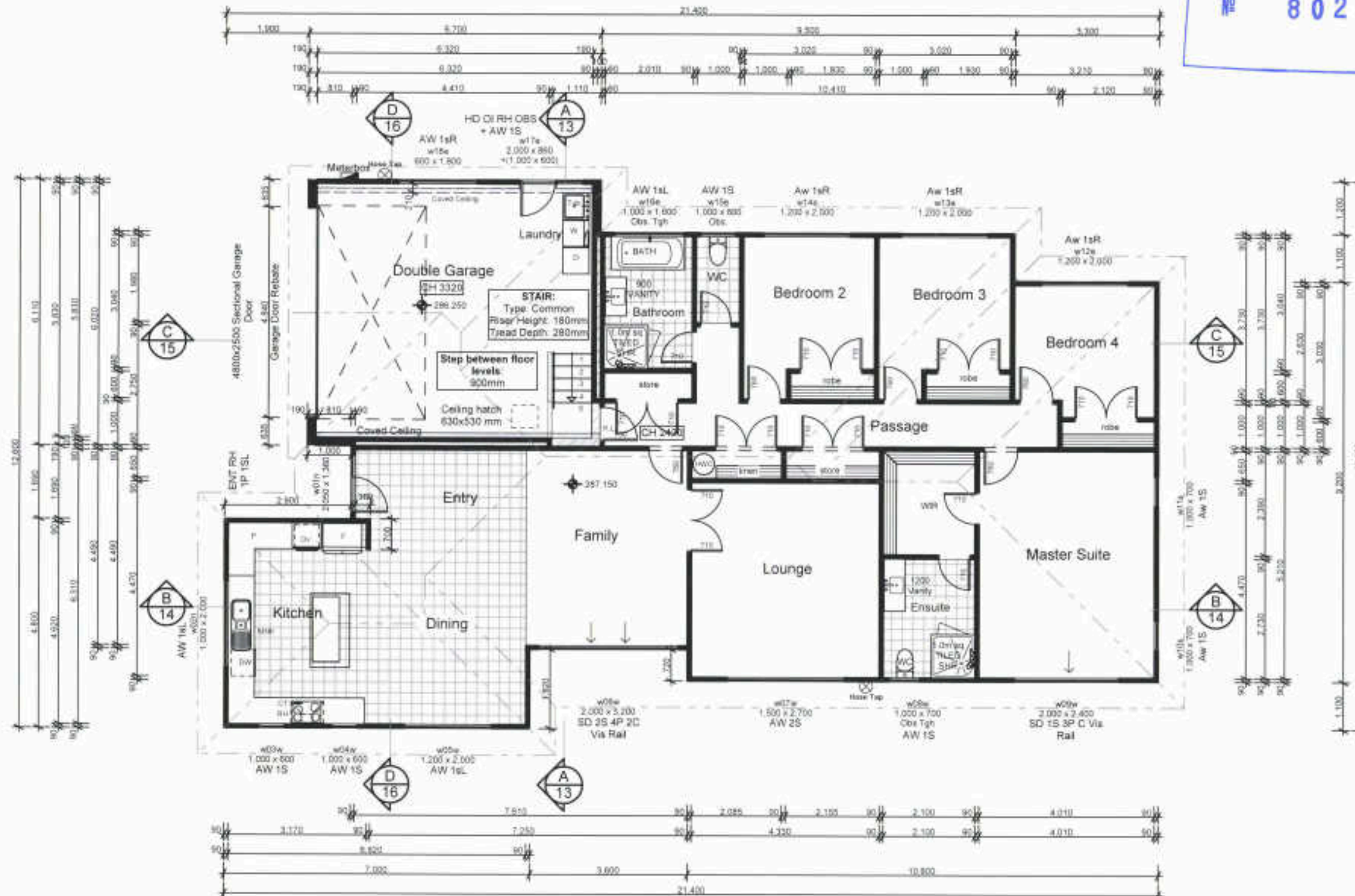
Gourlay Home -
Mark Lam

Drawn	JWD
Checked	MB
Published	16/12/2019

Job No: CHB

Document Set ID: 3556115
Version: 1, Version Date: 25/02/2020

BC ONLY
No 80240



NOTES:

In general all construction to comply with NZS3604 and the New Zealand Building code and all relevant NZA standards whether detailed on these plans or not.

TIMBER WALL FRAMING: Timber grading to NZS3604. Insulation to NZS3602 grading to AS/NZS 1748 or NZS 9631. All knots to be minimum 5G &.

TIMBER ROOF FRAMING: Timber truss layout to producers design. Moisture content 18% at supply.

PLYWOOD: Structural plywood to AS/NZS 2269 for bracing.

SLIP RESISTANCE: Main route to the entrance to have a slip resistance coefficient of 0.4 as per NZBC D1/A51.

ENGINEERED WOOD PRODUCTS: NZS3604:2011 Clause 2.3.9.5. Engineered wood products may be used as a direct substitute for SGR 6 or 10 provided that they are of the same finished size as the member to be substituted and that the strength and stiffness properties have been verified and marked in accordance with NZS 3622 and are no less than the strength and stiffness properties of the grade to be substituted.

ROOF	ZONE	Residential 1
WIND ZONE	High	LES 2DPR
EARTHQUAKE ZONE	2	SCAL CLASS
CORROSION ZONE	B	SNOW ZONE

Garage Area	40.94	m ²
House Area	174.78	m ²
Ground Floor Area	Area 215.71	m ² Perimeter 71.44 m
Roof Area	Area 258.62	m ² Perimeter 72.95 m
TOTAL FLOOR AREA	215.71	m²
TOTAL ROOF AREA	258.62	m²
SITE AREA	1143	m²

CONSENT

Client: **Mark Lam**

Site Address: **16 Oakland Place, Ngongotaha, Rotorua.**

LEGAL DESCRIPTION

Lot No: **70** Section: **389915**

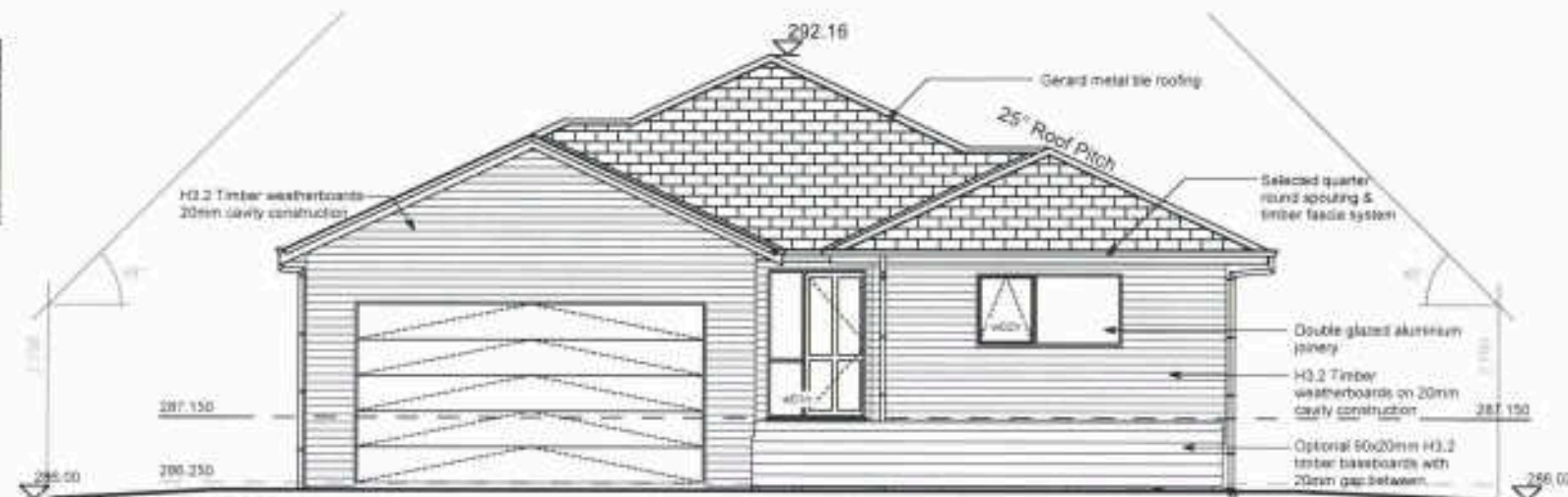
Job Title: **Gourlay Home - Mark Lam**

Drawing Title: **Floor Plan**

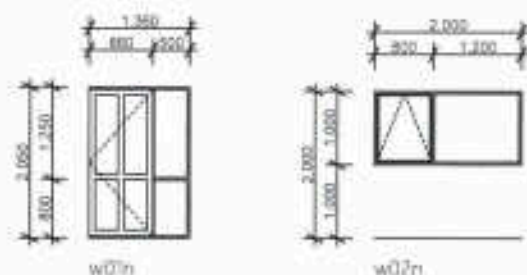
Scale: 1:100, 1:1	Drawing Number: 03
Drawn: JVD	
Checked: MB	
Published: 16/12/2019	Job No: GH84

ALL DIMENSIONS TO BE VERIFIED ON SITE

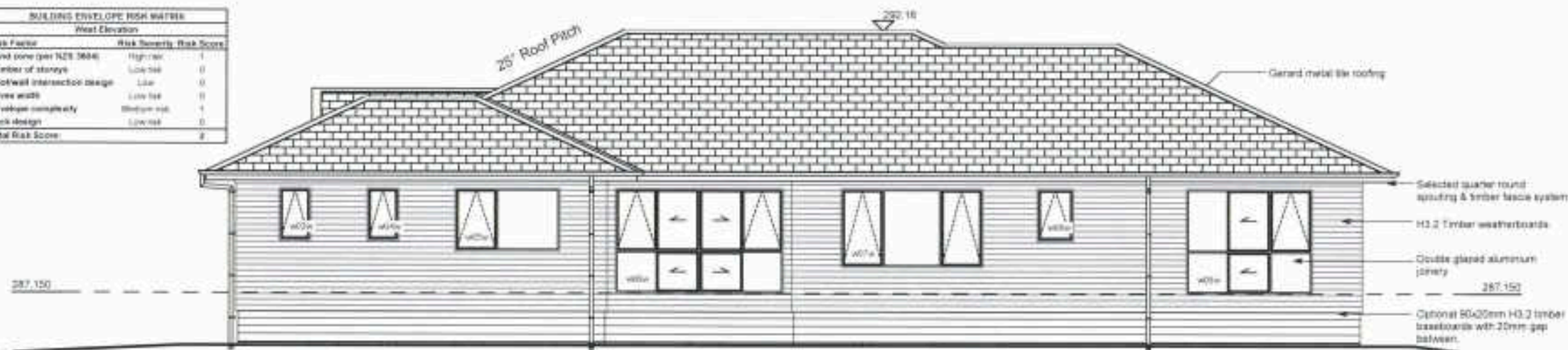
BUILDING ENVELOPE RISK MATRIX		
North Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Medium risk	1
Roof/wall intersection design	Low	0
Eaves width	Medium risk	1
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score		4



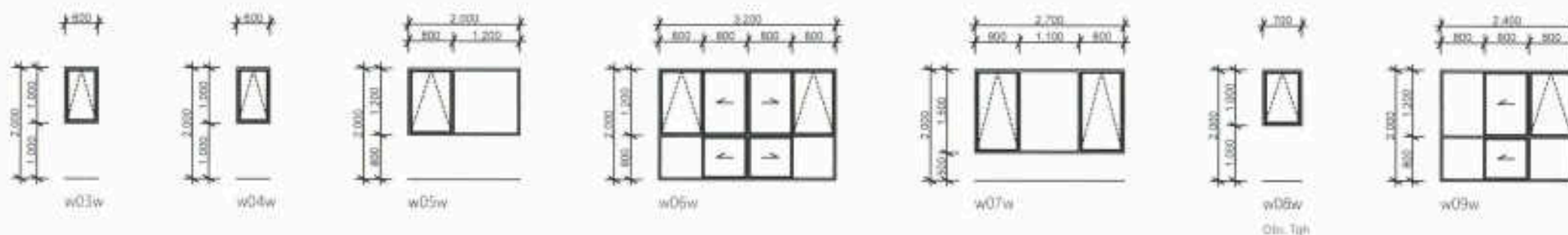
1 North Elevation 1:100



BUILDING ENVELOPE RISK MATRIX		
West Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low	0
Eaves width	Low risk	0
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score		2



2 West Elevation 1:100



BISHOP ARCHITECTURE
P.O. Box 808, ROTORUA
1108 Puketapu Street, ROTORUA
(ph) 07 929 9807
jose@bishoparch.co.nz

BC ONLY
80240

ROOFING
As detailed to comply with NZS 3604
NZS E2AS1.
Pressed metal tile - NZS 4217.

WEATHERBOARD CLADDING:
As detailed on plans to comply with E2AS1
Timber Weatherboards

JOINERY:
All joinery as detailed to comply with NZBC E2AS1:
NZS 4211 & WARE Aluminium Joinery Handbook
Double glazed units throughout

GLAZING:
All glazing shall be selected by the supplier to comply
with NZS 4223 for Glazing in Buildings.

CONSENT

Client
Mark Lam
Site Address
16 Oakland Place, Ngongotaha, Rotorua.
LEGAL DESCRIPTION
Lot No. **70** Section **389915**

Job Title
Gourlay Home - Mark Lam

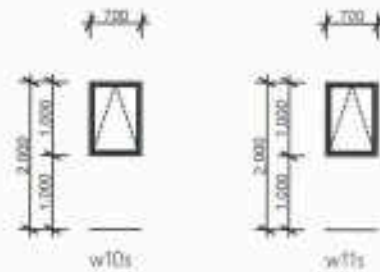
Drawing Title
Elevations
Scale
1:100
Drawn
JWD
Checked
MB
Published
16/12/2019
Drawing Number
04
Job No.
GH84

ALL DIMENSIONS TO BE VERIFIED ON SITE

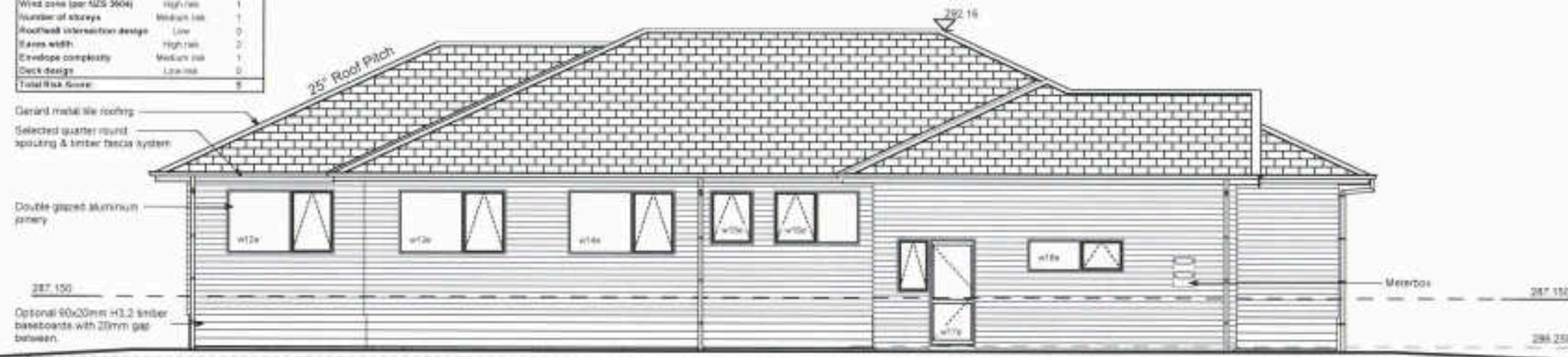
BUILDING ENVELOPE RISK MATRIX		
South Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low	0
Eaves width	Low risk	0
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score		2



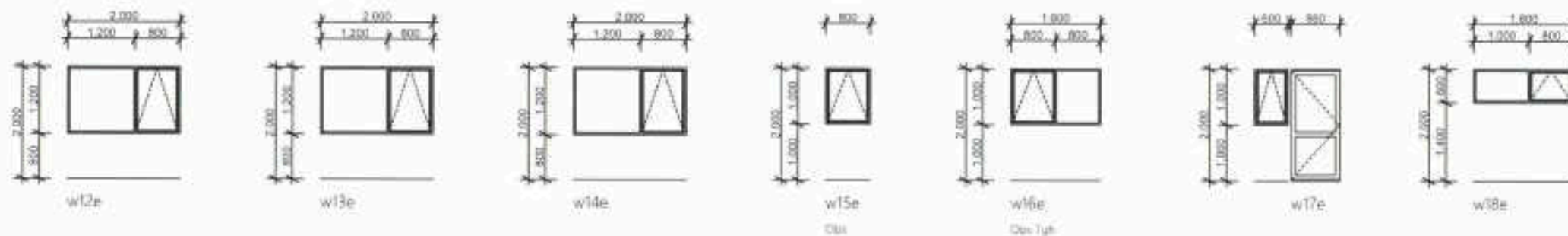
3 South Elevation 1:100



BUILDING ENVELOPE RISK MATRIX		
East Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Medium risk	1
Roof/wall intersection design	Low	0
Eaves width	High risk	2
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score		5



4 East Elevation 1:100



ROOFING
As detailed to comply with NZS3604
NZS E2AS1
Pressed metal tiles - NZS 4217

WEATHERBOARD CLADDING
As detailed on plans to comply with NZBC E2AS1
Timber Weatherboards

JOINERY
All joinery as detailed to comply with NZBC E2AS1
NZS 4211 & WAZZ Aluminium Joinery Handbook
Double glazed units throughout

GLAZING
All glazing shall be selected by the supplier to comply
with NZS4223 for Glazing in Buildings

CONSENT

Client
Mark Lam
Site Address
16 Oakland Place, Ngongotaha, Rotorua,
LEGAL DESCRIPTION
Lot No: **70** Section: **389915**

Job Title
Gourlay Home - Mark Lam

Drawing Title
Elevations
Scale
1:100
Drawing Number
05
Drawn
JVD
Checked
MB
Published
16/12/2019
Job No
GH84

ALL DIMENSIONS TO BE VERIFIED ON SITE

COUNCIL
COPY

RECEIVED

05 FEB 2021

BISHOP

P.O. Box 908, ROTORUA
1109 Pukutahi Street, ROTORUA
07 329 9907
pdc@bishoparch.co.nz

- 80240

NOTES

GENERIC NOTE SHOWN, PLEASE NOTE THAT ENGINEERS NOTES WILL SUPERCEDE ANY COMMENTS MADE ON THESE PLANS. PLEASE REFER TO THE WILTON JOUBERT PSI AND DESIGN.

CONCRETE

One of the following Fifth concrete products shall be used in the system:

1. CONCRETE RAFTMIX

Concrete slump structural mix available in either a 13mm or more usually a 19mm nominal aggregate size. This mix is normally placed in the form straight from the concrete truck chute and if necessary by wheelbarrow over planks set up over the pods.

2. RAFTMIX PUMP

Concrete slump pump mix available in either a 13mm or more commonly a 19mm nominal aggregate size. The selection of aggregate size may be determined either by the capability of the available concrete pump or by the concrete placer's preference.

FLOOR

Waffle Raft floor slab on-ground as per Engineers layout. Edge beams and ribs under load bearing walls are to engineers details to provide for the load specific support.

PODS

Polythene pods to engineers string are placed directly on levelled ground and are arranged in such a way as to form a reinforced concrete floor slab with a grid of reinforced concrete ribs and edge beams when concrete is placed onto them. Pods may be cut to suit specific architecture layout and also to accommodate services.

REINFORCING

Reinforcing steel consists of 500D Ductile mesh in the slab with reinforcing bars in the ribs and edge beams. The reinforcing bars and all welded mesh fabric reinforcing shall conform to NZS 4671:2001 "Steel Reinforcing Materials". Specifically designed spacers are used to position the polythene pods and the rib and edge beam reinforcing steel bars in a secure manner until the concrete is placed. The reinforcing steel mesh is held in place by mesh chairs. Conventional timber or steel formwork is used to form the edge of the slab.

CONSENT

Client:

Mark Lam

Site Address:

16 Oakland Place, Ngongotaha, Rotorua,

LEGAL DESCRIPTION

Lot No. 70 389915

Job Title

Gourlay Home -
Mark Lam

Drawing Title

Foundation Plan

Scale

1:100, 1:10

Drawn JWD

Checked MB

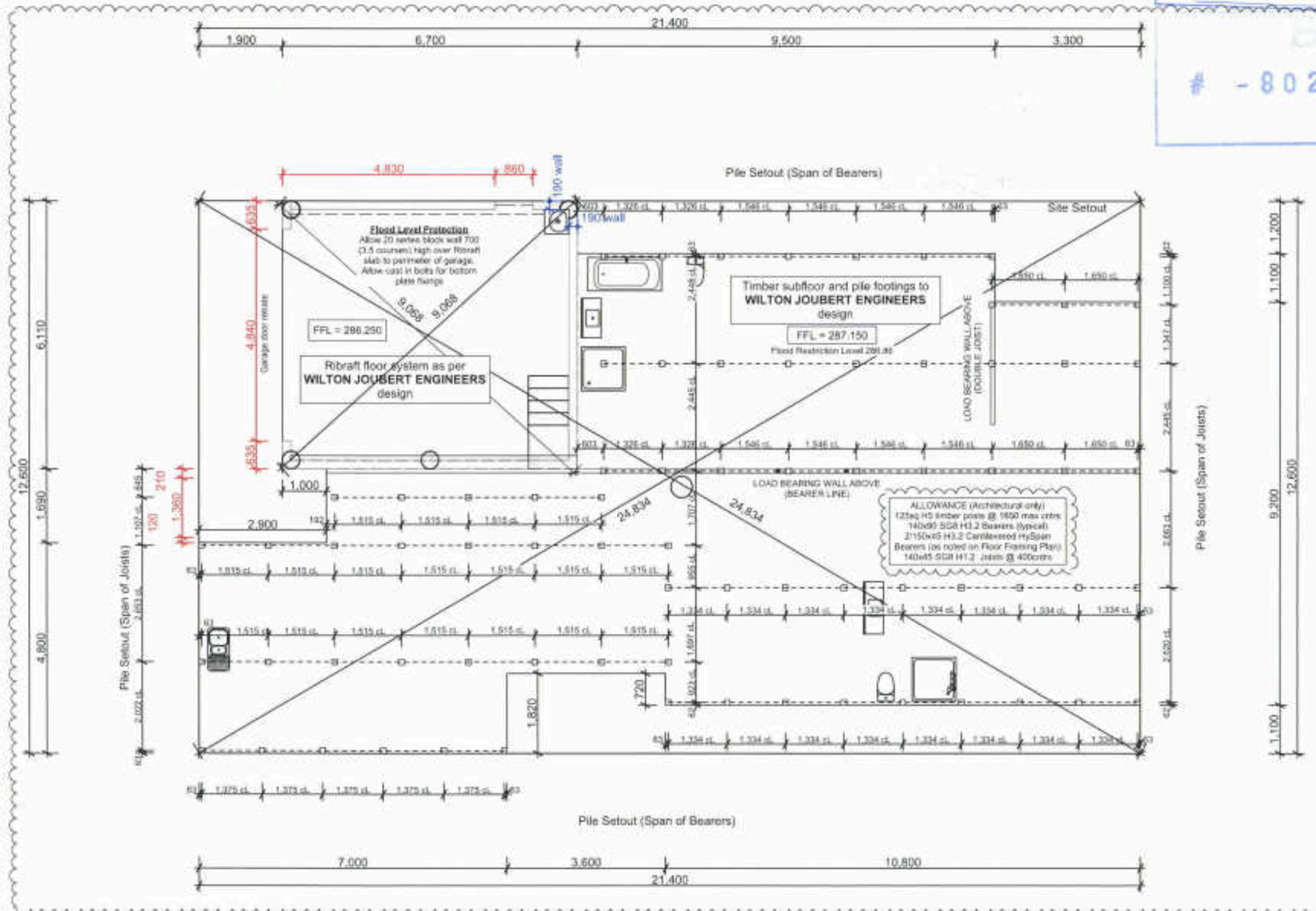
Published 06-Feb-20

Drawing Number

06

Job No. GH84

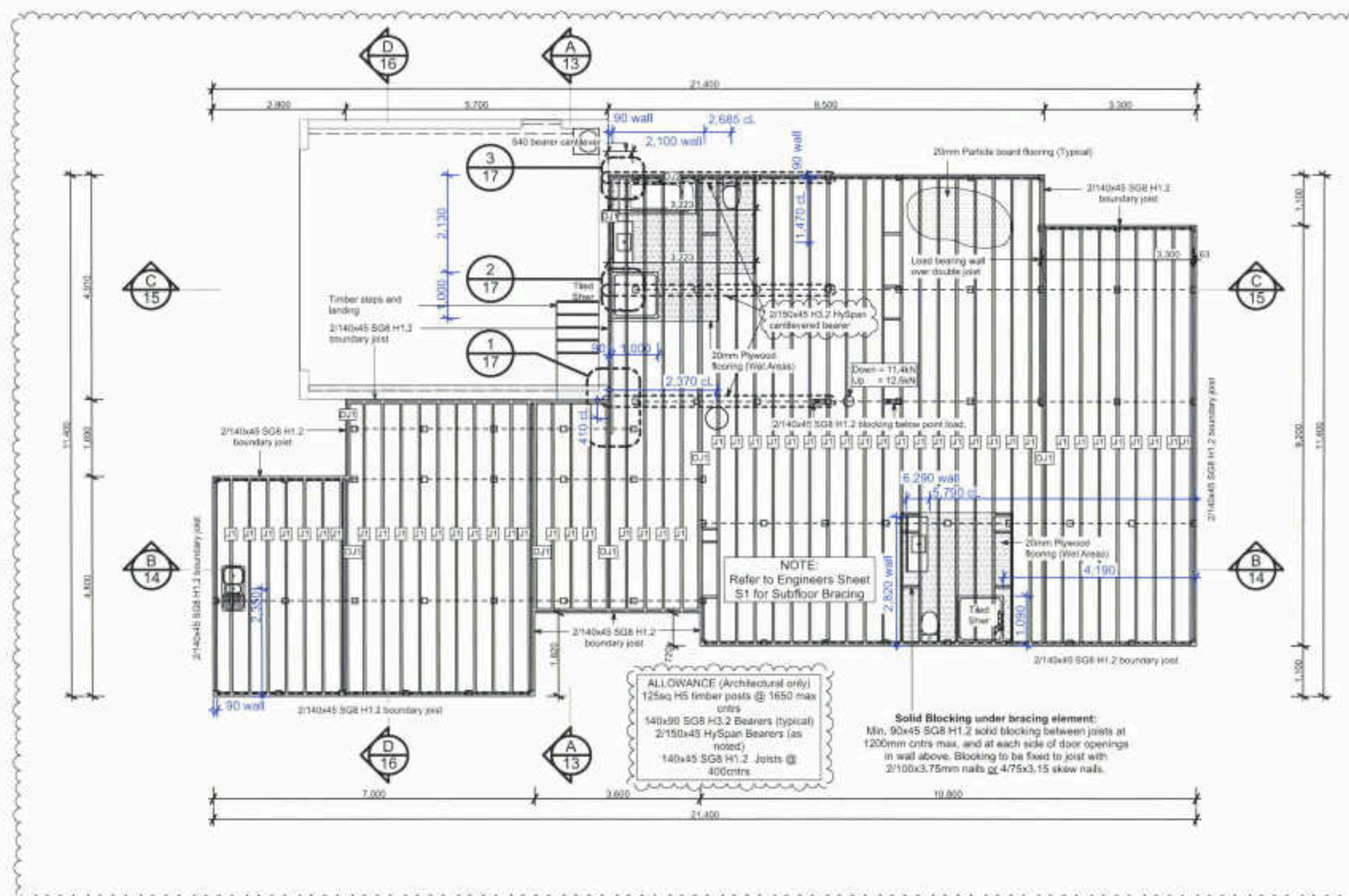
ALL DIMENSIONS TO BE VERIFIED ON SITE



RECEIVED

05 FEB 2020

- 80240



CONSENT

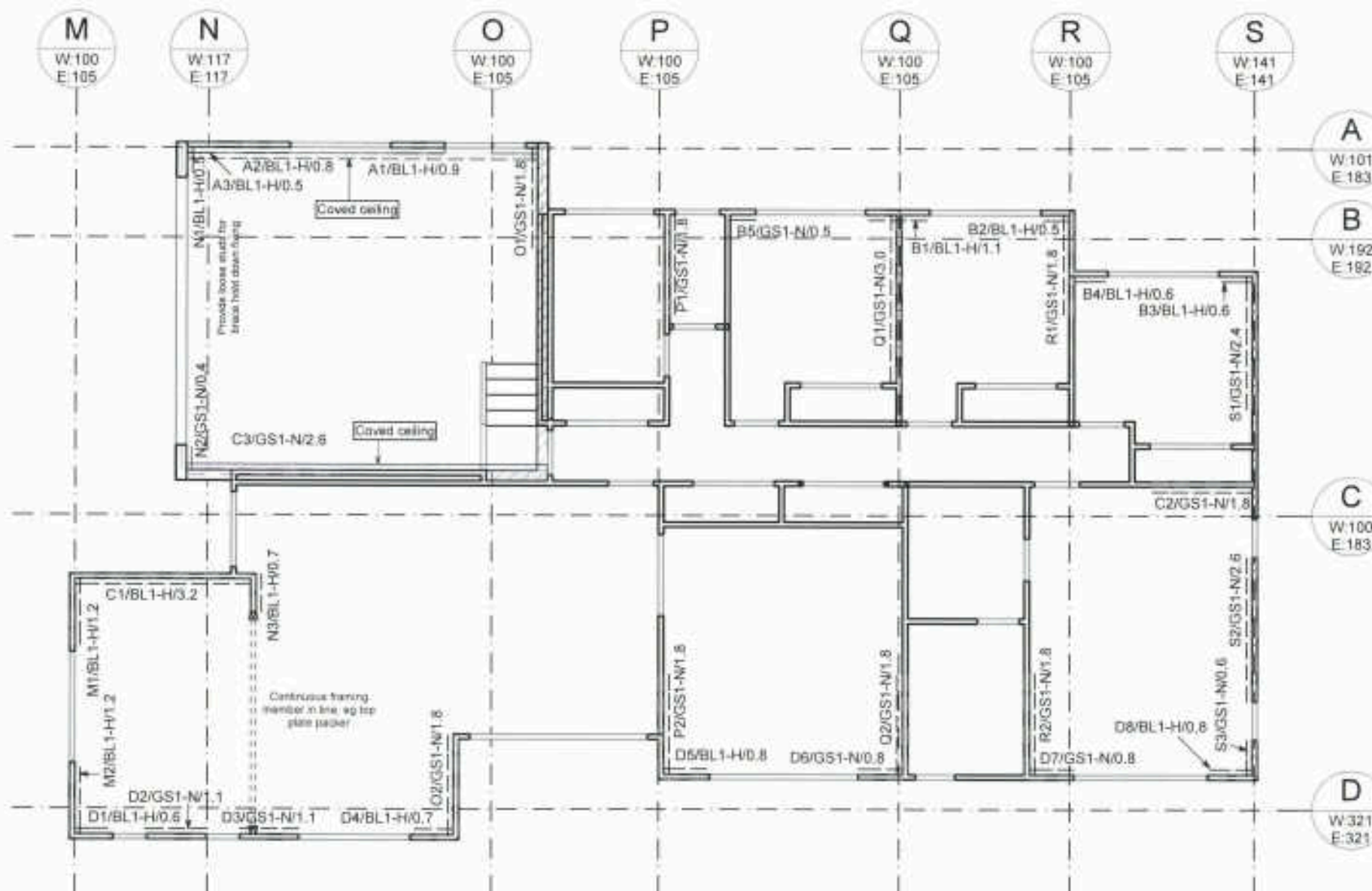
Client:	Mark Lam		
Site Address:	16 Oakland Place, Ngongotaha, Rotorua,		
LEGAL DESCRIPTION:			
Lot No.	76	389915	
Job Title:	Gourlay Home - Mark Lam		
Drawing Title:	Floor Framing Plan		
Scale:	1:100	Drawing Number:	07
Drawn:	JWD	Job No.:	GH84
Checked:	MB		
Published:	05-Feb-20		

ALL DIMENSIONS TO BE VERIFIED ON SITE



Document Set ID: 3556115
Version: 1, Version Date: 25/02/2020

BC ONLY
80240



INTERIOR:
As detailed to comply with NZS3604 and NZS E3 Internal Moisture.

PLASTERBOARD LININGS:
All linings to Gb living solutions Site Guide and all relevant suppliers documentation. Bracing elements as detailed on plans.
Wet areas to be lined with Gb Aquakine as outlined in Gb Aquakine Wet Area Systems.
Refer to Gb Drybrace Systems for approved substitutions in Wet Areas.

TILING:
Installed to Ceramic tiles AS 3958 and BRANZ Gox practice guide Tiling.

VINYL SURFACING:
Installed to NZS/AS 1884 Floor coverings and BRANZ Bulletin 335.

INSULATION:
As detailed to comply with NZS H10/51 and NZS421. Insulation to comply with manufacturers specifications. Minimum insulation specified on plans.

Garage Area	40.94 m ²
House Area	174.78 m ²
TOTAL FLOOR AREA	215.71 m²
TOTAL ROOF AREA	258.62 m²
SITE AREA	1143 m²

ZONES			
ROC	ZONE Residential 1		
WIND ZONE	High	LEE ZONE	N/A
EARTHQUAKE ZONE	2	SOL CLASS	DE
CORROSION ZONE	B	SHOW ZONE	ND

CONSENT

Client:
Mark Lam

Site Address:
16 Oakland Place, Ngongotaha, Rotorua,

LEGAL DESCRIPTION
Lot No: **70** **389915**

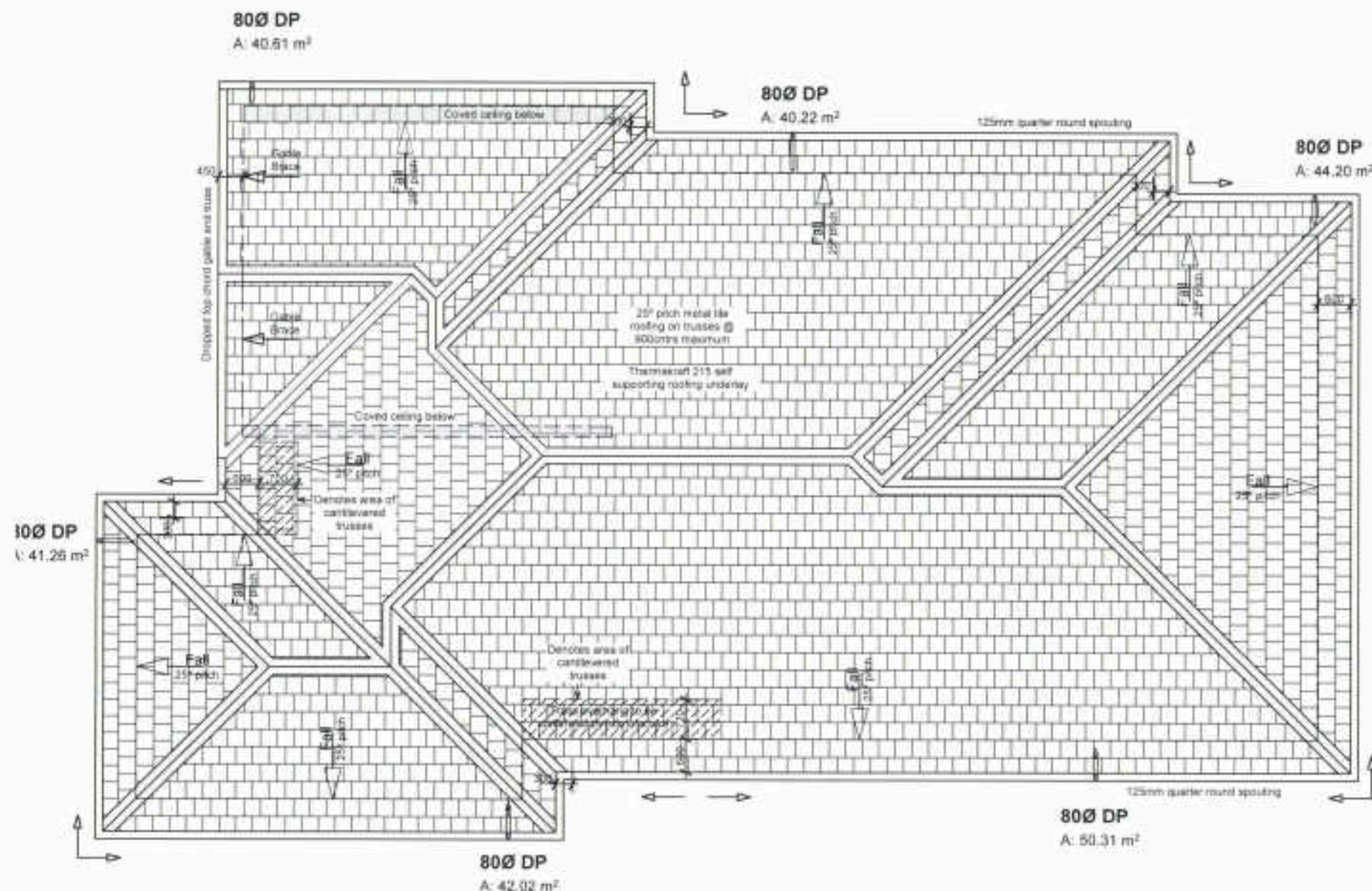
Job Title:
Gourlay Home - Mark Lam

Drawing Title:
Bracing Plan

Scale: 1:100, 1:1	Drawing Number: 09
Drawn: JWD	
Checked: MB	
Published: 16/12/2019	Job No: GH84

ALL DIMENSIONS TO BE VERIFIED ON SITE

BC ONLY
80240

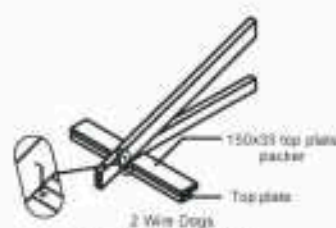


Truss Fixings
LUMBERLOK JH47x90 Joist Hanger
LUMBERLOK JH47x120 Joist Hanger
LUMBERLOK JH47x160 Joist Hanger
LUMBERLOK JH47x55 Joist Hanger
Pair of LUMBERLOK CT200 Ceiling Tie
Pair of LUMBERLOK CT400 Cyclone Tie
Pair of LUMBERLOK CT600 Cyclone Tie
Pair of LUMBERLOK Multi Grips
LUMBERLOK Nylon Plate
LUMBERLOK N21 Diagonal Cleat
Pair of LUMBERLOK CPC40 Cleats
LUMBERLOK TTP 16xN Truss to Top Plate set
2 Wire Dogs

Rafter Fixings as per NZS 3604:2011 Table 15.6
Fixing Type E 2/90x3.15 Skew nails + 2 wire dogs
Fixing Type F 2/90x3.15 Skew nails + 2 wire dogs + strap fixing



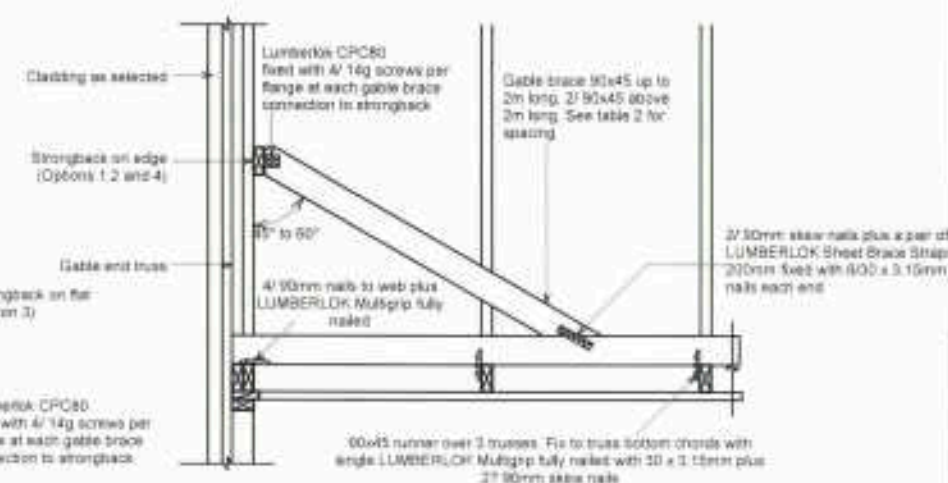
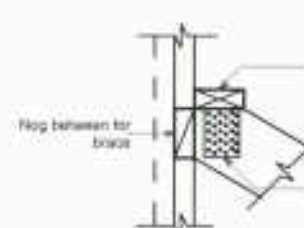
CT200 FIXING



WIRE DOG FIXING

Load Details
Truss Span: 6000-10000 High - Very High Wind zone
Roof Weight: Heavy or Light
Truss Centre: 800mm maximum

Load Details
Truss Span: 3000-10000 Low - Medium Wind zone
Roof Weight: Heavy or Light
Truss Centre: 800mm maximum



Fixings Gable End Detail

Scale: 1:10

3

METAL TILE ROOFING:
To comply with NZBC E2/AS1 External moisture, NZS 3602, NZS 3604 and NZS 4217.
Installed to NZ metal roof and wall cladding code of practice and to the Metrolite technical specification.
For Roof truss layout design refer to ITM producer statement.

BOTTOM CHORD RESTRAINTS
30x35mm bottom chord restraints (Refer roofing details) required when using clip on metal battens to ceilings.

CONSENT

Client:	Mark Lam
Site Address:	16 Oakland Place, Ngongotaha, Rotorua.
LEGAL DESCRIPTION:	
Lot No.	70
	389915
Job Title:	Gourlay Home - Mark Lam
Drawing Title:	Roof Plan
Scale:	1:100, 1:10
Drawn:	JWD
Checked:	MB
Published:	16/12/2019
Job No.:	GH84

ALL DIMENSIONS TO BE VERIFIED ON SITE

**COUNCIL
COPY**

RECEIVED

07 FEB 2020

- 80240

BISHOP
ELECTRICAL
P.O. Box 508, ROTORUA
1108 Pukutua Street, ROTORUA
(ph) 07 929 9907
jsb@bishopelectrical.co.nz

NOTE:

Electrical layout given as example. Use plan as minimum requirements for house. Consult client regarding full electrical layout prior to construction.

ELECTRICAL INSTALLATION:

To comply with the Electrical Regulations 1997, AS/NZS 3000 and AS/NZS 3008, 1, 2 and the New Zealand electrical codes of practice (ECP). Lamps 125mm Downlights used throughout - CA Rated

TELECOMMUNICATIONS INSTALLATION:

To comply with AS/NZS 3098

SMOKE ALARMS:

Installed as required by NZBC FTA51 as shown Detailed on plans.
Smoke Alarms to AS 3786

RECESSED DOWNLIGHTS:

recessed downlights used in residential housing in New Zealand must comply with 1 of the 4 Classifications listed below as per AS/NZS 60598.2.2

CA 80 Abutted only
CA 135 Abutted only
IC Abutted and covered
IC-F Abutted and covered

Bradford gold insulation is approved to be used with all of the above classifications. Both segment and blank et types have been through rigorous testing to warrant this. Bradford Gold passes Fire Hazard Test AS/NZS 60695.11.5.
Please refer manufacturer's technical literature as to which Classification the downlight is complying with.

ELECTRICAL FIXTURES IN BRACES:

Openings under 90x90mm are required to be a minimum of 50mm from any edge of the brace panels. Blocking may be required for fixing of flushboxes.

CONSENT

Client:

Mark Lam

Site Address:

16 Oakland Place, Ngongotaha, Rotorua,

LEGAL DESCRIPTION

Lot No. **70** **389915**

Job Title

**Gourlay Home -
Mark Lam**

Drawing Title

Electrical Plan

Scale

1:100, 1:1

Drawn

JWD

Checked

MB

Published

7/02/2020

Job No.

GH84

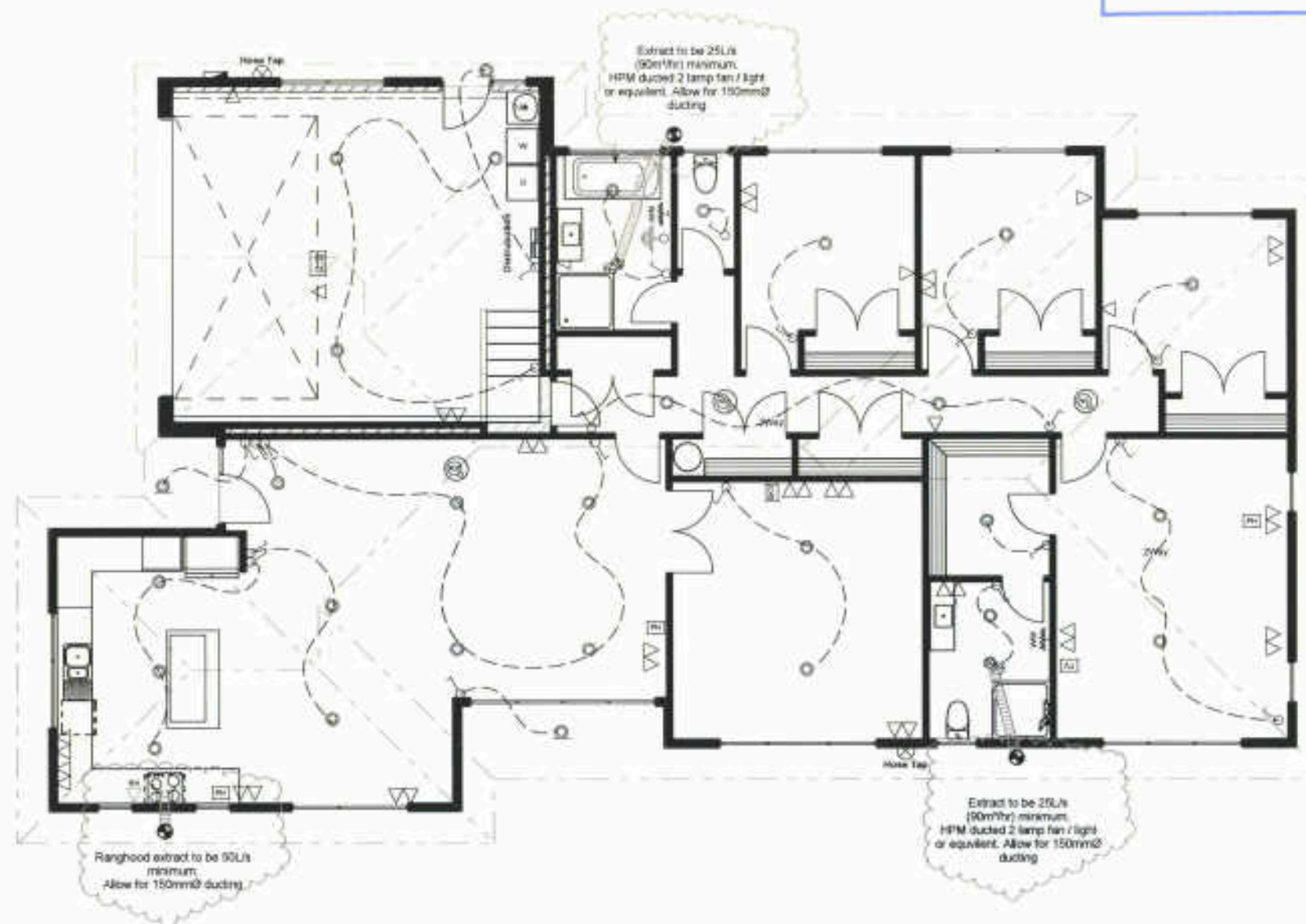
ALL DIMENSIONS TO BE VERIFIED ON SITE

Switches		
21		Single Switch
2		2 Way Circuit

Lights		
20		Recessed Down Light
3		Recessed Light
2		Inline fan with light ducted outside

Plugs & Sockets		
21		Double Plug
6		Single Plug
3		PFI Connection
1		Rangehood Plug
1		Sky Connection
1		TV Connection

Other		
3		Smoke Alarm Hardwired
2		Heated Towel Rail
2		Wall Mounted Heater
1		Garage Door
1		Distribution Board





WET AREA FINISHES:

Bench top:
Formica or Wilson Art rolled front edge bench tops

Splash back:
Stainless steel, glass or tile

Bathroom, Laundry and WC:
Waterborne Enamel Painted walls and ceiling

Wardrobe:
Custom designed wardrobe system. Heavy duty vinyl coated ventilated shelving painted.
Walk-in wardrobe is wall papered.

Wall Finishes:
Paint finish to: Bathroom, Ensuite, WC, Garage and Laundry.
Wall Paper finish to remaining areas.
Flat Paint finish to ceilings with 55mm Gie Cove Scotia

CONSENT

Client:
Mark Lam

Site Address:
16 Oakland Place, Ngongotaha, Rotorua,

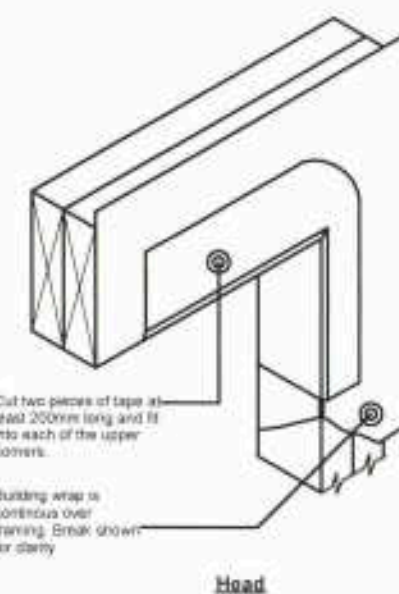
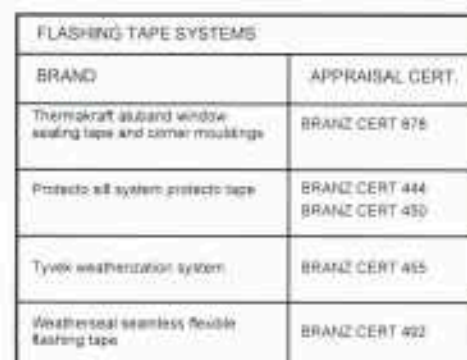
LEGAL DESCRIPTION
Lot No. **70** 389915

Job Title
Gourlay Home - Mark Lam

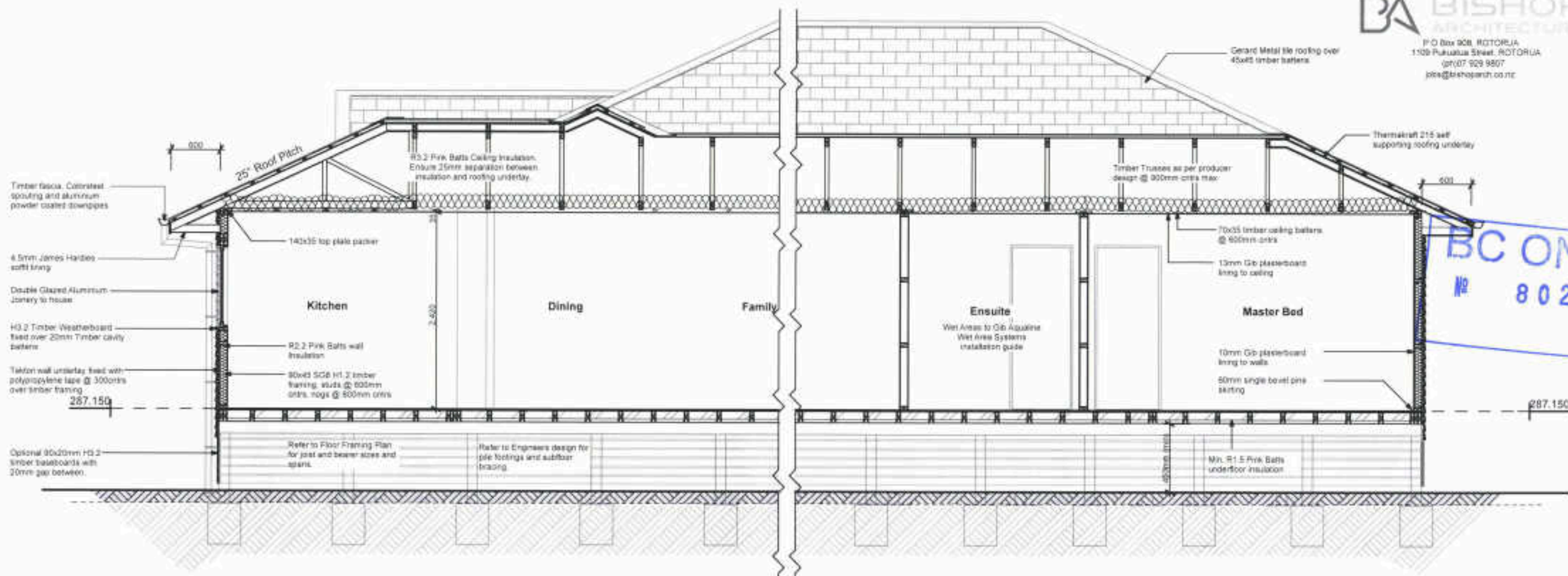
Drawing Title
Floor Finishes Plan

Scale 1:1, 1:100	Drawing Number 12
Drawn JWD	
Checked MB	
Published 16/12/2019	Job No. GH54

ALL DIMENSIONS TO BE VERIFIED ON SITE

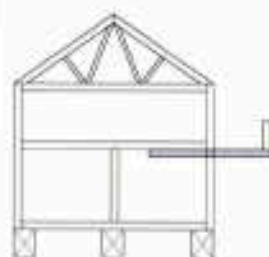


ALL DIMENSIONS TO BE VERIFIED ON SITE



TIMBER TREATMENT

Cantilevered enclosed balcony and balustrade



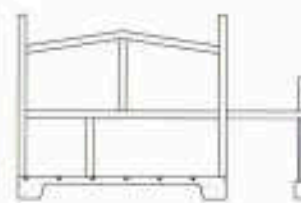
H1.2

Enclosed balcony and balustrade with living space below



H3.2

Enclosed balcony and balustrade open below



H5 post in contact with ground

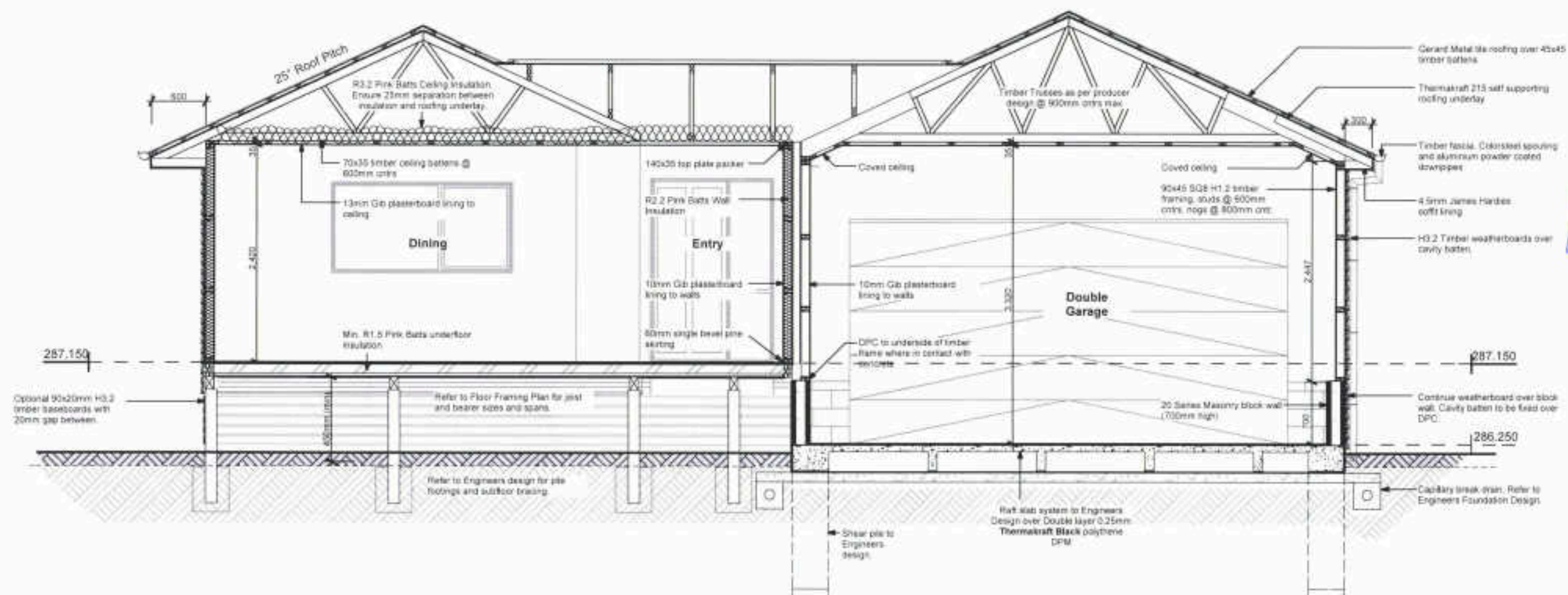
H5

TIMBER TREATMENT as per NZS 3602			
HAZARD CLASS	EXPOSURE	SERVICE CONDITIONS	BUILDING ELEMENTS
H1.2	Protected from weather, above ground, but with a possibility of exposure to moisture	Protected from weather, but with a risk of moisture contact conducive to decay	- Wall Framing - Low risk internal wall framing - Ceiling framing
H3.1	Exposed to weather above ground or protected from the weather but with a risk of moisture entrapment	Periodic wetting, not in contact with the ground	- Cavity framing - Window jamb liners
H3.2	Exposed to weather above ground	Periodic wetting, not in contact with the ground, more critical end uses	- Structural ply bracing - Decks and Pergolas - External beams and posts above ground - Timber Fascia
H5	Exposed to the weather, in ground or in fresh water	Ground contact, or conditions of severe or continuous wetting, where uses are critical and where a higher level of protection than H4 is required	House posts

CONSENT

Client	
Mark Lam	
Site Address	
16 Oakland Place, Ngongotaha, Rotorua,	
LEGAL DESCRIPTION	
Lot No.	389915
Job Title	
Gourlay Home - Mark Lam	
Drawing Title	
Section BB	
Scale	Drawing Number
1:50	14
Drawn	JWD
Checked	MB
Published	16/12/2019
Job No.	GH84

ALL DIMENSIONS TO BE VERIFIED ON SITE



BC ONLY
80240

CONSENT

Client	Mark Lam		
Site Address	16 Oakland Place, Ngongotaha, Rotorua,		
<u>LEGAL DESCRIPTION</u>			
Lot No.	70	389915	
Job Title	Gourlay Home - Mark Lam		
Drawing Title	Section DD		
Scale	1:50	Drawing Number	
Drawn	JWD	16	
Checked	MB		
Published	16/12/2019	Job No.	GH84

ALL DIMENSIONS TO BE VERIFIED ON SITE