ORIGINAL SCALE = 100 MM

Notes:

1. All work shall comply with NZS 3604:2011.
2. Dimensions are in millimeters unless noted otherwise.
3. The toilet shall be sited on level ground where possible, or ground to be levelled as required.
4. The lifting eye / hold down brackets shall be installed if:
   - Delivering the toilet to site by helicopter.
   - Located in high wind zones where tethering to ground is necessary.
5. All timber shall be pinus radiata. All subfloor framing shall be rough sawn, all other timber shall be finished sizes.
   General timber grades –
   - Timber above ground H3.2 – SG8 U.N.O. on drawings.
   - Timber in ground or in contact with ground H5 – SG8.
3. Bolts in timber shall be installed in bolt diameter plus 2mm diameter holes.
4. Bolts / coach screws & threaded rods shall be 316 stainless steel hex head grade 4.6 U.N.O. Washers shall not be recessed unless noted on drgs.
5. All framing brackets and multigrips shall be stainless steel. fixed in place with either stainless steel product nails or stainless steel dome head screws as noted on drgs. The exception to this the Lumberlok strip brace to roof – which shall be galv.
6. All nails and screws shall be stainless steel unless shown otherwise.
7. The following timber items shall be finished as follows:
   - Door and door framing – select paint system finish suitable for outdoor conditions.
   - Ecoply floor (internal and external) – Dulux Maxiproof Gloss polyurethane coating.
   - Ecoply to seat framing and Ecoply on 3 no. internal walls – polyurethane finish.
   - Timber bead and framing surrounding door – select paint system finish suitable for outdoor conditions, as noted on details).

Drawing Index

Department of Conservation
Te Papa Atawhai

Conservancy

Area

Project Name
Standard Backcountry Toilet

Drawing Name
Drawing Index & General Structural Notes

Consultant
Brad Williamson

Drawing Number	drawn
BW16011	JR

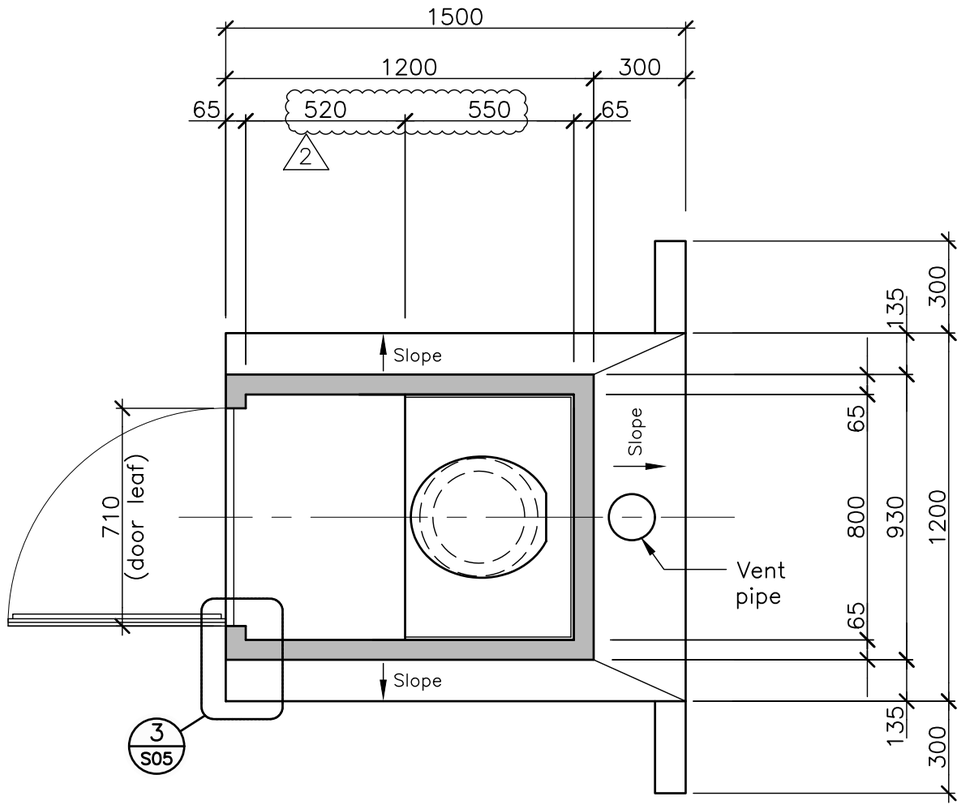
Grid Reference
mE mN

Designed	Checked	Approved
BW	JC	JD

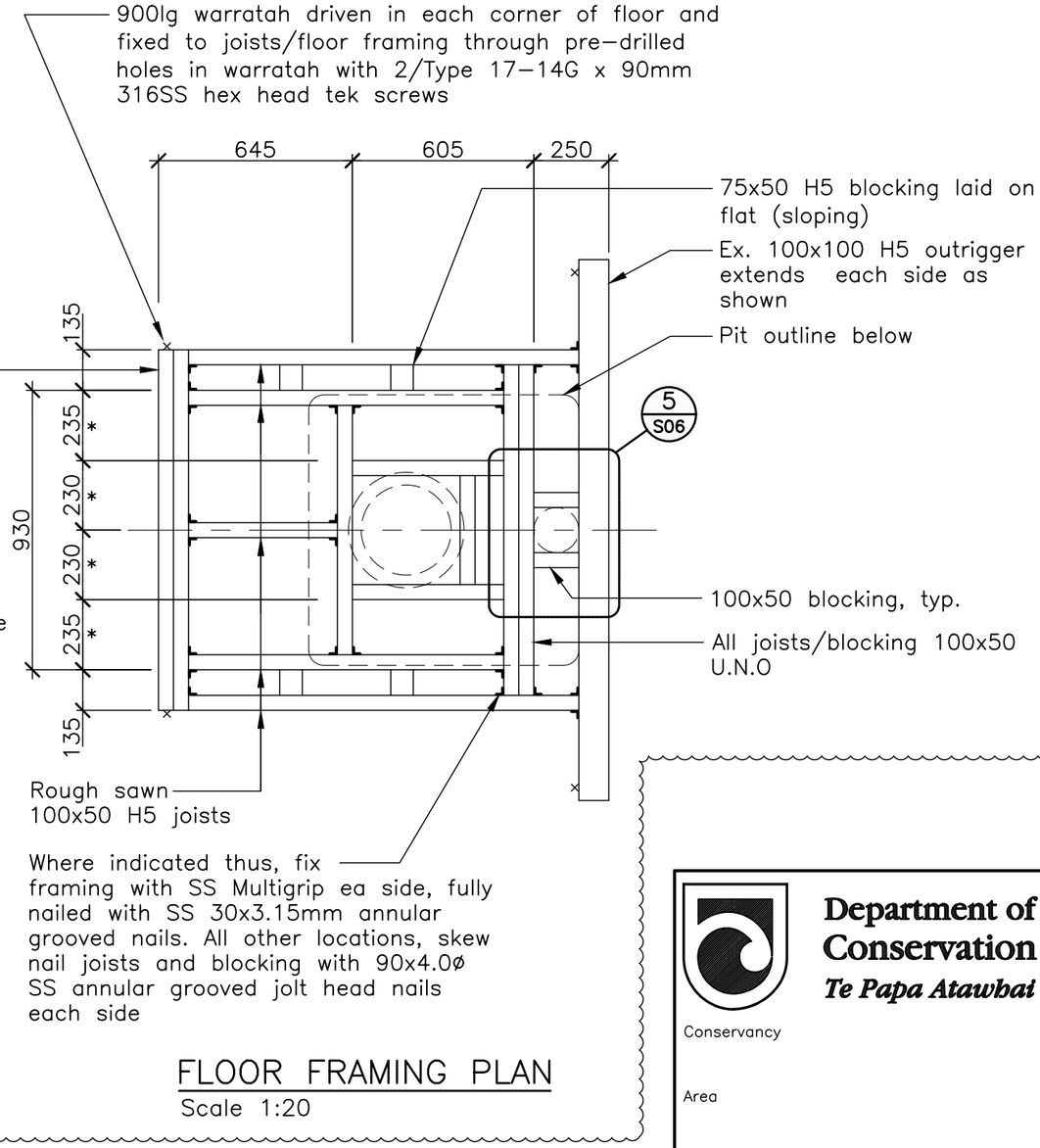
Equipment Number	drawing	issue
	S01	2

Iss.	Date	Reason For Issue	App.
2	11/05/21	For Construction	JD
1	20/07/16	For Construction	BW

DO NOT SCALE



FLOOR PLAN
Scale 1:20



FLOOR FRAMING PLAN
Scale 1:20

ORIGINAL SCALE = 100 MM

Department of Conservation
Te Papa Atawhai

Conservancy

Area

Project Name
Standard Backcountry Toilet

Drawing Name
Floor Plan and Floor Framing Plan

Consultant
Brad Williamson

Drawing Number	drawn
BW16011	JR

Grid Reference
mE mN

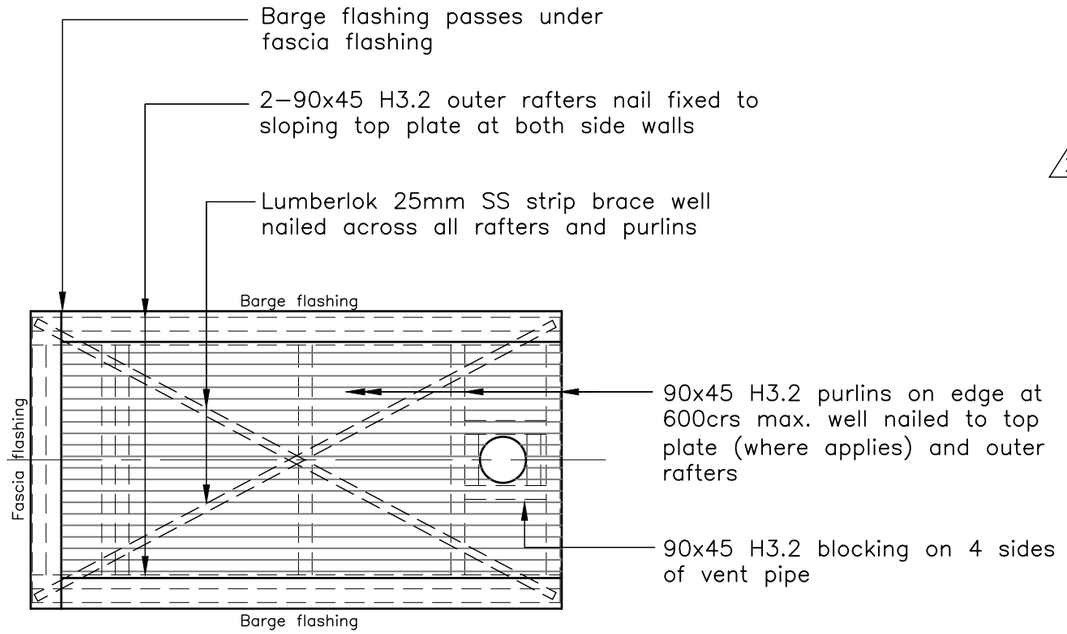
Designed	Checked	Approved
BW	JC	JD

Equipment Number	drawing	issue
	S02	2

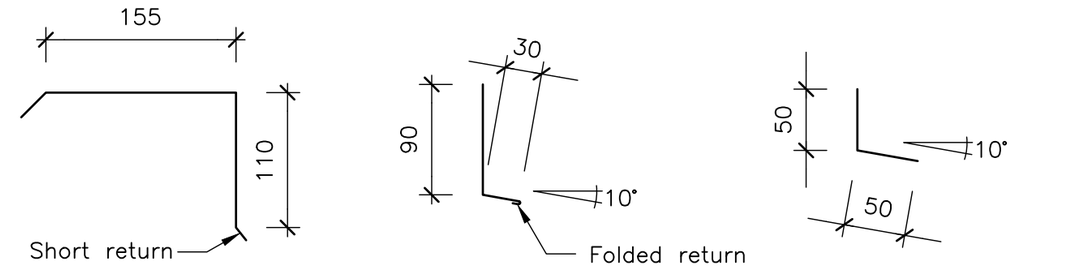
Iss.	Date	Reason For Issue	App.
2	11/05/21	For Construction	JD
1	20/07/16	For Construction	BW

DO NOT SCALE

DO NOT SCALE

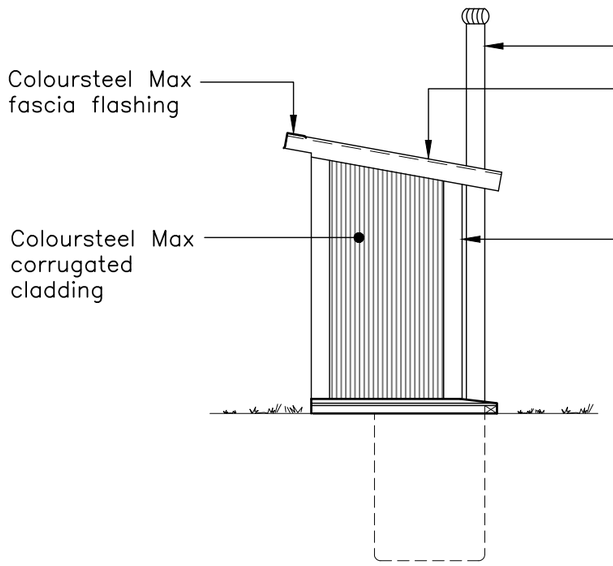


ROOF PLAN – SHOWING FRAMING
Scale 1:20

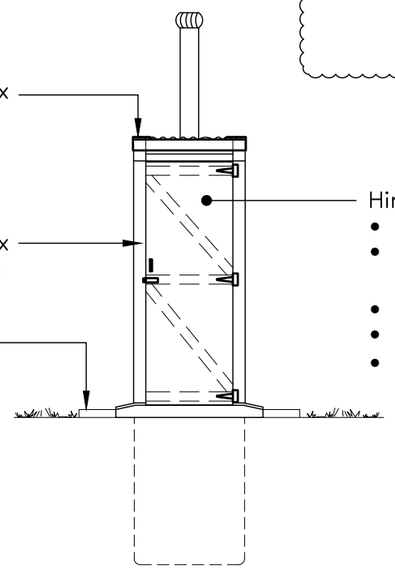


FLASHING PROFILES
Scale 1:5

Note: all flashings to be Colorsteel Max in New Denim Blue, cut length to suit



TYPICAL SIDE ELEVATION
Scale 1:50



FRONT ELEVATION
Scale 1:50

Hinged door: (2)
- 1980mm high door
- 2 layers of 12mm H3.2 Ecoply glued and screwed to timber framing (175x25mm)
- SS 'T' hinges (3 no.) min. 150mm long
- SS sliding bolt inside and outside
- SS 'D' handle to outside

ORIGINAL SCALE = 100 MM

Department of Conservation
Te Papa Atawhai

Conservancy

Area

Project Name
Standard Backcountry Toilet

Drawing Name
Roof Plan, Elevations & Flashing Details

Consultant
Brad Williamson

Drawing Number	drawn
BW16011	JR

Grid Reference
mE mN

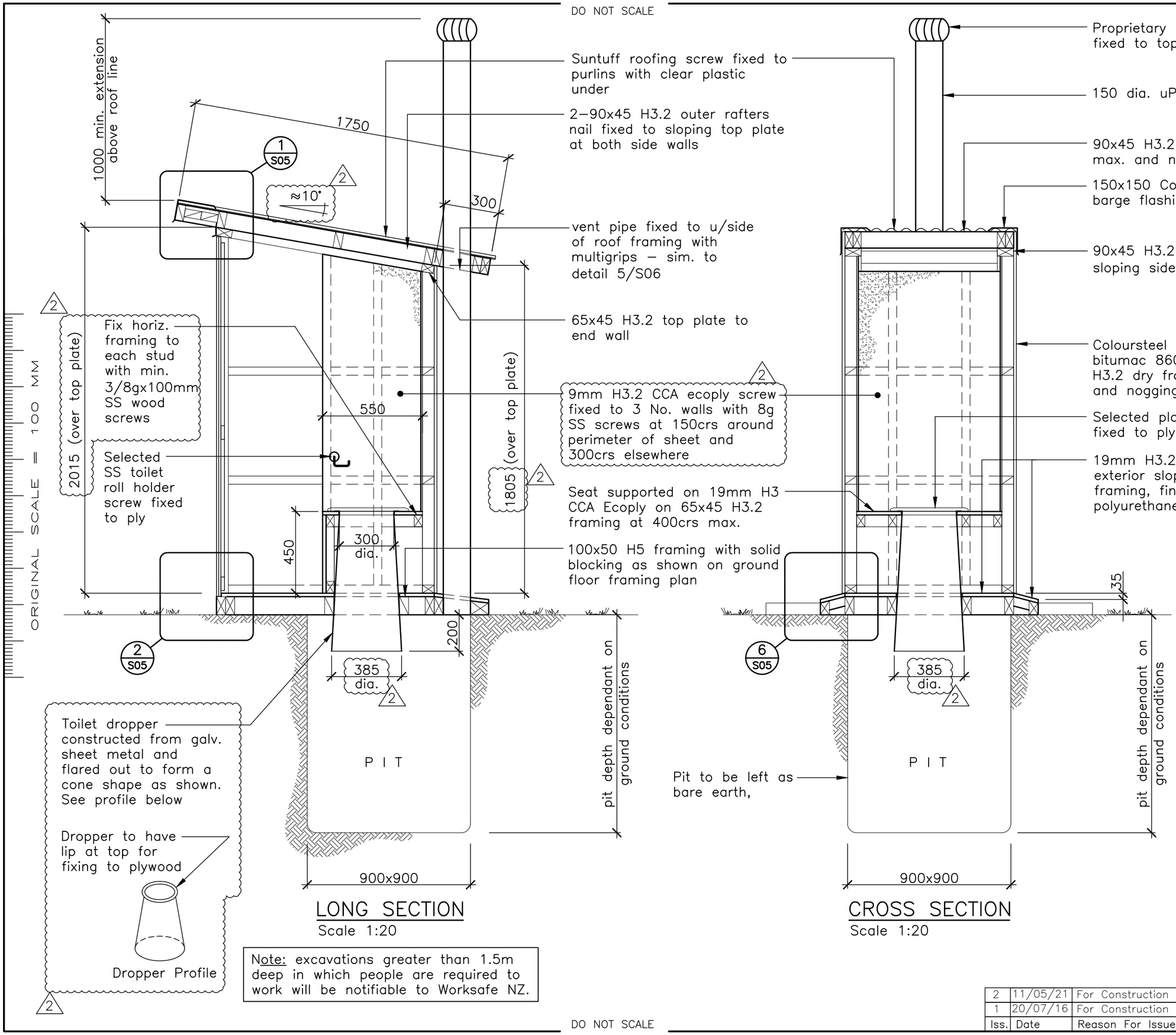
Designed	Checked	Approved
BW	JC	JD

Equipment Number	drawing	issue
	S03	2

Iss.	Date	Reason For Issue	App.
2	11/05/21	For Construction	JD
1	20/07/16	For Construction	BW

DO NOT SCALE

DO NOT SCALE



LONG SECTION
Scale 1:20

CROSS SECTION
Scale 1:20

Note: excavations greater than 1.5m deep in which people are required to work will be notifiable to Worksafe NZ.

ORIGINAL SCALE = 100 MM

DO NOT SCALE

Iss.	Date	Reason For Issue	App.
2	11/05/21	For Construction	JD
1	20/07/16	For Construction	BW

Department of Conservation
Te Papa Atawhai

Conservancy

Area

Project Name
Standard Backcountry Toilet

Drawing Name
Sections

Consultant
Brad Williamson

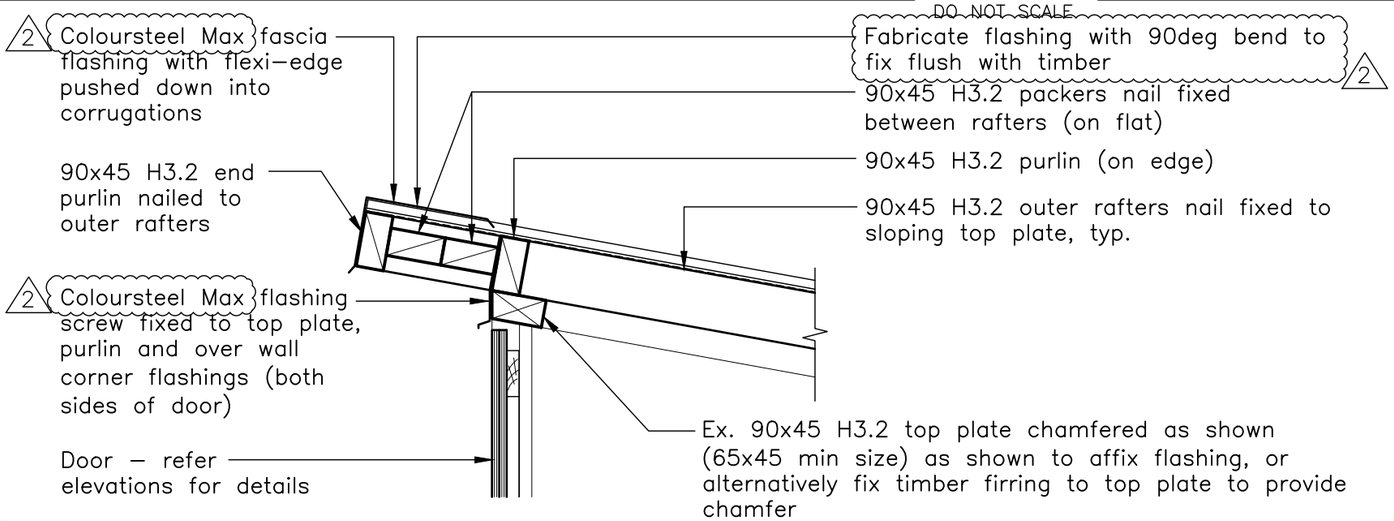
Drawing Number	drawn
BW16011	JR

Grid Reference
mE mN

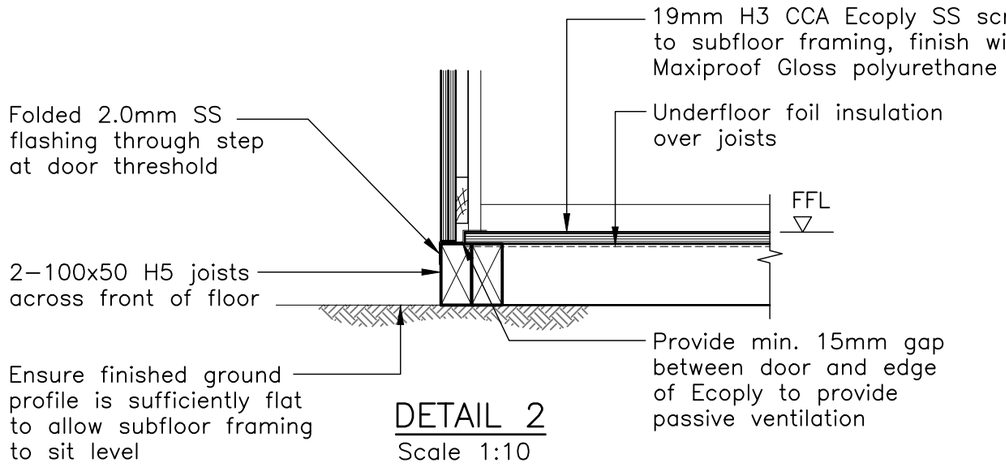
Designed	Checked	Approved
BW	JC	JD

Equipment Number	drawing	issue
	S04	2

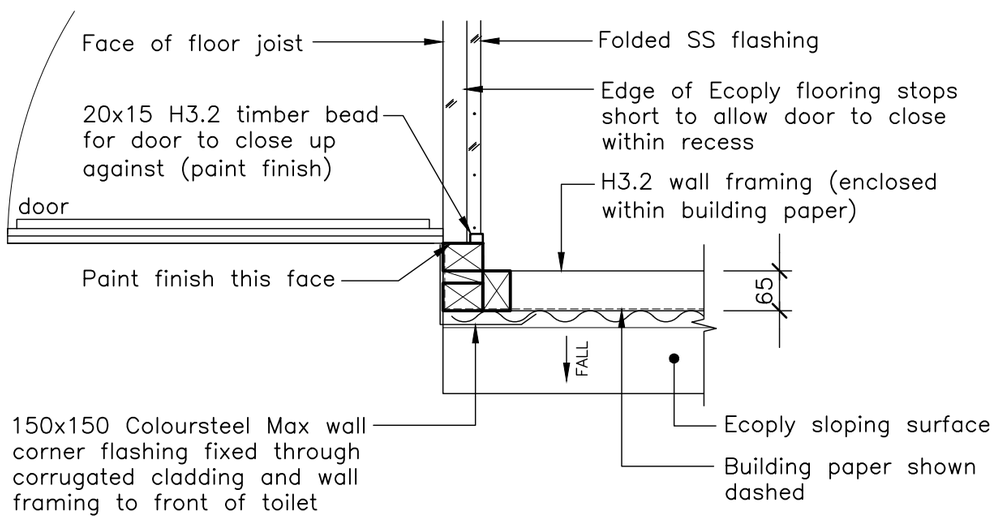
DO NOT SCALE



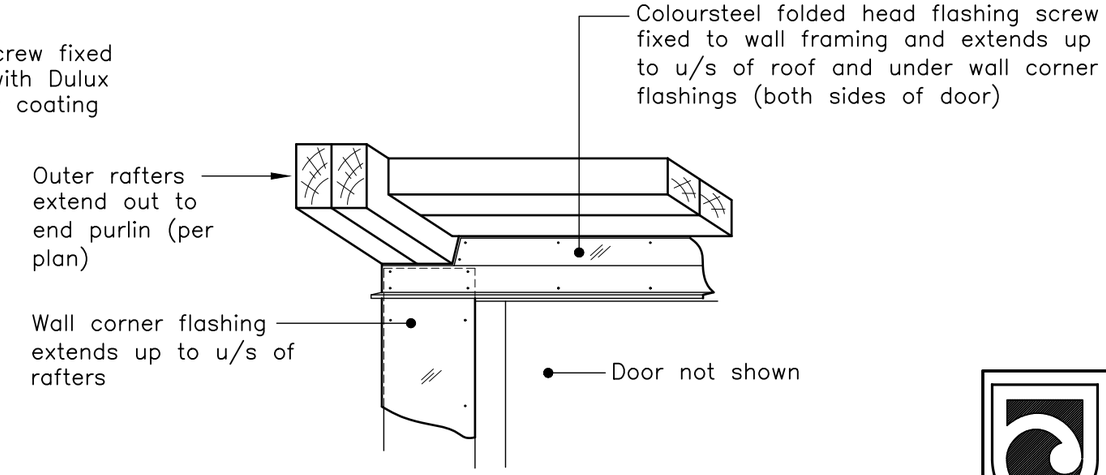
DETAIL 1
Scale 1:10



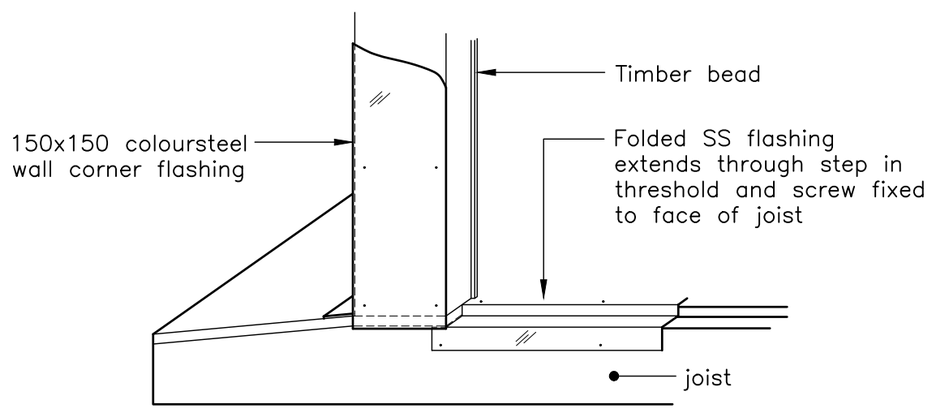
DETAIL 2
Scale 1:10



PLAN DETAIL 3
Scale 1:10



PICTORIAL VIEW AT DOOR HEAD
Scale 1:10



PICTORIAL VIEW AT DOOR BASE
Scale 1:10

Iss.	Date	Reason For Issue	App.
2	11/05/21	For Construction	JD
1	20/07/16	For Construction	BW

Department of Conservation
Te Papa Atawbai

Conservancy

Area

Project Name
Standard Backcountry Toilet

Drawing Name
Wall Details

Consultant
Brad Williamson

Drawing Number	drawn
BW16011	JR

Grid Reference
mE mN

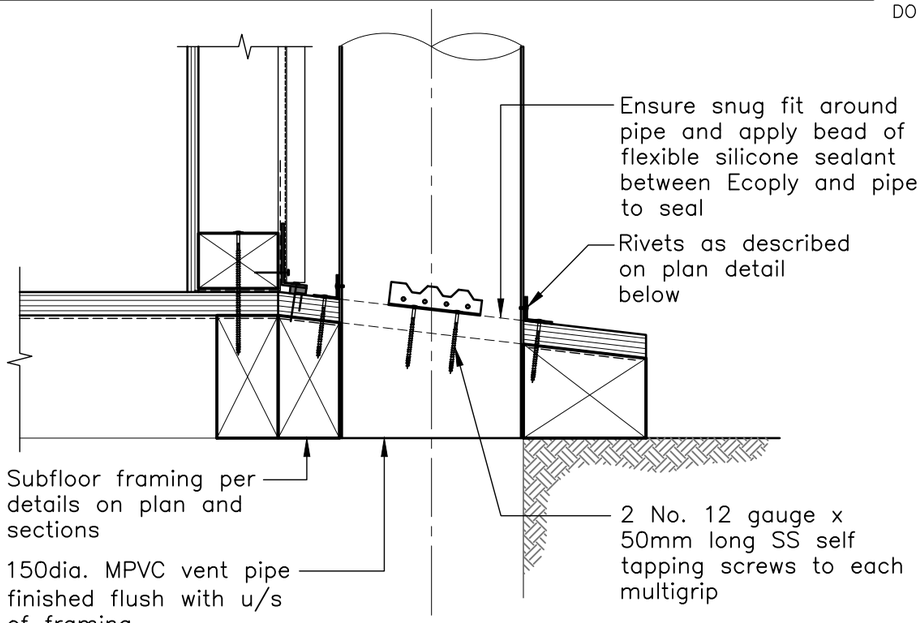
Designed	Checked	Approved
BW	JC	JD

Equipment Number	drawing	issue
	S05	2

ORIGINAL SCALE = 100 MM

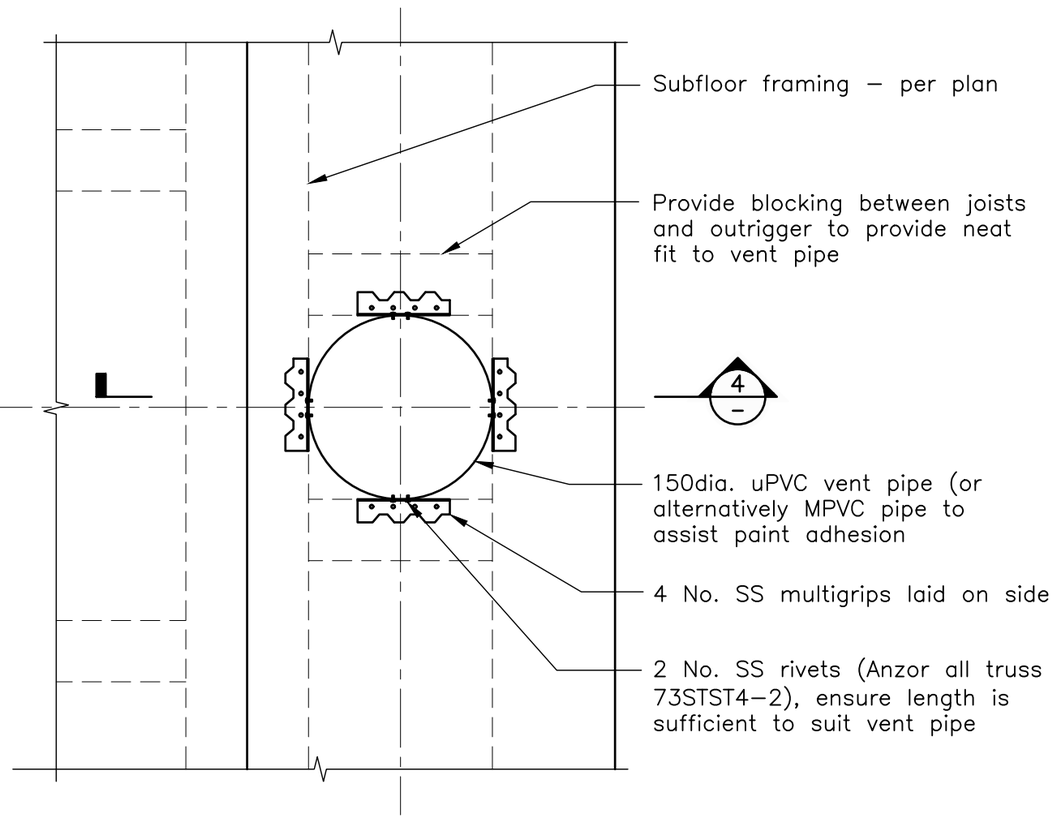
DO NOT SCALE

DO NOT SCALE



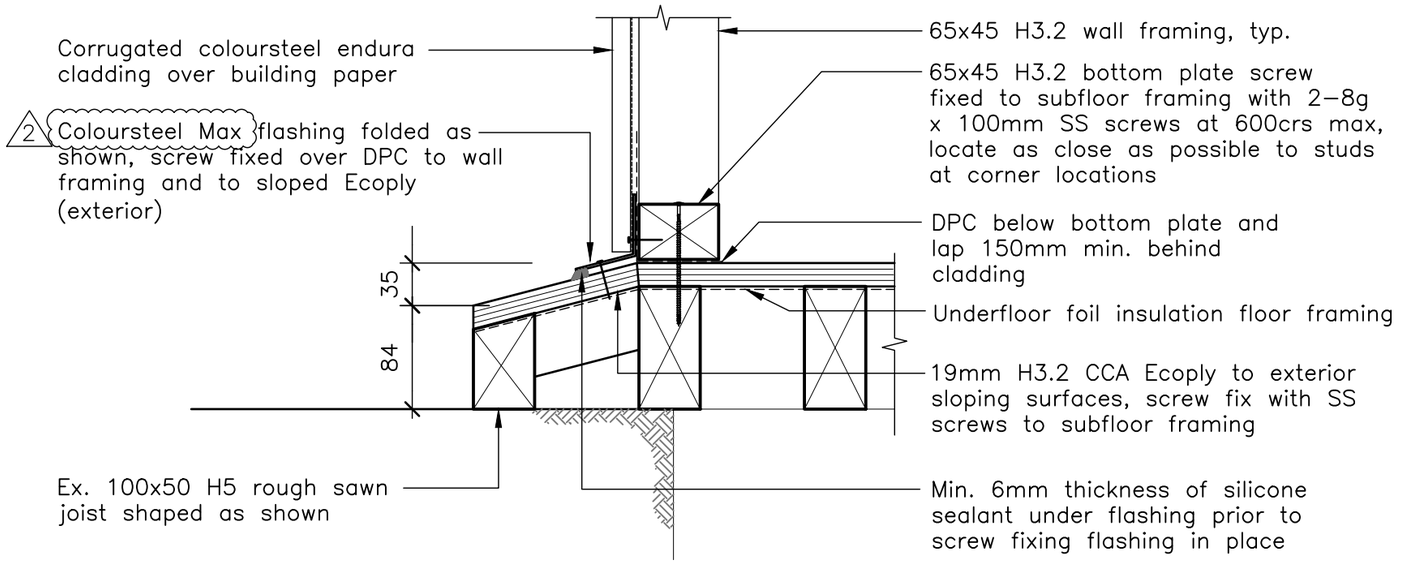
DETAIL 4 – AT VENT PIPE BASE FIXING

Scale 1:5 (SIM. AT U/SIDE OF ROOF)



DETAIL 5 – AT VENT PIPE BASE FIXING

Scale 1:5 (SIM. AT U/SIDE OF ROOF)



DETAIL 6 – TYP. WALL BASE FIXING

Scale 1:5

ORIGINAL SCALE = 100 MM

Iss.	Date	Reason For Issue	App.
2	11/05/21	For Construction	JD
1	20/07/16	For Construction	BW

Department of Conservation
Te Papa Atawhai

Conservancy

Area

Project Name
Standard Backcountry Toilet

Drawing Name
Floor and Vent Details

Consultant
Brad Williamson

Drawing Number	drawn
BW16011	JR

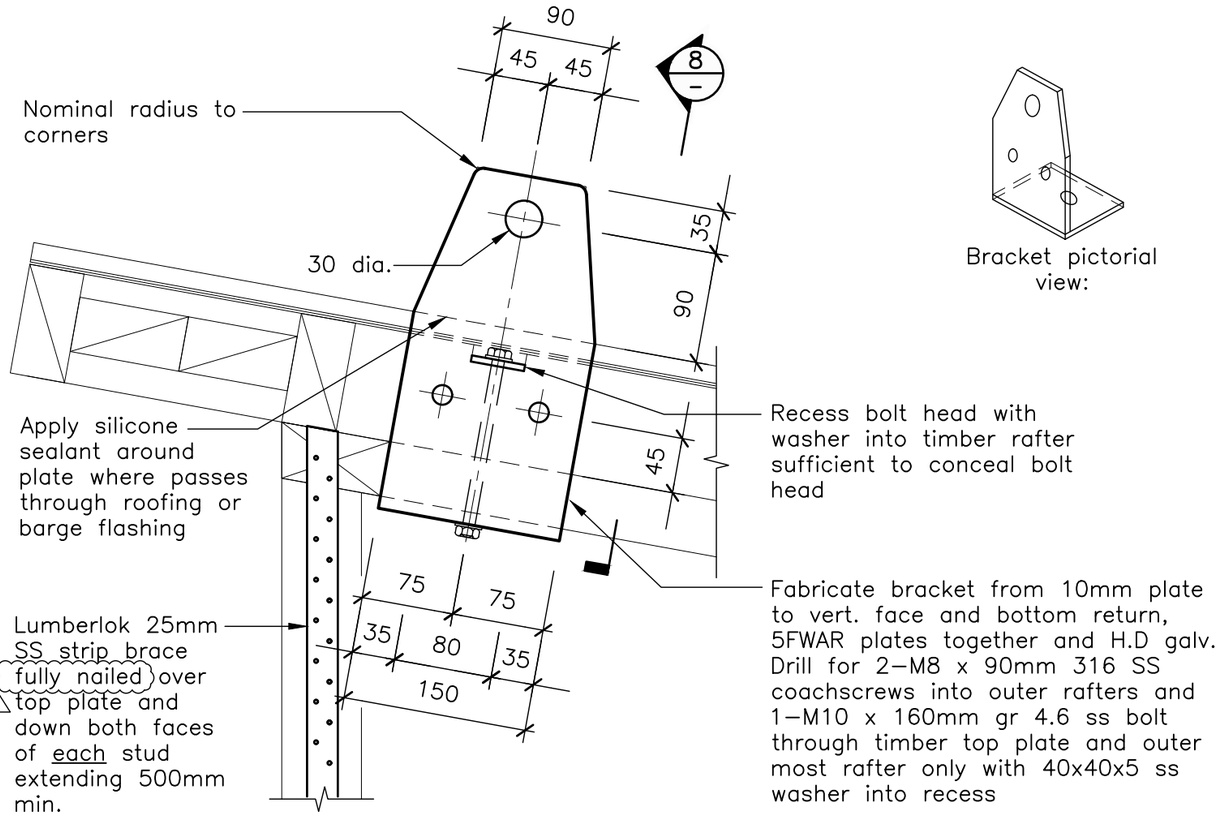
Grid Reference
mE mN

Designed	Checked	Approved
BW	JC	JD

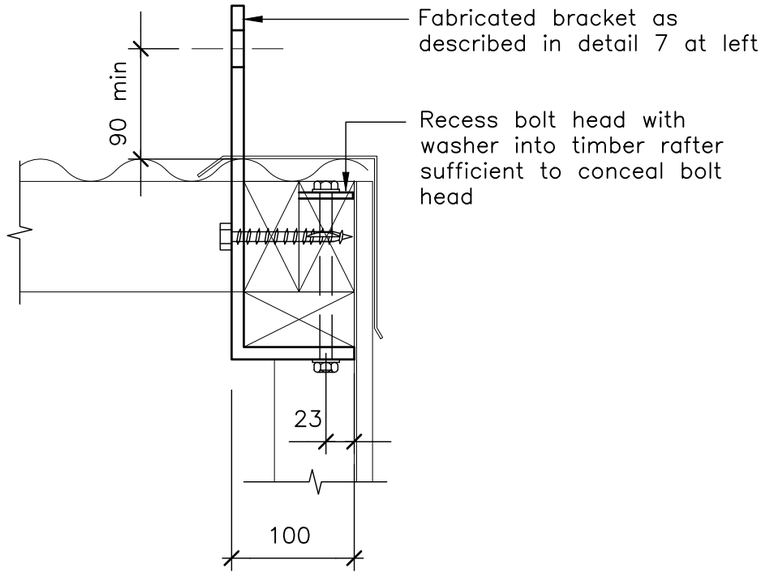
Equipment Number	drawing	issue
	S06	2

DO NOT SCALE

DO NOT SCALE



Bracket pictorial view:

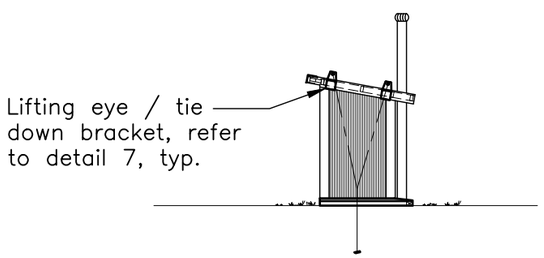


DETAIL 8
Scale 1:5

NOTE:
1. Bracket as shown suitable for all 4 locations.
2. Provide shop drawings for brackets prior to fabrication.

DETAIL 7 – LIFTING EYE / TIE DOWN BRACKET
Scale 1:5

(VIEWED FROM INSIDE TOILET)



SIDE ELEVATION
Scale 1:100

ORIGINAL SCALE = 100 MM

Iss.	Date	Reason For Issue	App.
2	11/05/21	For Construction	JD
1	20/07/16	For Construction	BW

Department of Conservation
Te Papa Atawbai

Conservancy

Area

Project Name
Standard Backcountry Toilet

Drawing Name
Lifting Eye / Tie Down Details

Consultant
Brad Williamson

Drawing Number	drawn
BW16011	JR

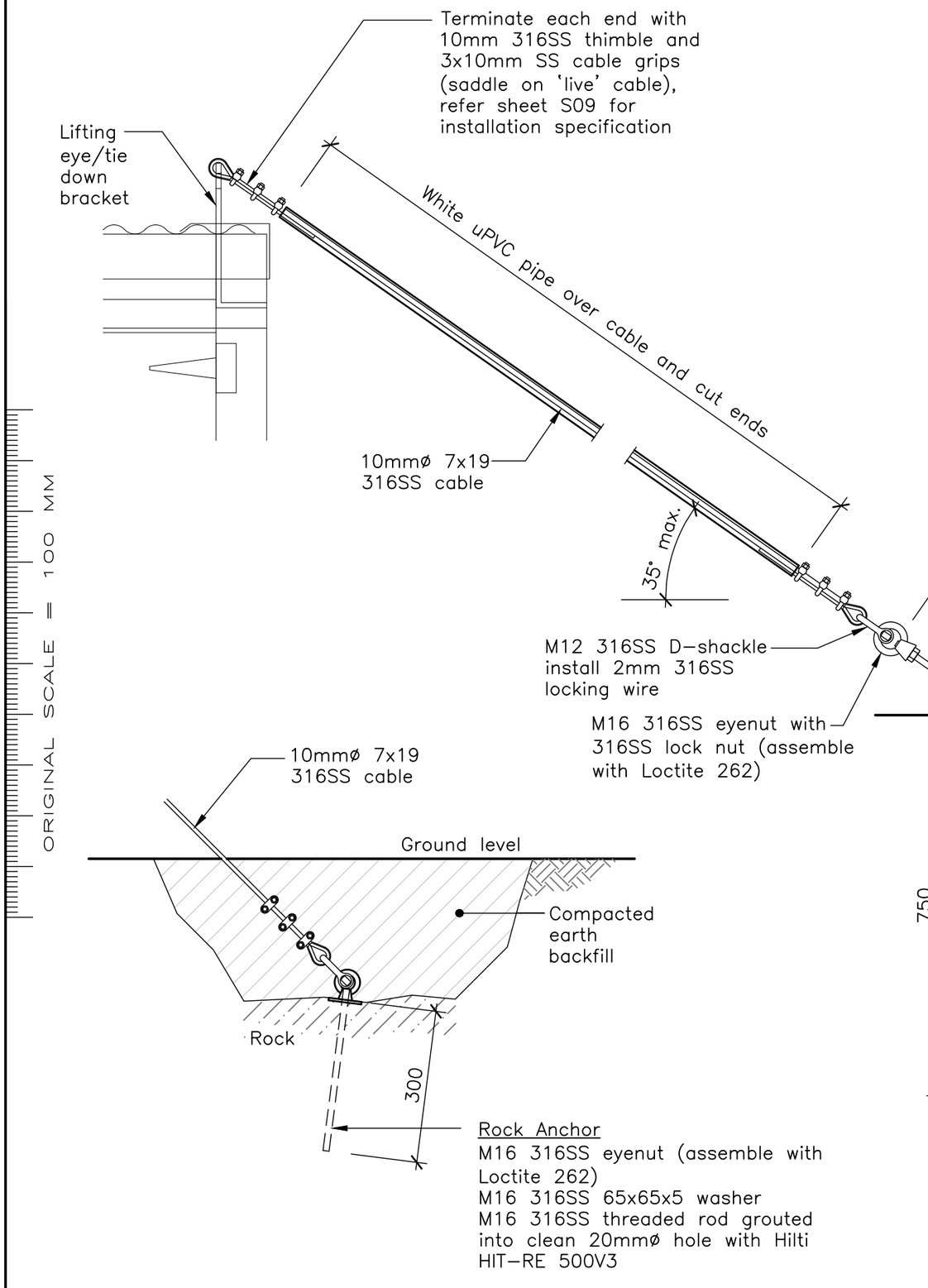
Grid Reference
mE mN

Designed	Checked	Approved
BW	JC	JD

Equipment Number	drawing	issue
	S07	2

DO NOT SCALE

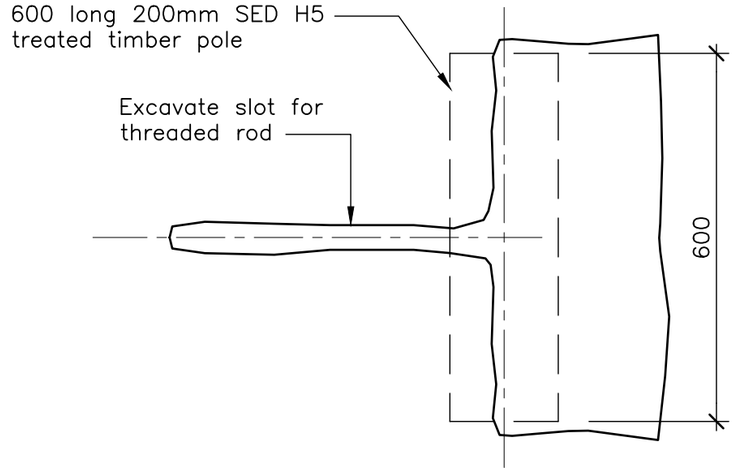
DO NOT SCALE



TIE DOWN DETAILS
(1:10)
(4 required, one in each corner of hut)

Rock Anchor
M16 316SS eyenut (assemble with Loctite 262)
M16 316SS 65x65x5 washer
M16 316SS threaded rod grouted into clean 20mmø hole with Hilti HIT-RE 500V3

ALTERNATIVE DETAIL IF SOUND ROCK ENCOUNTERED
(1:10)



PLAN – BURIED TIMBER DEADMAN
(1:10)

NOTES:

1. Refer Sheet S09 for all hardware requirements.
2. All bolts and threaded rods shall have a minimum of two threads protruding beyond the outer (exposed) face of the nut when installed.
3. All timber construction shall be carried out in accordance with NZS3603 and NZS3604.
4. Timber treatment shall be in accordance with NZS3602 as follows:
   – H5 buried timber pole.
5. All timber shall be Stress Grade 8 (SG8) Pinus Radiata in accordance with AS/NZS1748 unless noted otherwise.
6. All cut ends shall be coated in a liberal coating of Metalex Green.

ORIGINAL SCALE = 100 MM

Iss.	Date	Reason For Issue	App.
2	11/05/21	For Construction	JD
1	20/07/16	For Construction	BW

Department of Conservation
Te Papa Atawbai

Conservancy

Area

Project Name
Standard Backcountry Toilet

Drawing Name
Tie Down Deadman Details

Consultant
Brad Williamson

Drawing Number	drawn
BW16011	JR

Grid Reference
mE mN

Designed	Checked	Approved
BW	JC	JD

Equipment Number	drawing	issue
2	S08	2

DO NOT SCALE

DO NOT SCALE

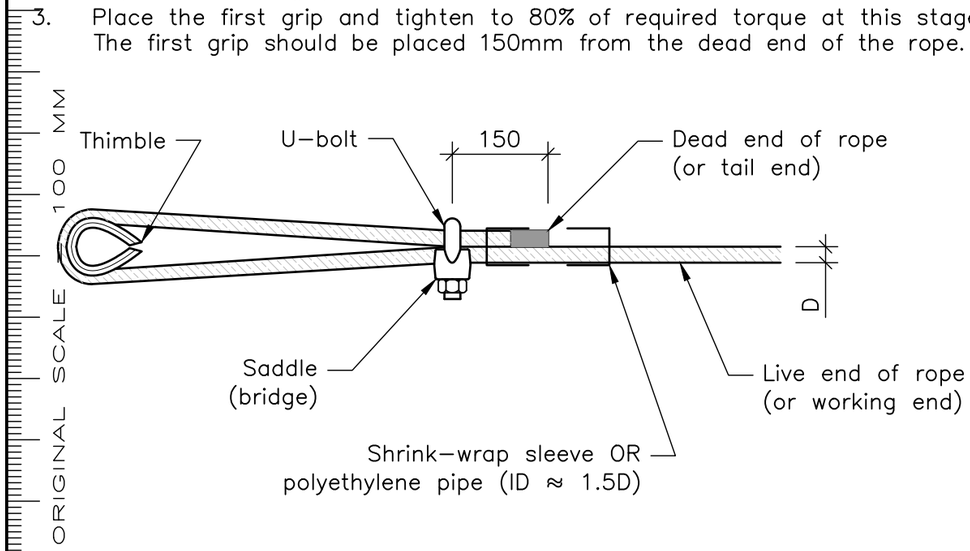
Wire Rope Grip Termination Guide

Specification

- Wire Rope Grips shall be Green Pin, Heavy Pattern, Hot Dip Galvanised, forged saddle, High Tensile Steel U–bolt, complying with EN13411–5 Type B (Fed. Spec. FF–C–450). Manufactured by Van Beest.
- Thimbles shall be Heavy Pattern, Hot Dip Galvanised to AS1138.
- Nuts must be tightened using a torque wrench.

Step 1 – First Grip

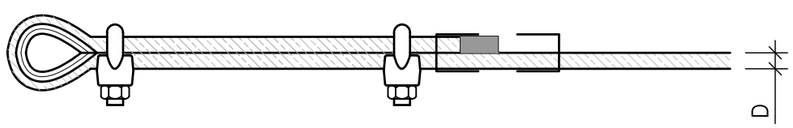
1. Prior to installing any grips, place heat–shrink sleeve or polyethylene pipe over the cable.
2. Determine the required tail length based on the required number of grips and spacing (See Table).
3. Place the first grip and tighten to 80% of required torque at this stage. The first grip should be placed 150mm from the dead end of the rope.



Note:
- The saddle of the grip should always be fitted on the live end of the rope and the U–bolt on the dead end of the rope.
  (Tip: Do not saddle a dead horse).
- Do not alternate the orientation of the grips.
- Orientate the diagonal lugs inside each grip's saddle with the lay of the cable strands.

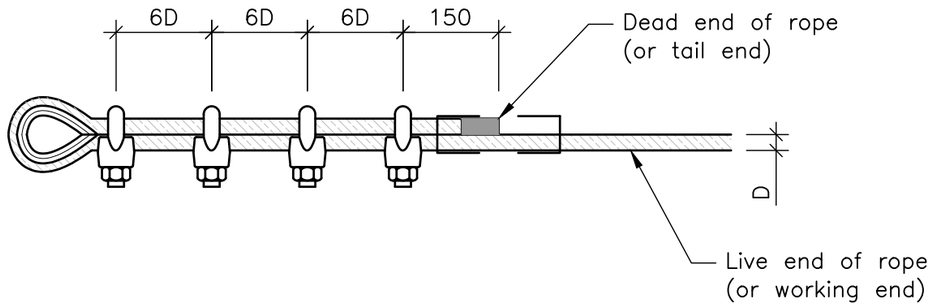
Step 2 – Second Grip

4. Place the second grip immediately against the thimble, but not so close to damage the thimble or cable during the tightening process.
5. Tighten the nuts to 80% of the required torque at this stage.



Step 3 – Remaining Grip(s)

6. Place all other grips, at equal spacing's, between the two end grips. The recommended spacing is six times the rope diameter (6D) (See Table).



Note:
- The minimum spacing between grips is at least one clear saddle away from each other.

Step 4 – Tighten to specified torque

7. Apply a light tension to the live end of the rope and tighten all nuts to the specified torque shown in the Table.

Step 5 – On–going torque checks

8. Check cable grip torque according to the following schedule:
   - Check torque setting as the last operation before leaving site.
   - At first ongoing inspection after upgrade work (within 2 years of upgrade work). Enter a work order into AMIS at time of initial installation.
   - At 6–yearly engineering inspections.
   - Prior to 12–yearly load test.

Nom. Wire Rope Dia. (D)	MIN number of grips	MAX Grip Spacing (6D)	Required Torque
(mm)	(No.)	(mm)	(N.m.)
8	3	48	10
10	3	60	10
13	4	78	33
16	4	96	49
19	5	114	68
22	5	132	107
26	6	156	147
30	7	180	212
34	8	204	296

Note:

Any existing wire rope grips installed on cables should not be removed or altered.

Department of Conservation
Te Papa Atawbai

Conservancy

Area

Project Name
Standard Backcountry Toilet

Drawing Name
Wire Rope Grip Termination

Consultant
Brad Williamson

Drawing Number	drawn
BW16011	JR

Grid Reference
mE mN

Designed	Checked	Approved
BW	JC	JD

Equipment Number	drawing	issue
	S09	2

Iss.	Date	Reason For Issue	App.
2	11/05/21	For Construction	JD
1	20/07/16	For Construction	BW

DO NOT SCALE

DO NOT SCALE

Rigging Screw Locking Wire Installation

Cables impart an anti–clockwise torque on rigging screws. Locking wire is installed to prevent this torque unwinding the end fittings from the barrel of rigging screws.

a. Locking wire shall be installed from the moment a rigging screw is installed.

b. Locking wire shall be 2.0mm diameter 316 stainless steel. Start with approx. 1.5 – 2.0m length of wire depending on size of rigging screw.

c. Locking wire installation shall be carried out, or supervised, by personnel experienced in cable structure construction.

d. Many in–service rigging screws will be wired differently to this specification. As long as the wire is at least 2.0mm diameter, is intact and passes through the barrel and both end–fittings it can be considered adequate.

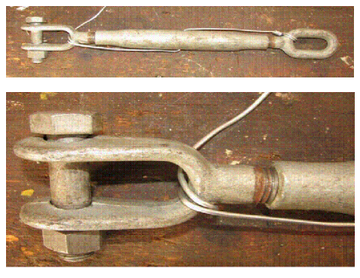
e. **Ensure the length of end fitting thread inside the barrel is at least 1.5 x the length of the swaged portion of the barrel** before installing locking wire. The threaded length of end fittings is approximately half the barrel length.

Step 1: One complete wrap of end–fitting

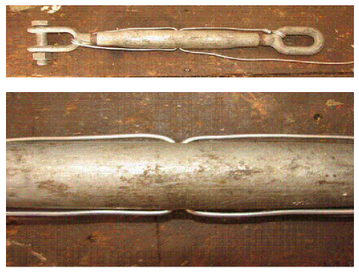
Step 2: Four tight winds of tail

Step 3: Trim back end of tail

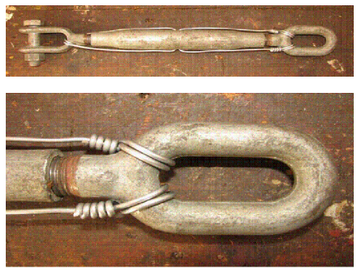
Step 4: Pass wire through barrel then one complete wrap of other end fitting



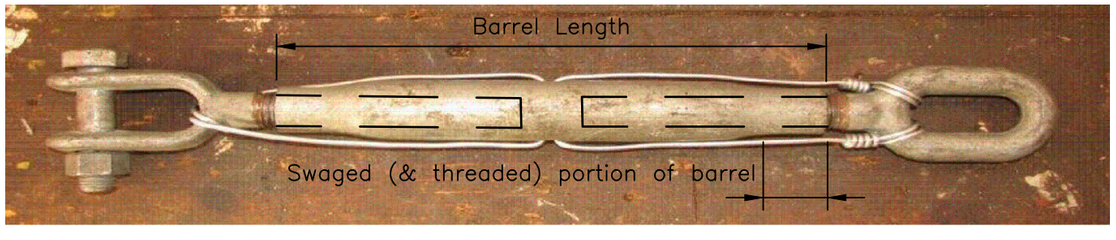
Step 5: Pass wire back through barrel



Step 6: Terminate wire at end–fitting as shown in steps 1 – 3



Finished article



Densotape Installation

Step 1: Denso MP Primer (Paste)

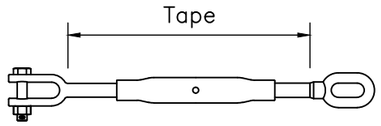
a. Clean metal surfaces with a wire brush. Firmly adherent rust and scale need not be removed.
b. Apply film of paste over component filling any small imperfections, voids, etc.

Step 2: Denso Tape (grease impregnated cloth tape)

a. Wrap tape without overstretching. Apply heavily coated side of the tape to metal surface.
b. Smooth down and mould by hand especially all overlapped edges.
c. A 55% overlap of tape should be applied to achieve a continuous double layer of tape.
d. Apply tape over barrel and threads ensuring tape does not extend into clevis or eyes.

Step 3: Denso PVC SA Tape

a. Finally apply PVC tape ensuring a 55% overlap is maintained.



Note: PVC tape is not always installed particulaly where exposed to direct sunlight which causes the paste to heat up and run out.

ORIGINAL SCALE = 100 MM

DO NOT SCALE

Iss.	Date	Reason For Issue	App.
2	11/05/21	For Construction	JD
1	20/07/16	For Construction	BW

Department of Conservation
Te Papa Atawbai

Conservancy

Area

Project Name
Standard Backcountry Toilet

Drawing Name
Rigging Screws

Consultant
Brad Williamson

Drawing Number	drawn
BW16011	JR

Grid Reference
mE mN

Designed	Checked	Approved
BW	JC	JD

Equipment Number	drawing	issue
2	S10	2