Architectural Drawings

DA000	COVER SHEET
DA001	FACADE COLOUR CONCEPT
DA002	PERSPECTIVES
DA021	SITE ANALYIS
DA101	SITE PLAN - NEW WORKS
DA161	SHADOW DIAGRAMS
DA201	BASEMENT LEVEL
DA202	GROUND FLOOR
DA203	LEVEL 1
DA204	LEVEL 2
DA205	ROOF PLAN
DA401	ELEVATIONS NORTH WING
DA402	ELEVATIONS SOUTH WING
DA403	ELEVATIONS WEST WING
DA404	DETAILED ELEVATION & WALL SECTIONS
DA501	SECTIONS

OPAL HILLSIDE - LAKE MACQUARIE
RESIDENTIAL AGED CARE FACILITY

General Notes

Verify all dimensions and levels on site and report any discrepancies to dwp|suters for direction prior to the commencement of work.

Drawings are to be read in conjunction with all other contract documents. Use figured dimensions only. Do not scale from drawings. dwp|suters cannot guarantee the accuracy of content and format for copies of drawings issued electronically.
The completion of the Issue Details Checked and Authorised section is confirmation of the status of the drawing. The drawing shall not be used for construction unless endorsed 'For Construction' and authorised for issue.

Robert Macindoe Nominated Architect NSW ARB 4699

Location Plan

Opal specialist aged care

Client
OPAL SPECIALIST AGED CARE
Level 27, 135 King Street

Sydney, NSW 2000
T- (02) 8241 1609

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Sydney
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Cairns

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newcastle@dwpsuters.com
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Project
OPAL HILLSIDE - LAKE MACQUARIE

Project Address
3 Violet Town Road, Mount Hutton NSW 2290, Australia

COVER PAGE

Project Number	Drawing Number	Issue
502779	DA000	1

File Name: C:\Repsuters REVIT local\2014 502779_HILLSIDE_CENTRAL_R2014_Rume.rvt

PAPERBARK
SOFFIT LINING

MONUMENT
LIGHTWEIGHT CLADDING TYPE 2

WALLABY
LIGHTWEIGHT CLADDING TYPE 1

CONCRETE SLAB EDGES
- PROVIDE HORIZONTAL FIRE SEPARATION

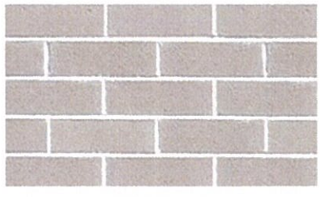
WALLABY - DOWNPIPES, ROOF SHEETING & GUTTERS

TERRAIN OR SIMILAR - PERFORATED METAL SUNSCREENS

ANGOPHORA COSTATA

SITE FEATURES

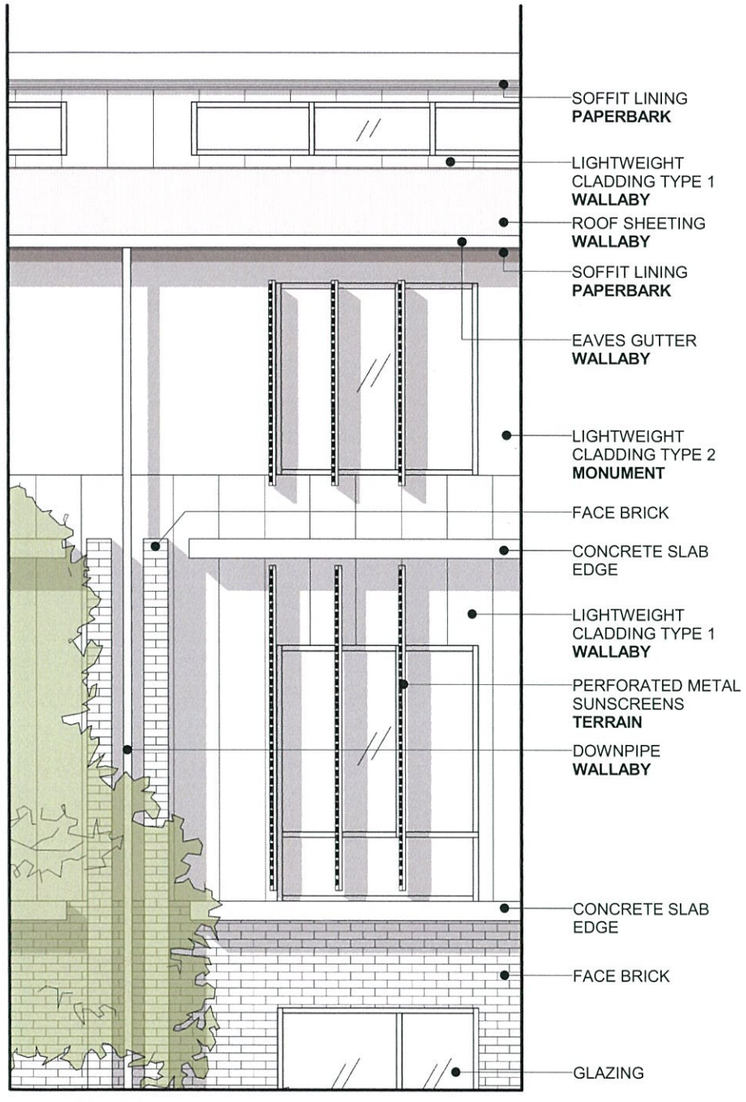
PGH - BLUE STEEL FLASH



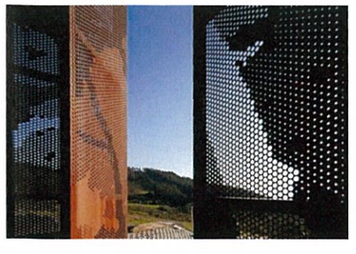
PGH - MOONDUST

ADBRI MASONRY Trihex - PAVERS

PROPOSED MATERIAL PALETTE



ELEVATION ELEMENTS



PRECEDENT IMAGES - METAL SCREEN

Issue	Description	Date	Chk	Auth
1	ISSUE FOR DA	12.08.14	RP	JH

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Project
OPAL HILLSIDE - LAKE MACQUARIE

Location
3 Violet Town Road, Mount Hutton NSW 2290, Australia

Client
Opal specialist aged care

Drawing
FACADE COLOUR CONCEPT

Scale	Date Printed
1 : 28 @ A1	13/08/2014 4:30:32 PM

Project Number	Drawing Number	Issue
502779	DA001	1

File Name: C:\dwpsuters REVIT local\502779_HILLSIDE_CENTRAL_R2014_jhunne.rvt

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PANORAMA 1 - INTERNAL ROAD ENTRY LOOKING EAST

PANORAMA 2 - VIOLET TOWN ROAD LOOKING EAST

PANORAMA 3 - CORNER OF WILSON AND VIOLET TOWN ROADS LOOKING SOUTH

PANORAMA 4 - VIOLET TOWN ROAD LOOKING SOUTH EAST

Issue	Description	Date	Chk.	Auth.
1	ISSUE FOR DA	12.08.14	RP	JH

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Opal specialist aged care

Drawing
PERSPECTIVES

Scale	Date Printed
@ A1	13/08/2014 4:30:44 PM

Project Number	Drawing Number	Issue
502779	DA002	1

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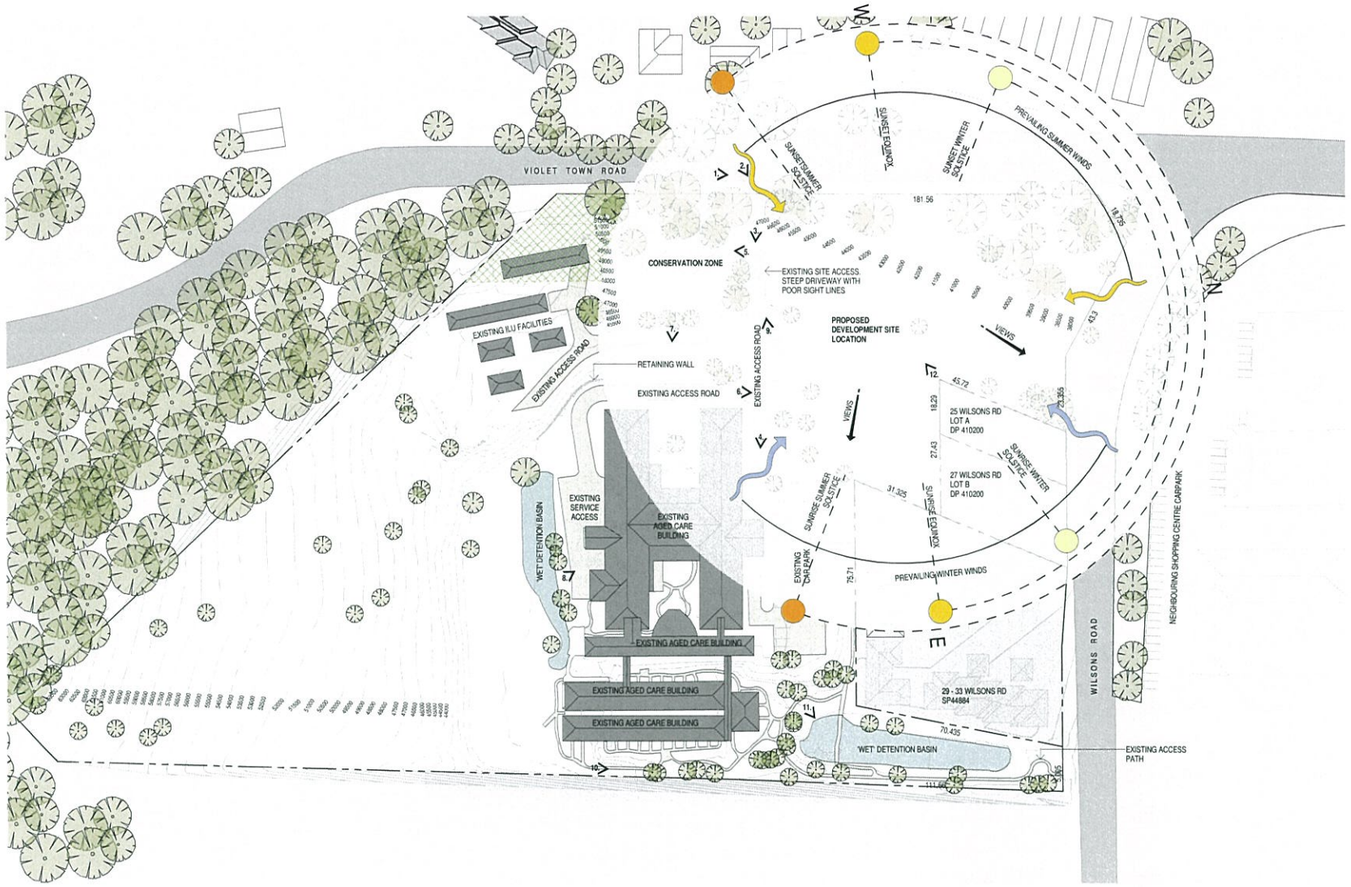

3 DA401 100_SITE ANALYSIS
1 : 1000


01. VIEW FROM VIOLET TOWN ROAD LOOKING TOWARDS THE EXISTING ENTRANCE TO THE AGED CARE FACILITY


02. VIEW FROM VIOLET TOWN ROAD LOOKING FROM THE EXISTING VIOLET TOWN ROAD ENTRANCE TOWARDS THE PROPOSED DEVELOPMENT SITE LOCATION


03. VIEW FROM VIOLET TOWN ROAD LOOKING FROM THE EXISTING VIOLET TOWN ROAD ENTRANCE DOWN THE EXISTING DRIVEWAY TOWARDS THE EXISTING AGED CARE FACILITY


04. VIEW TOWARDS THE CAR PARK AND ENTRANCE OF THE EXISTING AGED CARE FACILITY.


05. VIEW TOWARDS CONSERVATION ZONE AT THE SOUTH WEST PORTION OF THE SITE


06. VIEW NORTH TOWARDS THE PROPOSED DEVELOPMENT SITE LOCATION. EXISTING FACILITY ENTRANCE TO THE LEFT. EXISTING CAR PARKING AND EXISTING FACILITY TO THE RIGHT.


07. VIEW FROM THE PROPOSED CAR PARKING LOCATION AT THE SOUTH WEST PORTION OF THE SITE TO THE EXISTING AGED CARE FACILITY


08. VIEW OF THE REAR (BACK OF HOUSE) AREA OF THE EXISTING AGED CARE FACILITY


09. VIEW OF EXISTING AGED CARE FACILITY DRIVEWAY TOWARDS VIOLET TOWN ROAD


10. VIEW OF EXISTING ASSISTED LIVING UNIT FACILITY (ALUS)


11. VIEW OF EXISTING EASTERN 'WET' DETENTION BASIN


12. VIEW SOUTH OF THE PROPOSED DEVELOPMENT SITE LOCATION. EXISTING FACILITY ENTRANCE TO THE RIGHT. EXISTING CAR PARKING AND EXISTING FACILITY TO THE LEFT.

LEGEND

- EXISTING DRIVEWAY & CAR PARKING
- PROPOSED DRIVEWAY & CAR PARKING
- TO BE REMOVED/DEMOLISHED
- REFER TO LANDSCAPE DRAWINGS FOR EXISTING TREES TO BE REMOVED
- EXISTING TREES TO BE RETAINED

North

Issue	Description	Date	Chk	Auth
1	ISSUE FOR DA	12.08.14	RP	JH

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OPAL HILLSIDE - LAKE MACQUARIE

Location
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Client
Opal specialist aged care

Drawing
SITE ANALYIS

Scale	Date Printed
As indicated @ A1	13/08/2014 4:31:12 PM

Project Number	Drawing Number	Issue
502779	DA021	1

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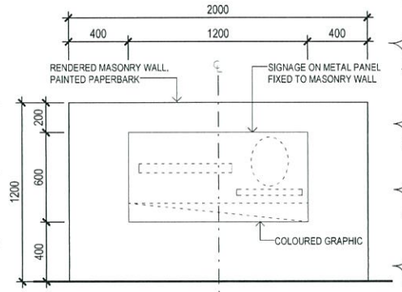
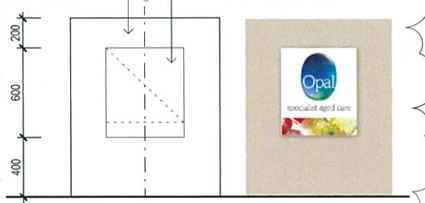
TYPICAL LANDSCAPE SIGNAGE ON WALL

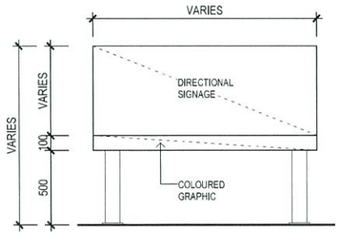


S1
TYPICAL WALL SIGNAGE -
REFER TO SITE PLAN FOR WALL CONFIGURATION



S1a
TYPICAL WALL SIGNAGE -
REFER TO SITE PLAN FOR WALL CONFIGURATION

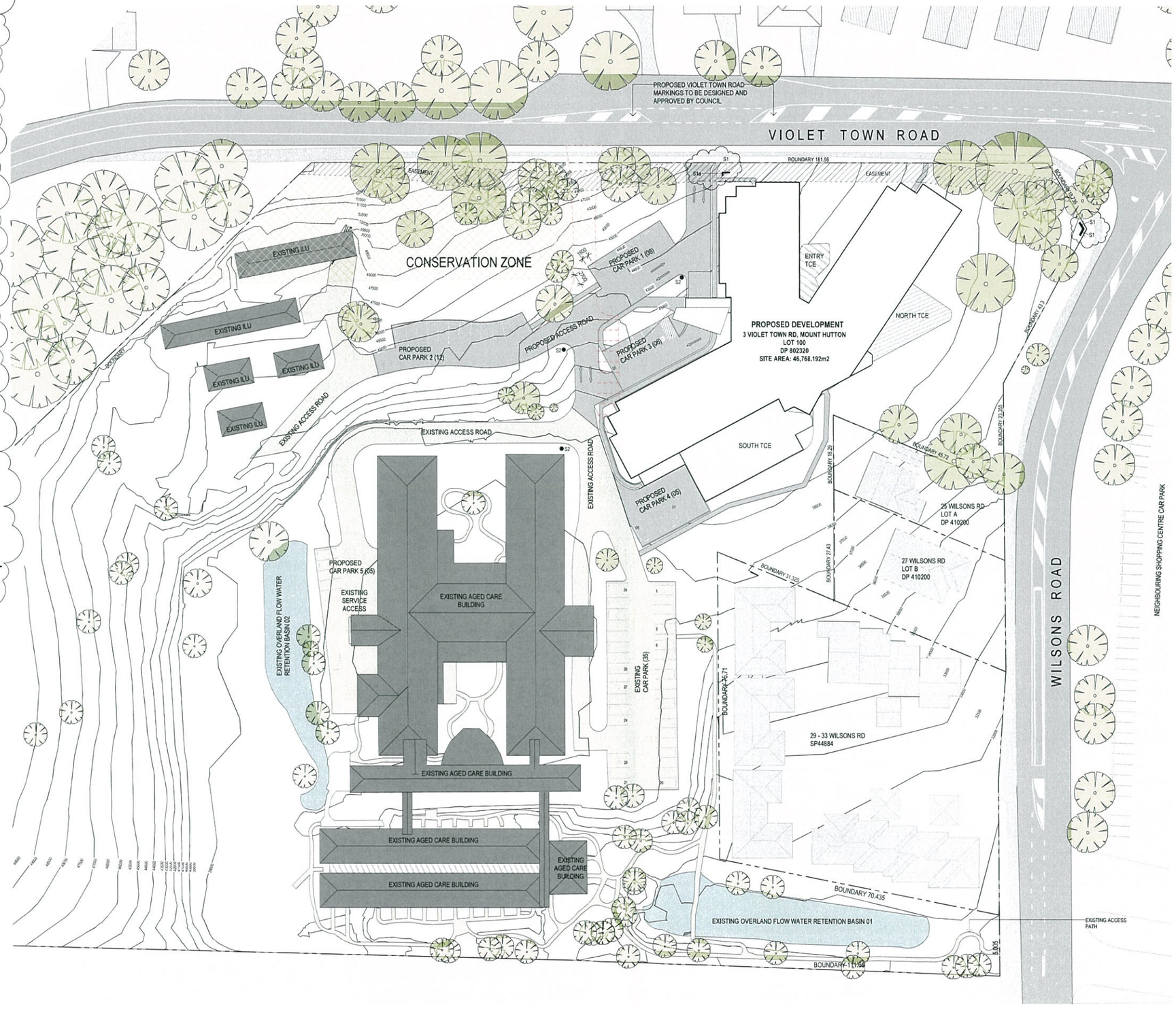
TYPICAL DIRECTIONAL
SIGNAGE - ON SITE



S2
TYPICAL DIRECTIONAL
SIGNAGE - ON SITE

FINAL LOCATIONS T.B.C

2 TYPICAL SIGNAGE
1 : 20



1 DA401 100_SITE PLAN
1 : 500

LEGEND

- EXISTING DRIVEWAY & CAR PARKING
- PROPOSED DRIVEWAY & CAR PARKING
- TO BE REMOVED/DEMOLISHED
- REFER TO LANDSCAPE DRAWINGS FOR EXISTING TREES TO BE REMOVED
- EXISTING TREES TO BE RETAINED

GROSS FLOOR AREA (GFA)	
LEVEL	AREA
LOWER GROUND	706.250 m²
GROUND FLOOR	1656.438 m²
LEVEL 1	2012.427 m²
LEVEL 2	2022.794 m²
	6397.908 m²

OVERALL BUILDING FOOTPRINT AREA	
LEVEL	AREA
GROUND FLOOR	1777.337 m²
LEVEL 1	2147.632 m²
LEVEL 2	2146.405 m²
LOWER GROUND	779.971 m²
	6851.344 m²

BEDROOM TYPE SCHEDULE		
ROOM TYPE	LEVEL	No.
SINGLE BEDROOM	GROUND FLOOR	32
COMPANION BEDROOM	LEVEL 1	4
SINGLE BEDROOM	LEVEL 1	40
COMPANION BEDROOM	LEVEL 2	4
SINGLE BEDROOM	LEVEL 2	40
		TOTAL = 128 BEDS

North

Issue	Description	Date	Chk	Auth
4	REVISED DA SUBMISSION	13.11.14	RP	SP
3	CLIENT REVIEW	12.11.14	RP	SP
2	ISSUE FOR DA	20.08.14	JC	JH
1	ISSUE FOR DA	12.08.14	RP	JH

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Project
OPAL HILLSIDE - LAKE MACQUARIE

Location
3 Violet Town Road, Mount Hutton NSW 2290, Australia

Client:
Opal specialist aged care

Drawing
SITE PLAN - NEW WORKS

Scale	Date Printed
As indicated @ A1	13/11/2014 10:44:29 AM

Project Number	Drawing Number	Issue
502779	DA101	4

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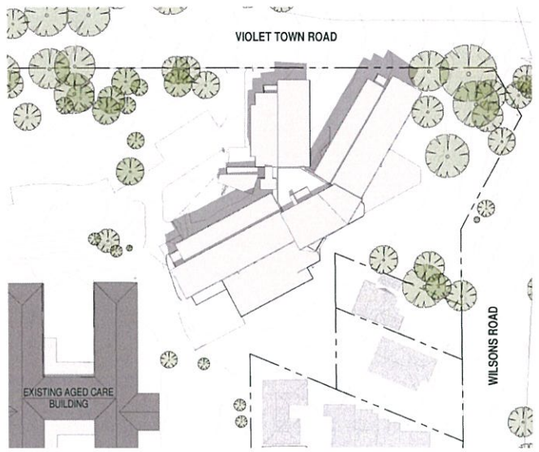

2 DA401 SHADOW DIAGRAM DEC 9AM
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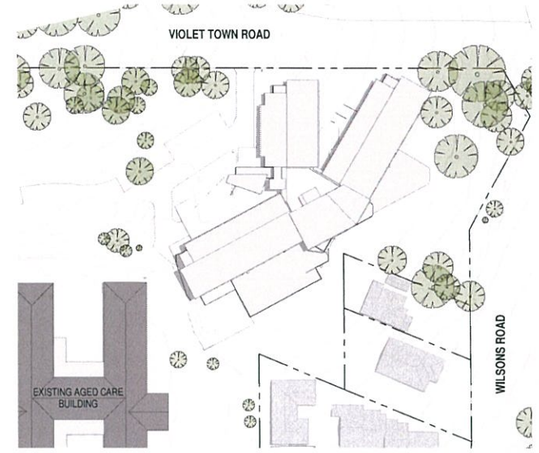

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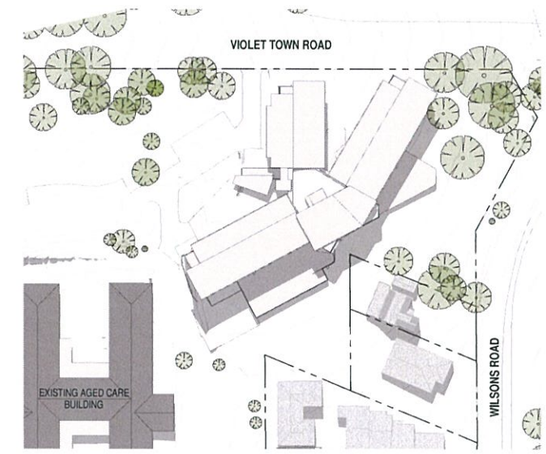

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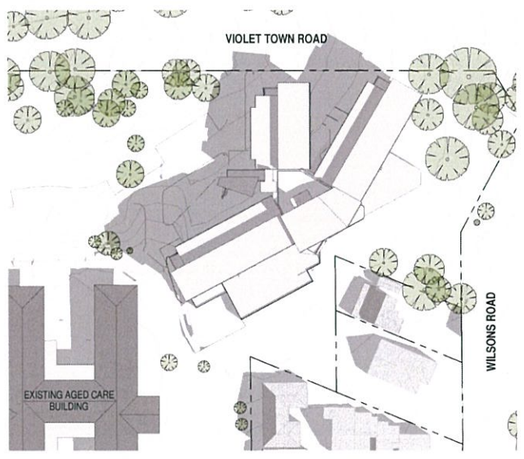

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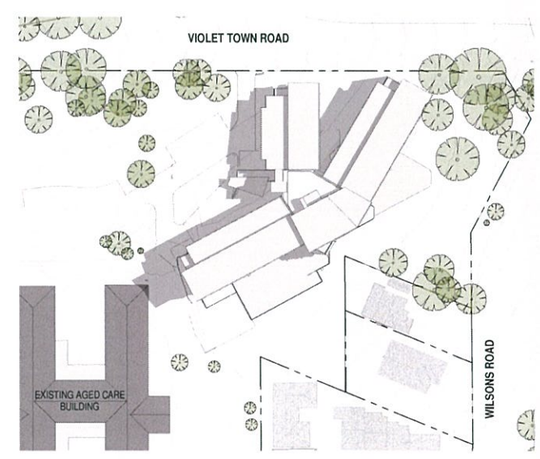

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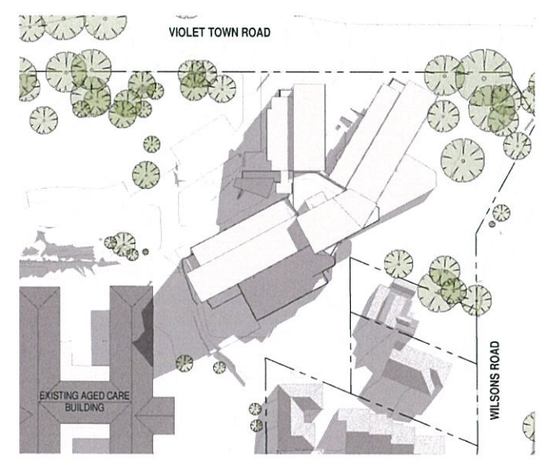

6 DA401 SHADOW DIAGRAM JUN 3PM
1 : 1000

North

Issue	Description	Date	Chk	Auth
1	ISSUE FOR DA	12.08.14	RP	JH

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OPAL HILLSIDE - LAKE MACQUARIE

Location
3 Violet Town Road, Mount Hutton NSW 2290, Australia

Client
Opal specialist aged care

Drawing
SHADOW DIAGRAMS

Scale	Date Printed
1 : 1000 @ A1	13/08/2014 4:32:29 PM

Project Number	Drawing Number	Issue
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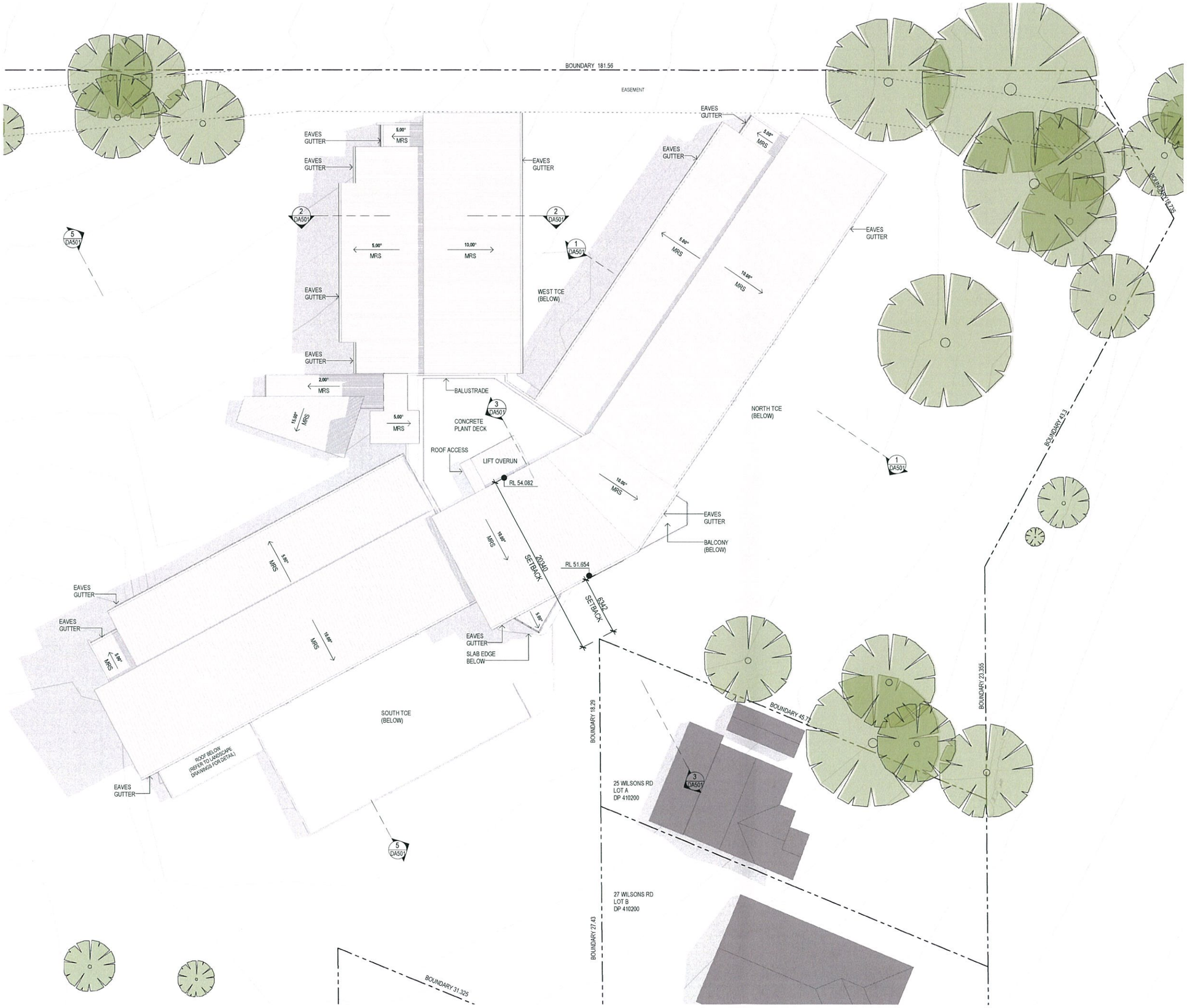

1 DA401 200_ROOF PLAN
1 : 200

North

Issue	Description	Date	Chk	Auth
2	ISSUE FOR DA	20.08.14	JC	JH
1	ISSUE FOR DA	12.08.14	RP	JH

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OPAL HILLSIDE - LAKE MACQUARIE

Location
3 Violet Town Road, Mount Hutton NSW 2290, Australia

Client
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Drawing
ROOF PLAN

Scale	Date Printed
1 : 200 @ A1	20/08/2014 12:58:48 PM

Project Number	Drawing Number	Issue
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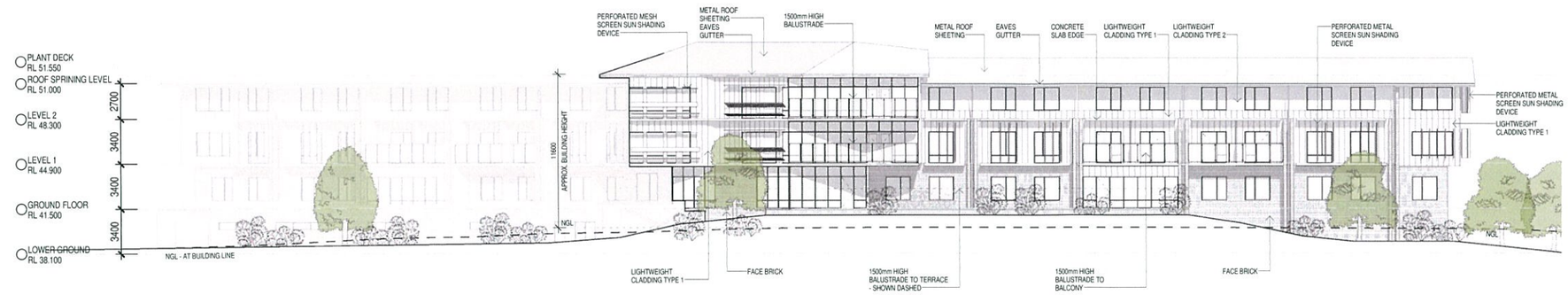
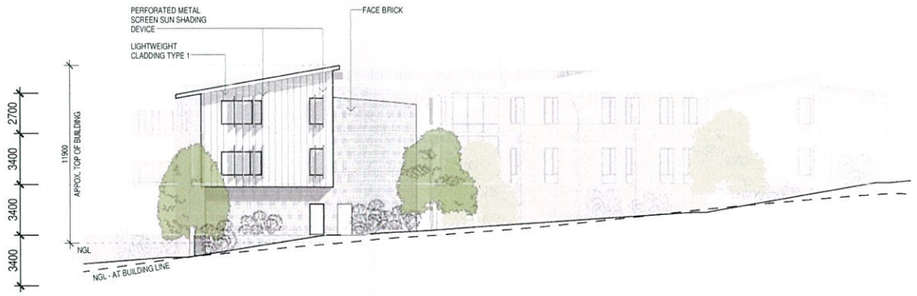


1 400_NORTH WING_EAST ELEVATION
1 : 200

2 400_NORTH WING_SOUTH ELEVATION
1 : 200



3 400_NORTH WING_WEST ELEVATION
1 : 200

NOTE:
LANDSCAPING SHOWN IS INDICATIVE ONLY. REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR DETAIL

Issue	Description	Date	Chk	Auth
1	ISSUE FOR DA	12.08.14	RP	JH

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Project
OPAL HILLSIDE - LAKE MACQUARIE

Location
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Client
Opal specialist aged care

Drawing
ELEVATIONS NORTH WING

Scale	Date Printed
As indicated @ A1	13/08/2014 4:34:59 PM

Project Number	Drawing Number	Issue
502779	DA401	1

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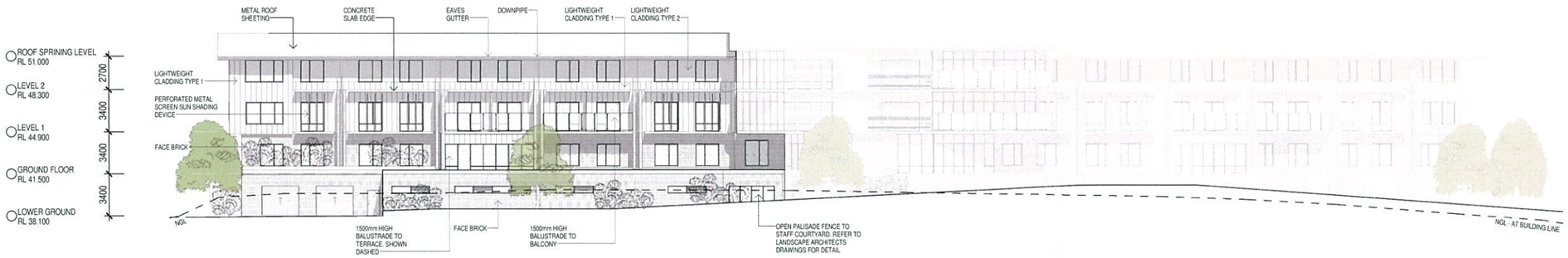
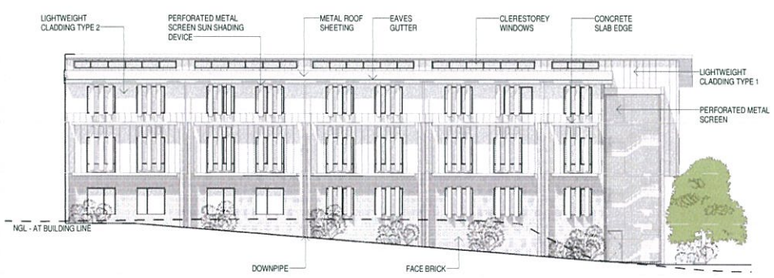


1 400_SOUTH WING_EAST ELEVATION
1 : 200

2 400_SOUTH WING_SOUTH ELEVATION
1 : 200



3 400_SOUTH WING_WEST ELEVATION
1 : 200

NOTE:
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Issue	Description	Date	Chk	Auth
1	ISSUE FOR DA	12.08.14	RP	JH

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OPAL HILLSIDE - LAKE MACQUARIE

Location
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Client
Opal specialist aged care

Drawing
ELEVATIONS SOUTH WING

Scale	Date Printed
As indicated @ A1	13/08/2014 4:35:59 PM

Project Number	Drawing Number	Issue
502779	DA402	1

File Name: C:\dwpsuters REVIT locals\2014\502779_HILLSIDE_CENTRAL_R2014_jhume.rvt

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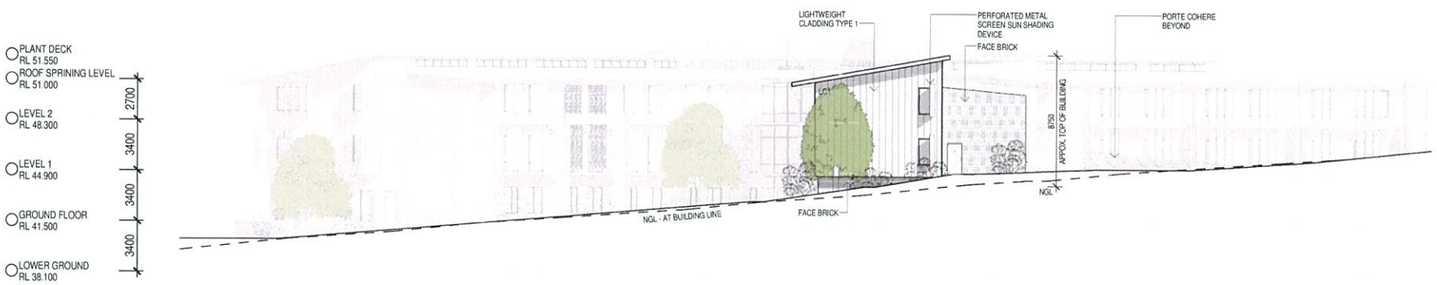
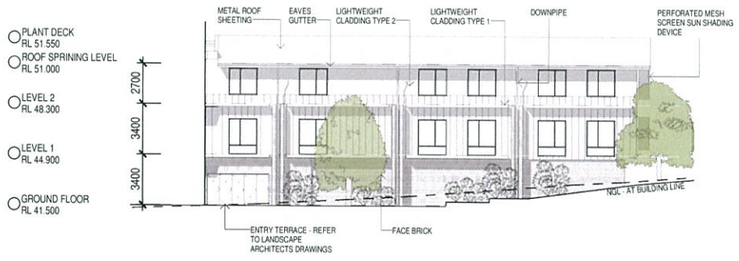
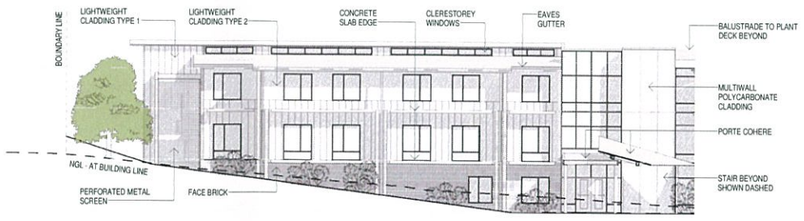


1 400_WEST WING_WEST ELEVATION
1 : 200



2 400_WEST WING_NORTH ELEVATION
1 : 200



3 400_WEST WING_SOUTH ELEVATION
1 : 200

NOTE:
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Issue	Description	Date	Chk	Auth
1	ISSUE FOR DA	12.08.14	RP	JH

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Project
OPAL HILLSIDE - LAKE MACQUARIE

Location
3 Violet Town Road, Mount Hutton NSW 2290, Australia

Client
Opal specialist aged care

Drawing
ELEVATIONS WEST WING

Scale	Date Printed
As indicated @ A1	13/08/2014 4:36:28 PM

Project Number	Drawing Number	Issue
502779	DA403	1

File Name C:\dwpsuters REVIT\scale 2014\502779_HILLSIDE_CENTRAL_R2014_jhume.rvt

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OPAL HILLSIDE

DEVELOPMENT APPLICATION SUBMISSION
LANDSCAPE ARCHITECTURE

CONTENTS

LEGEND

Site Boundary

Existing Trees to Remain (T14)
Existing Tree Protection Zone
Existing Tree Structural Root Zone
- Refer Arborist report for details

Existing Tree to be Removed (T15)
(29 no.)

Existing Contours

RL 49.20
TOW 49.20
Proposed Levels

Open Palisade Fence + Gate

TSGI
Tactile Indicators

Balustrade (1500 height)
Handrail

Proposed Trees On Grade (01/401) (02/401)

Proposed Trees On Grade (01/401) (02/401)

Proposed Trees On Slab

Proposed Mass Planting - On Grade (01/402)

Proposed Mass Planting - On Slab (02/402)

T
Turf

Steel Edge (03/402)

Table and Chairs

Bench Seat

L
B
Post top lighting
Bollard lighting

D
Timber Deck

HD
Hydroseed

AT
Artificial Turf (04/402)

BC
Broom Finish Concrete

P1
Paving - Type 1 On Grade (05/402)

P2
Paving - Type 2 On Grade (06/402)

P1
Paving - Type 1 On Slab (07/402)

P2
Paving - Type 2 On Slab (08/402)

G
Loose Gravel Path On Slab (09/402)

SB
Stone Ballast On slab (10/402)

SD
Subsoil Drainage
- connect to RWO

G
Service Gas

W
Service Water

T
Telstra

E+P
Power

INDICATIVE PLANT SCHEDULE

INDICATIVE PLANT SCHEDULE				
Botanical Name	**Common Name**	**Pot Size**	**Size @ Maturity (H x W)**	**Spacing**
TREES				
Angophora costata	Smooth Barked Apple	45L	25.0 x 15.0m	As shown
Eucalyptus gummifera	Red Bloodwood	45L	20.0 x 10.0m	As shown
Eleocarpus reticulatis	Blueberry Ash	75L	12.0 x 8.0m	As shown
Eucalyptus eugenioides	Thin Leaved Stringybark	45L	15.0 x 10.0m	As shown
Eucalyptus punctata	Grey Gum	45L	20.0 x 10.0m	As shown
Lagerstroemia indica	Crepe Myrtle	75L	8.0 x 6.0m	As shown
Magnolia grandiflora 'Exmouth'	Magnolia	75L	8.0 x 6.0m	As shown
Plumeria obtusa	Frangipani	75L	8.0 x 6.0m	As shown
Robinia pseudoacacia 'Frisia'	Black Locust	75L	10.0 x 8.0m	As shown
Tristaniopsis laurina	Water Gum	45L	10.0 x 8.0m	As shown
Ulmus parvifolium	Chinese Elm	75L	12.0 x 8.0m	As shown
MASS PLANTING				
Camellia sasanqua	Small Leaf Camellia	45L	3.5 x 3.0m	2/m2
Gardenia augusta 'Florida'	Gardenia	200mm	1.0 x 1.0m	2/m2
Murraya paniculata	Orange Jesamine	300mm	4.0 x 3.0m	2/m2
Pittosporum tenuifolim	Green Pillar Pittosporum	300mm	5.0 x 3.0m	2/m2
CLIMBERS + GROUNDCOVERS				
Dianella caerulea	Blue Flax Lily	150mm	1.0 x 0.6m	4/m2
Liriope muscari	Blue Lily Turf	150mm	0.5 x 0.5m	4/m2
Trachelospermum jasminoides	Star Jasmine	200mm	6.0 x 1.2m	4/m2
Poa labillardieri 'Eskdale'	Common Tussock Grass	tube	0.7 x 0.5m	4/m2
Clivia miniata	Natal Lily	200mm	0.5 x 0.5m	4/m2
Lomandra longifolia 'Tanika'	Tanika Mat Rush	200mm	0.5 x 0.5m	4/m2
Lomandra longifolia	Spiny Head Mat Rush	200mm	0.7 x 0.5m	4/m2
Myoporum parvifolium	Creeping Boobialla	150mm	0.2 x 1.0m	4/m2
Agave attenuata	Century Plant	200mm	0.7 x 0.5m	4/m2

CONSERVATION ZONE PLANT LIST				
TREES				
Eucalyptus gummifera	Red Bloodwood	45L	20.0 x 10.0m	As shown
Eucalyptus maculata	Spotted Gum	45L	20.0 x 10.0m	As shown
Eucalyptus robusta	Swamp Mahogany	45L	20.0 x 10.0m	As shown
MASS PLANTING				
Lomandra longifolia	Spiny Head Mat Rush	150mm	0.7 x 0.5m	4/m2
Dianella revoluta	Blue Flax-lily	150mm	0.7 x 0.5m	4/m2
Doryanthes excelsa	Gymea Lily	300mm	2.0 x 1.0m	2/m2

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Issue	Revision Description	Drawn	Check	Date
-	-	-	-	--.--.----
-	-	-	-	--.--.----
-	-	-	-	--.--.----
-	-	-	-	--.--.----
K	DA SUBMISSION - PLANS ADDED	FT	MP	19.12.2014
J	DA SUBMISSION - PLAN ADDED	BB	MP	10.11.2014
I	T13 REMOVED	FT	MP	18.08.2014
H	DA SUBMISSION	FT	MP	08.08.2014
G	T95 & T96 ALREADY REMOVED	FT	MP	06.08.2014
F	FOR REVIEW	FT	MP	01.08.2014
E	MINOR AMENDMENT	FT	MP	22.07.2014
D	FOR REVIEW	FT	MP	15.07.2014
C	FOR REVIEW	FT	MP	14.07.2014
B	PRE-DA MEETING 29.05.2014	SR/BB	MP	26.05.2014
A	FOR REVIEW	BB	MP	23.05.2014

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Site Image (VIC) Pty Ltd
ABN 92 298 651 413

Client: OPAL AGED CARE

Project: OPAL HILLSIDE
VIOLET TOWN RD
MOUNT HUTTON

Drawing Name: COVER SHEET, LEGEND & PLANT SCHEDULE

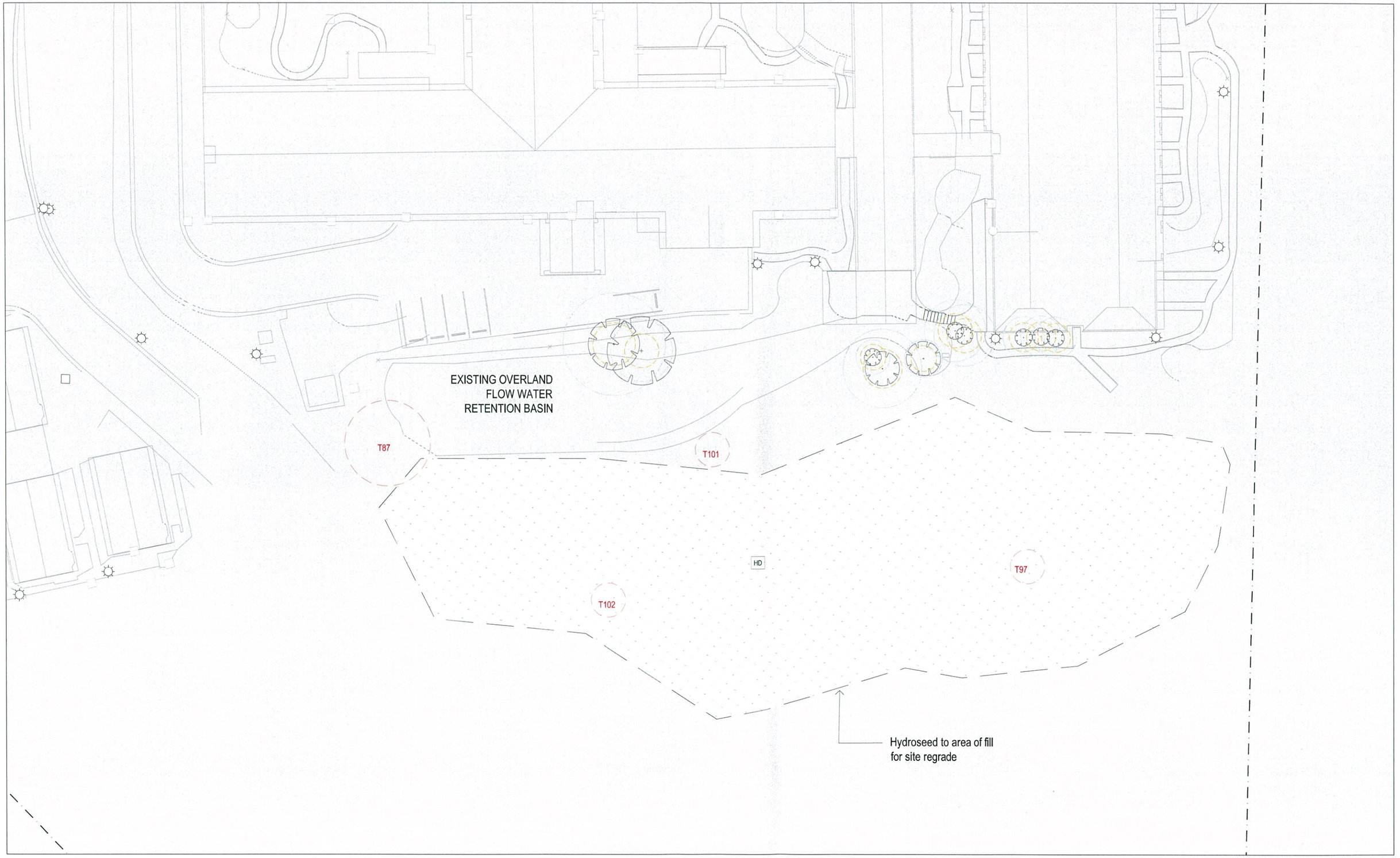
DA SUBMISSION

Scale:

Job Number: SM14147

Drawing Number: LP000

Issue: K



The contractor shall check and verify all work on site (including work by others) before commencing the landscape installation. Any discrepancies are to be reported to the Project Manager or Landscape Architect prior to commencing work. Do not scale this drawing. Any required dimensions not shown shall be referred to the Landscape Architect for confirmation.

Issue	Revision Description	Drawn	Check	Date
-	-	-	-	--.--.----
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-	-	-	-	--.--.----
-	-	-	-	--.--.----
C	DA SUBMISSION	FT	MP	08.08.2014
B	T95 & T96 ALREADY REMOVED	FT	MP	06.08.2014
A	FOR REVIEW	FT	MP	01.08.2014

north

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Site Image (VIC) Pty Ltd
ABN 92 298 651 413

Client:
OPAL AGED CARE

Project:
OPAL HILLSIDE
VIOLET TOWN RD
MOUNT HUTTON

Drawing Name:
LANDSCAPE PLAN 03

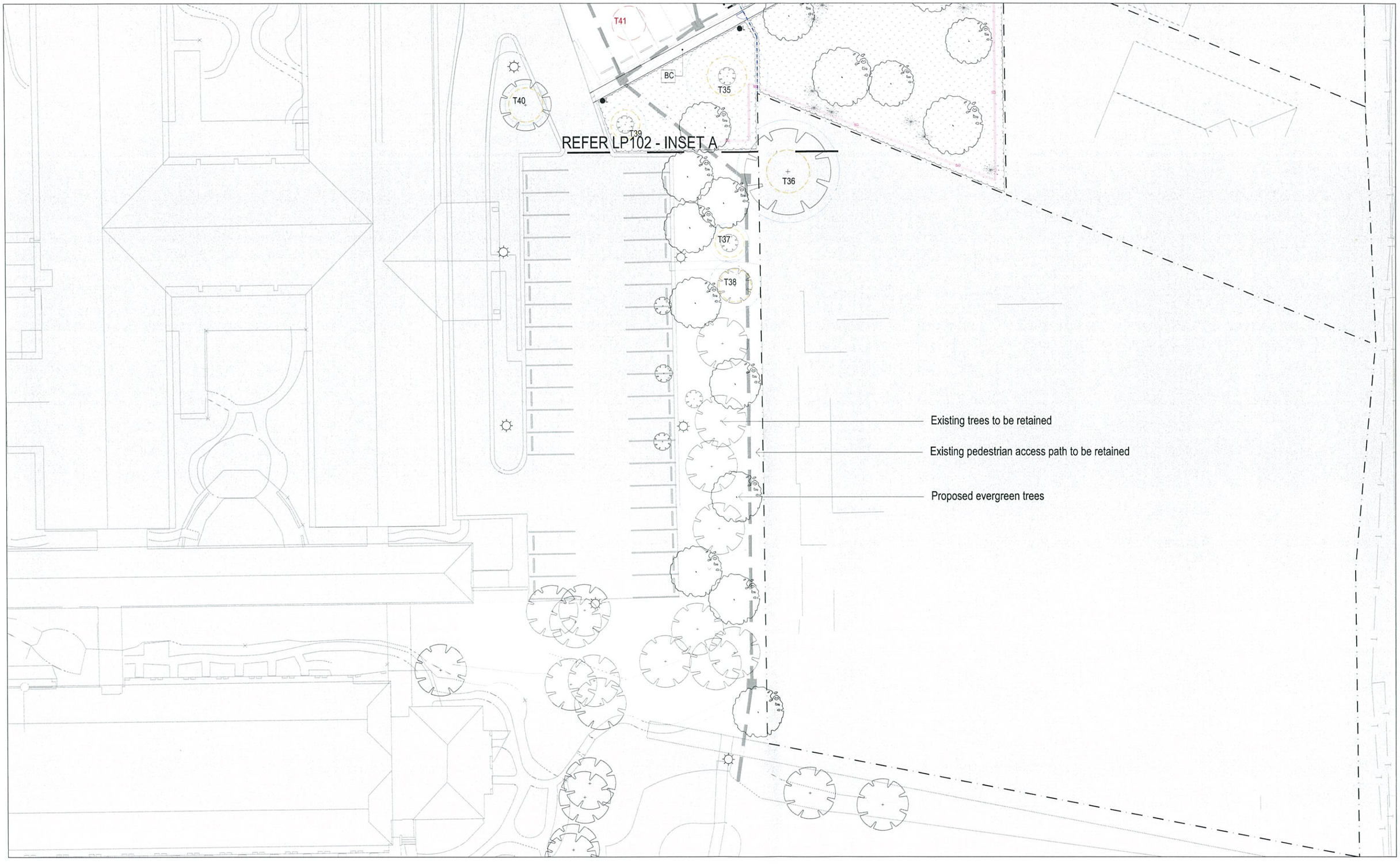
DA SUBMISSION

Scale: 1:200 @ A1 (0 1 2 4 6 10m)

Job Number: SM14147

Drawing Number: LP103

Issue: C



The contractor shall check and verify all work on site (including work by others) before commencing the landscape installation. Any discrepancies are to be reported to the Project Manager or Landscape Architect prior to commencing work. Do not scale this drawing. Any required dimensions not shown shall be referred to the Landscape Architect for confirmation.

Issue	Revision Description	Drawn	Check	Date
A	DA APPROVAL	BB	MP	10.11.2014

north

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Site Image (VIC) Pty Ltd
ABN 92 298 651 413

Client:
OPAL AGED CARE

Project:
OPAL HILLSIDE
VIOLET TOWN RD
MOUNT HUTTON

Drawing Name:
LANDSCAPE PLAN 04

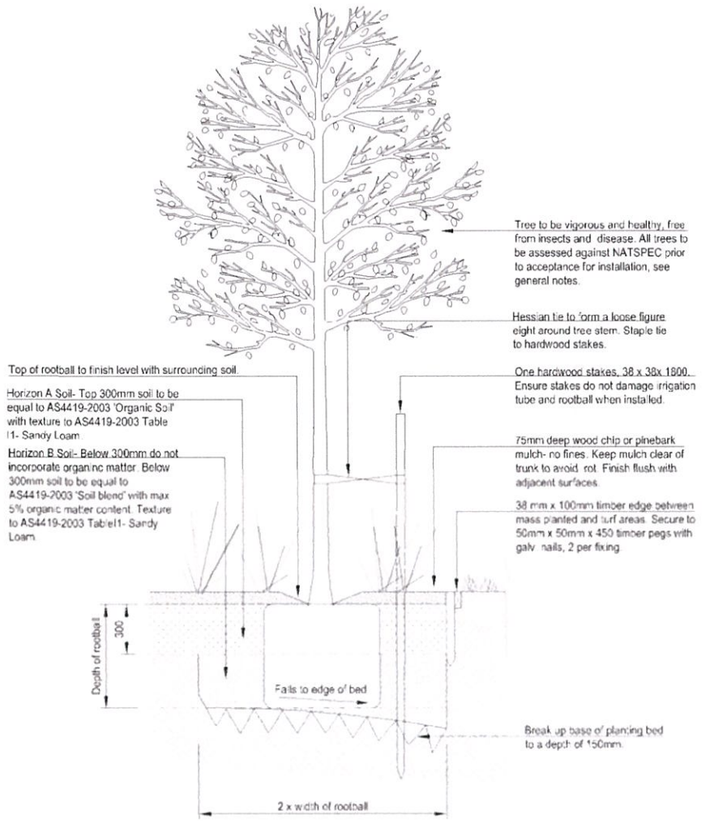
DA SUBMISSION

Scale: 1:200 @ A1 (0 1 2 4 6 10m)

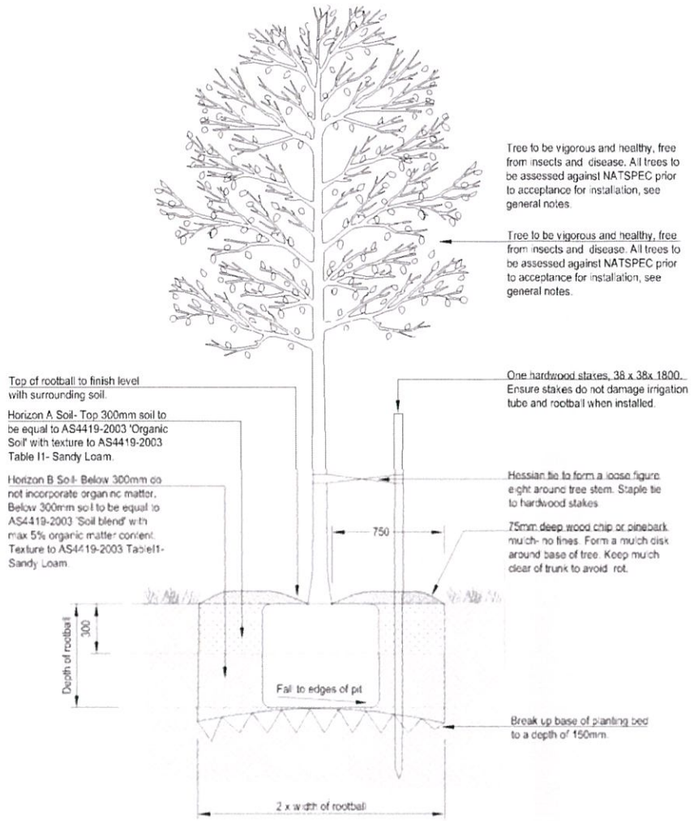
Job Number: SM14147

Drawing Number: LP104

Issue: A



01 >45L TREE IN MASS PLANTING (COUNCIL STANDARD)
SCALE 1:20



02 >45L TREE IN TURF (COUNCIL STANDARD)
SCALE 1:20

The contractor shall check and verify all work on site (including work by others) before commencing the landscape installation. Any discrepancies are to be reported to the Project Manager or Landscape Architect prior to commencing work. Do not scale this drawing. Any required dimensions not shown shall be referred to the Landscape Architect for confirmation.

Issue	Revision Description	Drawn	Check	Date
-	-	-	-	--.--.----
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-	-	-	-	--.--.----
-	-	-	-	--.--.----
D	DA SUBMISSION	FT	MP	08.08.2014
C	ADDITIONAL DETAIL	FT	MP	14.07.2014
B	PRE-DA MEETING 29.05.2014	SR	MP	26.05.2014
A	FOR REVIEW	SR	MP	23.05.2014

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ABN 92 298 651 413

Client: OPAL AGED CARE

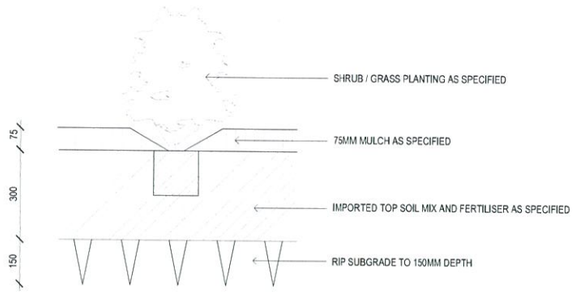
Project: OPAL HILLSIDE
VIOLET TOWN RD
MOUNT HUTTON

Drawing Name: LANDSCAPE DETAILS

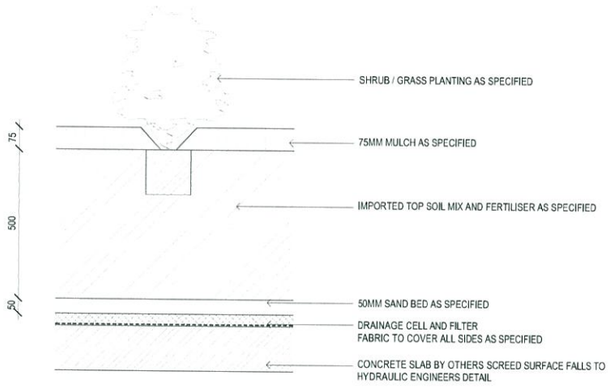
DA SUBMISSION

Scale: AS SHOWN

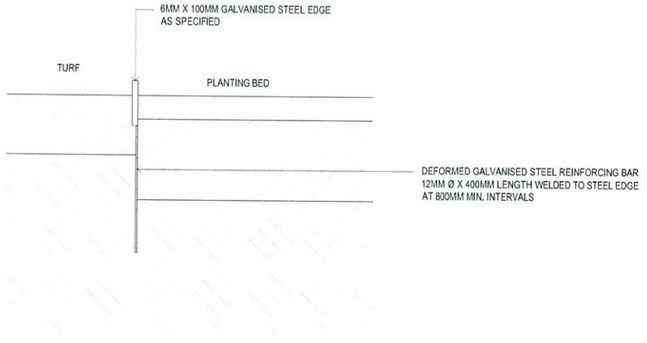
Job Number:	Drawing Number:	Issue:
SM14147	LP401	D



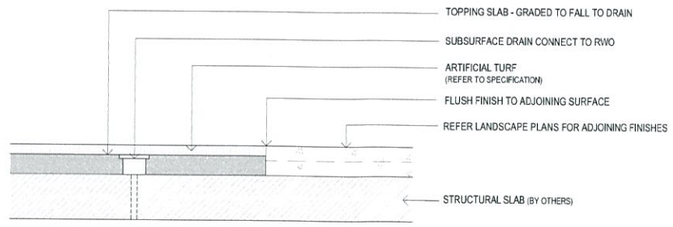
01 SHRUB PLANTING ON GRADE
SCALE 1:10



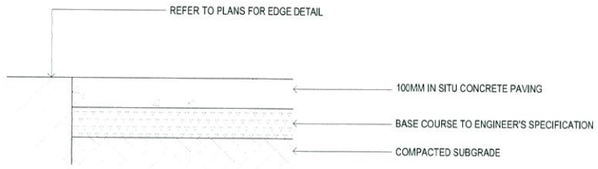
02 SHRUB PLANTING ON SLAB
SCALE 1:10



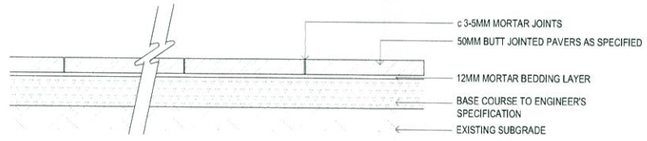
03 STEEL EDGE
SCALE 1:10



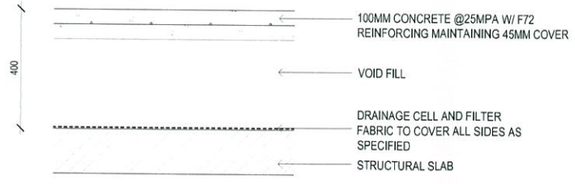
04 ARTIFICIAL TURF ON SLAB
SCALE 1:10



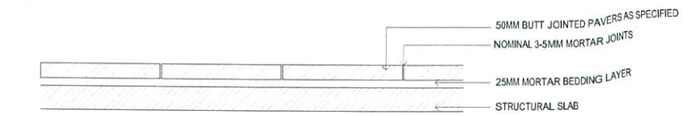
05 PAVING TYPE 1 - CONCRETE PAVING ON GRADE
SCALE 1:10



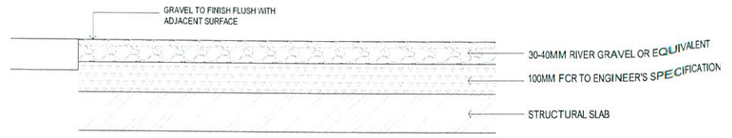
06 PAVING TYPE 2 - UNIT PAVING ON GRADE
SCALE 1:10



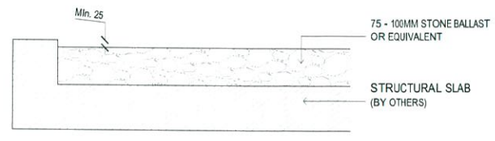
07 PAVING TYPE 1 - CONCRETE PAVING ON SLAB
SCALE 1:10



08 PAVING TYPE 2 - UNIT PAVING ON SLAB
SCALE 1:10



09 LOOSE GRAVEL PATH ON SLAB
SCALE 1:10



10 STONE BALLAST ON SLAB
SCALE 1:10

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Issue	Revision Description	Drawn	Check	Date
B	DA SUBMISSION	FT	MP	08.08.2014
A	FOR REVIEW	FT	MP	14.07.2014

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Client: OPAL AGED CARE

Project: OPAL HILLSIDE
VIOLET TOWN RD
MOUNT HUTTON

Drawing Name: LANDSCAPE DETAILS

DA SUBMISSION

Scale: AS SHOWN

Job Number: SM14147

Drawing Number: LP402

Issue: B

Balustrade Fence to Terraces

PANEL HEIGHT (MM): 1500mm

Open Palisade Fence + Gate

PANEL HEIGHT (MM): 1800mm

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Issue	Revision Description	Drawn	Check	Date
A	DA SUBMISSION	FT	MP	19.12.2014

NOTE:

IMAGES + STYLES SHOWN ARE INDICATIVE ONLY.

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ABN 92 298 651 413

Client: OPAL AGED CARE

Project: OPAL HILLSIDE
VIOLET TOWN RD
MOUNT HUTTON

Drawing Name: SUPPLEMENTARY INFORMATION 03

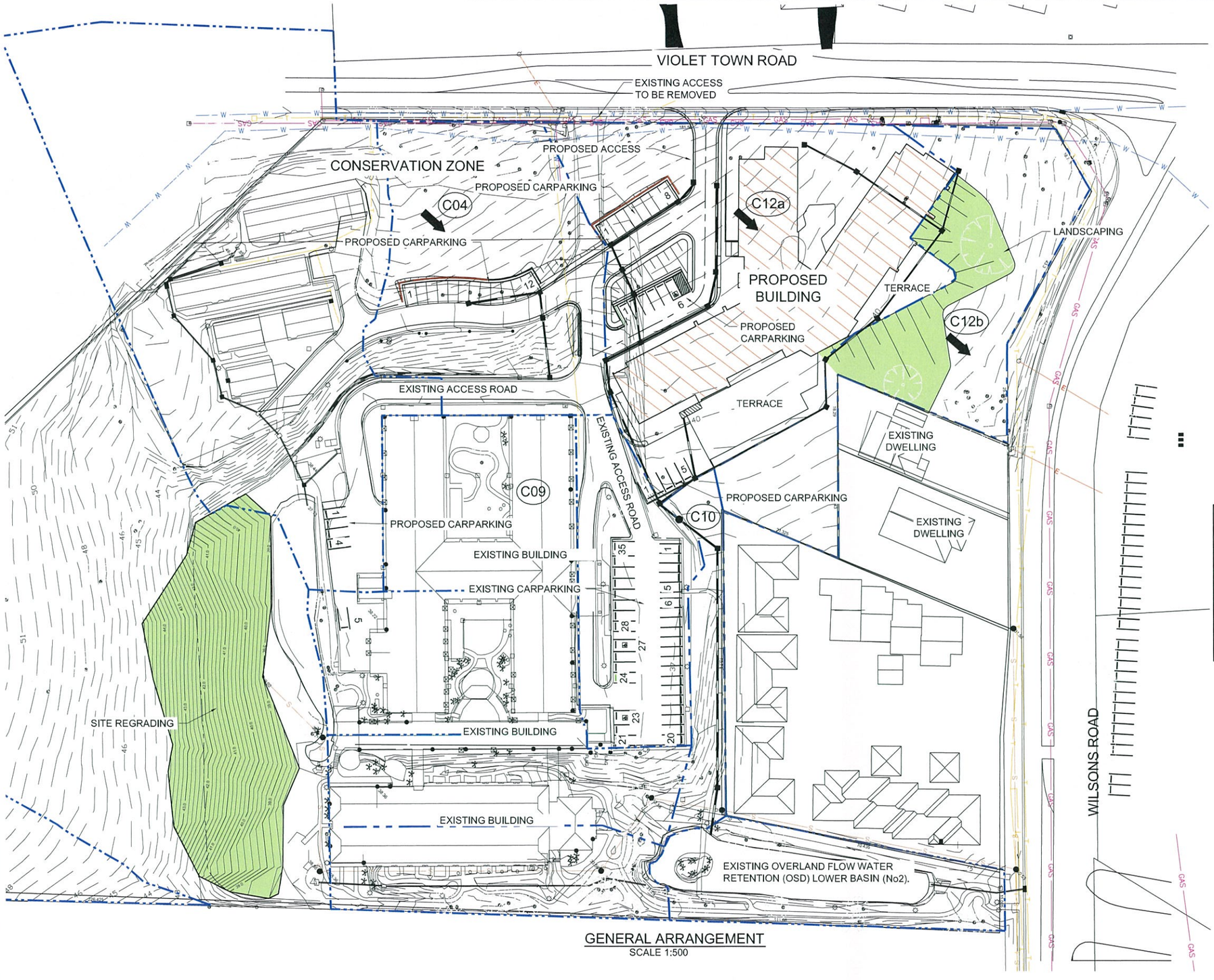
DA SUBMISSION

Scale: N/A

Job Number: SM14147

Drawing Number: LP503

Issue: A



GENERAL ARRANGEMENT
SCALE 1:500

1:500 @ A1
1:1000 @ A3
0 5 10 15 20 25 30 35 40 45 50 m

NOTES

1. ALL STORMWATER TO BE IN ACCORDANCE WITH AS3500.3 AND LAKE MACQUARIE COUNCIL REQUIREMENTS .
2. FOR DETAILS OF ASSESSMENT OF THE STORMWATER MANAGEMENT FOR THIS PROPOSED DEVELOPMENT REFER TO THE 'STORMWATER MANAGEMENT PLAN' SUMMARY REPORT DATED 24.07.2014. A SMMARY OF THE KEY INFORMATION IS SHOWN ON IN THE TABLES BELOW.

Summary of Stormwater / OSD design
As per DRAINS models (Hillside Pre-Dev 2014 DA Model.drn and Hillside Post-Dev 2014 DA model.drn)

	Pre-development	Post Development	
Catchment Area (ha)	6.567	6.567	
Site runoff (cu. m/s) for 100yr ARI			
Lower Basin - piped	0.627	0.592	
Lower Basin - overland	0.543	0.664	
Catchment 12	0.353	0.151	post development 12(b)
Site Worst case Peaks Total	1.523	1.407	< existing therefore okay (20yr and 5yr ARI similar)
Peak Hydrograph at outlet			
100yr ARI	1.40	1.36	< existing therefore okay
20yr ARI	1.06	1.00	< existing therefore okay
5 yr ARI	0.79	0.67	< existing therefore okay
OSD storage			
Existing Basin 1 (cu. m)	472	472	
Existing Basin 2 (cu. m)	339	490	lower permanent water level by 0.2m (151cu.m)
	811	962	
Site changes			
Additional Impervious areas (ha)		0.53	
Additional OSD storage (cu. m)		151	lower basin

Revised 2014 DA catchment summary

		Pre Development			Post-Development						
Catchment (Ref)	Catchment Name	Area (ha)	Fraction impervious %	Fraction pervious %	Area (ha)	Fraction impervious %	Fraction pervious %	Change in catchment area (ha)	Pre impervious area (ha)	Post impervious area (ha)	Increased impervious area (ha)
C01	South Eastern	0.538	0%	100%	0.538	0%	100%	0.000	0.000	0.000	0.000
C02	Southern	2.564	3%	97%	2.564	3%	97%	0.000	0.077	0.077	0.000
C03	South Western	0.892	30%	70%	0.892	30%	70%	0.000	0.268	0.268	0.000
C04	Western	0.440	28%	72%	0.427	42%	58%	-0.013	0.123	0.179	0.056
C05	Central 1	0.203	83%	17%	0.203	83%	17%	0.000	0.169	0.169	0.000
C06	Central 2	0.240	77%	23%	0.240	77%	23%	0.000	0.185	0.185	0.000
C07	Central 3	0.189	57%	43%	0.189	57%	43%	0.000	0.108	0.108	0.000
C08	Eastern	0.175	47%	53%	0.175	47%	53%	0.000	0.082	0.082	0.000
C09	Northern 1	0.212	73%	27%	0.200	71%	29%	-0.012	0.155	0.143	-0.012
C10	Northern 2	0.147	7%	93%	0.078	13%	87%	-0.069	0.010	0.010	0.000
C11	North Eastern	0.178	8%	92%	0.178	8%	92%	0.000	0.014	0.014	0.000
C12a	North Western (dev.)	0.406	0%	100%	0.499	97%	3%	0.093	0.000	0.484	0.484
C12b	North Western (undev.)	0.383	0%	100%	0.383	0%	100%	0.000	0.000	0.000	0.000
		6.567			**6.567**			**0.000**			**0.529**

LEGEND

C01 CATCHMENT NODE
SURFACE FALL
CATCHMENT BOUNDARY

NOTE

THIS STORMWATER MANAGEMENT PLAN HAS BEEN BASED ON THE ARCHITECTS DWP SUTERS PROPOSED DEVELOPMENT DRAWINGS No'S 502779 DA101H, 2012G, DA202J, DA203F, DA204F AND DA205B.

PRELIMINARY

Revision	Amendment	Approved	Revision Date
A	PRELIMINARY ISSUE	J.C.	22.05.14
B	PRE DA ISSUE	J.C.	27.05.14
C	PRE DA ISSUE	J.C.	30.06.14
D	CLIENT REVIEW	J.C.	15.07.14
E	DA REVIEW	J.C.	29.07.14
F	DA ISSUE	J.C.	08.08.14
G	REVISED DA ISSUE	J.C.	22.08.14
H	REVISED DA ISSUE	J.C.	12.11.14

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Australia

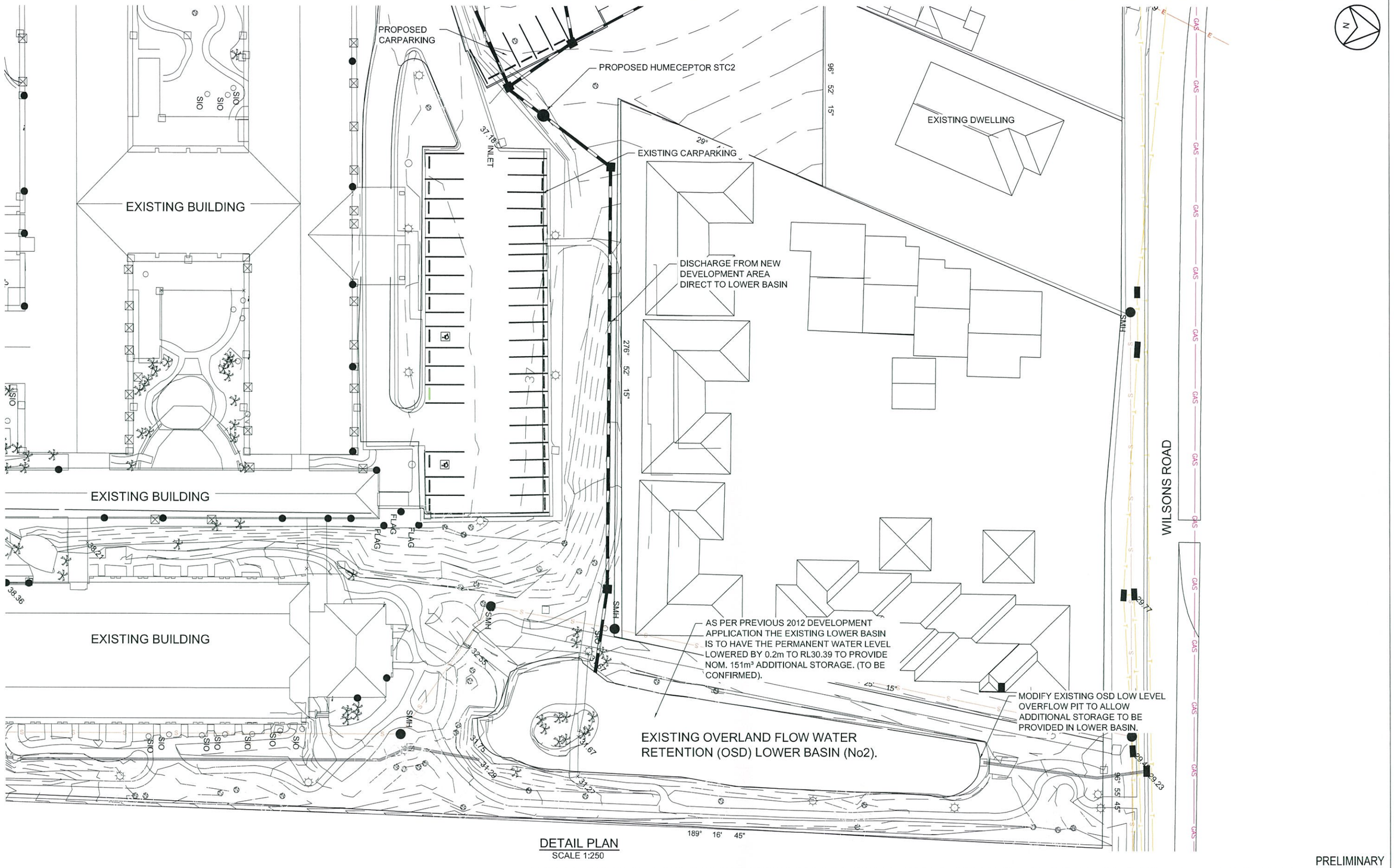
Drawn	Designed	Approved	Revision Date
A. HYLAND	R. CHARLTON		22.05.2014

Project
HILLSIDE
LAKE MACQUARIE
AGED CARE FACILITY

Sheet
ROADWORKS AND STORMWATER
GENERAL ARRANGEMENT

Project No.	Scale	Drawing No.	Sheet. No.	Revision
T-N0280.00	1:500	T-N0280.00 _DA1		H

Original Sheet Size A1 [841x594] Plot Date 12 Nov 2014 @ 1:57 PM Path G:\20_Newcastle_Projects\T-N0200 - T-N0299\T-N0280.00_dwpsuters - Hillside, Lake Macquarie, Aged Care Facility\Drafting\T-N0280_DA1.dwg RG



DETAIL PLAN
SCALE 1:250

PRELIMINARY

Revision	Amendment	Approved	Revision Date
A	PRELIMINARY ISSUE	J.C.	22.05.14
B	PRE DA ISSUE	J.C.	27.05.14
C	PRE DA ISSUE	J.C.	30.06.14
D	CLIENT REVIEW	J.C.	15.07.14
E	DA REVIEW	J.C.	29.07.14
F	DA ISSUE	J.C.	08.08.14
G	REVISED DA ISSUE	J.C.	22.08.14
H	REVISED DA ISSUE	J.C.	12.11.14

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Newcastle NSW 2300
Australia

Drawn	Designed	Approved	Revision Date
A. HYLAND	R. CHARLTON		22.05.14

Project
HILLSIDE
LAKE MACQUARIE
AGED CARE FACILITY

Sheet
STORMWATER MANAGEMENT PLAN
DETAIL PLAN 2

Project No.	Scale	Drawing No.	Sheet. No.	Revision
T-N0280.00	1:250	T-N0280.00 _DA3		H

1:250 @ A1
1:500 @ A3
0 4 8 12 16 20 24 m

Original Sheet Size A1 [841x594] Plot Date 12 Nov 2014 @ 1:58 PM Path G:\20_Newcastle_Projects\T-N0200 - T-N0299\T-N0280.00_cwpsuters - Hillside, Lake Macquarie, Aged Care Facility\Drafting\T-N0280_DA3.dwg RG

VIOLET TOWN ROAD

TEMPORARY CONSTRUCTION ENTRY AND EXIT

PROPERTY BOUNDARY

CONSERVATION ZONE

PROPOSED ACCESS

EARTH BANK TYPE SD5-3

PROPOSED CARPARKING

EARTH BANK TYPE SD5-3

PROPOSED CARPARKING

PROPOSED BUILDING

TERRACE

REFER TO PLAN 2 (DRG. No. DA21) FOR EROSION AND SEDIMENT CONTROL DETAILS IN THIS AREA

PROPOSED CARPARKING

SEDIMENT FENCE

EXISTING ACCESS ROAD

EXISTING ACCESS ROAD

TERRACE

BLOCK AND GRAVEL DROP INLET SEDIMENT TRAP

STOCKPILE TO BE LOCATED IN AREA OF FILL

EXISTING DWELLING

STOCKPILE TO BE LOCATED IN AREA OF FILL

EARTH BANK TYPE SD5-3

SEDIMENT FENCE

EXISTING BUILDING

EXISTING DWELLING

EXISTING CARPARKING

BLOCK AND GRAVEL DROP INLET SEDIMENT TRAP

BLOCK AND GRAVEL DROP INLET SEDIMENT TRAP

SITE REGRADING

EXISTING BUILDING

WILSONS ROAD

EXISTING BUILDING

EXISTING OVERLAND FLOW WATER RETENTION BASIN

GENERAL ARRANGEMENT

SCALE 1:500

NOTES:

1. DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. REDUCED LEVELS ARE IN METRES.
3. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING.
4. DETAILED SEDIMENT CONTROL PLAN TO BE PREPARED BY CONTRACTOR PRIOR TO DEMOLITION (OR) CONSTRUCTION AND OBTAIN APPROVAL.
5. TREE PROTECTION AS PER ARBORISTS REPORT.
6. EXISTING SERVICES TO BE IDENTIFIED PRIOR TO DEMOLITION (OR) CONSTRUCTION.
7. FOR SEDIMENT CONTROL DETAILS AND LEGEND REFER DRAWING T-N0280.00_SK_C011.
8. PLANS TO BE READ IN CONJUNCTION WITH STORMWATER PLAN.
9. FOR SEDIMENT AND EROSION CONTROL NOTES REFER T-N0280.00_□□□□□□□□□

LEGEND

- DENOTES EARTH BANK. CLEAN WATER DIVERSION
- DENOTES LEVEL SPREADER
- DENOTES BARRIER FENCE
- DENOTES SEDIMENT FENCE

PRELIMINARY

Revision	Amendment	Approved	Revision Date
A	DA REVIEW	-	29.07.14
B	DA ISSUE	J.C.	08.08.14
C	REVISED DA ISSUE	J.C.	22.08.14
D	REVISED DA ISSUE	J.C.	24.12.14

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Australia

Drawn	Designed	Approved	Revision Date
J.HOLBROOK	R. CHARLTON		19.12.14

Project No.	Scale
T-N0280.00	1:500

Project: HILLSIDE LAKE MACQUARIE AGED CARE FACILITY

Sheet: SEDIMENT CONTROL PLAN 1

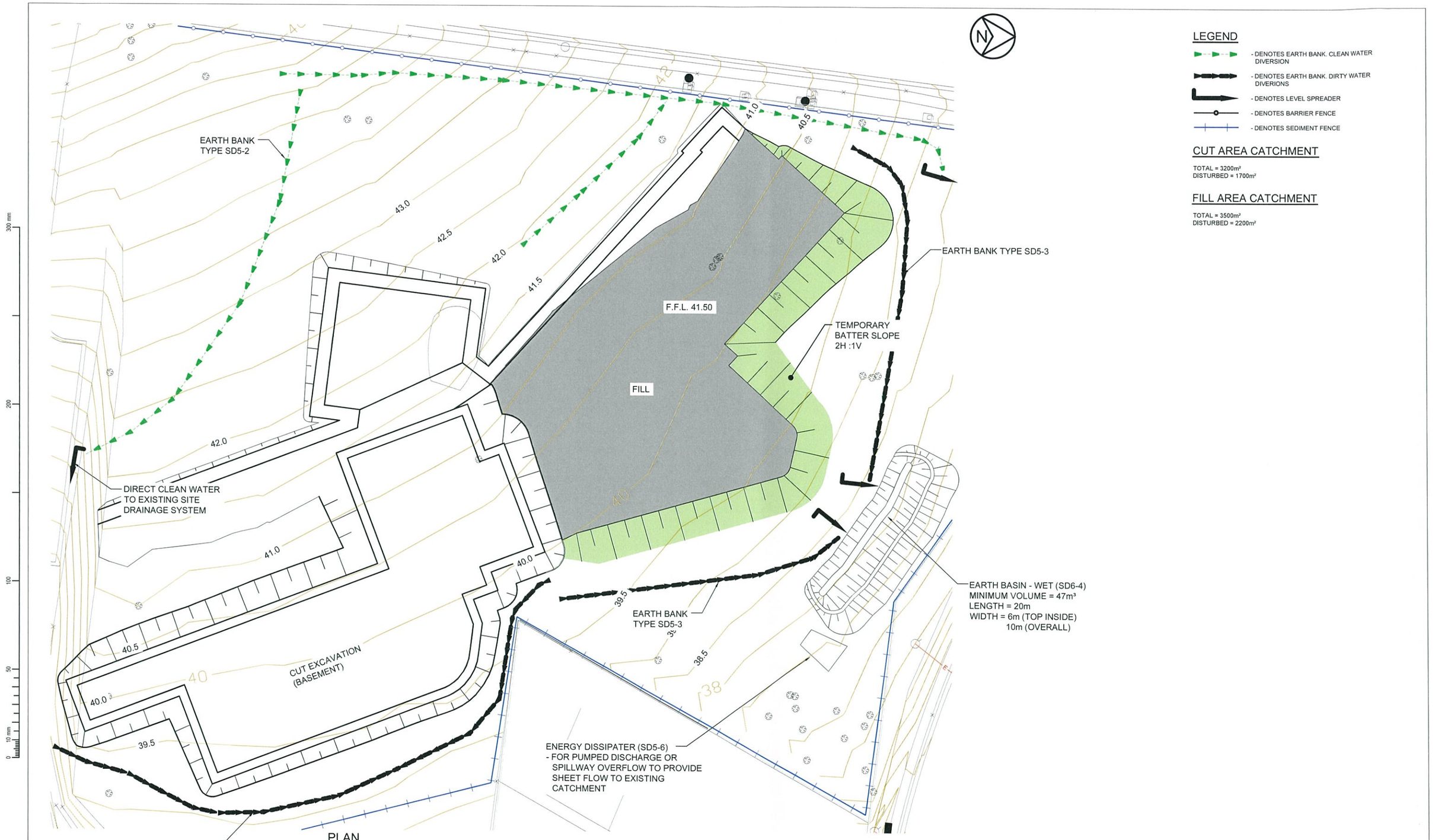
Drawing No.: T-N0280.00 _DA20

Sheet No.

Revision: D

1:500 @ A1
1:1000 @ A3
0 5 10 15 20 25 30 35 40 45 50 m

Original Sheet Size A1 [841x594] Plot Date 24 Dec 2014 @ 2:40 PM Path G:\20_Newcastle_Projects\T-N0200 - T-N0299\T-N0280.00_dwpsuters - Hillside, Lake Macquarie, Aged Care Facility\Drafting\T-N0280_DA20.dwg RC



LEGEND

- DENOTES EARTH BANK. CLEAN WATER DIVERSION
- DENOTES EARTH BANK. DIRTY WATER DIVERIONS
- DENOTES LEVEL SPREADER
- DENOTES BARRIER FENCE
- DENOTES SEDIMENT FENCE

CUT AREA CATCHMENT

TOTAL = 3200m²
DISTURBED = 1700m²

FILL AREA CATCHMENT

TOTAL = 3500m²
DISTURBED = 2200m²

PLAN

SCALE 1:200 AT A1

1:200 @ A1
1:400 @ A3
0 2 4 6 8 10 12 14 16 18 20 m

PRELIMINARY

Revision	Amendment	Approved	Revision Date
A	REVISED DA ISSUE	J.C.	24.12.14

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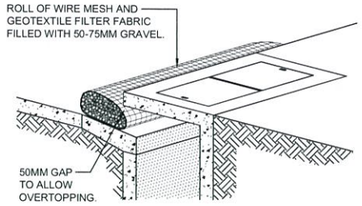
Drawn	Designed	Approved	Revision Date
J.HOLBROOK	R.CHARLTON		19.12.14

Project
HILLSIDE
LAKE MACQUARIE
AGED CARE FACILITY

Sheet
SEDIMENT CONTROL PLAN 2

Project No.	Scale	Drawing No.	Sheet. No.	Revision
T-N0280.00	AS SHOWN	T-N0280.00 DA21		A

Original Sheet Size A1 [841x594] Plot Date 24 Dec 2014 @ 2:40 PM Path G:\20_Newcastle_Projects\T-N0200 - T-N0299\T-N0280.00_dwpsuters - Hillside, Lake Macquarie, Aged Care Facility\Drafting\T-N0280_DA21.dwg DA21

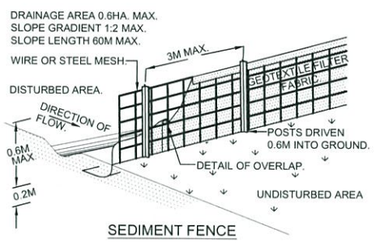


PORTABLE GRAVEL KERB INLET SEDIMENT TRAP

CONSTRUCTION NOTES:

1. FABRICATE A SLEEVE MADE FROM GEOTEXTILE or WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT.
2. FILL THE SLEEVE WITH 25mm to 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING OF THE KERB INLET LEAVING A 100mm GAP AT THE TOP TO ACT AS AN EMERGENCY SPILLWAY.
5. MAINTAIN THE OPENING WITH SPACER BLOCKS.
6. FORM A SEAL WITH THE KERBING & PREVENT SEDIMENT BYPASSING THE FILTER.
7. FIT TO ALL KERB INLETS AT SAG POINTS.

DENOTED ON PLAN - ---------

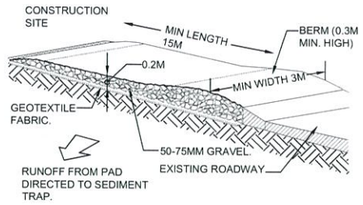


SEDIMENT FENCE

CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
2. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND, 3 METRES APART.
3. DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
4. BACKFILL TRENCH OVER BASE OF FABRIC.
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES or AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.

DENOTED ON PLAN - → ——

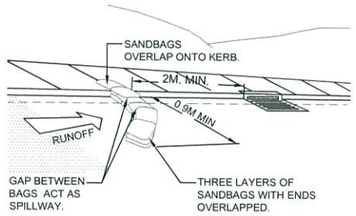


TEMPORARY CONSTRUCTION ENTRY AND EXIT

CONSTRUCTION NOTES:

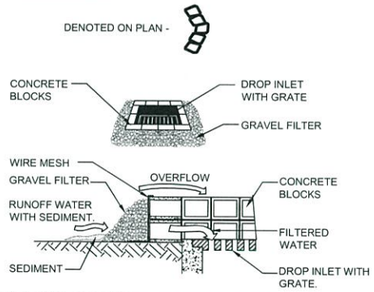
1. STRIP TOPSOIL AND LEVEL SITE.
2. COMPACT SUBGRADE.
3. COVER AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
4. CONSTRUCT 200mm THICK PAD OVER GEOTEXTILE USING ROADBASE or 30mm AGGREGATE. MINIMUM LENGTH 15 METRES OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3 METRES.
5. CONSTRUCT HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT FENCE or OTHER SEDIMENT TRAP.

DENOTED ON PLAN -

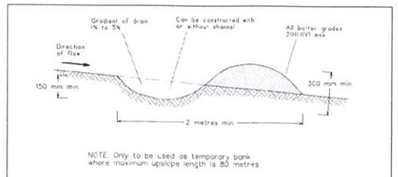


SANDBAG KERB INLET SEDIMENT TRAP

DENOTED ON PLAN -



BLOCK & GRAVEL DROP INLET SEDIMENT TRAP.

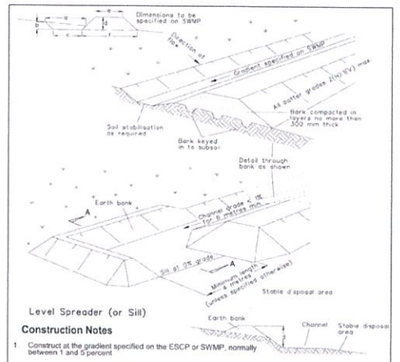


Construction Notes

1. Build with gradients between 1 percent and 5 percent.
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V shaped.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction.

EARTH BANK (LOW FLOW) **SD 5-5**

5.25

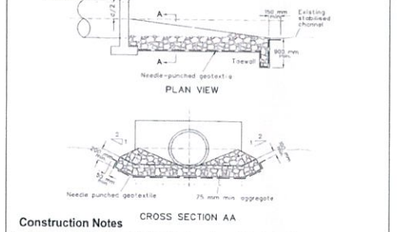


Construction Notes

1. Construct at the gradient specified on the ESCP or SWMP, normally between 1 and 5 percent.
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V-shaped, at the dimensions shown on the SWMP.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction following Table 5.2 in Landcom (2004).
7. Where discharging to erodible lands, ensure they outlet through a properly constructed level spreader.
8. Construct the level spreader at the gradient specified on the ESCP or SWMP, normally less than 1 percent or level.
9. Where possible, ensure they discharge waters onto either stabilised or undisturbed disposal sites within the same subcatchment area from which the water originated. Approval might be required to discharge into other subcatchments.

EARTH BANK (HIGH FLOWS) **SD 5-6**

5.26

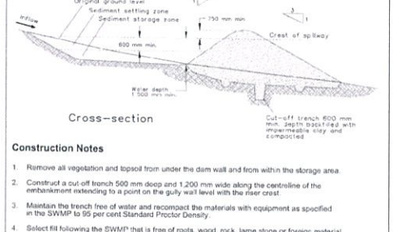


Construction Notes

1. Compact the subgrade fill to the density of the surrounding undisturbed material.
2. Prepare a smooth, even foundation for the structure that will ensure that the needle-punched geotextile does not sustain serious damage when covered with rock.
3. Should any minor damage to the geotextile occur, repair it before spreading any aggregate. For repairs, patch and piece of fabric over the damage, making sure that all joints and patches overlap more than 300 mm.
4. Lay rock following the drawing, according to Table 5.2 of Landcom (2004) and with a minimum diameter of 75 mm.
5. Ensure that any concrete or riprap used for the energy dissipater or the outlet protection conforms to the grading limits specified on the SWMP.

ENERGY DISSIPATER **SD 5-8**

5.34

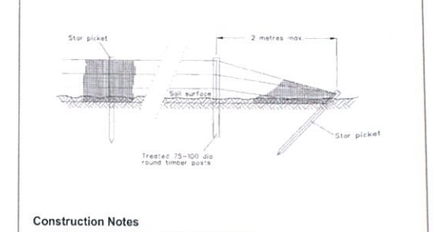


Construction Notes

1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Construct a cut-off trench 500 mm deep and 1,200 mm wide along the centreline of the embankment extending to a point on the gully wall level with the riser crest.
3. Maintain the trench free of water and recompact the materials with equipment as specified in the SWMP to 95 per cent Standard Proctor Density.
4. Select fill following the SWMP that is free of roots, wood, rock, large stone or foreign material.
5. Prepare the site under the embankment by ripping to at least 100 mm to help bond compacted fill to the existing substrate.
6. Spread the fill in 100 mm to 150 mm layers and compact it at optimum moisture content following the SWMP.
7. Construct the emergency spillway.
8. Rehabilitate the structure following the SWMP.

EARTH BASIN - WET
(APPLIES TO 'TYPE D' AND 'TYPE F' SOILS ONLY) **SD 6-4**

6.9



Construction Notes

1. Install the fence to the height specified in the ESCP/SWMP.
2. Cut a channel 200 mm deep along the fence line.
3. Place wire and light resistant, open-weave polymer mesh with 40 percent porosity on the prevailing wind side of fence.
4. Fasten the mesh to all wires using ring fasteners at 100 mm to 150 mm intervals on top wire and 300 mm intervals on other wires.
5. Use one 75-mm to100-mm diameter treated round timber post every 20 metres.
6. Where star pickets are used, ensure they are fitted with safety caps.

CONTROL OF WIND EROSION **SD 6-15**

6.49

NOTES:

1. DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. REDUCED LEVELS ARE IN METRES.
3. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING.
4. DETAILED SEDIMENT CONTROL PLAN TO BE PREPARED BY CONTRACTOR PRIOR TO DEMOLITION (OR) CONSTRUCTION AND OBTAIN APPROVAL.
5. TREE PROTECTION AS PER ARBORISTS REPORT.
6. EXISTING SERVICES TO BE IDENTIFIED PRIOR TO DEMOLITION (OR) CONSTRUCTION.
7. PLANS TO BE READ IN CONJUNCTION WITH STORMWATER PLAN.
8. ALL EARTH BANKS TO BE GRASSED AND LINED.

NOTE:

DETAIL SD 5-5, SD 5-6, SD 5-8, SD 6-4 AND SD 6-15 ARE TYPICAL DETAILS EXTRACTED FROM MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION (4TH ed. MARCH 2004), LANDCOM.

PRELIMINARY

Revision	Amendment	Approved	Revision Date
A	DA REVIEW	-	29.07.14
B	DA ISSUE	J.C.	08.08.14
C	REVISED DA ISSUE	J.C.	22.08.14
D	REVISED DA ISSUE	J.C.	24.12.14

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Drawn	Designed	Approved	Revision Date
J.HOLBROOK	R. CHARLTON		19.12.14

Project: HILLSIDE
LAKE MACQUARIE
AGED CARE FACILITY

Sheet: SEDIMENT CONTROL DETAILS

Project No.	Scale	Drawing No.	Sheet	Revision
T-N0280.00	N.T.S.	T-N0280.00 _DA22	A1	D

1:200 @ A1
1:1600 @ A3
0 0 5 4 10 15 20 1225 306 35 200 4524 50 m

Original Sheet Size A1 [841x594] Plot Date 24 Dec 2014 @ 2:40 PM Path G:\20_Newcastle_Projects\T-N0200 - T-N0299\T-N0280.00_dwpsuters - Hillside, Lake Macquarie, Aged Care Facility\Drafting\T-N0280_DA22.dwg RC

SEDIMENT AND EROSION CONTROL

1. THE CONTRACTOR IS TO PROVIDE MEASURES AS REQUIRED TO SUIT HIS STAGING, WORK METHODS & REQUIREMENTS OF COUNCIL AND THE 'BLUEBOOK' (NSW DEPT HOUSING- MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION). THE CONTRACTOR IS ALSO TO PROVIDE & MAINTAIN EFFECTIVE DUST CONTROL MEASURES TO THE ABOVE AUTHORITIES SATISFACTION.
2. THE WORKS ARE TO BE UNDERTAKEN WITH SEDIMENT & EROSION CONTROL MEASURES IN ACCORDANCE WITH COUNCILS REQUIREMENTS
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL REQUIRED SEDIMENT AND EROSION CONTROL MEASURES AND FOR THE MAINTENANCE AND ONGOING OPERATION OF ALL CONTROL MEASURES. ALL CONTROL FEATURES ARE TO BE REGULARLY INSPECTED TO ENSURE CORRECT OPERATION.
4. SEDIMENT AND EROSION CONTROL MEASURES AS REQUIRED SHALL BE CARRIED OUT FOR THE FULL DURATION OF THE WORKS BY THE CONTRACTOR.
5. THE ESCP/SWMP AND ITS ASSOCIATED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTANTLY MONITORED, REVIEWED, AND MODIFIED AS REQUIRED TO CORRECT DEFICIENCIES. COUNCIL HAS THE RIGHT TO REQUEST CHANGES IF, IN ITS OPINION, THE MEASURES THAT ARE PROPOSED OR HAVE BEEN INSTALLED ARE INADEQUATE TO PREVENT POLLUTION.
6. PRIOR TO ANY ACTIVITIES ONSITE, THE RESPONSIBLE PERSON(S) IS TO BE NOMINATED. THE RESPONSIBLE PERSON(S) SHALL BE RESPONSIBLE FOR THE EROSION AND SEDIMENT CONTROL (ESC) MEASURES ONSITE. THE NAME, ADDRESS AND 24 HOUR CONTACT DETAILS OF THE PERSON(S) SHALL BE PROVIDED TO COUNCIL IN WRITING. COUNCIL SHALL BE ADVISED WITHIN 48 HOURS OF ANY CHANGES TO THE RESPONSIBLE PERSON(S), OR THEIR CONTACT DETAILS, IN WRITING.
7. NO SITE WORKS SHALL COMMENCE PRIOR TO THE APPROVAL OF THE DETAILED ENGINEERING DESIGN. ITS IMPLEMENTATION SHALL BE SUPERVISED BY PERSONNEL WITH APPROPRIATE QUALIFICATIONS AND/OR EXPERIENCE IN ESC ON CONSTRUCTION SITES.
8. THE APPROVED SWMP SHALL BE AVAILABLE ON-SITE FOR INSPECTION BY COUNCIL OFFICERS WHILE WORK ACTIVITIES ARE OCCURRING.
9. ALL ESC MEASURES SHALL BE APPROPRIATE FOR THE SEDIMENT TYPE(S) OF THE SOILS ONSITE, IN ACCORDANCE WITH THE BLUE BOOK (MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION. LANDCOM, 2004), OR OTHER CURRENT RECOGNISED INDUSTRY STANDARD FOR EROSION AND SEDIMENT CONTROL FOR AUSTRALIAN CONDITIONS. THIS INCLUDES SEDIMENT TRAPS AND LINING OF CHANNELS.
10. ADEQUATE SITE DATA, INCLUDING SOIL DATA FROM A NATA APPROVED LABORATORY, SHALL BE OBTAINED TO ALLOW THE PREPARATION OF AN APPROPRIATE SWMP, AND ALLOW THE SELECTION, DESIGN AND SPECIFICATION OF REQUIRED ESC MEASURES.
11. THE SWMP SHALL CLEARLY STATE THAT NO LAND-DISTURBING ACTIVITIES ON THE SITE SHALL OCCUR UNTIL ALL PERIMETER ESC MEASURES, SEDIMENT BASINS, AND ASSOCIATED TEMPORARY DRAINAGE CONTROLS, HAVE BEEN CONSTRUCTED AND ARE FULLY OPERATIONAL, IN ACCORDANCE WITH CURRENT BEST PRACTICE ESC. THIS IS UNLESS SUCH CLEARING IS REQUIRED FOR THE PURPOSE OF INSTALLING SUCH MEASURES, IN WHICH CASE ONLY THE MINIMUM CLEARING REQUIRED TO INSTALL SUCH MEASURES SHALL OCCUR.
12. ADDITIONAL ESC MEASURES SHALL BE IMPLEMENTED, AND A REVISED SWMP IS TO BE SUBMITTED FOR APPROVAL TO THE CERTIFIER (WITHIN FIVE (5) BUSINESS DAYS OF ANY SUCH AMENDMENTS) IN THE EVENT THAT:
    a) THERE IS A HIGH PROBABILITY THAT SERIOUS OR MATERIAL ENVIRONMENTAL HARM MAY OCCUR AS A RESULT OF SEDIMENT LEAVING THE SITE; OR
    b) THE IMPLEMENTED WORKS FAIL TO ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES SPECIFIED IN THESE CONDITIONS; OR
    c) SITE CONDITIONS SIGNIFICANTLY CHANGE; OR
    d) SITE INSPECTIONS INDICATE THAT THE IMPLEMENTED WORKS ARE FAILING TO ACHIEVE THE "OBJECTIVE" OF THE SWMP.
13. A COPY OF ANY AMENDED SWMP SHALL BE FORWARDED TO AN APPROPRIATE COUNCIL OFFICER, WITHIN FIVE (5) BUSINESS DAYS OF ANY SUCH AMENDMENTS.
14. ALL OFFICE FACILITIES AND OPERATIONAL ACTIVITIES SHALL BE LOCATED SUCH THAT ANY EFFLUENT, INCLUDING WASH-DOWN WATER, CAN BE TOTALLY CONTAINED AND TREATED WITHIN THE SITE.
15. ALL REASONABLE AND PRACTICABLE MEASURES SHALL BE TAKEN TO ENSURE STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT SYSTEMS, DRAINS TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
16. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED SWMP (AS AMENDED FROM TIME TO TIME) UNLESS CIRCUMSTANCES ARISE WHERE:
    a) COMPLIANCE WITH THE SWMP WOULD INCREASE THE POTENTIAL FOR ENVIRONMENTAL HARM AS ASSESSED BY AN AUTHORITY RECOGNISED BY COUNCIL; OR
    b) CIRCUMSTANCES CHANGE DURING CONSTRUCTION AND THOSE CIRCUMSTANCES COULD NOT HAVE BEEN FORESEEN; OR
    c) COUNCIL OR ITS REPRESENTATIVE DETERMINES THAT UNACCEPTABLE OFF-SITE SEDIMENTATION IS OCCURRING AS A RESULT OF A LAND-DISTURBING ACTIVITY. IN EITHER CASE, THE PERSON(S) RESPONSIBLE MAY BE REQUIRED TO TAKE ADDITIONAL, OR ALTERNATIVE PROTECTIVE ACTION, AND/OR UNDERTAKE REASONABLE RESTORATION WORKS WITHIN THE TIMEFRAME SPECIFIED BY THE COUNCIL.
17. THE APPLICANT SHALL ENSURE AN ADEQUATE SUPPLY OF ESC, AND APPROPRIATE POLLUTION CLEAN-UP MATERIALS ARE AVAILABLE ON-SITE AT ALL TIMES.
18. SEDIMENT DEPOSITED OFF SITE AS A RESULT OF ON-SITE ACTIVITIES SHALL BE COLLECTED AND THE AREA CLEANED/REHABILITATED AS SOON AS REASONABLE AND PRACTICABLE.
19. CONCRETE WASTE AND CHEMICAL PRODUCTS, INCLUDING PETROLEUM AND OIL-BASED PRODUCTS, SHALL BE PREVENTED FROM ENTERING ANY INTERNAL OR EXTERNAL WATER BODY, OR ANY EXTERNAL DRAINAGE SYSTEM, EXCLUDING THOSE ON-SITE WATER BODIES SPECIFICALLY DESIGNED TO CONTAIN AND/OR TREAT SUCH MATERIAL. APPROPRIATE MEASURES SHALL BE INSTALLED TO TRAP THESE MATERIALS ONSITE.
20. BRICK, TILE OR MASONRY CUTTING SHALL BE CARRIED OUT ON A PERVIOUS SURFACE (E.G. GRASS OR OPEN SOIL), OR IN SUCH A MANNER THAT ANY RESULTING SEDIMENT-LADEN RUNOFF IS PREVENTED FROM DISCHARGING INTO A GUTTER, DRAIN OR WATER. APPROPRIATE MEASURES SHALL BE INSTALLED TO TRAP THESE MATERIALS ONSITE.

SEDIMENT AND EROSION CONTROL CONTINUED

21. NEWLY SEALED HARD-STAND AREAS (E.G. ROADS, DRIVEWAYS AND CAR PARKS) SHALL BE SWEPT THOROUGHLY AS SOON AS PRACTICABLE AFTER SEALING/SURFACING TO MINIMISE THE RISK OF COMPONENTS OF THE SURFACING COMPOUND ENTERING STORMWATER DRAINS.
22. STOCKPILES OF ERODIBLE MATERIAL SHALL BE PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC OR ORGANIC) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS.
23. STOCKPILES, TEMPORARY OR PERMANENT, SHALL NOT BE LOCATED IN AREAS IDENTIFIED AS NO-GO ZONES (INCLUDING, BUT NOT LIMITED TO, RESTRICTED ACCESS AREAS, BUFFER ZONES, OR AREAS OF NON-DISTURBANCE) ON THE ESCP/SWMP;
24. BULK TREE CLEARING AND GRUBBING OF THE SITE SHALL BE IMMEDIATELY FOLLOWED BY SPECIFIED TEMPORARY EROSION CONTROL MEASURES (E.G. TEMPORARY GRASSING OR MULCHING) PRIOR TO COMMENCEMENT OF EACH STAGE OF CONSTRUCTION WORKS;
25. TREES AND VEGETATION CLEARED FROM THE SITE SHALL BE MULCHED ONSITE WITHIN 7 DAYS OF CLEARING;
26. APPROPRIATE MEASURES SHALL BE UNDERTAKEN TO CONTROL ANY DUST ORIGINATING DUE TO THE MULCHING OF VEGETATION ONSITE;
27. PRIORITY SHALL BE GIVEN TO THE PREVENTION, OR AT LEAST THE MINIMISATION, OF SOIL EROSION, RATHER THAN THE TRAPPING OF DISPLACED SEDIMENT. SUCH A CLAUSE SHALL NOT REDUCE THE RESPONSIBILITY TO APPLY AND MAINTAIN, AT ALL TIMES, ALL NECESSARY SEDIMENT CONTROL MEASURES.
28. MEASURES USED TO CONTROL WIND EROSION SHALL BE APPROPRIATE FOR THE LOCATION AND PREVENT SOIL EROSION AT ALL TIMES, INCLUDING WORKING HOURS, OUT OF HOURS, WEEKENDS, PUBLIC HOLIDAYS, AND DURING ANY OTHER SHUTDOWN PERIODS.
29. THE APPLICATION OF LIQUID OR CHEMICAL-BASED DUST SUPPRESSION MEASURES SHALL ENSURE THAT SEDIMENT-LADEN RUNOFF RESULTING FROM SUCH MEASURES (E.G. RUNOFF OF EXCESS WATER) DOES NOT CREATE A TRAFFIC OR ENVIRONMENTAL HAZARD.
30. ALL TEMPORARY EARTH BANKS, FLOW DIVERSION SYSTEMS, AND SEDIMENT BASIN EMBANKMENTS SHALL BE MACHINE-COMPACTED, SEEDED AND MULCHED WITHIN TEN (10) DAYS OF FORMATION FOR THE PURPOSE OF ESTABLISHING A VEGETATIVE COVER, OR LINED APPROPRIATELY.
31. PRIOR TO THE CONTROLLED DISCHARGE (E.G. DE-WATERING ACTIVITIES FROM EXCAVATIONS AND SEDIMENT BASINS) OF ANY WATER FROM THE SITE DURING CONSTRUCTION, THE FOLLOWING WATER QUALITY OBJECTIVES SHALL BE ACHIEVED:
    a) TOTAL SUSPENDED SOLIDS (TSS) TO A MAXIMUM 50MG/L;
    b) WATER PH BETWEEN 6.5 AND 8.5 UNLESS OTHERWISE REQUIRED BY THE COUNCIL; AND
    c) EC LEVELS NO GREATER THAN BACKGROUND LEVELS.
30. PRIOR TO THE ISSUING OF A CONSTRUCTION CERTIFICATE, THE SITE MANAGER SHALL OBTAIN THE RELEVANT APPROVALS FROM THE RELEVANT ORGANISATIONS TO DISCHARGE TREATED WATER FROM ANY EXISTING BASINS. ORGANISATIONS, MAY INCLUDE BUT NOT BE LIMITED TO, HUNTER WATER, AND COUNCIL.
31. PRIOR TO ANY FORECAST WEATHER EVENT LIKELY TO RESULT IN SEDIMENT LADEN RUNOFF ON THE SITE, ANY EXISTING DETENTION BASINS/TRAPS SHALL BE DEWATERED TO PROVIDE SUFFICIENT CAPACITY TO CAPTURE SEDIMENT LADEN WATER FROM THE SITE PRIOR TO THE WEATHER EVENT.
32. ANY SEDIMENT LADEN WATER CAPTURED ONSITE SHALL BE TREATED TO ENSURE IT SHALL ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES SPECIFIED IN THESE CONDITIONS, PRIOR TO ITS RELEASE FROM SITE. A SAMPLE OF THE RELEASED TREATED WATER SHALL BE KEPT ONSITE IN A CLEAR CONTAINER WITH THE SAMPLE DATE RECORDED ON IT.
33. NO ALUMINIUM BASED PRODUCTS MAY BE USED TREAT TURBID WATER (FLOCCULATING/COAGULANTS) ONSITE WITHOUT THE PRIOR WRITTEN PERMISSION FROM AN APPROPRIATE COUNCIL OFFICER. THE APPLICANT SHALL HAVE A DEMONSTRATED ABILITY TO USE SUCH PRODUCTS CORRECTLY AND WITHOUT ENVIRONMENTAL HARM PRIOR TO ANY APPROVAL.
34. THE CHEMICAL/AGENT (FLOCCULATING/COAGULANTS) USED IN TYPE D AND TYPE F BASINS TO TREAT TURBID WATER CAPTURED IN THE BASIN SHALL BE APPLIED IN CONCENTRATIONS SUFFICIENT TO ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES, SPECIFIED IN THESE CONDITIONS, WITHIN THE 5-DAY RAINFALL DEPTH USED TO CALCULATE THE CAPACITY OF THE BASIN, AFTER A RAINFALL EVENT.
35. ALL MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED FOR THE USE OF ANY CHEMICALS/AGENTS USED ONSITE, EXCEPT WHERE APPROVED BY THE RESPONSIBLE PERSON OR AN APPROPRIATE COUNCIL OFFICER.
36. SUFFICIENT QUANTITIES OF CHEMICALS/AGENTS TO TREAT TURBID WATER (FLOCCULATING/COAGULANTS) SHALL BE PLACED SUCH THAT WATER ENTERING THE BASIN/SEDIMENT TRAP MIXES WITH THE CHEMICAL/AGENTS AND IS CARRIED INTO THE BASIN/TRAP.
37. ANY BASIN SHALL BE DEWATERED AS SOON AS PRACTICAL, ONCE WATER CAPTURED IN THE BASIN ACHIEVES COUNCIL'S WATER QUALITY OBJECTIVES, SPECIFIED IN THESE CONDITIONS.
38. SUFFICIENT QUANTITIES OF CHEMICALS/AGENTS TO TREAT TURBID WATER (FLOCCULATING/COAGULANTS) SHALL BE SECURELY STORED ON-SITE TO PROVIDE FOR AT LEAST THREE COMPLETE TREATMENTS OF ALL BASINS REQUIRING CHEMICALLY TREATMENT ONSITE.
39. THE APPLICANT SHALL ENSURE THAT ON EACH OCCASION A TYPE F OR TYPE D BASIN WAS NOT DE-WATERED PRIOR TO BEING SURCHARGED BY A FOLLOWING RAINFALL EVENT, A REPORT IS PRESENTED TO AN APPROPRIATE COUNCIL OFFICER WITHIN 5 DAYS IDENTIFYING THE CIRCUMSTANCES AND PROPOSED AMENDMENTS, IF ANY, TO THE BASIN'S OPERATING PROCEDURES.
40. AS-CONSTRUCTED PLANS SHALL BE PREPARED FOR ALL CONSTRUCTED SEDIMENT BASINS AND ASSOCIATED EMERGENCY SPILLWAYS. SUCH PLANS SHALL APPROPRIATELY VERIFY THE BASIN'S DIMENSIONS, LEVELS AND VOLUMES COMPLY WITH THE APPROVED DESIGN DRAWINGS. THESE PLANS SHALL BE SUBMITTED TO COUNCIL WITHIN 14 CALENDAR DAYS OF THE CONSTRUCTION OF EACH BASIN, IF REQUESTED BY THE CERTIFIER, OR COUNCIL.

SEDIMENT AND EROSION CONTROL CONTINUED

41. WHERE MORE THAN ONE STAGE IS TO BE DEVELOPED AT ONE TIME, OR BEFORE THE PRECEDING STAGE IS COMPLETE, THE SEDIMENT BASIN(S) FOR THESE STAGES SHALL HAVE SUFFICIENT CAPACITY TO CATER FOR ALL AREA DIRECTED TO THE BASIN(S).
42. ALL SEDIMENT BASINS SHALL REMAIN FULLY OPERATIONAL AT ALL TIMES UNTIL THE BASIN'S DESIGN CATCHMENT ACHIEVES 70% GROUND COVERAGE, OR SURFACE STABILISATION ACCEPTABLE TO COUNCIL.
43. SETTLED SEDIMENT SHALL BE REMOVED AS SOON AS REASONABLE AND PRACTICABLE FROM ANY SEDIMENT BASIN IF:
    a) IT IS ANTICIPATED THAT THE NEXT STORM EVENT IS LIKELY TO CAUSE SEDIMENT TO SETTLE ABOVE THE BASIN'S SEDIMENT STORAGE ZONE; OR
    b) THE ELEVATION OF SETTLED SEDIMENT IS ABOVE THE TOP OF THE BASIN'S SEDIMENT STORAGE ZONE; OR
    c) THE ELEVATION OF SETTLED SEDIMENT IS ABOVE THE BASINS SEDIMENT MARKER LINE.
44. SCOUR PROTECTION MEASURES PLACED ON SEDIMENT BASIN EMERGENCY SPILLWAYS SHALL APPROPRIATELY PROTECT THE SPILLWAY CHUTE AND ITS SIDE BATTERS FROM SCOUR, AND SHALL EXTEND A MINIMUM OF 3M BEYOND THE DOWNSTREAM TOE OF THE BASIN'S EMBANKMENT.
45. SUITABLE ALL-WEATHER MAINTENANCE ACCESS SHALL BE PROVIDED TO ALL SEDIMENT CONTROL DEVICES.
46. ALL SEDIMENT CONTROL DEVICES (OTHER THAN SEDIMENT BASINS) SHALL BE DE-SILTED AND MADE FULLY OPERATIONAL AS SOON AS REASONABLE AND PRACTICABLE AFTER RUNOFF-PRODUCING RAINFALL, OR IF THE SEDIMENT RETENTION CAPACITY OF THE DEVICE FALLS BELOW 75% OF THE DESIGN RETENTION CAPACITY.
47. ALL CUT AND FILL EARTH BATTERS LESS THAN 3M IN ELEVATION SHALL BE TOPSOILED, AND GRASS SEEDED/HYDROMULCHED WITHIN 10 DAYS OF COMPLETION OF GRADING IN CONSULTATION WITH COUNCIL.
48. THE PH LEVEL OF TOPSOIL SHALL BE APPROPRIATE TO ENABLE ESTABLISHMENT AND GROWTH OF SPECIFIED VEGETATION PRIOR TO INITIATING THE ESTABLISHMENT OF VEGETATION.
49. SOIL AMELIORANTS SHALL BE ADDED TO THE SOIL IN ACCORDANCE WITH AN APPROVED LANDSCAPE PLAN, VEGETATION MANAGEMENT PLAN, AND/OR SOIL ANALYSIS.
50. SURFACE SOIL DENSITY, COMPACTION AND SURFACE ROUGHNESS SHALL BE ADJUSTED PRIOR TO SEEDING/PLANTING IN ACCORDANCE WITH AN APPROVED LANDSCAPE PLAN, VEGETATION MANAGEMENT PLAN, AND/OR SOIL ANALYSIS.
51. PROCEDURES FOR INITIATING A SITE SHUTDOWN, WHETHER PROGRAMMED OR UN-PROGRAMMED, SHALL INCORPORATE REVEGETATION OF ALL SOIL DISTURBANCES UNLESS OTHERWISE APPROVED BY COUNCIL.
52. THE APPLICANT SHALL ENSURE THAT APPROPRIATE PROCEDURES AND SUITABLY QUALIFIED PERSONNEL ARE ENGAGED TO PLAN AND CONDUCT SITE INSPECTIONS AND WATER QUALITY MONITORING THROUGHOUT THE CONSTRUCTION AND MAINTENANCE PHASE.
53. ALL ESC MEASURES SHALL BE INSPECTED:
    a) AT LEAST DAILY (WHEN WORK IS OCCURRING ON-SITE); AND
    b) AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON-SITE); AND
    c) WITHIN 24HRS OF EXPECTED RAINFALL; AND
    d) WITHIN 18HRS OF A RAINFALL EVENT THAT CAUSES RUNOFF ON THE SITE.
54. WRITTEN RECORDS SHALL BE KEPT ONSITE OF ESC MONITORING AND MAINTENANCE ACTIVITIES CONDUCTED DURING THE CONSTRUCTION AND MAINTENANCE PERIODS, AND BE AVAILABLE TO COUNCIL OFFICERS ON REQUEST.
55. ALL SITE MONITORING DATA INCLUDING RAINFALL RECORDS, DATES OF WATER QUALITY TESTING, TESTING RESULTS AND RECORDS OF CONTROLLED WATER RELEASES FROM THE SITE, SHALL BE KEPT IN AN ON-SITE REGISTER. THE REGISTER IS TO BE MAINTAINED UP TO DATE FOR THE DURATION OF THE APPROVED WORKS AND BE AVAILABLE ON-SITE FOR INSPECTION BY COUNCIL OFFICERS ON REQUEST.
56. SEDIMENT BASIN WATER QUALITY SAMPLES SHALL BE TAKEN AT A DEPTH NO LESS THAN 200MM BELOW THE WATER SURFACE WITHIN THE BASIN.
57. ALL ENVIRONMENTAL INCIDENTS SHALL BE RECORDED IN A FIELD LOG THAT SHALL REMAIN ACCESSIBLE TO ALL RELEVANT REGULATORY AUTHORITIES ON REQUEST.
58. ALL MATERIALS REMOVED FROM ESC DEVICES DURING MAINTENANCE, OR DECOMMISSIONING, WHETHER SOLID OR LIQUID, SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT CAUSE ANY ONGOING EROSION OR POLLUTION HAZARD.
59. CONSTRUCTION CONTRACTOR IS TO STAGE WORKS TO MINIMISE EXTENT OF DISTURBED AREAS AT ANY ONE TIME.
60. ALL AREAS AND SIZES TO BE CONFIRMED DURING DETAILED DESIGN.

SEDIMENTATION BASIN SIZING CALCULATIONS

1. THE PRELIMINARY SEDIMENT BASIN SIZING CALCULATIONS HAVE BEEN UNDERTAKEN IN ACCORDANCE WITH THE "BLUE BOOK".

1. Erosion Hazard and Sediment Basins

Site Name: Hillside, Lake Macquarie, Aged Care Facility

Site Location: 3 Violet Town Road, Mount Hutton

Precinct/Stage: DA submission

Other Details: NSWBlueBook - Appendix C "Table 17- GosfordLakeMacquarie Soil Landscapes - Warners Bay (wa), Sediment Type D, K-factor =

Site area	Sub-catchment or Name of Structure						Notes
	1						
Total catchment area (ha)	0.35						
Disturbed catchment area (ha)	0.22						

Soil analysis (enter sediment type if known, or laboratory particle size data)

Sediment Type (C, F or D) if known	D						From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)							Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)							
% clay (fraction finer than 0.002 mm)							
Dispersion percentage							E.g. enter 10 for dispersion of 10%
% of whole soil dispersible							See Section 6.3.3(e). Auto-calculated
Soil Texture Group	D						Automatic calculation from above

Rainfall data

Design rainfall depth (no of days)	5						See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25
Design rainfall depth (percentile)	75						
x-day, y-percentile rainfall event (mm)	24.4						
Rainfall R-factor (if known)							Only need to enter one or the other here
IFD 2-year, 6-hour storm (if known)	12						

RUSLE Factors

Rainfall erosivity (R-factor)	3110						Autofilled from above
Soil erodibility (K-factor)	0.019						
Slope length (m)	50						
Slope gradient (%)	10						RUSLE LS factor calculated for a high rill/interrill ratio
Length-gradient (LS-factor)	2.04						
Erosion control practice (P-factor)	1.3	1.3	1.3	1.3	1.3	1.3	
Ground cover (C-factor)	1	1	1	1	1	1	

Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)

Storage (soil) zone design (no of months)	2						Minimum is generally 2 months
Cv (Volumetric runoff coefficient)	0.5						See Table F2, page F-4 in Appendix F

Calculations and Type D/F Sediment Basin Volumes

Soil loss (t/ha/yr)	156						
Soil Loss Class	2						See Table 4.2, page 4-13
Soil loss (m³/ha/yr)	120						Conversion to cubic metres
Sediment basin storage (soil) volume (m^3)	4						See Sections 6.3.4(i) for calculations
Sediment basin settling (water) volume (m^3)	43						See Sections 6.3.4(i) for calculations
Sediment basin total volume (m^3)	47						

N.B for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required)

IMPLEMENTATION OF EROSION AND SEDIMENT CONTROL MEASURES

61. THE PRELIMINARY IMPLEMENTATION SCHEDULE FOR THE EROSION AND SEDIMENTATION MEASURES IS AS PER THE SCHEDULE BELOW FOR THE DA SUBMISSION. THE DETAILED SCHEDULE MUST BE UNDERTAKEN BY THE CONSTRUCTION CONTRACTOR WHEN THE FULL AND APPROVED EXTENT OF CONSTRUCTION WORK IS KNOWN AND TO SUIT THE CONSTRUCTION CONTRACTORS WORK METHODS AND STAGING OF WORKS AND DISTURBANCE OF GROUND. THIS SCHEDULE AND THE CONTRACTORS WORKS MUST FOLLOW THE REQUIREMENTS OF THE NSW 'BLUE BOOK'
62. INSTALL ALL SEDIMENT FENCES, KERB INLET PROTECTION, AND CONSTRUCTION ENTRY PRIOR TO ANY DISTURBANCE WORKS BEING UNDERTAKEN.
63. INSTALL ALL CLEAN WATER DIVERSIONS.
64. INSTALL DIRTY WATER DIVERSIONS, SEDIMENT BASIN AND ENERGY DISSIPATER PRIOR TO UNDERTAKING EARTHWORKS.
65. AFTER COMPLETION OF ALL CONSTRUCTION WORKS AND STABILISATION OF DISTURBED AREAS REMOVAL OF ESC MEASURES IS TO FOLLOW THE REVERSE ORDER TO INSTALLATION.

300 mm
200
100
50
10 mm
0

1:500 @ A1
1:1000 @ A3
0 5 10 15 20 25 30 35 40 45 50 m

PRELIMINARY

Revision	Amendment	Approved	Revision Date
A	DA ISSUE	-	24.12.14

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Drawn	Designed	Approved	Revision Date
J.HOLBROOK	R. CHARLTON		19.12.14

Project: HILLSIDE
LAKE MACQUARIE
AGED CARE FACILITY

Sheet: SEDIMENT CONTROL NOTES

Project No.	Scale	Drawing No.	Sheet No.	Revision
T-N0280.00	N.T.S.	T-N0280.00 _DA23		A

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