

# NELSON CITY COUNCIL

## Cable Bay Road Remediation, Contract No: EC 3424

### Tender Issue

DRAWING Rev Title

#### GENERAL INFORMATION - SITE 13

- 870982.1013-00 A Location Plan and Drawing List
- 870982.1013-01 A Existing Site and Site Investigation Plan
- 870982.1013-02 A Working Areas & Erosion Sediment Control Plan

#### RETAINING WALL DESIGN - SITE 13

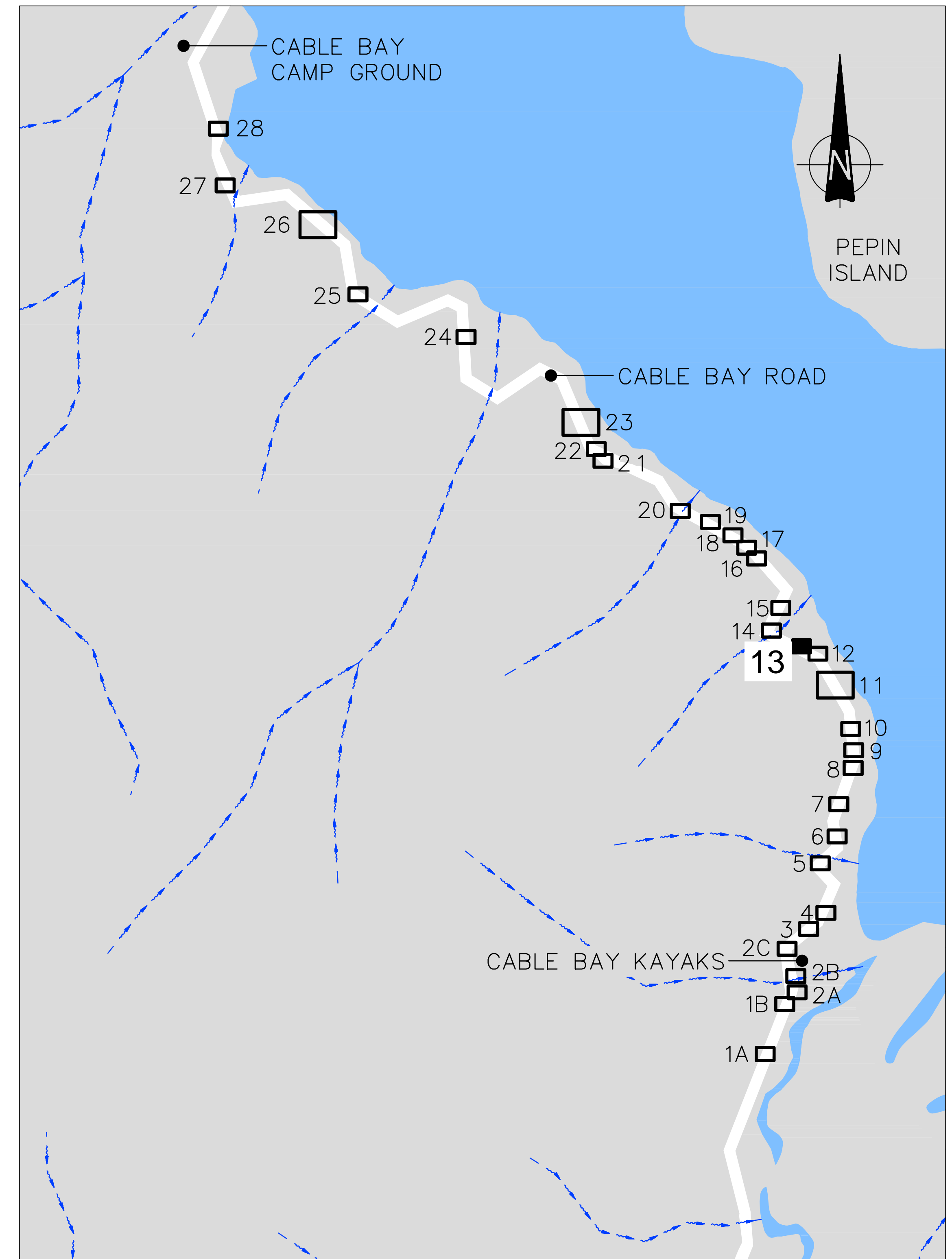
- 870982.1013-10 A General Arrangement
- 870982.1013-20 A Section and Elevation
- 870982.1013-30 A Typical Anchored Timber Pole Wall Detail
- 870982.1013-40 A Waler Details

- Denotes drawing this issue: 08/05/2013



Topomap sourced from Land Information New Zealand data (Crown Copyright Reserved).

**LOCALITY MAP**  
SCALE 1: 100,000



**SITE LOCATION PLAN**  
SCALE 1: 5,000

<p><b>Nelson City Council</b> te kaunihera o whakatū</p> <p>NETWORK SERVICES DEPARTMENT</p>	<p>APPROVED</p> <p>EXECUTIVE MANAGER NETWORK SERVICES</p>
	<p>DATE: 15/4/2013</p>
<p><b>NCC Plan No. 19-0076</b></p>	

**DRAWING STATUS: TENDER ISSUE**

DESIGNED :	DJA	Oct. 12	NOTES :
DRAWN :	AMC	Oct. 12	
DESIGN CHECKED :			
DRAFTING CHECKED :			
CADFILE :	\\870982.1013-00.dwg		
APPROVED :			REFERENCE :
<p><b>NOT FOR CONSTRUCTION</b> This drawing is not to be used for construction purposes unless signed as approved</p>			
REVISION DESCRIPTION	BY	DATE	
A Tender Issue			
1 Consultation Issue	MPD	Nov. 12	

**Tonkin & Taylor**  
Environmental and Engineering Consultants

43 Halifax St, Nelson  
Tel. (03) 546 6339 Fax. (03) 546 7619  
www.tonkin.co.nz

CLIENT, PROJECT	<b>NELSON CITY COUNCIL</b>	
TITLE	<b>CABLE BAY ROAD REMEDIATION</b>	
TITLE	GENERAL INFORMATION - SITE 13	
TITLE	Location Plan and Drawing List	
SCALES (AT A1 SIZE)	DWG. No.	REV.
AS SHOWN	870982.1013-00	A



**LEGEND**

- Approximate edge of seal
- - - Property Boundary
- ▲ Landslip head scarp
- - - 10 Existing contours (5m interval)
- - - Existing contours (0.5m interval)
- Fo - Fibre optic cable
- ← Stormwater Flow Path
- ~ Existing Watercourse
- ▬ Existing Culvert Pipe
- ⊗ SC Scala penetrometer test location
- ⊕ DH 1 Drillhole test location
- ◇ AH 1 Machine auger hole location
- ⊗ PH 1 Fibre optic pothole location
- 1000 Distance along road alignment (From State Highway 6 intersection)

**Nelson City Council**  
te kaunihera o whakatū

APPROVED

EXECUTIVE MANAGER  
NETWORK SERVICES

DATE: 15/4/2013

**NCC Plan No. 19-0076**

**DRAWING STATUS: TENDER ISSUE**

DESIGNED :	MPD	Oct. 12
DRAWN :	AMC	Oct. 12
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1013-01.dwg	
APPROVED :	<b>NOT FOR CONSTRUCTION</b>	
This drawing is not to be used for construction purposes unless signed as approved		
REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MPD	Nov. 12

**NOTES :**

- Nelson Circuit (2000) coordinates. Levels to NCC Datum.
- The Contractor shall confirm the location/depth of all services prior to any excavation.
- All works shall comply with the latest version of the NCC Land Development Manual and all amendments.
- Works outside the reconstruction area shall be reinstated as per NCC Land Development Manual.
- Special care shall be taken to ensure there is no damage to fences and gardens on private property. Any damage is to be repaired promptly at the Contractor's cost.
- Property boundaries, services location and culvert location supplied by DOP Ltd.

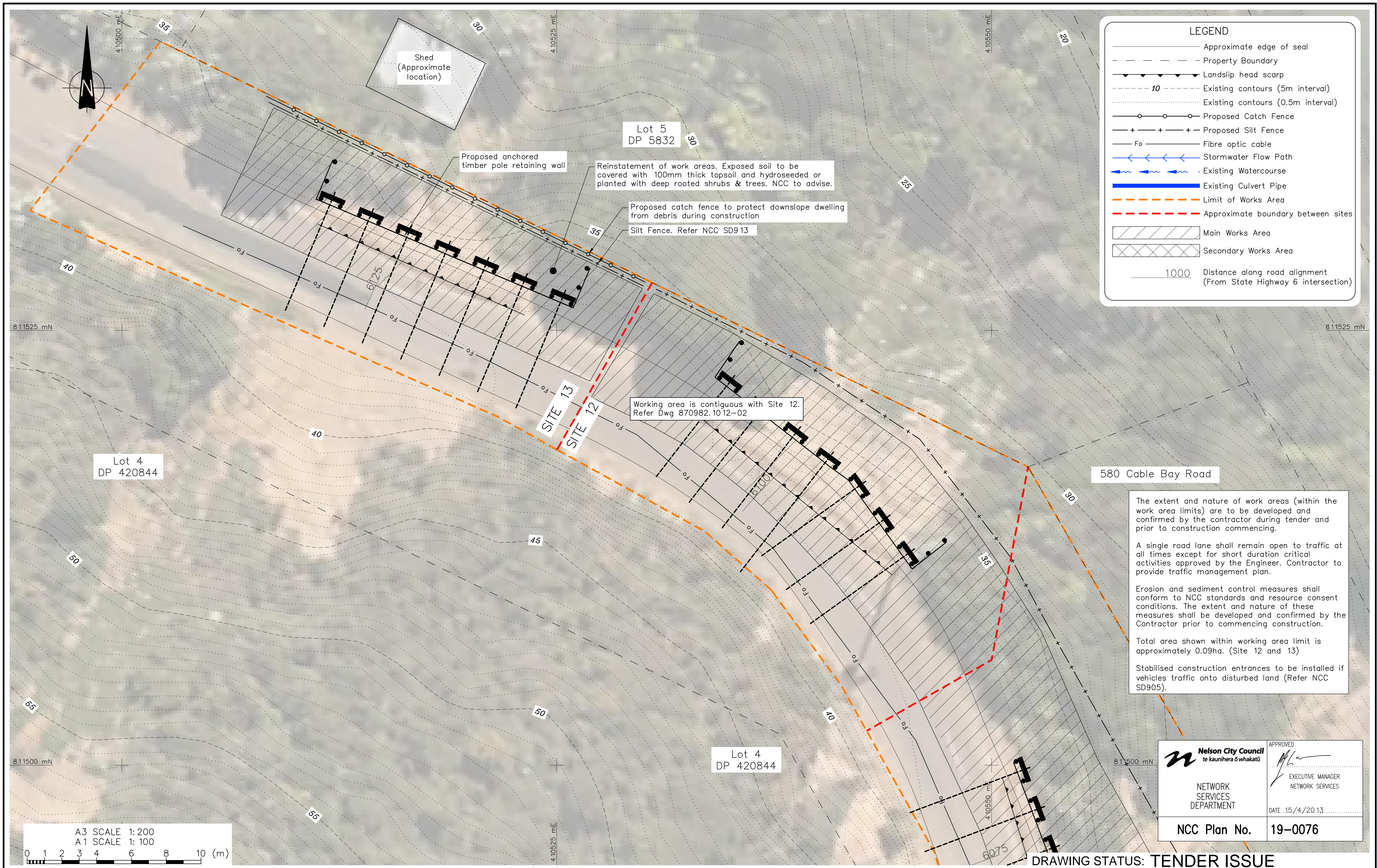
REFERENCE : LiDAR contours and aerial photos supplied by NCC.

**Tonkin & Taylor**  
Environmental and Engineering Consultants

43 Halifax St, Nelson  
Tel. (03) 546 6339 Fax. (03) 546 7619  
www.tonkin.co.nz

CLIENT, PROJECT	<b>NELSON CITY COUNCIL</b>	
	CABLE BAY ROAD REMEDIATION	
TITLE	GENERAL INFORMATION – SITE 13	
	Existing Site and Site Investigation Plan	
SCALES (AT A1 SIZE)	DWG. No.	REV.
1: 100	870982.1013-01	A

P:\070982\070982\_1013\WorkingFiles\CAD\870982\_1013-01.dwg, 01\_10/05/2013 10:30:34 a.m., caduser, AT: 1:1



**LEGEND**

- Approximate edge of seal
- - - Property Boundary
- ▲ Landslip head scarp
- - - 10 Existing contours (5m interval)
- ..... Existing contours (0.5m interval)
- Proposed Catch Fence
- + + + Proposed Silt Fence
- Fo Fibre optic cable
- ← Stormwater Flow Path
- Existing Watercourse
- Existing Culvert Pipe
- - - Limit of Works Area
- - - Approximate boundary between sites
- ▨ Main Works Area
- ▩ Secondary Works Area
- 1000 Distance along road alignment (From State Highway 6 intersection)

The extent and nature of work areas (within the work area limits) are to be developed and confirmed by the contractor during tender and prior to construction commencing.

A single road lane shall remain open to traffic at all times except for short duration critical activities approved by the Engineer. Contractor to provide traffic management plan.

Erosion and sediment control measures shall conform to NCC standards and resource consent conditions. The extent and nature of these measures shall be developed and confirmed by the Contractor prior to commencing construction.

Total area shown within working area limit is approximately 0.09ha. (Site 12 and 13)

Stabilised construction entrances to be installed if vehicles traffic onto disturbed land (Refer NCC SD905).

**Nelson City Council**  
te kaunihera o whakatū

APPROVED

EXECUTIVE MANAGER  
NETWORK SERVICES

DATE: 15/4/2013

**NCC Plan No. 19-0076**

**DRAWING STATUS: TENDER ISSUE**

DESIGNED :	MPD	Jan. 13
DRAWN :	DJAA	Jan. 13
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1013-02.dwg	
APPROVED :	<b>NOT FOR CONSTRUCTION</b>	
This drawing is not to be used for construction purposes unless signed as approved		
REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MRF	5/11/12

**NOTES :**

- Nelson Circuit (2000) coordinates. Levels to NCC Datum.
- The Contractor shall confirm the location/depth of all services prior to any excavation.
- All works shall comply with the latest version of the NCC Land Development Manual and all amendments.
- Works outside the reconstruction area shall be reinstated as per NCC Land Development Manual.
- Special care shall be taken to ensure there is no damage to fences and gardens on private property. Any damage is to be repaired promptly at the Contractor's cost.
- Property boundaries, services location and culvert location supplied by DOP Ltd.

REFERENCE : LIDAR contours and aerial photos supplied by NCC.

**Tonkin & Taylor**  
Environmental and Engineering Consultants

43 Halifax St, Nelson  
Tel. (03) 546 6339 Fax. (03) 546 7619  
www.tonkin.co.nz

CLIENT, PROJECT	<b>NELSON CITY COUNCIL</b>	
	CABLE BAY ROAD REMEDIATION	
TITLE	GENERAL INFORMATION - SITE 13	
	Working Areas & Erosion Sediment Control Plan	
SCALES (AT A1 SIZE)	DWG. No.	REV.
1: 100	870982.1013-02	A

P:\870982\870982\_1013\WorkingArea\870982\_1013-02.dwg, 02/05/2013 10:30:49 a.m., caduser, AT: 1:1



**LEGEND**

- Approximate edge of seal
- - - Property Boundary
- ▲ Landslip head scarp
- - - 10 Existing contours (5m interval)
- - - Existing contours (0.5m interval)
- Fo - Fibre optic cable
- ← Stormwater Flow Path
- ~ Existing Watercourse
- Existing Culvert Pipe
- ① Setout Point
- 1000 Distance along road alignment (From State Highway 6 intersection)

**SETOUT**

Point	Northing	Easting
1	8 11534.69 10	4 105 12.2468
2	8 11532.597 1	4 105 11.4497
3	8 11526.5 145	4 10525.8264
4	8 11528.5694	4 10526.7374

A3 SCALE 1: 100  
A1 SCALE 1: 50

**Nelson City Council**  
te kaunihera o whakatū

APPROVED

EXECUTIVE MANAGER  
NETWORK SERVICES

DATE: 15/4/2013

**NCC Plan No. 19-0076**

**DRAWING STATUS: TENDER ISSUE**

DESIGNED :	RP	Oct. 12
DRAWN :	AMC	Oct. 12
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1013-10.dwg	
APPROVED :	<b>NOT FOR CONSTRUCTION</b>	
This drawing is not to be used for construction purposes unless signed as approved		
REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MPD	Nov. 12

**NOTES :**

- Nelson Circuit (2000) coordinates. Levels to NCC Datum.
- The Contractor shall confirm the location/depth of all services prior to any excavation.
- All works shall comply with the latest version of the NCC Land Development Manual and all amendments.
- Works outside the reconstruction area shall be reinstated as per NCC Land Development Manual.
- Special care shall be taken to ensure there is no damage to fences and gardens on private property. Any damage is to be repaired promptly at the Contractor's cost.
- Property boundaries, services location and culvert location supplied by DOP Ltd.

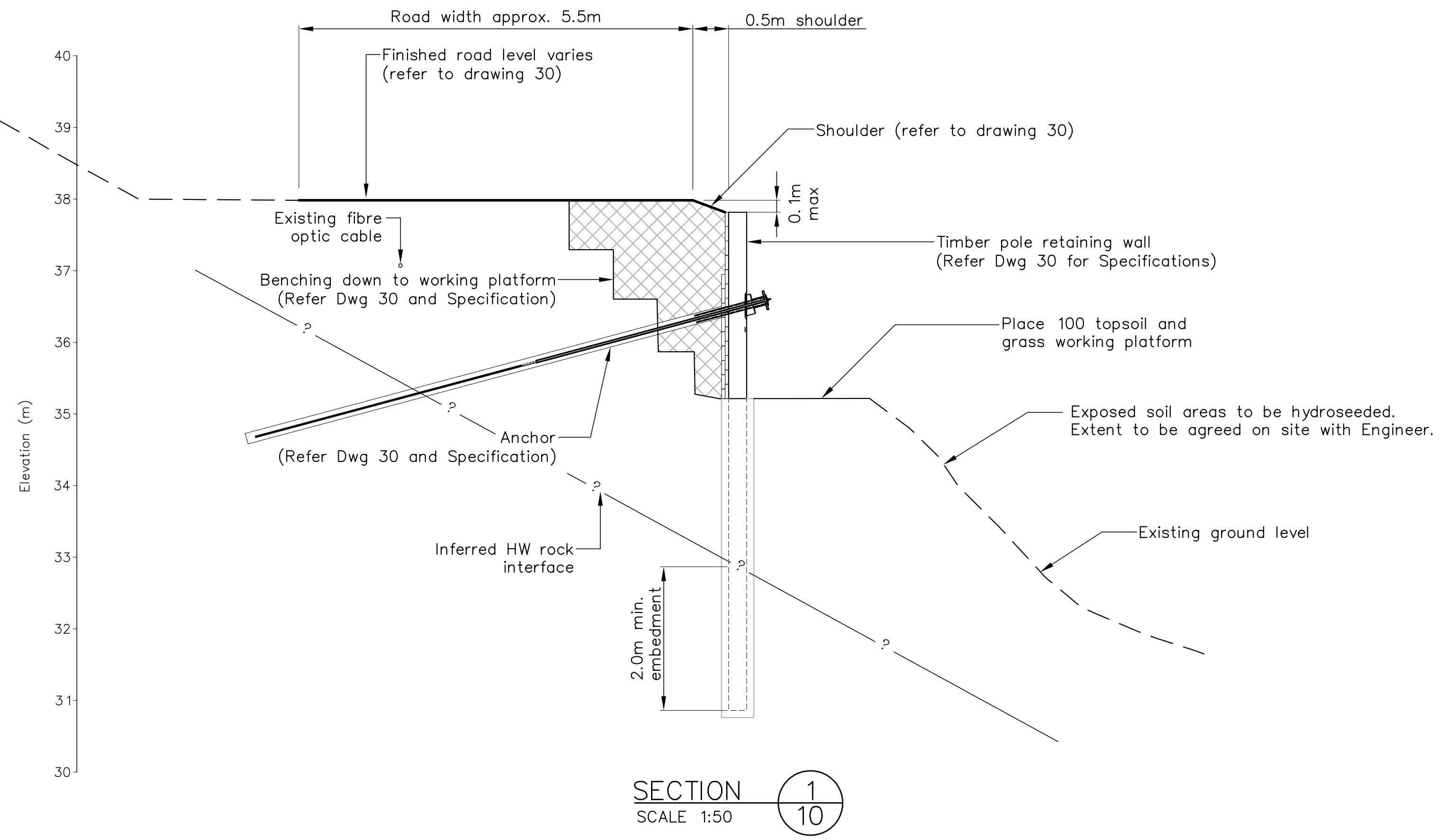
REFERENCE : LiDAR contours and aerial photos supplied by NCC.

**Tonkin & Taylor**  
Environmental and Engineering Consultants

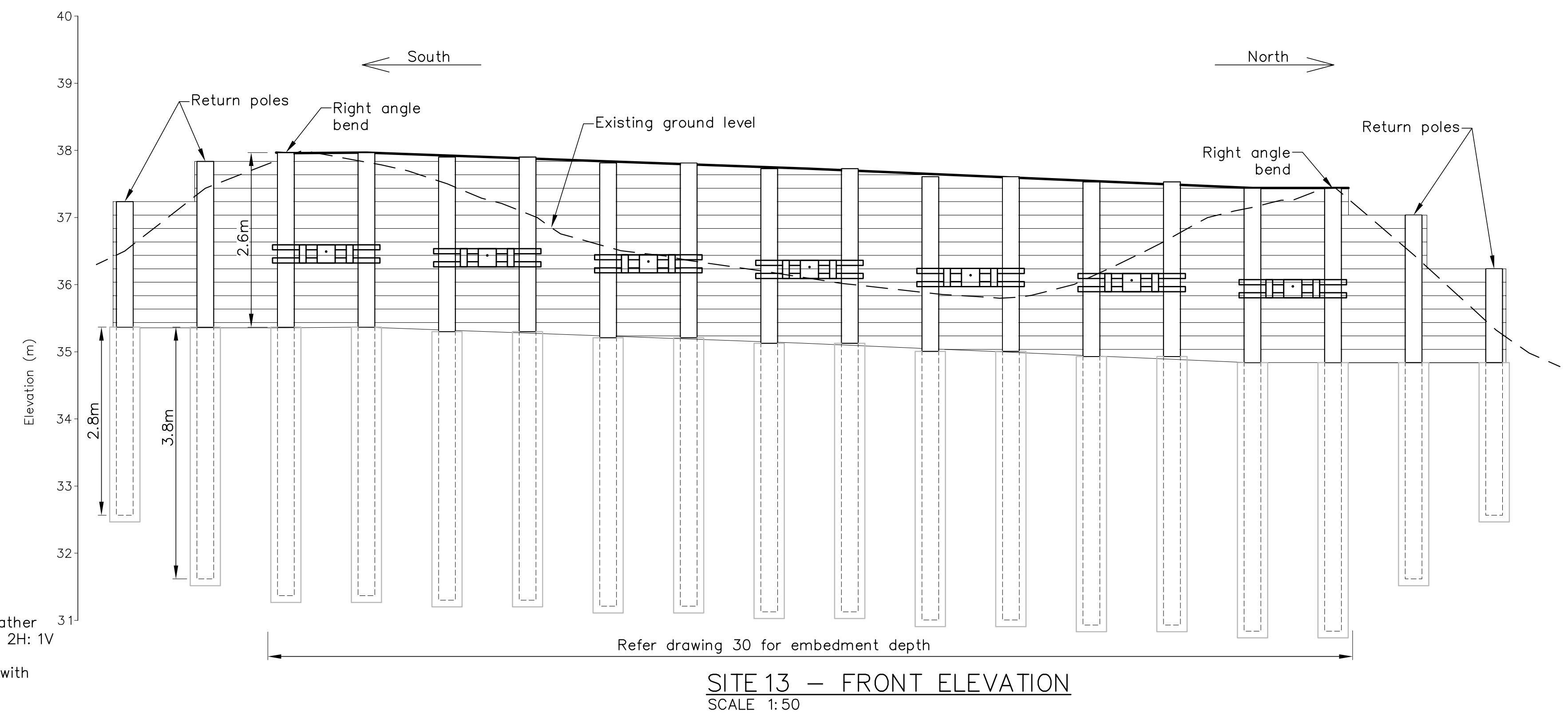
43 Halifax St, Nelson  
Tel. (03) 546 6339 Fax. (03) 546 7619  
www.tonkin.co.nz

CLIENT, PROJECT	<b>NELSON CITY COUNCIL</b> CABLE BAY ROAD REMEDIATION
TITLE	RETAINING WALL DESIGN – SITE 13 General Arrangement
SCALES (AT A1 SIZE)	1: 50
DWG. No.	870982.1013-10
REV.	A

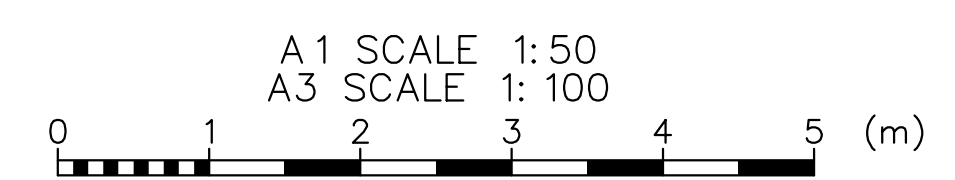
P:\070982\070982\_1013\WorkingFiles\CAD\070982\_1013-10.dwg, 10/05/2013 10:31:04 a.m., caduser, AT: 1:1



- Construction Sequence**
1. Cut platform.
  2. Install poles.
  3. Place lagging.
  4. Place hardfill and drainage metal with 150mmØ ID PVC tubes through hardfill & drainage metal for anchors
  5. Install anchors, stopping grout at least 1m back from the poles.
  6. Carry out testing on specified anchors (minimum 7 days to be allowed for grout to set).
  7. Place waler and lock off anchors at 10% working load.
  8. Grout 100Ø steel tube.



- NOTES (cont):**
7. No soil to be stockpiled on site during periods of wet weather
  8. No soil to be stockpiled overnight on slopes steeper than 2H:1V
  9. Pile embedment to be confirmed on site by the Engineer
  10. The termination of the retaining structures to be agreed with Engineer on site prior to construction



 Nelson City Council te kaunihera o whakatū  NETWORK SERVICES DEPARTMENT	APPROVED  EXECUTIVE MANAGER NETWORK SERVICES
	DATE 15/4/2013
<b>NCC Plan No. 19-0076</b>	

**DRAWING STATUS: TENDER ISSUE**

DESIGNED :	RP	Dec. 12
DRAWN :	AMC	Dec. 12
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1013-20.dwg	
APPROVED :	<b>NOT FOR CONSTRUCTION</b>	
This drawing is not to be used for construction purposes unless signed as approved		
REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MPD	Nov. 12

- NOTES :**
1. All dimensions are in millimetres unless noted otherwise
  2. Contractor to set out wall as per coordinates shown on sheet 10, Engineer and Client to verify wall location prior to commencement of augering of pole holes.
  3. All cut faces of poles and lagging shall be coated with two layers of Ensele preservative paint or Engineer-approved similar.
  4. Contractor is fully responsible for the location of all services prior to commencement of works.
  5. Contractor to provide As-Built Drawings and PS3 on completion of works.
  6. All works are to be inspected and approved by the Engineer
- REFERENCE :**

**Tonkin & Taylor**  
 Environmental and Engineering Consultants  
 43 Halifax St, Nelson  
 Tel. (03) 546 6339 Fax. (03) 546 7619  
 www.tonkin.co.nz

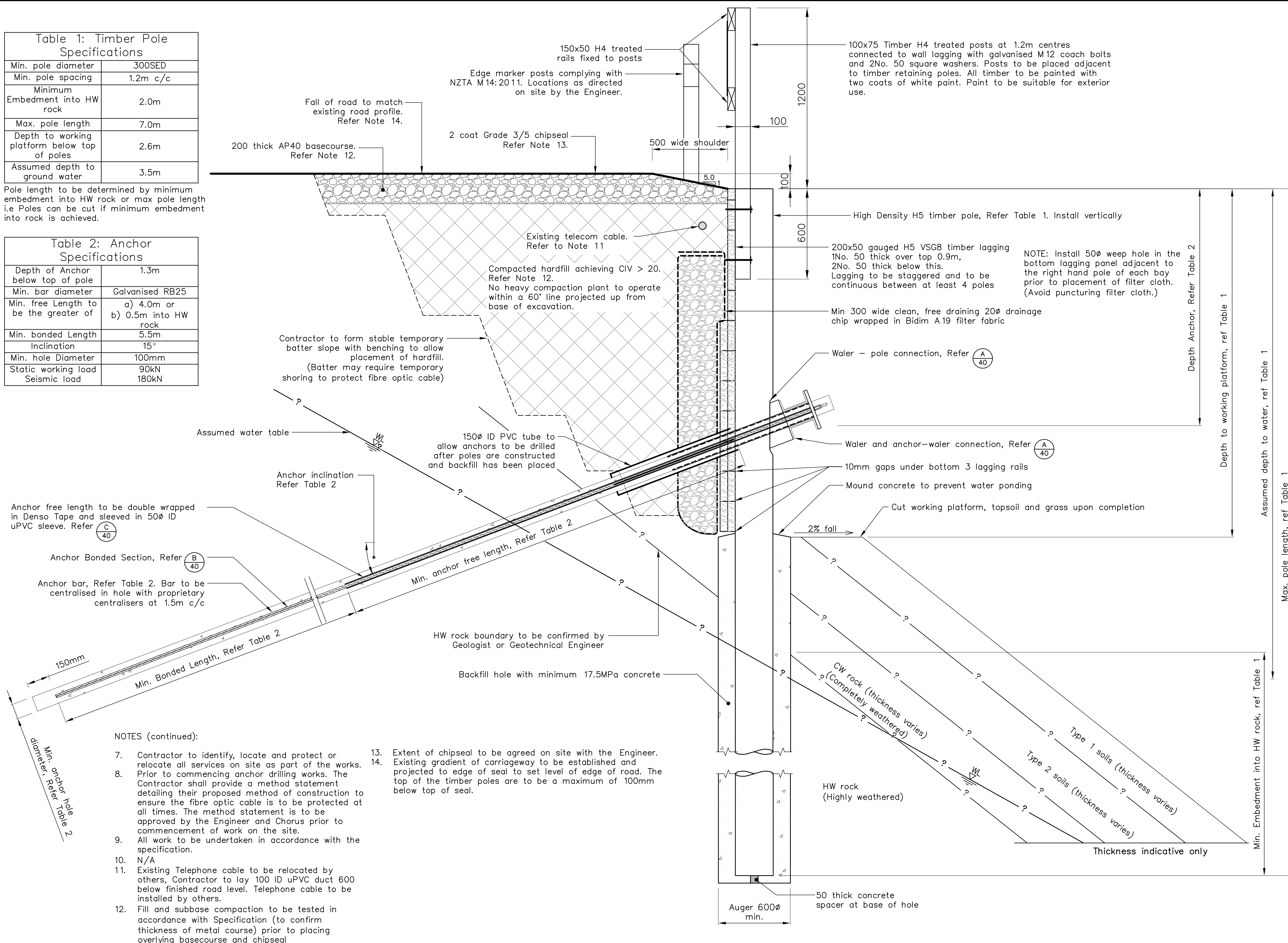
CLIENT, PROJECT	<b>NELSON CITY COUNCIL</b>	
	CABLE BAY ROAD REMEDIATION	
TITLE	RETAINING WALL DESIGN – SITE 13	
	Section and Elevation	
SCALES (AT A1 SIZE)	DWG. No.	REV.
1:50	870982.1013-20	A

P:\070982\070982\_1013\WorkingFiles\CAD\070982\_1013-20.dwg, 20. 9/05/2013 10:31:24 a.m., caduser, AT: 1:1

Min. pole diameter	300SED
Min. pole spacing	1.2m c/c
Minimum Embedment into HW rock	2.0m
Max. pole length	7.0m
Depth to working platform below top of poles	2.6m
Assumed depth to ground water	3.5m

Pole length to be determined by minimum embedment into HW rock or max pole length i.e Poles can be cut if minimum embedment into rock is achieved.

Depth of Anchor below top of pole	1.3m
Min. bar diameter	Galvanised RB25
Min. free Length to be the greater of	a) 4.0m or b) 0.5m into HW rock
Min. bonded Length	5.5m
Inclination	15°
Min. hole Diameter	100mm
Static working load	90kN
Seismic load	180kN



NOTES (continued):

- Contractor to identify, locate and protect or relocate all services on site as part of the works. Prior to commencing anchor drilling works. The Contractor shall provide a method statement detailing their proposed method of construction to ensure the fibre optic cable is to be protected at all times. The method statement is to be approved by the Engineer and Chorus prior to commencement of work on the site.
- All work to be undertaken in accordance with the specification.
- N/A
- Existing Telephone cable to be relocated by others, Contractor to lay 100 ID uPVC duct 600 below finished road level. Telephone cable to be installed by others.
- Fill and subbase compaction to be tested in accordance with Specification (to confirm thickness of metal course) prior to placing overlying basecourse and chipseal
- Extent of chipseal to be agreed on site with the Engineer.
- Existing gradient of carriageway to be established and projected to edge of seal to set level of edge of road. The top of the timber poles are to be a maximum of 100mm below top of seal.

<p>Nelson City Council te kaunihera o whakatū</p> <p>NETWORK SERVICES DEPARTMENT</p>	<p>APPROVED</p> <p>EXECUTIVE MANAGER NETWORK SERVICES</p>
	<p>DATE: 15/4/2013</p>
<p>NCC Plan No. 19-0076</p>	

DRAWING STATUS: TENDER ISSUE

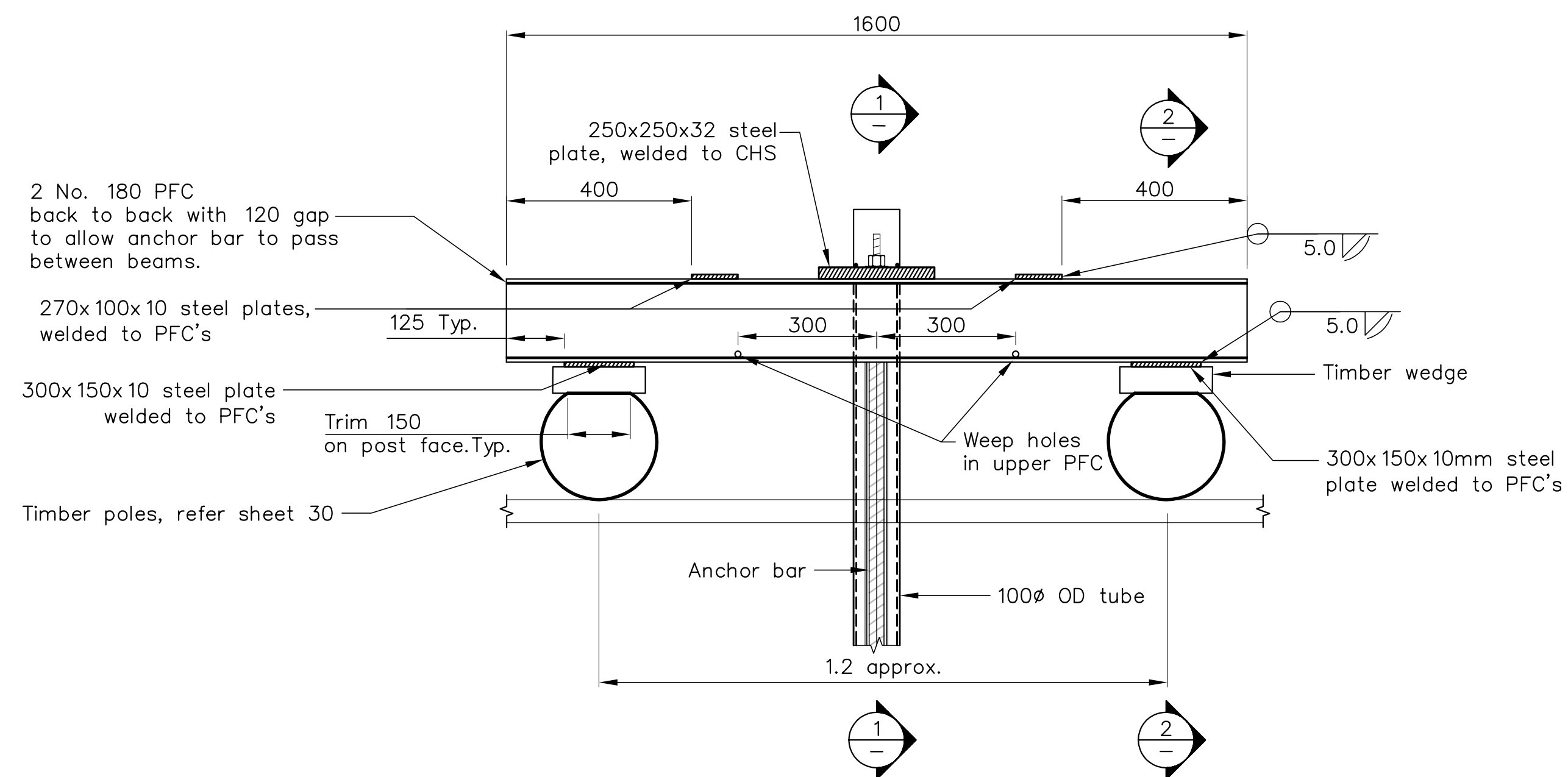
DESIGNED :	RP	Oct. 12	<p>NOTES :</p> <ol style="list-style-type: none"> <li>All dimensions are in millimetres unless noted otherwise.</li> <li>Place Malthold paper between all steel - timber contacts.</li> <li>All cuts &amp; holes in timber to be treated with 'Ensale' or similar approved.</li> <li>Contractor to set out wall and confirm setout with Engineer and Client before proceeding with construction.</li> <li>HW rock to be determined on site by suitably experienced Geotechnical Engineer or Engineering Geologist</li> <li>Type 1 soils have scala blow counts &lt; 2/50mm. Type 2 soils have scala blows &gt; 2/50mm</li> </ol>
DRAWN :	AMC	Oct. 12	
DESIGN CHECKED :			
DRAFTING CHECKED :			
CADFILE :	\\870982.1013-30.dwg		
APPROVED :	<p><b>NOT FOR CONSTRUCTION</b></p> <p>This drawing is not to be used for construction purposes unless signed as approved</p>		
REVISION DESCRIPTION	BY	DATE	REFERENCE :
1 Consultation Issue	MPD	Nov. 12	

**Tonkin & Taylor**  
Environmental and Engineering Consultants

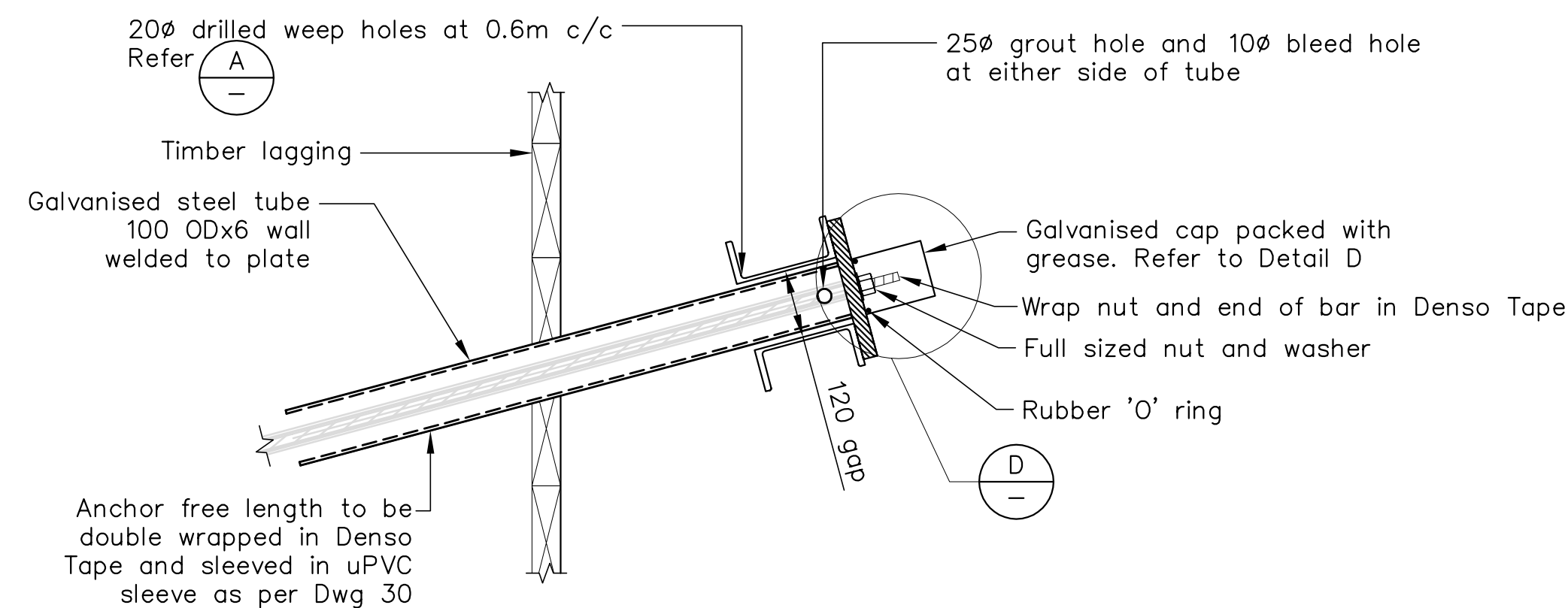
43 Halifax St, Nelson  
Tel. (03) 546 6339 Fax. (03) 546 7619  
www.tonkin.co.nz

CLIENT, PROJECT	<p>NELSON CITY COUNCIL CABLE BAY ROAD REMEDIATION</p>	
TITLE	<p>RETAINING WALL DESIGN - SITE 13 Typical Anchored Timber Pole Wall Detail</p>	
SCALES (AT A1 SIZE)	DWG. No.	REV.
N.T.S	870982.1013-30	A

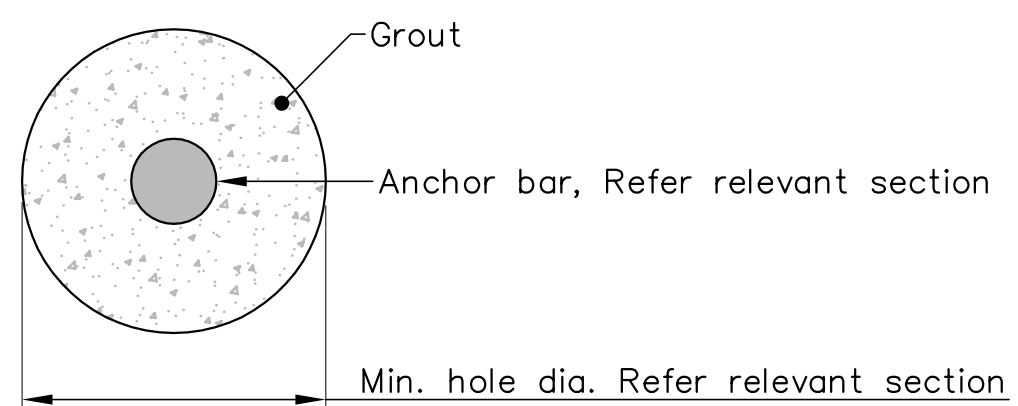
P:\070982\070982\_1013\Working\Site\070982\_1013-30.dwg, 30/09/2013 10:31:27 a.m., caduser, AT: 1:1



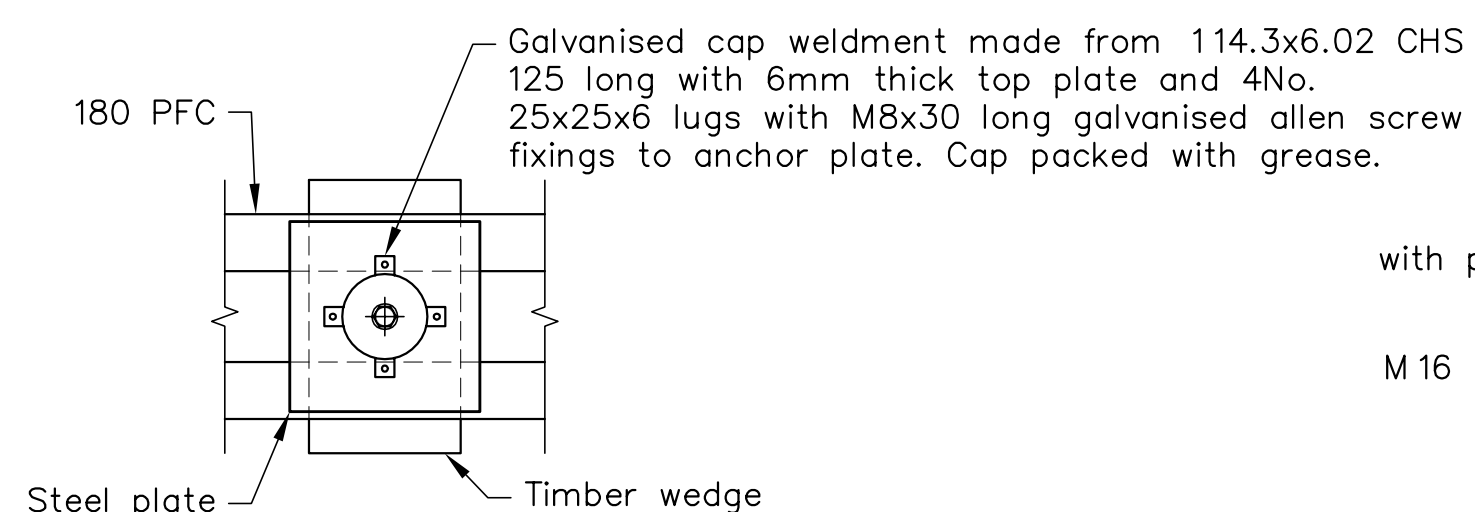
DETAIL (A) PLAN - TYPICAL BACK-TO-BACK PFC WALER  
A1 SCALE 1: 10



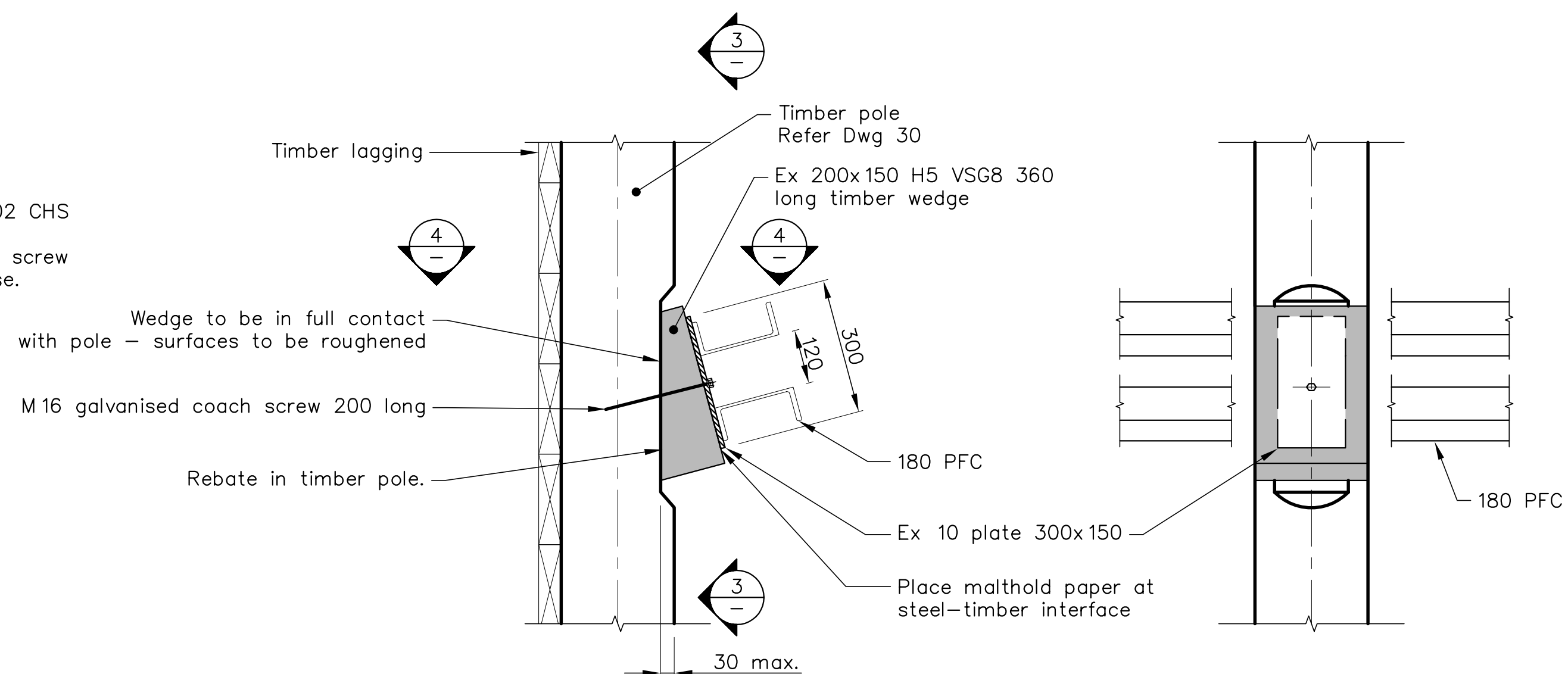
SECTION (1) WALER TO ANCHOR CONNECTION  
A1 SCALE 1: 10



DETAIL (B) ANCHOR BONDED LENGTH  
SCALE NTS

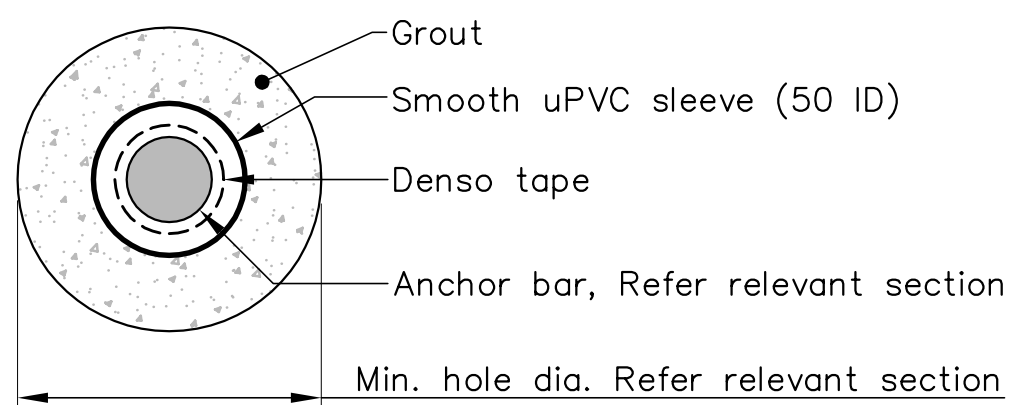


DETAIL (D) STEEL CAP  
A1 SCALE 1: 10

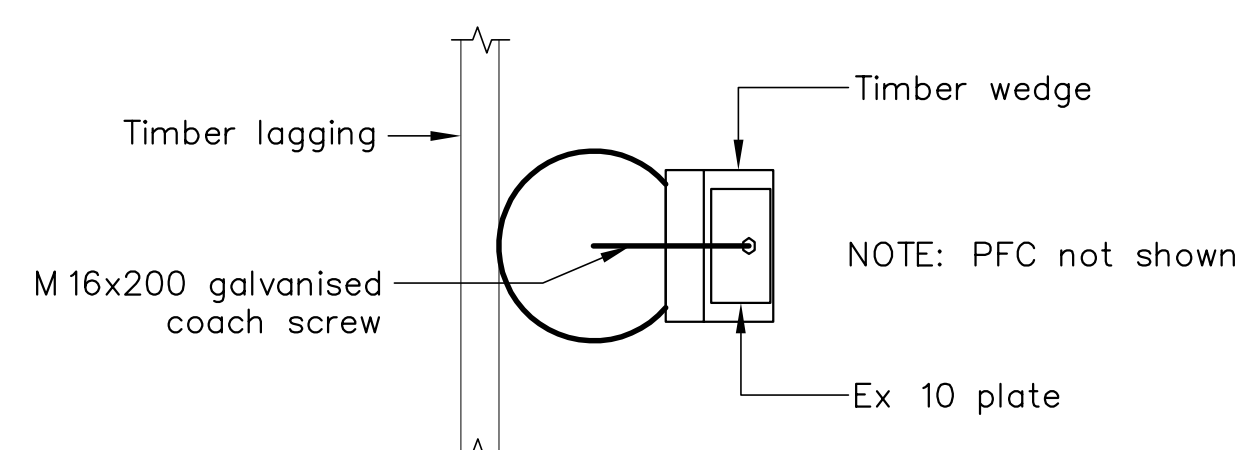


SECTION (2) WALER TO POLE CONNECTION  
A1 SCALE 1: 10

SECTION (3) WALER TO POLE CONNECTION  
A1 SCALE 1: 10

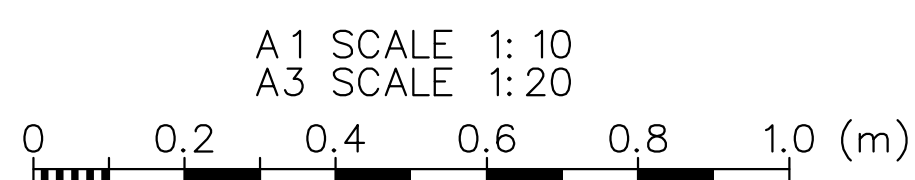


DETAIL (C) ANCHOR FREE LENGTH  
SCALE NTS



SECTION (4) WALER TO POLE CONNECTION  
A1 SCALE 1: 10

- Notes (continued)
- All cut or drilled surfaces in timber to be protected by applying a liberal brush application of 'ensele' or equivalent.
  - All steelwork shall be grade 300 and hot dip galvanised to HDG600 to AS/NZS4680 100 micron thickness after welding.
  - Grout in steel tube to be cementitious grout complying with BS8081: 1989. The grout shall have a 28 day strength of 4N/mm<sup>2</sup> and a water cement ratio of between 0.35 and 0.45.
  - All cuts, scarfs and holes in treated timber to be coated with ensele preservative prior to assembly.



<p>Nelson City Council te kaunihera o whakatū</p> <p>NETWORK SERVICES DEPARTMENT</p>	<p>APPROVED</p> <p>EXECUTIVE MANAGER NETWORK SERVICES</p>
	<p>DATE: 15/4/2013</p>
<p>NCC Plan No. 19-0076</p>	

DRAWING STATUS: TENDER ISSUE

DESIGNED :	RP	Oct. 12
DRAWN :	AMC	Oct. 12
DESIGN CHECKED :		
DRAFTING CHECKED :		
CADFILE :	\\870982.1013-40.dwg	
APPROVED :		
<p><b>NOT FOR CONSTRUCTION</b></p> <p>This drawing is not to be used for construction purposes unless signed as approved</p>		
REVISION DESCRIPTION	BY	DATE
1 Consultation Issue	MPD	Nov. 12

REFERENCE :

**Tonkin & Taylor**  
Environmental and Engineering Consultants

43 Halifax St, Nelson  
Tel. (03) 546 6339 Fax. (03) 546 7619  
www.tonkin.co.nz

CLIENT, PROJECT	<p>NELSON CITY COUNCIL CABLE BAY ROAD REMEDIATION</p>	
TITLE	<p>RETAINING WALL DESIGN - SITE 13 Waler Details</p>	
SCALES (AT A1 SIZE)	DWG. No.	REV.
AS SHOWN	870982.1013-40	A