RELOCATED NEW BUILD

As of 27 July 2022 The Proposed District Plan requires that this consent complies with The Auckland Council Guidance Document GD005 for Erosion and Silt Control and Rule EW-S3 Accidental Discovery Protocol

NOTES:
3d indicative only

Summary of works (consentable items)

Building yard (house only): Tauranga
- Building structure - Piles(temp)bearers, floor joist, wall frames, roof structure
- Closing in - Roof cladding, gutters, soffits, wall cladding, joinery/glazing
- Drainage - N/A
- Plumbing - Plumbing first fix (pressure tested), final fit off
- Gas - Fitted & Certified
- Electrical - Fully installed and certified
- Interior - Ceiling linings, wall linings, internal doors, skirting & architraves
- Fixtures - Vanities & toilets installed, kitchen installed
- Finishings - Interior and exterior painting, floor coverings (carpet & vinyl), back

Destination Consent: Opononi
- Building structure - Piles/connection
- Closing in - Subfloor cladding
- Drainage - Full as per plans
- Plumbing - N/A
- Electrical - Connection to Meterbox
- Gas - Bottles location checked for compliance
- Interior Linings - N/A
- Fixtures - Tiling to shower
- Finishings - Floor coverings (tiles)
- Decks, driveway & landscaping

READY FOR CONSENT

NOTE
Transportable Building designed for:

Wind Zone: High
Earthquake Zone: 1
Exposure Zone: D
Climate Zone: 2
Rain intensity: 126mm/hr
Snowload: 0.0kPa

Reports used and required on-site

Subdivision completion report (as per consent notice)	= Site Suitability Report for Prposed Subdivision of 594 Koutu Loop Road by Haigh Workman Ltd ref: 18-173 dated: September 2018
Geotechnical report used for foundation design	= Site Suitability Report by Haigh Workman Ltd ref: 18 173 dated: September 2018
Liquefaction assessment	= Low/negligible (as per subdivision report)
Storm-water design / method	= Overflow & paved areas to natural water course (as per subdivision report)
Waste-water design / method	= On Site Wastewater Design by Haigh Workman Ltd ref: 21 330 dated: 19 Jan 2022
Water treatment design / method	= Marley Rainwater combined with UV and Filter System / Potable water certificate provided prior to code of compliance

Consent notices

Consent Notice - 11953531-2: (Parent Lot) Specific Design Wastewater, Engineering Assessment for Ground Suitability. Firefighting Water Supply Required, Any Building In Flood Areas to have a Minimum Floor Level set by Engineer, Control Stormwater Flow from Site as per Haigh Workman Report noted, Owner responsible for Telecommunication Services

Consent Notice - 11374098-3: (Parent Lot) Specific Design Wastewater, Firefighting Water Supply Required,Specific Design Foundations, Owner responsible for Telecommunication Services

Minimum floor level

No specific requirement, as per E1/AS1 (>150mm above lowest point on site)

CLIENT:

Jeff & Gwen McTainsh
Lot 6, DP 546669
Dune Rise, Whirinaki
Opononi

TERRITORIAL AUTHORITY:
Far North District Council
Coastal Living Zone

SITE DATA: *for zones upto & including*

Ground Bearing:	REF GEOTECH
Sub-soil Classification:	D
Soil Classification	REF GEOTECH
Wind Zone:	High
Earthquake Zone:	1
Exposure Zone:	D
Climate Zone:	1
Rain Intensity (10%AEP):	80mm/hr
Snowload:	0.0kPa (open ground)

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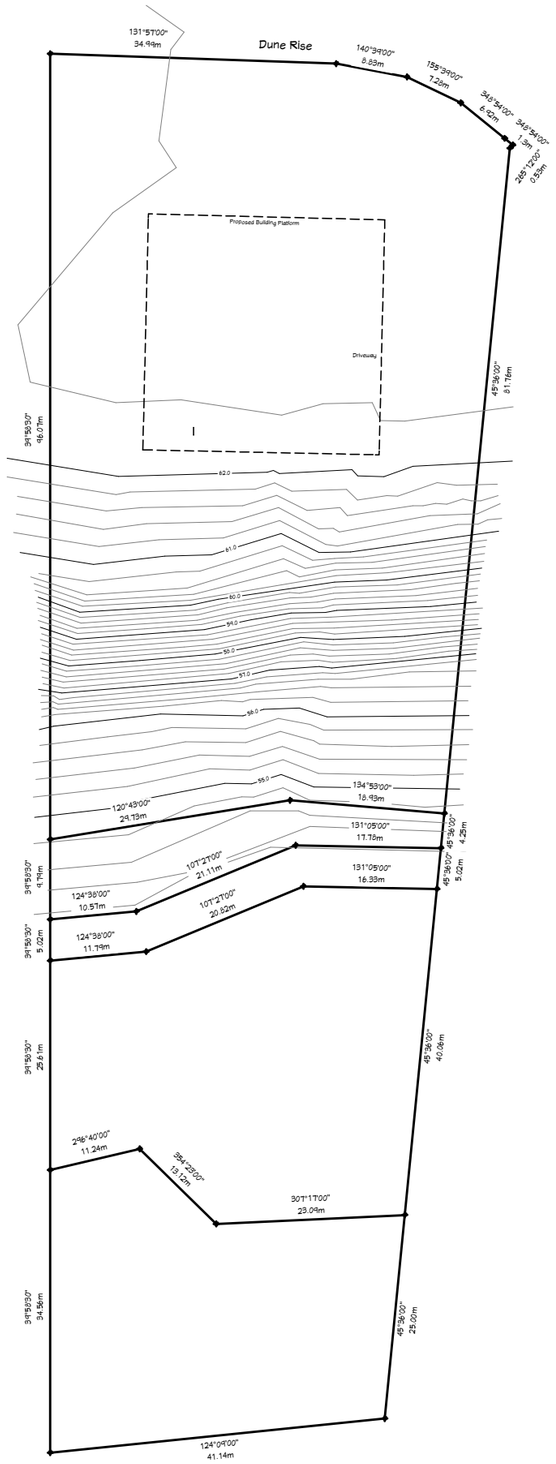
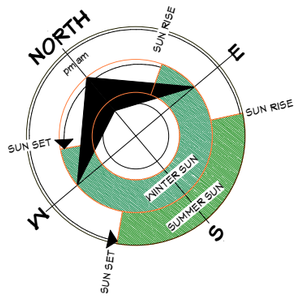
JOB No: FH21016	DESIGN: LBA
SIZE: A3 LAYOUT	DRAWN: LBA
PRINT DATE:	4/04/2022
SCALE:	SHEET: 1 OF 12





firsthomes

NOTES:

- All boundary bearings, lengths & peg locations are to be confirmed on site prior to commencing foundations. The house position is to be confirmed as correct and any discrepancies are to be reported to 'Lightbulb Architecture' immediately.
- Finished floor level in relation to height to boundary recession plane requirements are the responsibility of the floor layer, any discrepancies between the plan and physical site levels are the responsibility of the floor layer. 'Lightbulb Architecture' takes no responsibility for any error that may occur.
- Sewer & stormwater connections are to be confirmed on site prior to commencement of foundations.
- Drain layer to confirm downpipe locations prior to commencement of construction.

Public protection from onsite hazards

- Site safety fencing (when required by T.A), 2.0m(min) to prevent site hazards from harming traffic or passers-by, to restrict unauthorized entry by children - ensure fencing is difficult to be climbed, gates and doors do not project beyond site when open, and encloses the whole site.
- All building sites to have O.S.H compliant warning signs erected.
- Any hazardous equipment or materials will be stored onsite only if secured, by portable building lock up or in the house being built (after lock-up stage)
- Sites to be assessed on a individual basis by construction managers for compliance with NZBC clause F5 and if specific hazards exist then a work-site barrier must be erected.

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Site Plan (Existing/Location)

JOB No: FH21016		DESIGN:	LBA
SIZE: A3 LAYOUT		DRAWN:	LBA
PRINT DATE:			4/04/2022
SCALE:	1:750	SHEET:	2 OF 12

Geotechnical

According to available geological plans and the Haigh Workman walkover survey, the underlying soil geology across the site comprises Kara clay and Kara silt loam, typically described and categorised as 'imperfectly to very poorly drained'; consistent with superficial soils. Superficial soil deposits are indicated to be underlain (at depth) by solid geology comprising Whangai Formation (Kkw) of the Mangakahia Complex, a subsidiary group of the Northland Allochthon Formation.

Fieldworks were undertaken by a Haigh Workman Geotechnical Engineer in a single stage on 20 February 2017 and comprised the drilling of five hand augured boreholes to profile shallow underlying stratum to depths ranging from 0.40 m to 1.00 m below ground level. Following interpretation of field data it is concluded and recommended that:

- All investigated house sites are suitable for a final low-rise residential end-use;
- Generally uniform strata was encountered across the seven proposed house sites conforming to available geological mapping. Stratigraphy generally included loose natural granular soils overlying a hard pan at shallow depth;

As soil properties did not meet the minimum requirement for bearing capacity in accordance with NZS3604 at founding depth or within influencing distance of shallow foundations it is recommended all proposed lots are subject to further geotechnical investigation and specific foundation design at the time of building consent. It is recommended that foundations take the form of either:

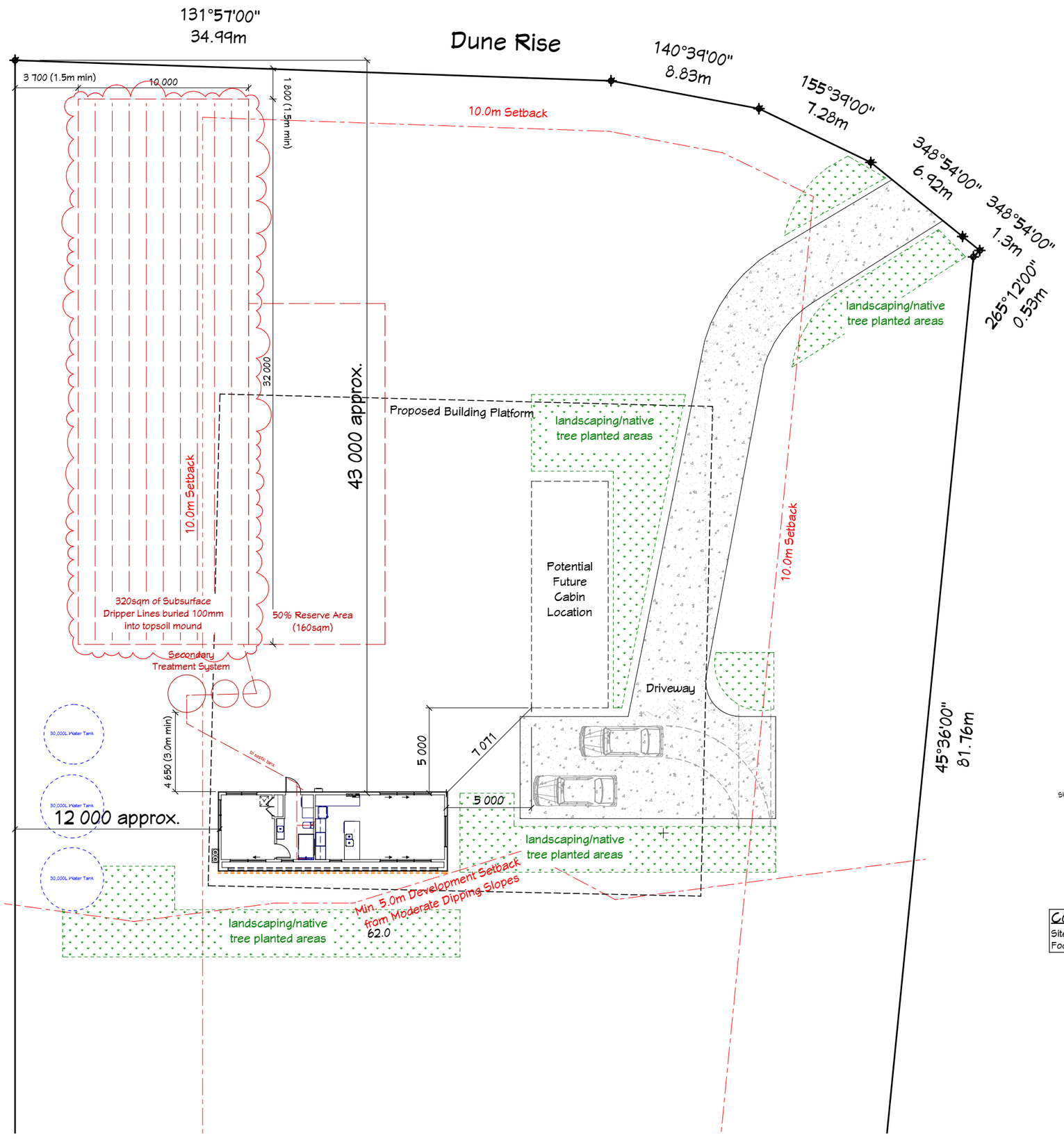
- Piled foundations extended through shallow soils and the hard pan layer founding within underlying natural soils of adequate strength/bearing capacity, or;
- Concrete slab on grade specifically designed for soils of 50 kPa allowable bearing capacity and with an allowance to minimise differential settlement across granular/cohesive soils for proposed lot 11.

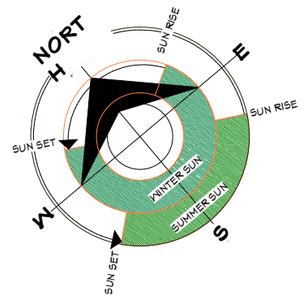
To complete the subdivision process it is proposed to cut the existing bank to the north eastern face of the subdivision entrance. For this option it is recommended that the cut is retained by a specifically designed retaining wall. It is recommended the wall is designed as condition of consent.

Extract from Geo Report - Refer to full report

Amended 12/08/2022

- Dripper lines now shown at 1.0m centres





COVERAGE

Site area	= 8163m²	
Footprint (over cladding)	= 53.2m²	= 0.06%

firsthomes

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Dune Rise, Whirinaki
Opononi

TERRITORIAL AUTHORITY:
Far North District Council
Coastal Living Zone

SITE DATA: *for zones upto & including*

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Soil Classification	REF GEOTECH
Wind Zone:	High
Earthquake Zone:	1
Exposure Zone:	D
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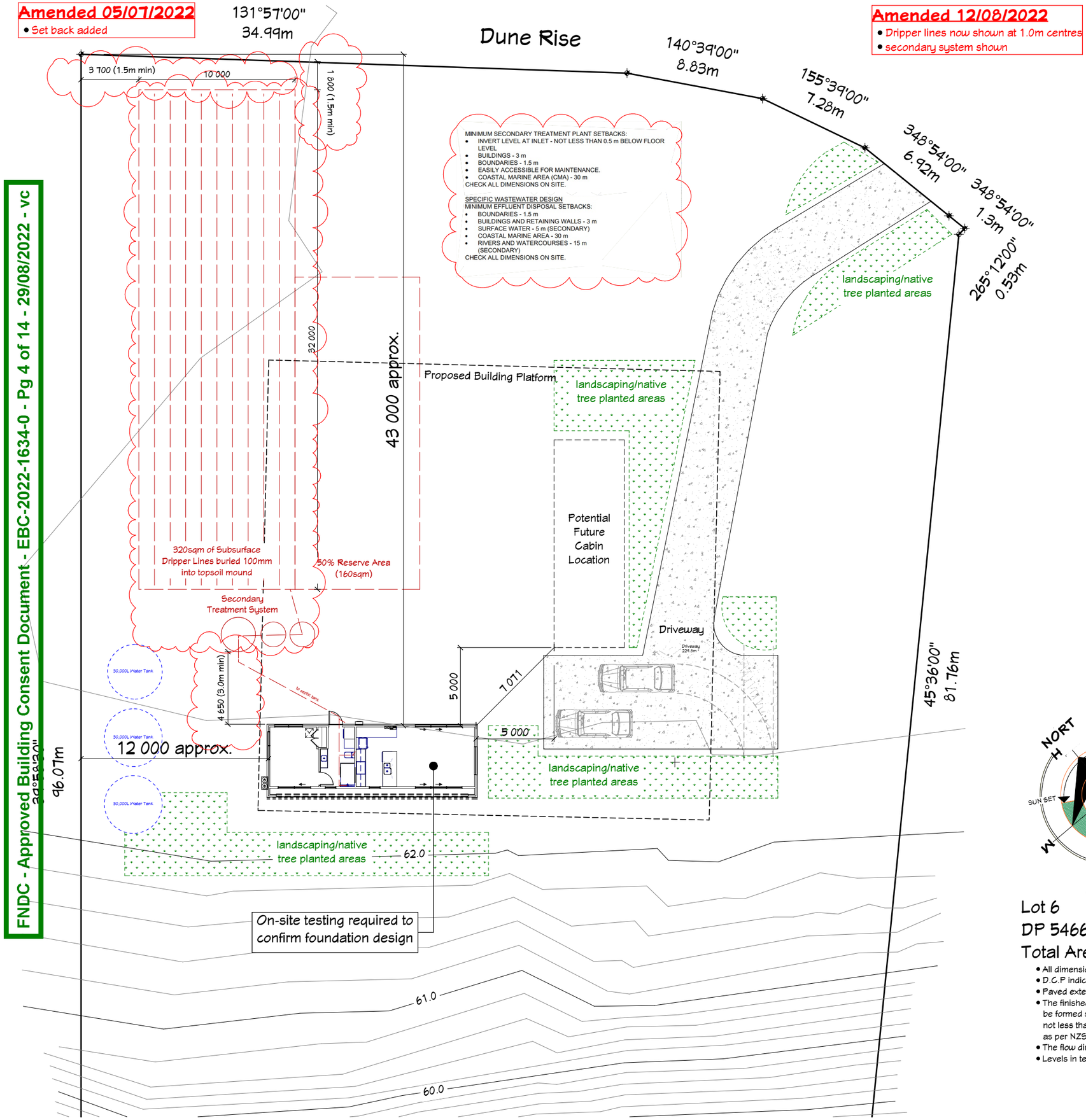
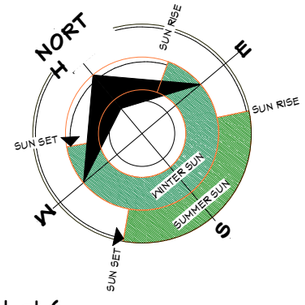
Site Plan (Planning)

JOB No:	FH21016	DESIGN:	LBA
SIZE:	A3 LAYOUT	DRAWN:	LBA
PRINT DATE:			12/08/2022
SCALE:	1:250	SHEET:	3 OF 12

Amended 05/07/2022
- Set back added

Amended 12/08/2022
- Dripper lines now shown at 1.0m centres
- secondary system shown





Lot 6
DP 546669
Total Area = 8163sqM

- All dimensions shown are to the foundation unless noted otherwise.
- D.C.P indicates Daylight Control Point of recession plane.
- Paved exterior surfaces, refer to the foundation plan
- The finished ground level adjoining the concrete slab-on-ground shall be formed so as to carry water away from the building, at a slope of not less than 1:25, for a distance of at least 1.0m from the building as per NZS.3604.2011.
- The flow direction of surface water follows the slope of the natural ground.
- Levels in terms of Moturiki Datum / NZ Vertical Datum

Onsite sediment control
- In accordance with TA's requirements.
- Access via stabilised entry/exit pad.
- Covered wind proof skip bin
- Site access, storage and construction should be controlled so that there is no adverse environmental effects.
- Temporary down pipes to be installed to control roof water run-off

firsthomes

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Snowload:	0.0kPa (open ground)

Site Plan (Proposed/Final)

JOB No: FH21016		DESIGN:	LBA
SIZE: A3 LAYOUT		DRAWN:	LBA
PRINT DATE:			12/08/2022
SCALE:	1:250	SHEET:	4 OF 12

Amended 12/08/22
- Subfloor access hatch & scrawl space noted

Elevation 1

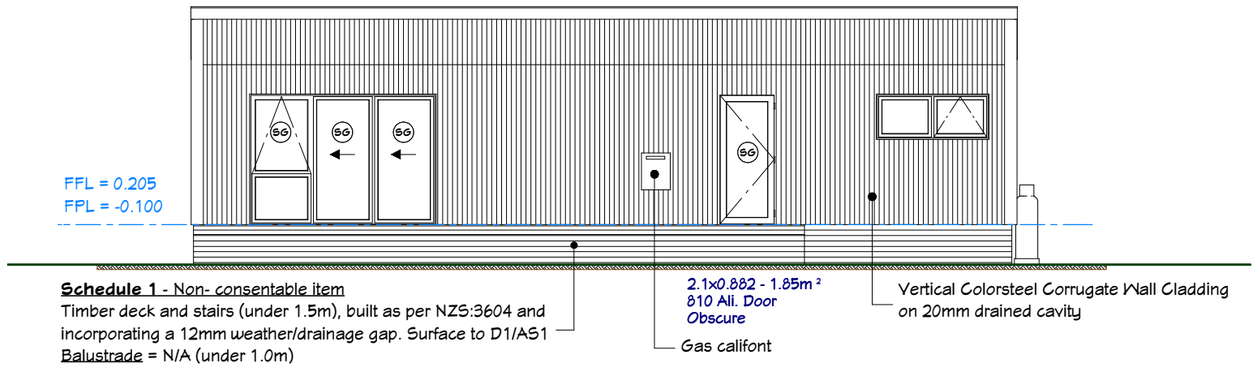
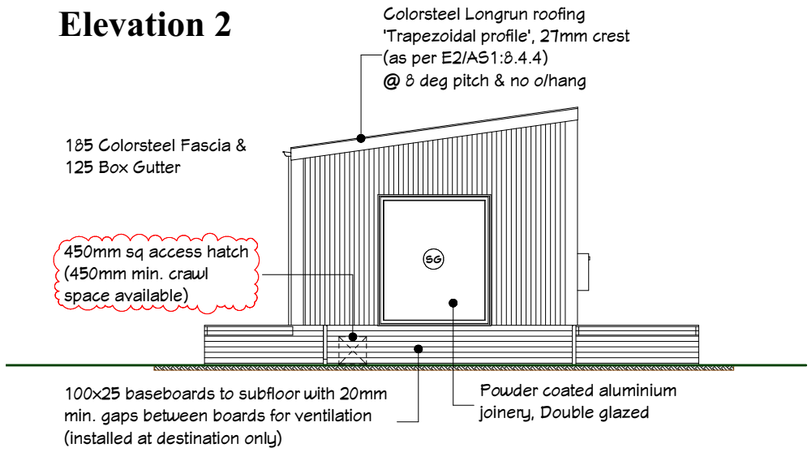


Table 2	Building envelope risk matrix Paragraph 3.1.2. Figure 1					
All Walls	Risk Severity					
Risk factor	Low	Med	High	Very High	Subtotals for each risk factor	
Wind zone (per NZS 3604)	0	0	1	2	1	
Number of storeys	0	1	2	4	0	
Roof/wall intersection design	0	1	3	5	1	
Eaves width	0	1	2	5	5	
Envelope complexity	0	1	3	6	1	
Deck Design	0	2	4	6	0	
				Total Risk Score	= 8	

Elevation 2



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- All claddings fixed as per manufacturers specifications
- Fill over 600mm requires Engineer Certification

- EGL = Existing Ground Level (black dash)
- FFL = Finished Floor Level (blue dash)
- FGL = Finished Ground Level(solid green)
- GL = Ground Level
- FPL = Finished Platform Level

Safety Glazing
- All glazing is to be in accordance with the NZ Building Code Handbook and NZS. 4223, Parts 1, 2, & 3 Code of Practice for Glazing in Buildings.
- All glazing panels to bathrooms and toilets to have safety glazing to the interior panel only
- All gazing to be confirmed by the manufacturer prior to construction

Indicates safety glass

SG

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Elevations 1 & 2

JOB No: FH21016	DESIGN: LBA
SIZE: A3 LAYOUT	DRAWN: LBA
PRINT DATE:	12/08/2022
SCALE: 1:100	SHEET: 5 OF 12

Elevation 3

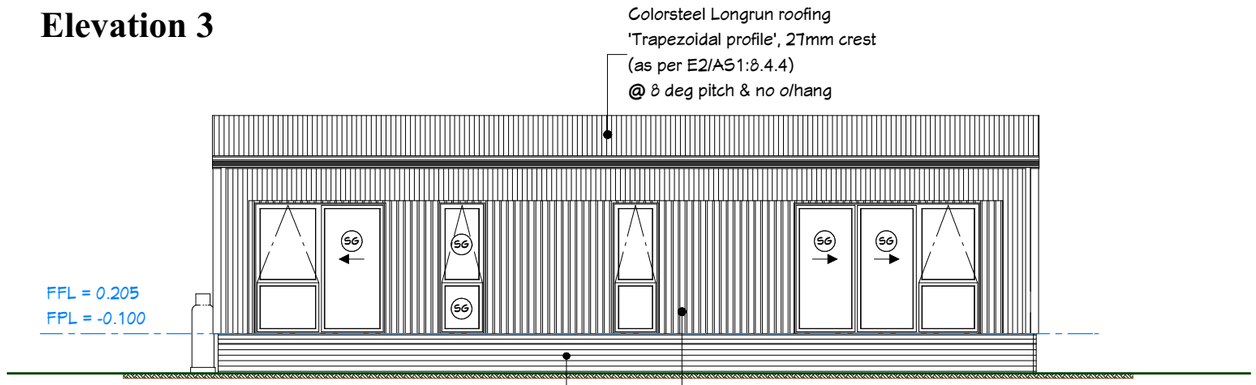

Table 2	Building envelope risk matrix Paragraph 3.1.2. Figure 1				
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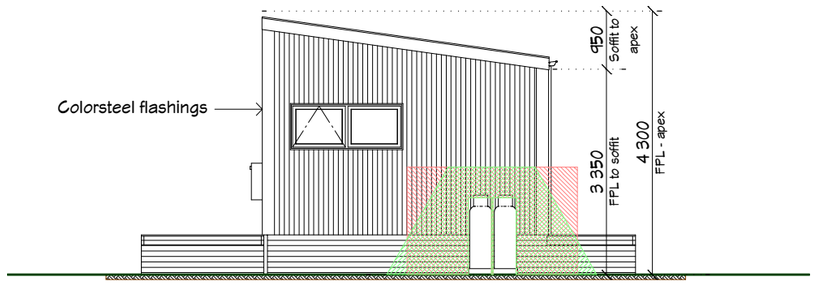
Number of storeys	0	1	2	4	0
Roof/wall intersection design	0	1	3	5	1
Eaves width	0	1	2	5	5
Envelope complexity	0	1	3	6	1
Deck Design	0	2	4	6	0
				Total Risk Score	= 8

Elevation 4



firsthomes

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Elevations 3 & 4

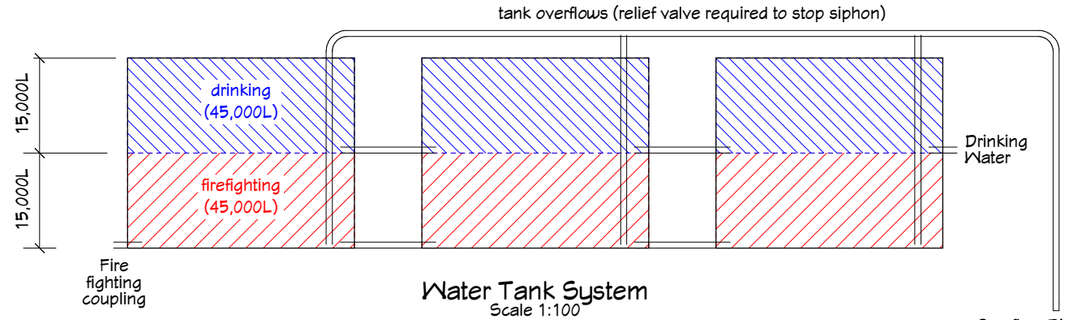
JOB No:	FH21016	DESIGN:	LBA
SIZE:	A3 LAYOUT	DRAWN:	LBA
PRINT DATE:			4/04/2022
SCALE:	1:100	SHEET:	6 OF 12

Amended 12/08/2022
- secondary system shown

320sqm of Subsurface Dripper Lines buried 100mm into topsoil mound

50% Reserve Area (160sqm)

Secondary Treatment System

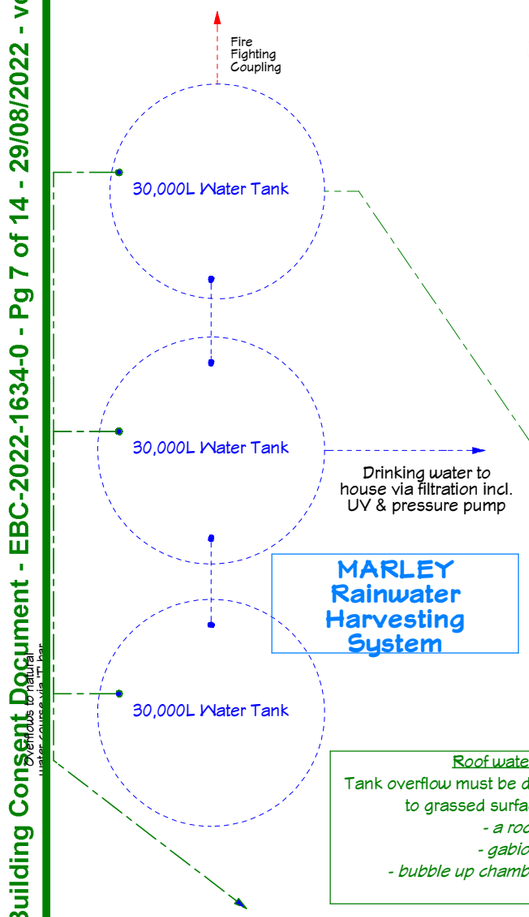


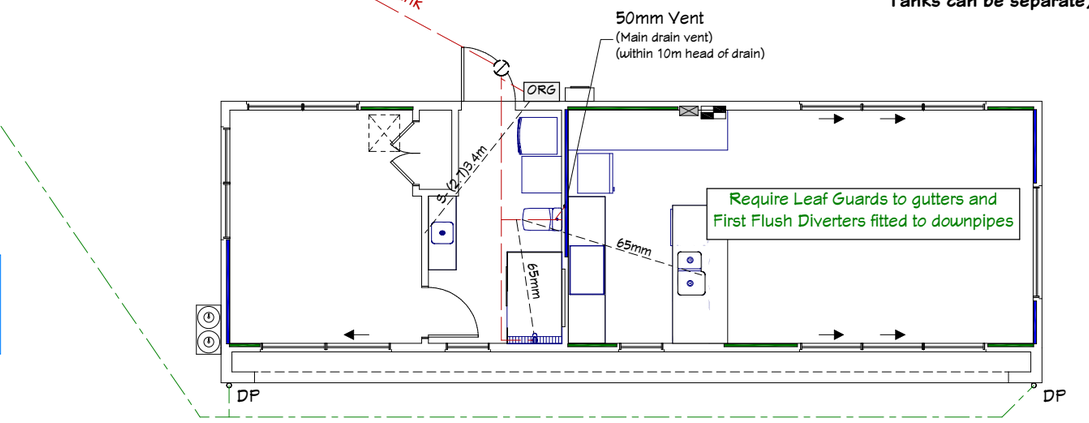
Water Tank System
Scale 1:100

Water Quality:
- Maintained via Marley System (attached) + UV filter system

Fire Fighting:
- 4500ltr storage provided + coupling

(Alternatively, Drinking Water & Firefighting Water Tanks can be separate)





Roof water to Water Tank
Tank overflow must be discharged away from buildings to grassed surfaces via T-bar dispersal
- a rock 'riprap' OR
- gabion basket OR
- bubble up chamber to disperse the energy

Key
- = IP = Inspection Point
- = RE = Rodding Eye
- = DP = Down Pipe
- = Disconnector Gully Trap
- DGT = Floor Waste Gully Trap
- FWG = Overflow Relief Gully Trap
- ORG = 100mm PVC Stormwater Drain
- = 150mm PVC Stormwater Drain
- = 100mm PVC Wastewater Drain
- = Fixture Waste Pipes

EXTERNAL DRAINAGE
AS-NZS 3500, Pipe sizes
MCI - Minimum connection invert (below FFL)
Sewer drain - 100mm P.V.C pipe, 1:60 Gradient(min)
Stormwater drain - 100mm P.V.C pipe, 1:120 Gradient(min)
*All inverts allow 650mm below FFL at the head of the drain to allow for gully and pipe cover

INTERNAL PLUMBING WASTE KEY
S indicates a sink and has +700mm for developed length
T indicates a shower tray or bath and has +300mm for developed length
H indicates a H.W.C and has +700mm for developed length
(#.#) in all cases indicates the plan length

POINTS OF ACCESS GENERAL
Rodding points are preferred to inspection points in landscaped or sealed areas and within buildings.

Spaced at no further than:
- 50m where rodding points are used.
- 100m where inspection points, inspection chambers or access chambers are used.

Positioned at:
- Changes in direction of greater than 45°
- Changes in gradient of greater than 45°

Stormwater Specific
- Plumber to ensure there is an inspection point within 2.0m of building were a stormwater pipe runs under the slab
- At junctions of drains, other than a drain serving a single downpipe less than 2.0m.

Sewer Specific
- Plumber to ensure there is an inspection point within 2.0m of building were a sewer pipe runs under the slab
- Immediately prior to drain outfalls,
- Immediately inside the boundary of the property served
- At the junction of every drain with another drain, other than a drain serving a single gully trap less than 2.0m.

AS3500 LIMITS

MAXIMUMS
- Max developed length to a Floor Waste Gully 2.5m.

VENT REQUIREMENTS
- Vent at head of the drain to be within 10.0m(developed length) of last Gully trap/W.C.
- One Gully trap to be used as a Overflow Relief Gully.
- Max branch drain without venting is 10.0m(developed length)
- Max developed length to a Disconnector Gully if exceeds add venting.
  - DN40 = 3.5m
  - DN50 = 6.0m
  - DN65 = 10.0m
- Developed length is from water seal to discharge (allow +200mm foundation to gully)

		Discharge Fixtures	Min. Discharge pipe size to FWG (mm)	Min. Discharge pipe size to DGT (mm)	Gradient
		1	40	40	1:40
		4	40	40	1:40
		2	40	40	1:40
		5	50	50	1:40
		3	Not Permitted	65	1:40
		4	Not Permitted	100	1:60

are to include individual water traps

Discharge Pipe Table

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- The sewer and stormwater disposal design is the responsibility of the plumber. 'Lightbulb Architecture' takes no responsibility for any errors that may occur. Compliance with all applicable codes are required at all times.
- Drain layer to confirm downpipe locations prior to commencement of construction.
- Holes in bracing elements may require remedial work
- It is recommended all vanity wastes put into walls to allow for the posibility of wall hung units

Onsite sediment control
- Temporary down pipes to be installed to control roof water run-off

Sink volumes must comply with NZBC:
- Laundry tub - to have a capacity to spill-level of no less than 35 litres, and be capable of fully containing a solid cylinder of 400 mm diameter and 200 mm depth
- Kitchen sink - The sink shall be capable of fully containing a solid cylinder of 300 mm diameter and 125 mm depth.

REFER TO DRAINAGE DETAILS ALSO
(Located on the following sheet)

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Drainage Plan

JOB No:	FH21016	DESIGN:	LBA
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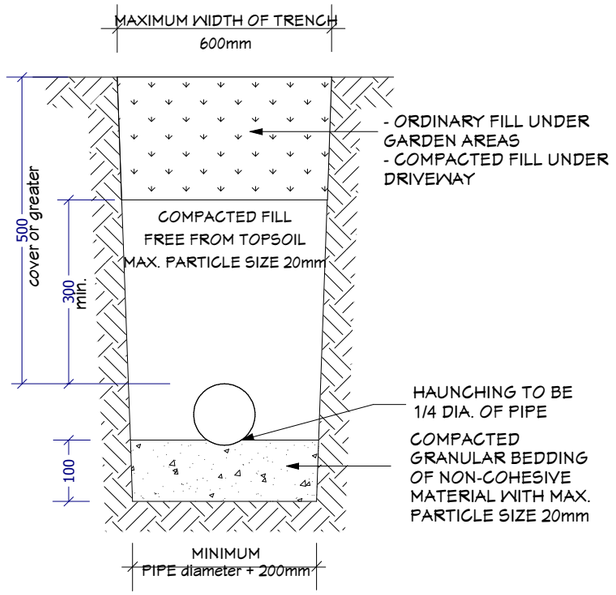
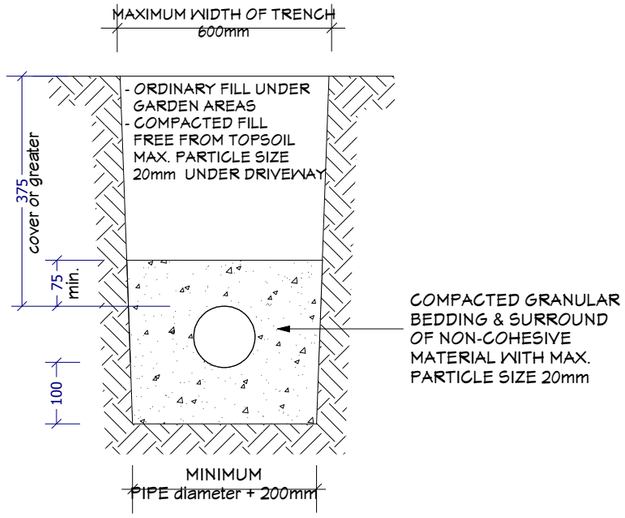
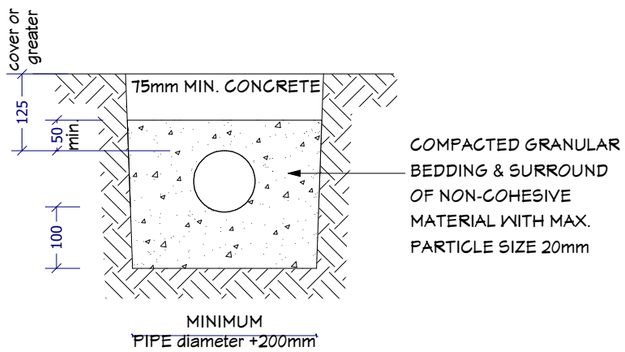
SCALE:	1:100	SHEET:	7 OF 12

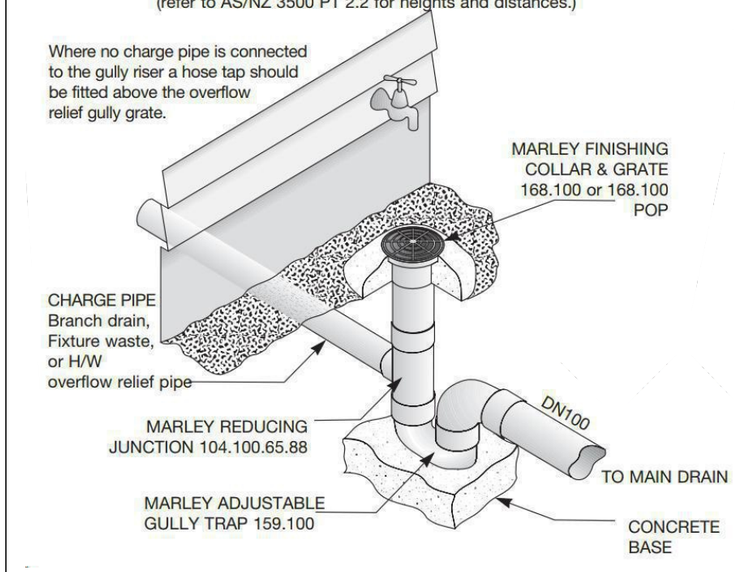


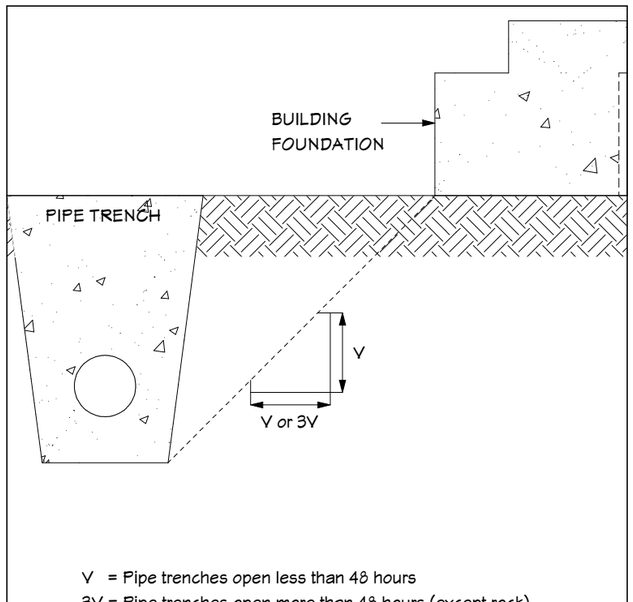




PIPE BEDDING AND BACKFILLING

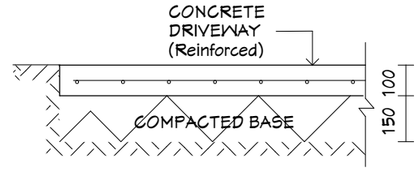
TYPICAL EXTERNAL OVERFLOW RELIEF GULLY LAYOUT
(refer to AS/NZ 3500 PT 2.2 for heights and distances.)





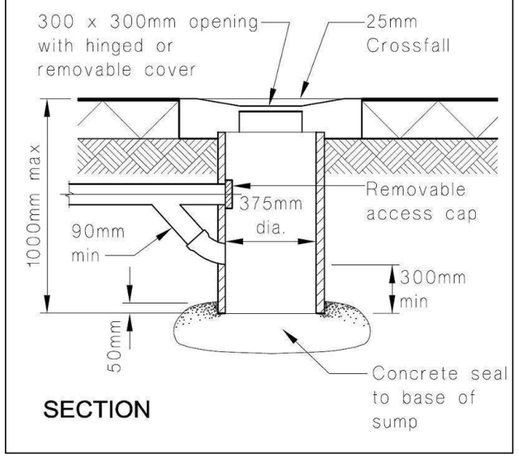
V = Pipe trenches open less than 48 hours
3V = Pipe trenches open more than 48 hours (except rock)

TRENCH NEXT TO FOUNDATION



DRIVEWAY EDGE DETAIL

Figure 8: **Type-one Surface Water Sump**
Paragraph 3.6.2



SECTION

NOTES:
- All details are in accordance with E1 AS1

CLIENT:
Jeff & Gwen McTainsh
Lot 6, DP 546669
Dune Rise, Whirinaki
Opononi

TERRITORIAL AUTHORITY:
Far North District Council
Coastal Living Zone

SITE DATA: *for zones upto & including*

Ground Bearing:	REF GEOTECH
Sub-soil Classification:	D
Soil Classification	REF GEOTECH
Wind Zone:	High
Earthquake Zone:	1
Exposure Zone:	D
Climate Zone:	1
Rain Intensity (10%AEP):	80mm/hr
Snowload:	0.0kPa (open ground)

Drainage Details

JOB No: FH21016	DESIGN: LBA
SIZE: A3 LAYOUT	DRAWN: LBA
PRINT DATE:	4/04/2022
SCALE: NTS	SHEET: 8 OF 12

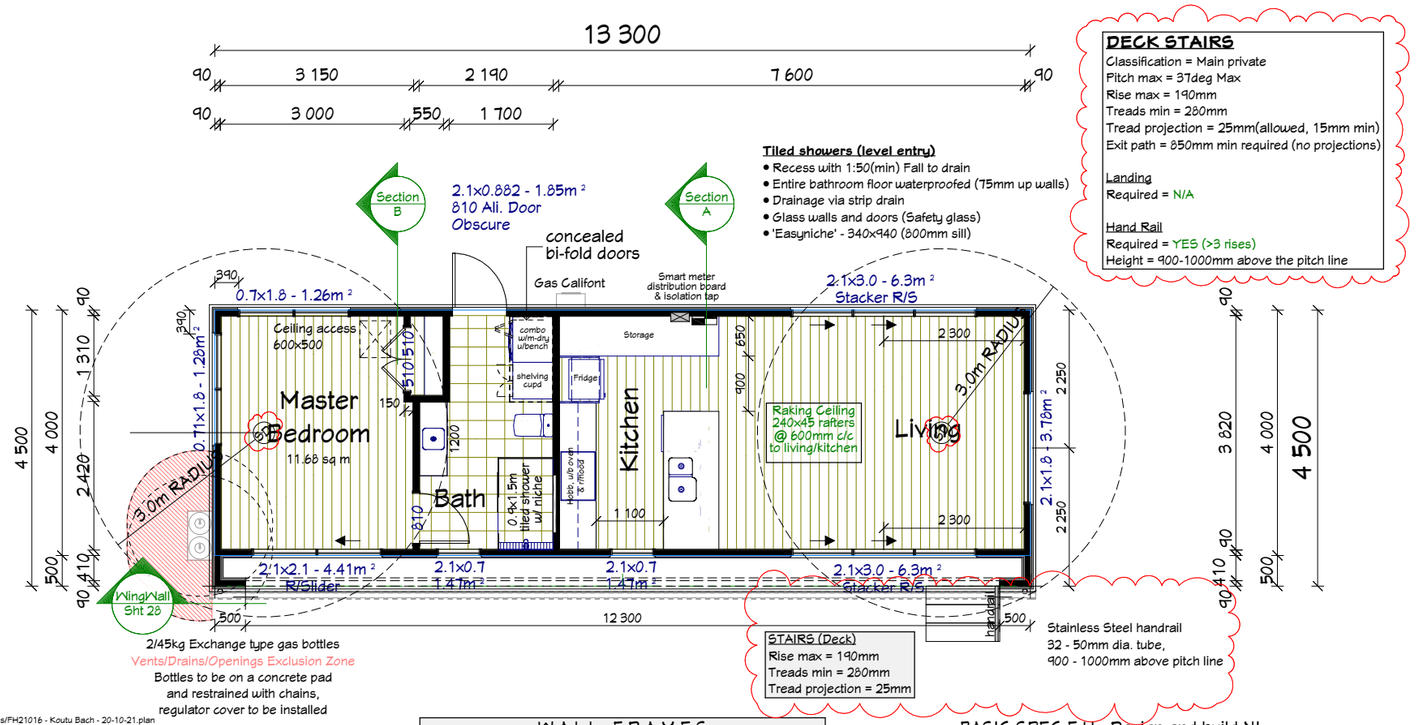
Amended 12/08/22
- deck stair and handrail notes added
- smoke detectors added

Roofing
Colorsteel Longrun roofing
'Trapezoidal profile', 27mm crest
(as per E2/AS1:8.4.4)
@ 8 deg pitch & no o/hang

Cladding
-1.Vertical Colorsteel Corrugate Wall Cladding on 20mm drained cavity
-2.Enduroclad Board & Batten System on a 20mm drained cavity

Windows
Powder coated aluminium joinery, Double glazed

Fascia + gutter
185 Colorsteel fascia + 125 Box gutter



2/45kg Exchange type gas bottles
Vents/Drains/Openings Exclusion Zone
Bottles to be on a concrete pad and restrained with chains, regulator cover to be installed

Tiled showers (level entry)
- Recess with 1:50(min) Fall to drain
- Entire bathroom floor waterproofed (75mm up walls)
- Drainage via strip drain
- Glass walls and doors (Safety glass)
- 'Easyniche' - 340x940 (800mm sill)

DECK STAIRS
Classification = Main private
Pitch max = 37deg Max
Rise max = 190mm
Treads min = 280mm
Tread projection = 25mm(allowed, 15mm min)
Exit path = 850mm min required (no projections)

Landing
Required = N/A

Hand Rail
Required = YES (>3 rises)
Height = 900-1000mm above the pitch line

STAIRS (Deck)
Rise max = 190mm
Treads min = 280mm
Tread projection = 25mm

Stainless Steel handrail
32 - 50mm dia. tube,
900 - 1000mm above pitch line

G:/Shared drives/F.H - Jobs/FH - 2021/FH21016 - Jeff & Gwen - Koutu Bach - Street - (NI)/1. Job files/FH21016 - Koutu Bach - 20-10-21.plan

Total floor area = 53.2sqm(o/found.)

Total Roof area = 63.1sqm(o/fascia)

APPROXIMATE Exterior wall perimeter = 34.6m
APPROXIMATE Interior wall perimeter = 10.0m
APPROXIMATE Fascia & Gutter lineal meters = 13.5m
APPROXIMATE Barge lineal meters = 23.0m

FLOOR COVERINGS
= Vinyl/Laminate
= Carpet

WALL FRAMES
External / Load bearing up to 2.7m - 90x45@400c/c
External / Load bearing up to 3.0m - 90x45@300c/c
Internal / Non-load bearing - 90x45@600c/c
Dwangs @ 480mm c/c for Vertical Colorsteel Walls
Dwangs @ 600mm max c/c for Enduroclad Walls

BASIC SPEC F.H - Design and build NI
NZS3604 - Timber Subfloor
- Plumbing and drainage standard used - G13/AS3 (AS/NZS3500.2)
- Stud height - 2.42m stud to bedroom/bathroom & raking ceilings (rafters) to living/kitchen
- Truss heel height - 235mm
- Window reveals - H3.1 treated
- Window and door liners - 40x10mm Architraves
- Window joinery full depth unit - 2110mm
- Interior door leaf height - 1980mm
- Roof underlay - DriStud 'FRU36'
- Wall wrap - Tekton
- Insulation - walls = R2.2, ceilings = R3.2
- Ceiling lining - 10mm GIB on rondo battens @450c/c (direct fixed)
- Wall lining - 10mm GIB
- Coving / Skirting -75mm gib classic (40x18mm cupboards) / 60x10 skirting
- Bathrooms - GIB Aqualine® (Villaboard® tiled showers)
- Ceiling Access - 600x500 ceiling access
- Ceiling storage - N/A
- Hot water - Gas - Rinnai A-Series Califont & Gas Bottles

Elevation Guide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NOTES:
90x45 New Frames - H1.2 treatment (or equiv.) & graded to SG8 or LVL8
- Dimensions on this plan are to be checked by all trades prior to commencement of any works 'Lightbulb Architecture' takes no responsibility for any errors in the dimensions shown.
- All timber frame above subfloor to have a minimum treatment of H1.2
- All lintels and beams are calculated using appropriate NZS:3604 or Mitek lintel charts. Some may require the design by Design IT software, these are noted and designed provided
- Kitchen bench finish options; Stainless steel or a decorative high pressure laminate
- Internal and external walking surfaces to comply with NZBC D1/AS1 2.1.2 and Table 2

Natural lighting & Ventilation
- Natural lighting is provided via glazing to 10% of floor areas for individual rooms. Ref:G7/AS1, Clause 1.0
- Natural ventilation is provided via exterior openings of no less than 5% of floor area for individual rooms. Ref:G4/AS1, Clause 1.2 Natural ventilation
- Key lock to internal garage door

CLIENT:
Jeff & Gwen McTainsh
Lot 6, DP 546669
Dune Rise, Whirinaki
Opononi

TERRITORIAL AUTHORITY:
Far North District Council
Coastal Living Zone

SITE DATA: *for zones upto & including*

Ground Bearing:	REF GEOTECH
Sub-soil Classification:	D
Soil Classification	REF GEOTECH
Wind Zone:	High
Earthquake Zone:	1
Exposure Zone:	D
Climate Zone:	1
Rain Intensity (10%AEP):	80mm/hr
Snowload:	0.0kPa (open ground)

Floor Plan

JOB No: FH21016	DESIGN: LBA
SIZE: A3 LAYOUT	DRAWN: LBA
PRINT DATE:	12/08/2022
SCALE: 1:100	SHEET: 9 OF 12

Amended 12/08/22
- raft slab notes removed (replaced with timber floor notes)
- Zone D fixing notes added

MATERIALS Zone D

(summary of 3604 Tables 4.1, 4.2, 4.3, read in conjuction with)

Roof Cladding, Fascia & Gutter - Colorsteel 'Maxx'

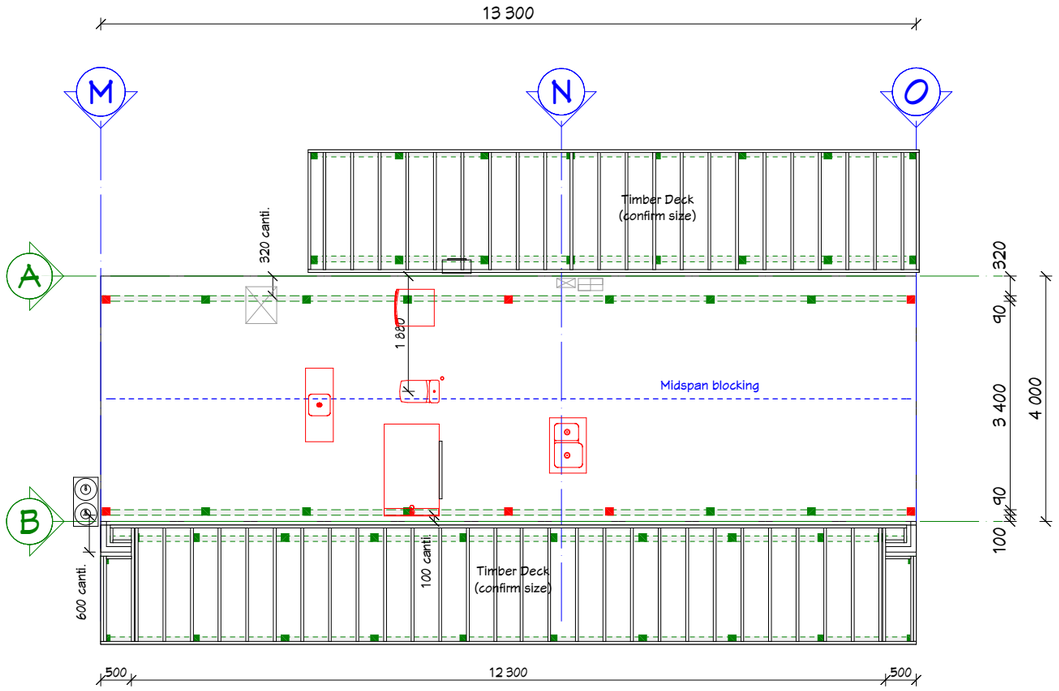
Closed
Nails / Screws - Mild steel
Nail plates - Continuously coated galvanized steel
Bolts / Wire dogs - Hot dipped galvanized steel
Joist hangers/brackets - Mild steel
Fabricated brackets - Mild steel

Sheltered
Nails / Screws - Type 304 Stainless steel
Nail plates / Bolts / Joist hangers -Type 304 Stainless steel
Fabricated brackets - 5mm Stainless steel - Type 304 Stainless steel

Exposed
Nails / Screws - Type 304 Stainless steel
Nail plates / Bolts / Joist hangers - Type 304 Stainless steel
Fabricated brackets - 5mm Stainless steel - Type 304 Stainless steel

Cladding Non-Structural
Fixings - Refer manufacturers technical manuals

NOTE:
- Ground preparation to be undertaken in accordance with site specific Geotechnical Report Recommendations



House Subfloor framing
- Piles - 125sq H5 timber piles (destination intention)
- Bearers - 2/140x45 H3.2 SG8 bearers (1.65m max. span) (Cantilever 300mm max)
- Joists - 190x45 SG8 H1.2 joists @ 450mm c/c (3.45m max span)
- Joists - Cantilever 600mm max (<4.0m roof span)
- Allow for H3.2 boundary joists

SCHEDULE 1 - non-consentable

Deck Subfloor framing (destination intention)
- Selected decking, 20mm min thickness
- 12mm weather gap
- Do not attach to the house / free standing
- 140x45 SG8 H3.2 joists @ 450mm c/c (2.05m max. span)
- 2/140x45 H3.2 bearers, 1.65m max. span
- 125sq H5 timber piles @ 1.65m max. c/c

■ = Ordinary Piles
A ■ = Anchor Piles

Footing size - Decks
= 225sq or 260dia x 200mm deep (min.)

Footing size - Under load bearing walls
400sq or 460dia x 200mm deep (min.)

- **Ground conditions to be confirmed in accordance with Geotechnical Report at time of construction**
- **Monitoring to be undertaken in accordance with Geotechnical Report**

NOTE: The dimensions on this plan are to be checked by all trades prior to commencement of any works as they are an indication only and have been shown to help verify each trades own calculation from the floor plan.

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NOTES:
- The dimensions on this foundation plan / floor framing plan are to be checked by all trades prior to commencement of any works as they are an indication only and have been shown to help verify each trades own calculations from the floor plan 'Lightbulb Architecture' takes no responsibility for any errors in the dimensions shown.
- Foundations to be on good ground soils with a consistent compaction in excess of 100kPa as confirmed by council inspection. If inspection fails, then all site works are to be carried out in accordance with a geotechnical soils investigation report in accordance with NZS.3604.2011 and related documents. Site classifications for such investigations to comply with the requirements of AS2870 and referenced documents.
- Timber subfloor to be installed as per NZS: 3604
- All flooring to be installed as per NZS:3604 and manufacturers technical documentation
- All fixings to be in accordance with section 4, Durability, NZS:3604
- All footings to be founded in 'good ground' as per NZS:3604

CLIENT:
Jeff & Gwen McTainsh
Lot 6, DP 546669
Dune Rise, Whirinaki
Opononi

TERRITORIAL AUTHORITY:
Far North District Council
Coastal Living Zone

SITE DATA: *for zones upto & including*

Ground Bearing:	REF GEOTECH
Sub-soil Classification:	D
Soil Classification	REF GEOTECH
Wind Zone:	High
Earthquake Zone:	1
Exposure Zone:	D
Climate Zone:	1
Rain Intensity (10%AEP):	80mm/hr
Snowload:	0.0kPa (open ground)

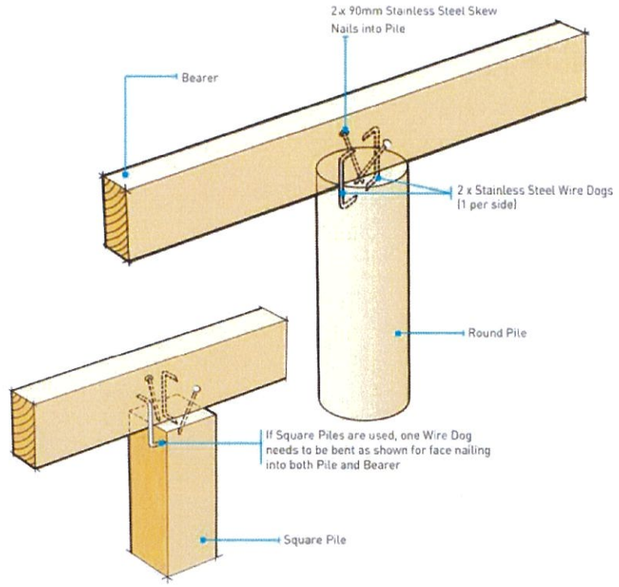
Subfloor Layout

JOB No: FH21016	DESIGN: LBA
SIZE: A3 LAYOUT	DRAWN: LBA
PRINT DATE:	12/08/2022
SCALE: 1:100	SHEET: 10 OF 12

ORDINARY PILE FIXING

COMPLIES WITH NZS 3604:2011

- All Fixings Stainless Steel
- For all Ordinary Piles (Refer to figure 6.3 NZS 3604:2011)



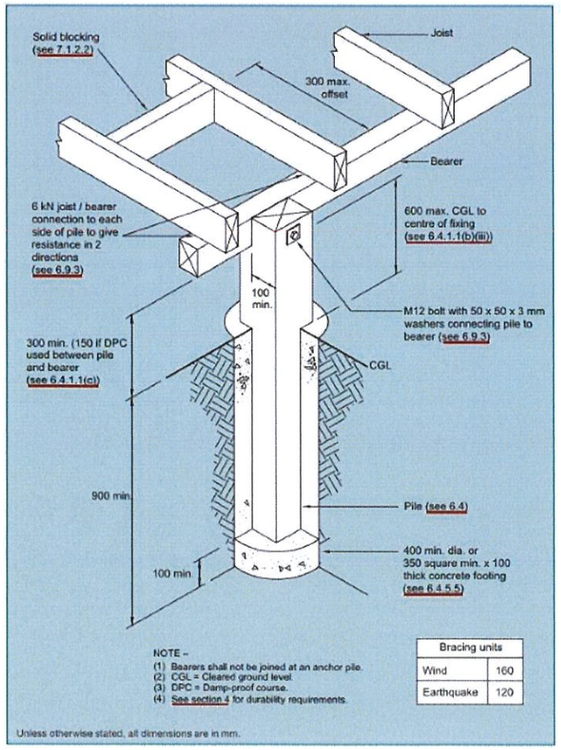
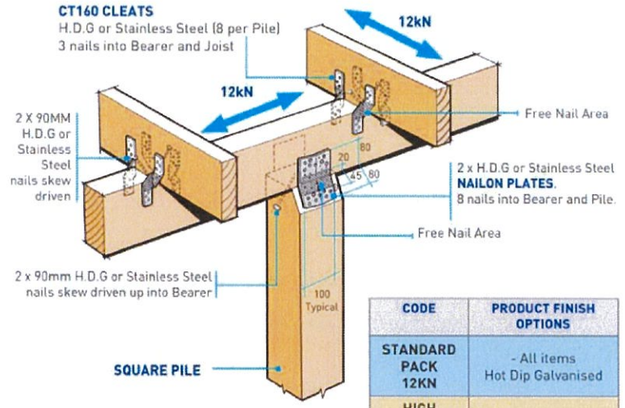


Figure 6.10 – Anchor pile directly connected to bearer only (see 6.9)

12kN PILE FIXING

FOR BRACED PILES OR ANCHOR PILES

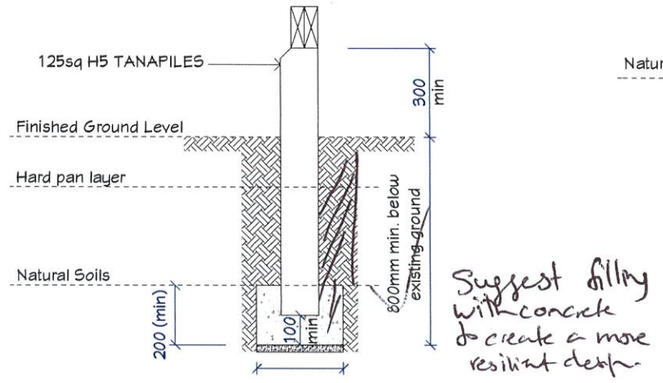
- The 12kN Pile Fixing must be installed in accordance with this brochure.
- Auckland University Tested Ref. 4613.
- All Subfloor construction must be in accordance with NZS 3604:2011.
- NZS 3604 requires lines of lateral support to floor joists within 300mm of bearer or bracing lines, refer clause 7.1.2.
- Joists deeper than 150mm require solid nogging over braced or anchor pile.



Anchor / Brace Pile Shown
(on internal bracing line)

CODE	PRODUCT FINISH OPTIONS
STANDARD PACK 12KN	- All items Hot Dip Galvanised
HIGH CORROSION PACK 12KNH	- All items Stainless Steel

NOTE:
- Ground preparation to be undertaken in accordance with site specific Geotechnical Report Recommendations



Concrete = 17.5MPa
Footing Size = Refer Subfloor Layout

ORDINARY PILE FOOTING

SCALE 1:20

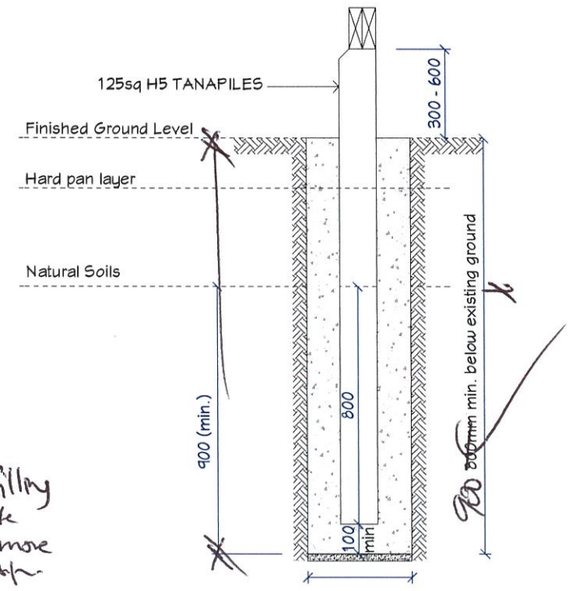
NOTES

Pile support

Footing to be founded on a compacted granular bedding material to a minimum depth of 25 mm, on undisturbed good ground, to obtain even bearing to the excavated surface, together with cast-in-situ concrete embedment.

Fixings to bearer

Use 2/4.9mm wire dogs together with 2/100x3.75 nails or 4/100x3.75 nails, skew driven into the piles



Concrete = 17.5MPa
Footing Size = Refer Subfloor Layout

ANCHOR PILE FOOTING

SCALE 1:20

NOTES

Pile support

Footing to be founded on a compacted granular bedding material to a minimum depth of 25 mm, on undisturbed good ground, to obtain even bearing to the excavated surface, together with cast-in-situ concrete embedment.

Fixings to bearer

Refer to details

Amended 12/08/22
- pile details updated

Amended 26/08/22
- 800mm min. embedment noted

Sited by
Haigh Workman
W Thorburn
CPEng 1006534

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NOTES:
- Flashings to be in accordance with AS1/E2
- All fixings to be in accordance with section 4, Durability, NZS:3604
- All timber frame above subfloor to have a minimum treatment of H1.2 and be graded SG8

CLIENT:
Jeff & Gwen McTainsh
Lot 6, DP 546669
Dune Rise, Whirinaki
Opononi

TERRITORIAL AUTHORITY:
Far North District Council
Coastal Living Zone

SITE DATA: *for zones upto & including*

Ground Bearing:	REF GEOTECH
Sub-soil Classification:	D
Soil Classification	REF GEOTECH
Wind Zone:	High
Earthquake Zone:	1
Exposure Zone:	D
Climate Zone:	1
Rain Intensity (10%AEP):	80mm/hr
Snowload:	0.0kPa (open ground)

Subfloor Details .1

JOB No: FH21016	DESIGN:	LBA
SIZE: A3 LAYOUT	DRAWN:	LBA
PRINT DATE:		26/08/2022
SCALE:	SHEET:	11 OF 12

Table 7.5 – Nailing schedule for hand-driven and power-driven nails (see 7.6)

Joint	Hand-driven nails		Power-driven nails	
	Length (mm) x diameter (mm) and type	Number/ Location	Length (mm) x diameter (mm) and type	Number/ Location
Floor framing				
Boundary joist to end of each joist	100 x 3.75	2 (end nailed)	90 x 3.15	2 (end nailed)
Curtailed joist not exceeding 3 m long to trimmer	100 x 3.75	3 (end nailed)	90 x 3.15	5 (end nailed)
Curtailed joist to trimmer when half housed	100 x 3.75	2 (end nailed)	90 x 3.15	3 (end nailed)
Flitched joint in joist	100 x 3.75	4 (each end)	90 x 3.15	6 (each end)
Herringbone strutting to joist	60 x 2.8	2 (skewed)	60 x 2.8	2 (skewed)
Joist to plate on foundation walls	100 x 3.75	12 (skewed) per 1.5 m length	90 x 3.15	18 (skewed) per 1.5 m length
Joist to plate or bearer	100 x 3.75	2 (skewed)	90 x 3.15	3 (skewed)
Lapped joint in joist	100 x 3.75	2 (each side)	90 x 3.15	3 (each side)
Solid blocking between joists to plate bearer or stringer	100 x 3.75	4 (skewed)	90 x 3.15	6 (skewed)
Solid blocking to joist	100 x 3.75 or 75 x 3.15	2 (end nailed) 4 (skewed)	90 x 3.15	2 (end nailed)
Flooring				
Sheet decking (not exceeding 21 mm thick): (a) Supports at sheet edges	60 x 3.06 ring shanked galv. or 60 x 2.8	150 mm centres	60 x 2.8 ring shanked galv.	150 mm centres
(b) Intermediate supports		300 mm centres		300 mm centres
Strip flooring not exceeding 75 mm wide to floor joist	2½ x finished thickness	1	–	1
Strip flooring not exceeding 100 mm wide to floor joist	2½ x finished thickness	2	–	2

NOTE –
(1) Nail lengths and diameters are the minimum required.
(2) See 4.4 for required protective coatings for metal fasteners.

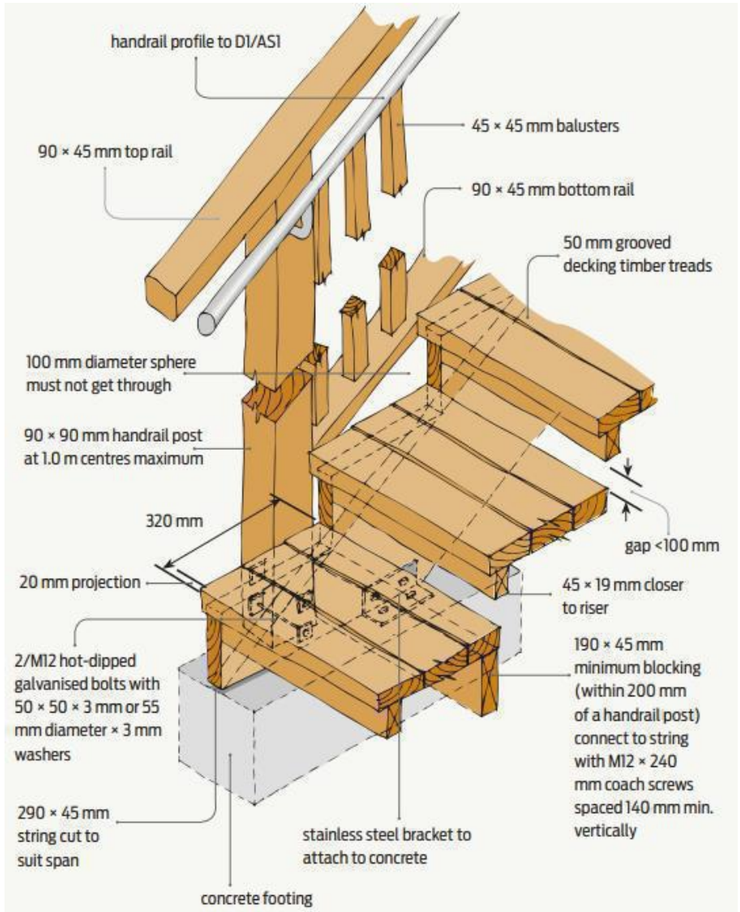
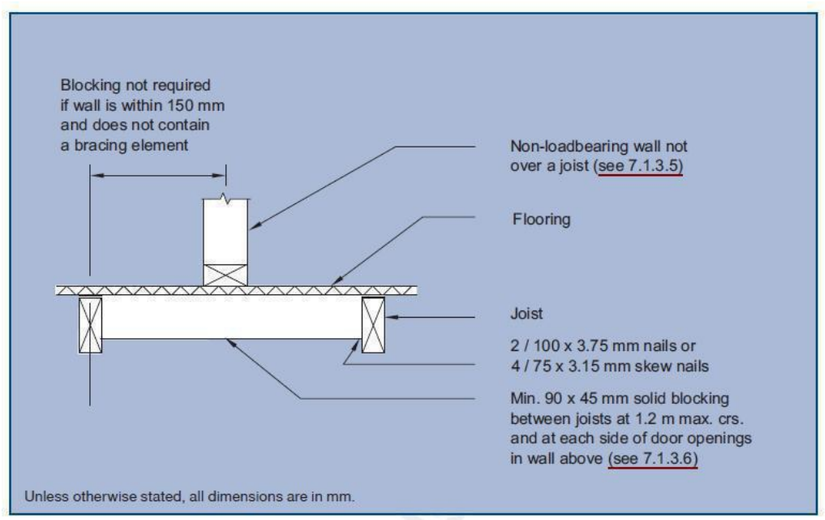


Figure 4 Stair construction.



Solid blocking detail (extract Figure 7.5 3604)

NOTES:
- Flashings to be in accordance with AS1/E2
- All fixings to be in accordance with section 4, Durability, NZS:3604
- All timber frame above subfloor to have a minimum treatment of H1.2 and be graded SG8

CLIENT:
Jeff & Gwen McTainsh
Lot 6, DP 546669
Dune Rise, Whirinaki
Opononi

TERRITORIAL AUTHORITY:
Far North District Council
Coastal Living Zone

SITE DATA: *for zones upto & including*

Ground Bearing:	REF GEOTECH
Sub-soil Classification:	D
Soil Classification	REF GEOTECH
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Earthquake Zone:	1
Exposure Zone:	D
Climate Zone:	1
Rain Intensity (10%AEP):	80mm/hr
Snowload:	0.0kPa (open ground)

Subfloor Details .2

JOB No: FH21016	DESIGN:	LBA
SIZE: A3 LAYOUT	DRAWN:	LBA
PRINT DATE:		4/04/2022
SCALE:	SHEET:	12 OF 12

HAIGH WORKMAN LTD
Civil & Structural Engineers

22 128

29/08/2022

Attention: First Homes NZ
c/o Jesse Tuke

Re: 594 Koutu Loop Road, Koutu Point
Geotechnical Drawing Review

Further to your request, we have reviewed the provided drawings of the proposed residential building at 594 Koutu Loop Road, Koutu Point. Haigh Workman Limited (HWL) conducted geotechnical investigations at the site, with the findings presented in our report dated August 2022, reference 22 128. This review is related to the geotechnical aspects for the proposed building and to confirm the foundation recommendations provided within the Geotechnical Report have been followed.

The provided drawings indicate that the building will comprise a suspended floor, supported on timber post foundations encased in concrete. Any required changes are outlined in Table 1 below and should be implemented to follow the recommendations made within the geotechnical report. All other recommendations contained in our reports should be implemented during design and construction.

Table 1 – Drawing Review.

Sheet No	Date	Comments 29/08/2022
11 of 12 – Subfloor Details	26/08/2022	Correct embedment depth shown. We suggest filling all holes with concrete rather than just the bottom 200 mm. Minor amendments to anchor pile to make it clearer.

Haigh Workman confirms that we have reviewed the appended drawings with reference to foundation details. We confirm that the proposed foundations are in accordance with the geotechnical recommendations. All other recommendations in the geotechnical report should be followed. We trust that the above is satisfactory. If you have any queries or require further information, please do not hesitate to contact the undersigned at your convenience. For reference we have appended the Drawing Set reviewed.

Limitations

This report has been prepared for the use of First Homes NZ with respect to the brief outlined to us. This report is to be used by our Client and their Consultants and may be relied upon when considering geotechnical advice. The information and opinions contained within this report shall not be used in other context for any other purpose without prior review and agreement by Haigh Workman Ltd

Prepared by:
Wayne Thorburn on behalf of Haigh Workman Limited

Senior Geotechnical Engineer
CPEng, CMEngNZ

Phone: +64 9 407 8327 • Fax: +64 9 407 8378 • info@haighworkman.co.nz • www.haighworkman.co.nz
PO Box 89 • 6 Fairway Drive • Kerikeri 0245 • New Zealand

Attachments:
Marked-up Drawings