DRAWING REGISTER - CIVIL

PROJECT VELOCITY
43-47 ALLENS ROAD, ALLENTON, ASHBURTON - AR112275

DRAWING REGISTER AND TRANSMITTAL NOTICE

ISSUE

Drawing No.	PROJECT VELOCITY	CURRENT REV	DAY MONTH YEAR	04 05 23					
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AR112275-CV-101	SITE PLAN								
AR112275-CV-111	SERVICES PLAN	A		A					
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	Count	6		6					

DISTRIBUTION

PROJECT VELOCITY
43-47 ALLENS ROAD, ALLENTON, ASHBURTON - AR112275

DRAWING REGISTER AND TRANSMITTAL NOTICE

Resource Consent

COMPANY	
ASHBURTON DISTRICT COUNCIL	P
BUILDER	P

KEY
PDF.....P
A1.....A1 Hardcopy
A3.....A3 Hardcopy
AA.....A1 and A3 Hardcopy

HOUSING DELIVERY SYSTEM - MBU5

LOCALITY PLAN
NTS

DRAWING LIST		
DRAWING NUMBER	DESCRIPTION	REV
AR112275-CV-001	COVER SHEET	A
AR112275-CV-002	GENERAL CIVIL NOTES	A
AR112275-CV-101	SITE PLAN	
AR112275-CV-111	SERVICES PLAN	A
AR112275-CV-112	WATER CROSSOVER INSTALLATION	
AR112275-CV-121	EXISTING SITE PLAN WITH EROSION & SEDIMENT CONTROL.	A
AR112275-CV-131	EARTHWORKS PLAN	A
AR112275-CV-501	EROSION & SEDIMENT CONTROL DETAILS	A
AR112275-CV-505	PAVEMENT DETAILS	
AR112275-CV-506	KERB & CHANNEL DETAILS	
AR112275-CV-510	VEHICLE CROSSINGS DETAILS SHEET 1	
AR112275-CV-511	VEHICLE CROSSINGS DETAILS SHEET 2	
AR112275-CV-512	MISCELLANEOUS DETAILS	
AR112275-CV-515	3 WATERS DETAILS SHEET 1	
AR112275-CV-516	3 WATERS DETAILS SHEET 2	
AR112275-CV-517	3 WATERS DETAILS SHEET 3	
AR112275-CV-518	3 WATERS DETAILS SHEET 4	
AR112275-CV-519	3 WATERS DETAILS SHEET 5	

CIVIL

3160491

43-47 ALLENS ROAD
ALLENTON
ASHBURTON

COVER SHEET

MAY 2023

Beca

Kāinga Ora
Homes and Communities

ORIGINAL DRAWING
IN COLOUR

RESOURCE CONSENT
NOT FOR CONSTRUCTION

AR112275-CV-001 | A

Document No. AR112275-CV-001.DWG

Project Velocity Specifications

1. Datums and Coordinate Systems

- levels are in terms of Lyttelton Vertical Datum 1937(LVD37). Origin of levels: (AC96) U72/22 RL:99.948m
- coordinates are in terms of NZGD2000 Gawler Circuit 2000. Origin of Coordinates: IS LXX DP 15101 (784434.917mN,430500.717mE)

2. Civil Works General

All works shall be in accordance with the New Zealand Building Code (NZBC) and the Ashburton District Council Standard Specifications for (i) Construction of Sewer and Stormwater Pipelines, and the (ii) Construction of Water Supply Pipelines, including the (iii) Water Services Department Standard Details, and (iv) the Roading Standard Drawings (Aoraki Roading Collaboration).

3. Setout

The contractors shall be responsible for setting out the work as shown on the drawings.

It is the contractors responsibility to confirm design positions and levels on site. If any existing positions or levels are found to conflict with the design then the contractor shall provide details to the engineer.

4. Existing Services

The contractor shall check territorial authorities and services providers for details and locations of services within and adjacent to the site. The contractor shall locate and protect all existing services.

5. Erosion and Sediment control

Erosion and sediment control shall be in accordance with the Canterbury regional Council's Erosion and Sediment Control Toolbox, the ADC Stormwater Bylaw, the specification and the drawings.

6. Earthworks General

The scope for the earthworks include;

- stripping and disposal of surplus topsoil
- excavation and disposal of unsuitable material as agreed with the engineer
- minor cut to fill works within the proposed extent of works.

The contractor shall be responsible for managing stormwater runoff for the period of the contract term as per the contractors construction management plans. All excavation works are to be carried out in accordance with worksafe NZ excavation safety good practice guide dated July 2016.

7. Subgrade

The contractor shall be responsible for the protection and care of the subgrade for the works duration and particularly during wet weather.

8. Subgrade Testing

Subgrade testing shall be carried out immediately prior to pavement construction in accordance with the below parameters:

- fine grained material in-situ CBR shall be determined by testing with a dynamic cone (scala) penetrometer to a depth of not less than 1 metre in accordance with NZS 4402 test 6.5.2 at 10m spacings.
  Minimum CBR of 4% for pavement construction and 7% for vehicle crossings.

The contractor shall not commence the construction of the sub-basecourse layer until the engineer's acceptance of the subgrade is given.

9. Filling

Filling shall be to the following requirements;

- fill material shall be laid and compacted in layers not exceeding 150mm thick;
- AP65 shall be compacted to a minimum dry density of 98% and the materials Maximum Dry Density (MMD).

10. Drainage and Water Supply

- placement and compaction of all embedment and backfilled layers shall be in layers not exceeding 250mm compacted thickness. Where hand tampers are used, the compacted lift thickness shall not exceed 150mm.
- backfill shall be AP65.
- during construction, test backfill compaction of every layer at least once in each 10m of trench using a nuclear densometer.
  - backfill shall comply as follows;
    - trafficked and pedestrian areas - compacted to a minimum dry density of 98% and the materials Maximum Dry Density (MMD)
    - landscape areas (not trafficked) - compacted to minimum of 70% of that materials maximum dry density
- gravity drainage shall be Hydrostatic Tested with a minimum head of 1.2m at the upper end of the pipe for a minimum of 5 minutes with no drop in water level. No part of the pipeline shall be subjected to a head of water greater than 6m for safety reasons.
- water supply pipelines shall be tested in accordance with AS/NZS 2566.2 Appendix M8 at a minimum pressure of 200kPa with no drop in pressure.
- abandoned services shall be removed in accordance with the ADC Standard Specifications for Construction of Sewer and Stormwater Pipelines.

11. Sub-basecourse Preparation

Should rain fall on the subgrade between the time of initial acceptance and the commencement of sub-basecourse construction, a further inspection of the subgrade surface shall be carried out to confirm that the subgrade is still suitable for sub-basecourse construction to proceed.

12. Sub-basecourse Construction

Supply, placement and compaction of sub-base material shall be in accordance with NZTA B/2 and NZS 4404.
Sub base shall be AP65.

13. Sub-basecourse Acceptance

The sub-basecourse shall meet the following requirements prior to acceptance;

- acceptance for compaction shall be in accordance with NZTA B/2 and NZS 4404.
- surface shape and tolerances shall comply with the requirements of NZTA B/2 and NZS 4404

Any yielding or otherwise unsatisfactory areas of the sub-basecourse which become evident shall be treated in accordance with the engineer's instructions.

For areas less than 500mm depth one set of testing shall suffice. For areas greater than 500mm two sets of testing shall be undertaken on layers of equal depth.

14. Basecourse Construction

The supply, placing and compaction of the basecourse layers shall be in accordance with NZTA B/2 and NZS 4404.
Basecourse shall comply with the NZTA M/4 specification unless otherwise noted on the drawings.

15. Basecourse Acceptance

The basecourse shall meet the following requirements prior to acceptance;

- acceptance for compaction shall be in accordance with NZTA B/2 and NZS 4404.
- surface shape and tolerances shall comply with the requirements of NZTA B/2 and NZS 4404.

The contractor shall not commence the construction of the surface layer until the engineer's acceptance of the basecourse is given.

16. Asphaltic Concrete

Asphaltic concrete shall be manufactured and installed in accordance with NZTA M/10 and NZS 4404.
The finished surface shall be:

- Uniform in texture
- Contain no segregated areas
- Not pond water

17. Concrete

All concrete shall be in accordance with the requirements of NZBC, NZS 3104, NZS 3109, NZS 3112, NZS 3114.
The finished surface shall be :

- Uniform in texture
- Contain no segregated areas
- Not pond water

18. Asbuilts

Asbuilts shall be marked up copies of the Building Consent drawings.

19. Completion

Completion documents shall include all testing included in the above specifications and asbuilt documentation to the satisfaction of the engineer and in accordance with the contract documents.
The following shall be submitted for final sign off.

- asbuilt documents
- compaction test results (clegg, Nuclear Density Meter)
- leakage testing (air testing or hydrostatic testing)
- supplier specifications and warranties (for pumps, tanks, chambers etc)
- construction inspections records including site photos.

The engineer reserves the right to request further documentation to that listed above.

20. Inspections

The contractor shall provide the engineer with 72 hours notice prior to an item being ready for inspection.
The following items are to be inspected by the engineer on site.

- Earthworks
  - excavated subgrade prior to any filling.
  - completion of compaction of each layer of fill material and testing prior to placement of further layers
- Pipework
  - trench excavation prior to laying of bedding materials
  - completed pipework, manholes, chambers and other structures prior to backfilling
  - completion of compaction of backfill and testing
- Pavement
  - inspection of subgrade prior to sub-basecourse placement
  - completion of compaction of basecourse material prior to placement of surfacing
  - boxing and jointing prior to pouring of concrete
- Completion
  - final inspection on completion of drainage and surfaces.

RESOURCE CONSENT
NOT FOR CONSTRUCTION

ORIGINAL DRAWING IN COLOUR

UNIT MEASURE BAR 0 10 20 30 40 50 60 70 80 90 100

No.	Revision	By	Chk	Appd	Date
A	ISSUED FOR RESOURCE CONSENT	NY	DJ	PH	04.05.23

Design	N. Yung	27.04.2023
Drawn	R. Sharma	28.04.2023
Dsg Verifier	D. Johnstone	27.04.2023
Drg Check	N. Yung	28.04.2023

Original Scale (A1)
Reduced Scale (A3)
* Refer to Revision 1 for Original Signature

Beca

Kāinga Ora Homes and Communities

Project: 43-47 ALLENS ROAD ALLENTON ASHBURTON

Title: GENERAL CIVIL NOTES

Discipline: CIVIL
Beca Project No.: 3160491
Drawing No.: AR112275-CV-002
Rev.: A

Document No. AR112275-CV-002.DWG

DO NOT SCALE FOR SET OUT DIMENSIONS

Drawing Plotted: 03 May 2023 3:49 p.m.

Proposed House 04 & 05 soakpit size and location TBC at detailed design.

Proposed House 06 & 07 soakpit size and location TBC at detailed design.

Proposed House 08 & 09 soakpit size and location TBC at detailed design.

HOUSE 4 & 5
FFL = 108.95

HOUSE 6 & 7
FFL = 109.08

HOUSE 8 & 9
FFL = 109.10

DN150 uPVC SW

DN150 uPVC WW to be vested

DN150 uPVC WW to be vested

Proposed communal soakpit size and location TBC at detailed design.

Ø1050 WW MH

Ø1050 WW MH

Proposed House 01 soakpit size and location TBC at detailed design.

Proposed Type 2 sump

Proposed House 02 soakpit size and location TBC at detailed design.

Proposed House 03 soakpit size and location TBC at detailed design.

HOUSE 1
FFL = 108.85

HOUSE 2
FFL = 108.68

HOUSE 3
FFL = 108.68

DN150 uPVC SW

DN150 uPVC WW to be vested

DN15 PE80 PN12.5 WS

DN15 PE80 PN12.5 WS

DN15 PE80 PN12.5 WS

Ø1050 WW MH

Existing meter to be reused.

Proposed Type 2 sump

6 new DN20 watermeter connection

New DN63 connection with valve onto main.

Existing meter to be reused.

Existing meter to be reused.

Existing DN150 AC WS main

Existing DN150 AC WS main

ALLENS ROAD

DN150 uPVC WW to be vested

Proposed Ø1050 WW MH

WW MH 0.3m LID BELOW SEAL unable to survey

Existing DN150 CONC WW main

Existing DN150 CONC WW main

Notes:

1. Refer to drawing CV-002 for General Civil Notes.
2. For DN100 uPVC pipes within the boundary use SN6, for DN150 uPVC pipes within the boundary use SN8. When in road reserve use SN16.
3. Drainage contractor is to confirm the condition of all existing stormwater and wastewater laterals prior making to making connections. If not in suitable condition council to be contacted for replacement/repair. The public wastewater lateral may only be repaired by a Council Authorized Drainlayer.
4. Stormwater- DN100 uPVC SW@1:100 unless noted otherwise.
5. Wastewater- DN100 uPVC WW@1:60 unless noted otherwise.
6. Water-DN20 PE80 PN12.5 WS unless noted otherwise.
7. The first 1m of sealed surfacing next to a threshold drain must fall away from the threshold drain at 1 in 40 grade.
8. Invert levels of existing pipes that proposed stormwater & wastewater systems are connecting to must be excavated and confirmed at the start of construction.

LEGEND

Existing

- Sewer
- Water
- Stormwater
- U/G power
- O/H power
- High voltage
- Telecommunication
- Fibre optic
- Existing power pole/ lighting pole
- Existing water meter

Proposed

- Waste Water
- Water
- Stormwater
- Property Boundary
- Gully trap
- Sewer stack
- Down pipe
- WW / SW rodding point
- Proprietary Inline sump
- Water meter
- WW / SW Manhole
- Sump. Refer to drawing for type
- Strip Drain
- Water supply pipe to be vested back to council
- WaterWater pipe to be vested back to council

Important Services Note:

Existing services shown are considered indicative and are based on records supplied by the service authorities. The contractor is responsible for ensuring all services are located and marked prior to any site works, and for protecting these services for the duration of the contract. Locations of power supply and communications including connection locations are indicative only. Contractor to confirm appropriate services layout with utility providers and ensure minimum separation distances are observed for shared trenching with 3 waters services

RESOURCE CONSENT
NOT FOR CONSTRUCTION

ORIGINAL DRAWING IN COLOUR

No.	Revision	By	Chk	Appd	Date
A	ISSUED FOR RESOURCE CONSENT	CB	DJ	PH	04.05.23

Design	C. Bridi	27.09.2023
Drawn	R. Sharma	28.04.2023
Dsg Verifier	D. Johnstone	27.04.2023
Drg Check	C. Bridi	28.04.2023

* Refer to Revision 1 for Original Signature

Original Scale (A1) 1:125
Reduced Scale (A3) 1:250

Project: 43-47 ALLENS ROAD ALLENTON ASHBURTON

Title: SERVICES PLAN

Discipline: CIVIL

Beca Project No.: 3160491

Drawing No.: AR112275-CV-111

Rev.: A

Document No. AR112275-CV-111.DWG

DO NOT SCALE FOR SET OUT DIMENSIONS

1:125 (A1) 1:250 (A3)

Drawing Plotted: 03 May 2023 10:07 a.m.

Notes:

1. Refer to drawing CV-002 for General Civil Notes.
2. The topographical survey information shown is supplied by a third party and has not been confirmed by Beca.
3. Refer to architectural drawings for trees to be removed.
4. Refer to architectural drawings for fencing requirements.
5. Install water inlet protection(silt sock) at downstream catchpits or other stormwater inlet structures.
6. Refer to survey drawing for further detail on existing features.

LEGEND

- Sewer
- Water
- Stormwater
- U/G Power
- O/H power
- High voltage
- Telecommunication
- Fibre optic
- Vodafone
- Property Boundary
- 20.0 Major contour
- Minor contour
- Existing Fence
- Proposed Silt Fence
- Silt sock for sump protection
- BN 2 20.24m Control mark
- Stormwater sump
- Stormwater manhole
- Stormwater kerb outlet
- Sewer manhole
- 20.37 Spot heights
- FH Fire hydrant
- W Water meter
- Water valve
- Power box
- Telecom box / plinth
- Existing power pole / lightpole
- CHORUS Existing communications structure
- Tree trunk and dripline

48°12'10" 16.76
48°12'10" 15.85
48°12'10" 16.15
138°12'10" 44.48
137°44'50" 44.48
48°12'10" 16.20
48°12'10" 15.80

Proposed House outlines. Typical

Refer Architect for trees to be removed

Existing house to be demolished

Lot 10 DP 12797

Lot 3 DP 21833

Lot 4 DP 21833

Install perimeter silt fence. Refer CV-501 for detail

4m min.

8m min.

Stabilised entranceway. Refer CV-501 for detail

ALLENS ROAD

Contractor to install `Vanguard Type 49-GPM' ground protection mat with proprietary mat connectors as per manufacturer's specifications (or similar approved by engineer) over the stabilised gravel layer to protect the existing footpath and kerb during construction. Extent of mat protection to be agreed upon with engineer

Contractor to install `Vanguard Type 49-GPM' ground protection mat with proprietary mat connectors as per manufacturer's specifications (or similar approved by engineer) over the stabilised gravel layer to protect the existing footpath and kerb during construction. Extent of mat protection to be agreed upon with engineer

RESOURCE CONSENT
NOT FOR CONSTRUCTION

ORIGINAL DRAWING IN COLOUR

No.	Revision	By	Chk	Appd	Date
A	ISSUED FOR RESOURCE CONSENT	NY	DJ	PH	04.05.23

Design	N. Yung	27.04.2023
Drawn	R. Sharma	28.04.2023
Dsg Verifier	D. Johnstone	27.04.2023
Drg Check	N. Yung	28.04.2023

* Refer to Revision 1 for Original Signature

Original Scale (A1) 1:100
Reduced Scale (A3) 1:200

Beca

Kāinga Ora Homes and Communities

Project: 43-47 ALLENS ROAD ALLENTON ASHBURTON

Title: EXISTING SITE PLAN WITH EROSION & SEDIMENT CONTROL.

Discipline: CIVIL

Beca Project No.: 3160491

Drawing No.: AR112275-CV-121

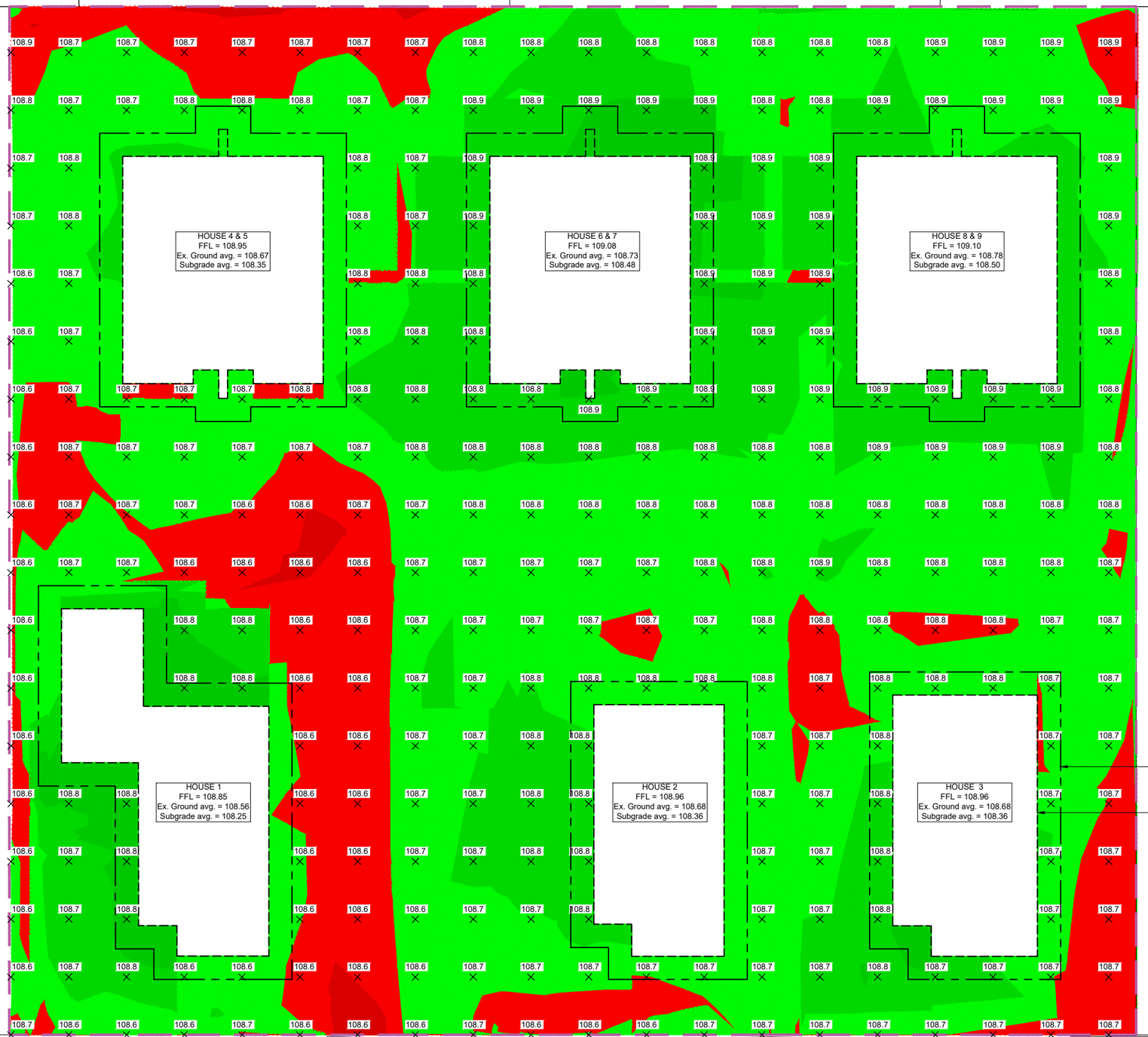
Rev.: A

Document No. AR112275-CV-121.DWG

1:100 (A1) 1:200 (A3)

DO NOT SCALE FOR SET OUT DIMENSIONS

Drawing Plotted: 03 May 2023 10:08 a.m.



ALLENS ROAD

EARTHWORKS PLAN OVERALL
EXISTING TO FINAL

Notes:

1. Refer to drawing CV-002 for general civil notes.
2. Cut/fill of the foundation is considered, but not shown on the plan.
3. Spot heights represent finished ground levels

Elevation Ranges		
Colour	Minimum Elevation (m)	Maximum Elevation (m)
	0.2	0.3
	0.1	0.2
	0.0	0.1
	-0.1	0.0
	-0.2	-0.1

Volumes : Cut \ Fill		
	Whole Site	
	Cut (m^3)	Fill (m^3)
Stage 1 -From existing to site scrape	684	0
Stage 2 - From site scrape to subgrade	17	195
Stage 3 - From subgrade to finished	0	748
Total	701	943

RESOURCE CONSENT
NOT FOR CONSTRUCTION

ORIGINAL DRAWING IN COLOUR

No.	Revision	By	Chk	Appd	Date
A	ISSUED FOR RESOURCE CONSENT	NY	DJ	PH	04.05.23

Original Scale (A1)	Design	N. Yung 27.04.2023
1:100	Drawn	R. Sharma 28.04.2023
Reduced Scale (A3)	Dsg Verifier	D. Johnstone 27.04.2023
1:200	Drg Check	N. Yung 28.04.2023

* Refer to Revision 1 for Original Signature

Beca

Kāinga Ora Homes and Communities

Project: 43-47 ALLENS ROAD ALLENTON ASHBURTON

Title: EARTHWORKS PLAN

Discipline: CIVIL

Beca Project No.: 3160491

Drawing No.: AR112275-CV-131

Rev.: A

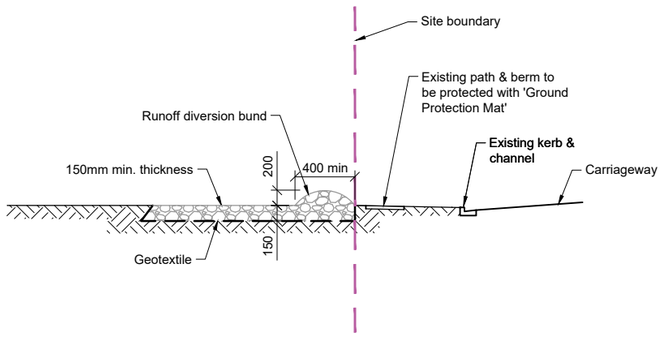
Document No. AR112275-CV-131.DWG

1:100 (A1)
1:200 (A3)
10m

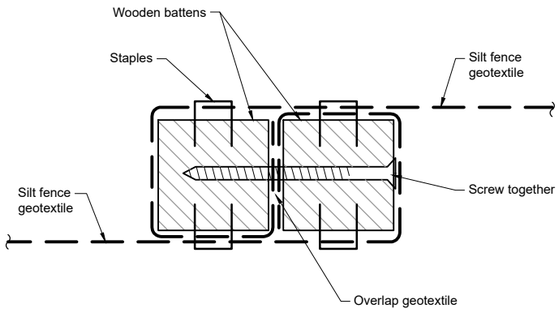
DO NOT SCALE FOR SET OUT DIMENSIONS

Notes:

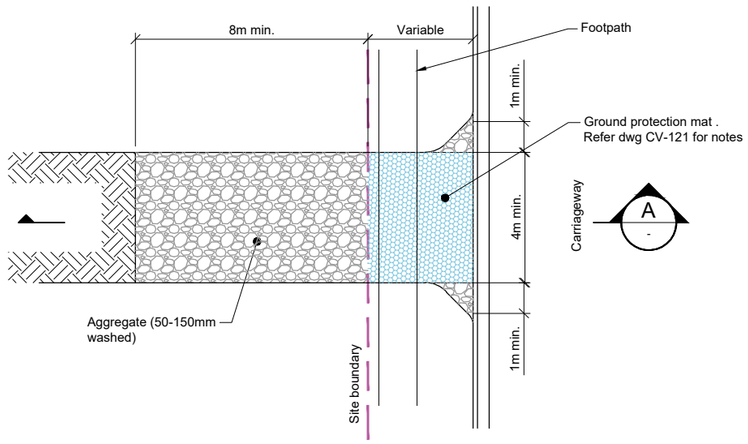
1. Refer to drawing CV-002 for General Notes.
2. Refer to drawing CV-121 for location of stabilised entranceway on property boundary.



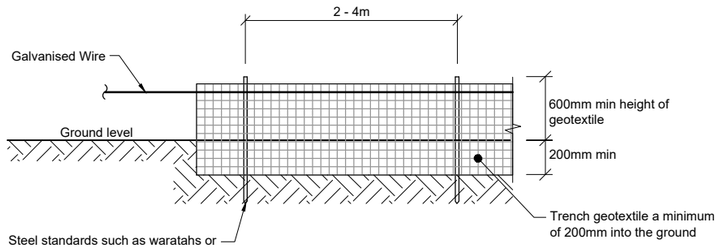
A SECTION - STABILISED ENTRANCEWAY
NTS



SILT FENCE GEOTEXTILE JOIN SECTIONAL PLAN
SCALE NTS



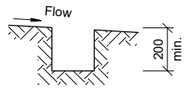
STABILISED ENTRANCEWAY - PLAN
SCALE NTS



SILT FENCE ELEVATION
SCALE NTS

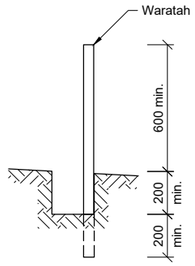
Step 1

Dig a 200mm deep trench



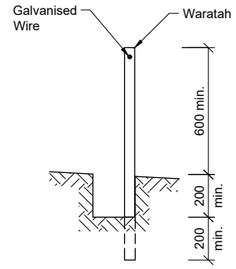
Step 2

Hammer in 1m waratahs or wooden fence post 200mm into the trench, therefore 400mm below original ground level



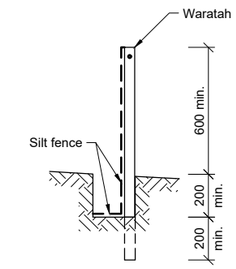
Step 3

Install single galvanised wire and tension it at 50m intervals



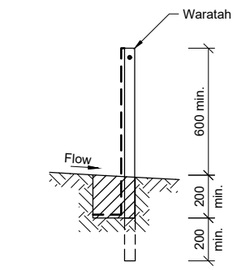
Step 4

Install single layer of silt fence geotextile fabric hard against the side of the trench (800mm total height)



Step 5

Back fill and compact well (critical)



SILT FENCE CONSTRUCTION METHOD
SCALE NTS

RESOURCE CONSENT
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
A	ISSUED FOR RESOURCE CONSENT	NY	DJ	PH	04.05.23

Original Scale (A1) as shown	Design	N. Yung	27.04.2023
	Drawn	R. Sharma	28.04.2023
Reduced Scale (A3)	Dsg Verifier	D. Johnstone	27.04.2023
	Drg Check	N. Yung	28.04.2023
	* Refer to Revision 1 for Original Signature		

Beca

Kāinga Ora Homes and Communities

Project: 43-47 ALLENS ROAD ALLENTON ASHBURTON

Title: EROSION & SEDIMENT CONTROL DETAILS

Discipline: CIVIL	Beca Project No.: 3160491
Drawing No.: AR112275-CV-501	Rev.: A

UNIT MEASURE BAR 0 10 20 30 40 50 60 70 80 90 100

DO NOT SCALE FOR SET OUT DIMENSIONS

Document No. AR112275-CV-501.DWG