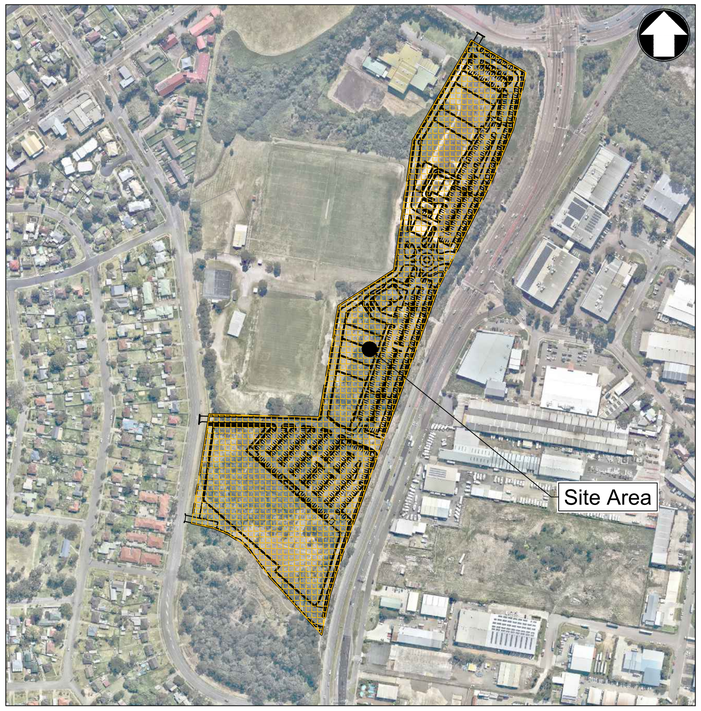


Locality Plan

Drawing List

Drawing Number	Drawing Title
0001	Cover Sheet
0002	General Notes and Legends Sheet 1
0005	General Arrangement Plan
0010	Soil and Water Management Plan Sheet 1
0011	Soil and Water Management Plan Sheet 2
0015	Soil and Water Management Notes and Details Sheet 1
0016	Soil and Water Management Notes and Details Sheet 2
0110	Siteworks and Stormwater Plan Sheet 1
0111	Siteworks and Stormwater Plan Sheet 2
0112	Siteworks and Stormwater Plan Sheet 3
0113	Siteworks and Stormwater Plan Sheet 4
0114	Siteworks and Stormwater Plan Sheet 5
0120	Site Sections Sheet 1
0121	Site Sections Sheet 2
0150	Stormwater Details Sheet 1
0160	Siteworks Details Sheet 1
0179	Typical OSD Tank Details Sheet 1
0180	DRAINS Catchment Plan
0181	MUSIC Catchment Plan

Drawing List

Drawing Number	Drawing Title
0200	Retaining Wall Alignment Plan Sheet 1
0201	Retaining Wall Alignment Plan Sheet 2
0210	Retaining Wall Longsections Sheet 1
0211	Retaining Wall Longsections Sheet 2
0212	Retaining Wall Longsections Sheet 3
0213	Retaining Wall Longsections Sheet 4
0220	Concept Cut and Fill Plan Sheet 1
0221	Concept Cut and Fill Plan Sheet 2

MOTT MACDONALD

Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205

Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Cover Sheet

Issued for Section 96

MMD-382538-C-DR-00-S96-0001 P6
Date: 02.07.2018

p:\Sydney\Projects\38xxxx\382538 blueprint windale\04 working\01 CAD\Civil\Drawings\MMD-382538-C-DR-00-S96-0001.dwg Jul 3, 2018 - 11:32AM
rel55920

Survey Legend

268°02' 198.12	Existing boundary, bearing and distance
PINE	Existing road name
SHED	Existing building
	Existing kerb and spot levels
BLOCK WALL	Existing block wall
MESH FENCE	Existing fence
	Existing spot level
	Existing earth batter
TREE 0.3D 8H 4S	Existing tree, level, trunk diameter, height and spread
	Existing electricity (underground)
	Existing electricity (overhead)
	Existing gas
	Existing sewer
300mm NA PVC / INV 12.4	Existing stormwater drainage
	Existing water
	Existing telecommunications (underground)
	Existing electricity pit, pole, pole with light and light pole
	Existing gas valve
	Existing sewer pit and maintenance hole
	Existing stormwater grate, maintenance hole and pit
	Existing water hydrant, stop valve and valve
	Existing telecommunications pit and pillar
	Existing maintenance hole (unspecified)
	Existing pole (unspecified)
	Existing pit (unspecified)
	Existing traffic signal

P7

Pavement Legend

	Pavement Type 1 - Asphaltic Concrete To be confirmed during detailed design stage.
	Pavement Type 2 - Concrete To be confirmed during detailed design stage.
	Pavement Type 3 - Concrete Footpath To be confirmed during detailed design stage.
	Pavement Type 4 - Reinforced Grass To be confirmed during detailed design stage.

Note
*All Pavements are subject to geotechnical/structural testing, investigation and design. The pavements listed above are provisional only. All works in accordance with Lake Macquarie City Council requirements

General Notes

GN1 All workmanship and materials shall comply with the National Construction Code of Australia and the relevant current Australian Standards.

GN2 Any discrepancies, omissions or errors shall be reported to the Superintendent for clarification before proceeding with the work.

GN3 Do NOT scale measurements from the drawings.

Proposed Legend

RW	Construct reinforced concrete block retaining wall
KG	Construct kerb and gutter
KO	Construct kerb only
IK	Construct integral kerb
CREST	Provide crest to direct surface runoff
3.0 % Fall	Construct finish surface to grade
23.00	Proposed finished surface contour
● P10.00	Proposed surface level
● G10.00	Proposed grate level
● TOK 10.00	Proposed top of kerb level
A1	Construct stormwater drainage structure with pit number
Ø100 SW	Stormwater drainage with pipe diameter and flow direction
	Stormwater OSD tank
	Below ground rainwater tank
	Proposed water quality treatment device. To be confirmed during detailed design stage.

Earthworks Notes

EW1 All work shall comply with AS3798 (2007) - Guidelines on earthworks for commercial and residential developments.

EW2 All work shall comply with the project geotechnical report - To be confirmed

EW3 Strip topsoil to expose naturally occurring engineering material and stockpile on site for reuse as directed by the superintendent.

EW4 All soft, wet or unsuitable material to be removed as directed by the superintendent and replaced with approved fill material.

EW5 All fill material shall be from a source approved by the superintendent and shall comply with the following -
a) free from organic and perishable matter,
b) maximum particle size 75mm,
c) plasticity index - between 2% and 15%.

EW6 All fill material shall be placed in maximum 200mm thick layers and compacted at optimum moisture content (+ or - 2%) to achieve a dry density determined in accordance with AS1289.5.1.1 - 2003 - methods of testing soils for engineering purposes of not less than the following standard minimum dry density -

location	standard dry density
under building slabs	98%
vehicular paved areas	100%
non-vehicular paved areas	98%
landscaped areas	95%

EW7 The contractor shall program the earthworks operation so that the working areas are adequately drained during the period of construction. The surface shall be graded and sealed off to remove depressions, roller marks and similar which would allow water to pond and penetrate the underlying material. any damage resulting from the contractor not observing these requirements shall be rectified by the contractor at their own expense.

EW8 Testing of the fill material shall be carried out by an approved NATA registered laboratory at the contractors expense.

EW9 Where the subgrade is unable to support construction equipment, or it is not possible to compact overlying pavement layers, only because of the subgrade moisture content, then the contractor shall condition or replace the material at the contractors discretion and expense.

EW10 Earthworks calculations are volumetric only and do not allow for bulking of excavated material. It is the contractors responsibility to make allowances for these items as part of the tender / works.

EW11 No allowance has been made for footings or foundations, retaining walls or trenching. It is the contractors responsibility to make allowances for these items as part of the tender / works.

Existing Services Notes

ES1 Existing services have been plotted from supplied data and as such their accuracy cannot be guaranteed. It is the responsibility of the contractor to establish the location and level of all existing services prior to the commencement of any work. Any discrepancies shall be reported to the superintendent.

ES2 The contractor shall allow for the capping off, excavation and removal if required of all redundant existing services in areas affected by works within the contract area, as shown on the drawings unless directed otherwise by the superintendent.

ES3 The contractor shall ensure that at all times services to all buildings not affected by the works are not disrupted.

ES4 If required, the contractor shall construct temporary services to maintain existing supply to buildings remaining in operation during works to the satisfaction and approval of the superintendent. Once diversion is complete and commissioned the contractor shall remove all such temporary services and make good to the satisfaction of the superintendent and the relevant service authority.

ES5 Interruption to supply of existing services shall be done so as not to cause any inconvenience to the principal. The contractor is to gain approval from the superintendent for time of interruption - the contractor is responsible for all liaison.

ES6 All branch gas and water services under driveways and brick paving shall be located in Ø80mm uPVC sewer grade conduits extending a minimum of 500mm beyond the edge of paving.

ES7 Clearance and cover requirements shall be obtained from the relevant service authority before commencement of works and shall be adhered to at all times.

ES8 Care is to be taken when excavating near existing services. No mechanical excavations are to be undertaken over telecom or electrical services. Hand excavate in these areas only.

Siteworks Notes

SN1 Datum : Australian Height Datum (AHD)
Origin of levels : PM69756 RL17.347
Origin of co-ordinates : Mapping Grid Of Australia (MGA)
Survey prepared by : Lockley Land Title Solutions
19 Massey Street
Gladesville NSW

SN2 The contractor must verify all dimensions and existing levels on site prior to commencement of work, and report any discrepancies to the superintendent.

SN3 All existing services (including any not shown on the plans) must be accurately located in position and level prior to any excavation. Any discrepancies shall be reported to the superintendent. Minimum service clearances shall be maintained from the relevant service authority.

SN4 The contractor shall arrange for all setting out by a registered surveyor.

SN5 The contractor shall obtain all regulatory authority approvals at their own expense.

SN6 Where new works abut existing, the contractor must ensure that a smooth and even profile, free from abrupt changes is obtained.

SN7 All disturbed areas shall be restored to their original condition, unless specified otherwise.

SN8 Excavated trenches shall be compacted to the same density as the adjacent natural material. Any subsidences during the period to be rectified as directed by the superintendent.

SN9 Any existing trees which form part of the final landscaping plan will be protected from construction activities in accordance with the landscape architect's details and/or by -

Protecting them with barrier fencing or similar materials installed outside the drip line, ensuring that nothing is nailed to them, prohibiting paving, grading, sediment wash or placing of stockpiles within the drip line except under the following conditions -
Encroachment only occurs on one side and no closer to the trunk than either 1.5m or half the distance between the outer edge of the drip line and the trunk, which ever is the greater, a drainage system that allows air and water to circulate through the root zone (eg a gravel bed) is placed under all fill layers of more than 300mm care is taken not to cut roots unnecessarily nor to compact the soil around them.

SN10 Receptors for concrete and mortar slurries, paints, acid washings, light-weight waste materials and litter are to be emptied as necessary. Disposal of waste shall be in a manner approved by the superintendent or as specified in the works contract.

Stormwater Notes

SW1 For residential subdivisions and public roads -

All Ø375mm to Ø600mm drainage pipes shall be class 4 approved spigot and socket reinforced concrete pipes with rubber ring joints (UNO). All Ø675mm or larger drainage pipes shall be class 3 approved spigot and socket reinforced concrete pipes with rubber ring joints (UNO).

All uPVC drainage pipes in footways or accessways shall be DWV grade class SN8 in accordance with AS/NZS 1260:2009 - PVC-u pipes and fittings for drain, waste and vent application. heavy duty uPVC pipes to be in accordance with AS/NZS 1254 : 2010 - PVC pipes and fittings for storm and surface water applications may be used within allotments.

SW2 For commercial or industrial sites -

All Ø300mm to Ø600mm drainage pipes shall be class 4 approved spigot and socket reinforced concrete pipes with rubber ring joints (UNO). All Ø675mm or larger drainage pipes shall be class 3 approved spigot and socket reinforced concrete pipes with rubber ring joints (UNO).

All drainage pipes less than or equal to Ø225mm shall be uPVC DWV grade class SN8 in accordance with AS/NZS 1260 : 2009 - PVC-u pipes and fittings for drain, waste and vent application with solvent welded joints.

SW3 Equivalent strength fibrous reinforced concrete (F.R.C.) and / or High density polyethylene (H.D.P.E.) may be used subject to approval by the superintendent.

SW4 All pipe junctions up to and including Ø450mm and tapers, shall be via purpose made fittings (UNO).

SW5 Minimum grade to stormwater lines to be 1% (UNO).

SW6 Contractor to supply and install all fittings and specials including various pipe adaptors to ensure proper connection between dissimilar pipework.

SW7 All connections to existing drainage pits shall be made in a tradesman-like manner and the internal wall of the pit at the point of entry shall be cement rendered to ensure a smooth finish with no protrusions.

SW8 All in-situ concrete pits to be 32Mpa minimum at 28 days.

SW9 Pits and pipes in areas of salinity hazard shall have increased cover to any reinforcement.

SW10 Precast concrete pits may be installed in lieu of cast in-situ pits, when pipe junctions are accommodated within the overall dimensions of the pit, and approved by the superintendent.

SW11 Pits deeper than 1000mm shall have step irons installed in accordance with the local or statutory authority requirements.

SW12 Bedding shall be type H2 (UNO) for pipes not under pavements, and type HS2 for pipes under pavements in accordance with AS/NZS 3725 : 2007 - design for installation of buried concrete pipes.

SW13 Backfill trench with sand or approved granular backfill to 300mm (min) above the pipe. Where the pipe is under pavements backfill remainder of trench to pavement subgrade with sand or approved gravel sub-base compacted in 150mm layers to 98% standard maximum dry density. The contractor is to ensure compaction equipment is appropriate for the pipe class used.

SW14 Where stormwater lines pass under floor slabs DWV grade uPVC rubber ring joints are to be used (UNO).

SW15 Where subsoil drainage lines pass under floor slabs and vehicular pavements, unslotted uPVC DWV grade class SN8 pipe shall be used.

SW16 Provide 3m length of Ø100mm subsoil drainage line or 200 'Nylex' strip drain surrounded with 150mm of 20mm blue metal or gravel, and wrapped in 'Bidum' A24 geotextile filter fabric or approved equivalent, at invert of incoming upstream pipe on each pit.

Concrete Notes

General

CN1 Use "AS3972 - 2010 - General purpose and blended cements - Type GP" cement (UNO).

CN2 All concrete shall be subject to project control sample and testing to AS3600 - 2009 - concrete structures.

CN3 Consolidate all concrete, including footings and slabs on ground with mechanical vibrators.

CN4 Cure all concrete as follows -
- keep surfaces continuously wet for 3 days, then
- prevent moisture loss for the next 4 days using polythene sheeting or wet hessian protected from wind and traffic, and then allow drying out.
- curing compounds may be used provided that they comply with AS3799 and they do not affect floor finishes.
- PVA-based curing compounds are NOT acceptable.

CN5 Fix reinforcement as shown on drawings. The type and grade is indicated by a symbol as shown below -

N	hot rolled deformed bar, grade 500
R	plain round bar, grade 250
SL / RL	hard drawn wire fabric square or rectangular

following this symbol a numeral indicates the specified diameter.

CN6 Provide bar supports or spacers to provide concrete cover as detailed to all reinforcement.

Concrete Pavements

CN7 Concrete mix parameters -
maximum aggregate size 20mm
flexural strength at 28 days = 3.5 MPa, F'c= 32 MPa, (UNO)
flexural strength at 90 days = 3.85 MPa
max water/cement ratio = 0.55
max shrinkage limit = 650 micron strains (AS1012.13-1992)
min cement content = 300kg/m³
cement to be type "SL" (normal cement) to AS3972-2010
slump = 80mm

CN8 Early age saw cutting ('softcut') or similar shall be used for initial saw cut. It is to be performed as soon as the concrete has hardened sufficiently, to prevent excessive chipping, spalling, or tearing regardless of time or weather conditions.

CN9 Joint layout shall be as detailed on the plans.

CN10 Provide 10mm wide expansion joints between all buildings, other structures and pavements.

CN11 Bond breaker to be two (2) uniform coats of bitumen emulsion all over the exposed surface and on the end.

CN12 Dowels and tie bars to meet strength requirements of structural grade steel in accordance with AS ISO 1302 - 2005 - geometrical product specifications.
Dowels and tie bars shall be -
straight,
to length specified,
all dowels to be hot dip galvanised,
sawn to length not cropped.

CN13 Dimensions of sealant reservoir dependant on the sealant type adopted. Superintendent approval to be obtained for sealant and reservoir dimensions and detail proposed by the contractor. Refer to plans for typical arrangement and sealant.

CN14 Prior to the placement of concrete in the adjacent slab, 'Ableflex' filler shall be adhered to the already cast and cleaned concrete face using an approved waterproof adhesive. Adhesive shall be liberally applied to the full face of the concrete slab to be covered by the filler, and on the full face of the filler to be adhered.

CN15 The base course shall be kept moist (not wet) by sprinkling with water immediately prior to pouring the concrete.

CN16 All work to be finished to satisfy its intended use as shown on the plans, and / or in accordance with the specification.

Kerbing Notes

CN17 All concrete kerbs to have a minimum characteristic compressive strength F'c=25MPa (UNO).

CN18 All kerbs, dish drains, etc. to be constructed on 75mm minimum base course.(UNO on the Drawings)

CN19 Kerb expansion joints shall be formed from 10mm 'Abelflex' (or approved equivalent) for the full depth of the section.

CN20 Expansion joints shall be located at drainage pits, tangent points of curves and elsewhere at 12m maximum spacing (UNO).

CN21 Tooled joints shall be min 3mm wide and located at maximum 3m spacing.

CN22 Integral kerb joints shall match the location of the pavement jointing.

Asphaltic Concrete Notes

General

AC1 Asphaltic concrete mix design, manufacture, placing and compaction shall be in accordance with RMS Specification R116-Asphalt (dense graded and open graded) and AS2150-2005 - Hot Mix Asphalt - A Guide To Good Practice. Annexure R116/1 to be completed by subcontractor and submitted for approval by superintendent 7 days prior to AC works.

AC2 Mineral filler to comply with AS2150 - 2005 - Hot Mix Asphalt - A Guide to Good Practice.

Mix Proportions

AC3 Job mix - 7mm nominal size aggregate. Minimum bitumen content (%) by (mass of total mass) - 5.1%.

AC4 Mix stability - between 16kn and 36kn as determined by RMS test method T601 - Compaction of Test Specimens of Dense Grade Bituminous Mixtures and T603 - Stability of Dense Grade Bituminous Mixtures.

AC5 Air voids in compacted mix - between 4% of volume and 7% of the mix. Voids filled in binder. 65-80% of air voids in the total mineral aggregate filled by binder in accordance with RMS test method T601 - Compaction of Test Specimens of Dense Grade Bituminous Mixtures, T605 - Maximum Density of Bituminous Plant Mix and T606 - Bulk Density of Compacted Dense Graded Bituminous Mixtures.

Pavement Preparation

AC6 The existing surface to be sealed, shall be dry and broomed before commencement of work to ensure complete removal of all superficial foreign and loose matter.

AC7 All depressions or uneven areas are to be tack-coated and brought up to general level of pavement with asphaltic concrete before laying of main course.

Tack Coat

AC8 The whole of the area to be sheeted with asphaltic concrete shall be lightly and evenly coated with rapid setting bitumen. Application rate for residual bitumen shall be 0.15 to 0.30 litres/square metre. Application shall be by means of a mechanical sprayer with spray bar.

Spreading

AC9 All asphaltic concrete shall be spread with a self propelled paving machine.

AC10 The asphaltic concrete shall be laid at a mix temperature as shown below -

road surface temp in shade (°c)	mix temperatures (°c)
5 - 10	not permitted
10 - 15	150
15 - 25	145
25+	140

AC11 Asphaltic concrete shall not be laid when the road surface is wet or when cold winds chill the mix to adversely affect temperature of mix during spreading and compaction operations.

AC12 The minimum compacted thickness is 50mm in two (2) layers.

Joints

AC13 The number of joints both longitudinal and transverse shall be kept to a minimum.

AC14 The density and surface finish at joints shall be similar to those of the remainder of the layer.

Compaction

AC15 All compaction shall be undertaken using self propelled rollers.

AC16 Initial rolling shall be completed before the mix temperature falls below 105°c.

AC17 Secondary rolling shall be completed before the mix temperature falls below 60°c.

AC18 Minimum characteristic value of relative compaction of a lot when tested in accordance with AS2150 - 2005 - Hot Mix Asphalt - A Guide to Good Practice, shall be 95%.

Finished Pavement Properties

AC19 Finished surfaces shall be smooth, dense and true to shape and shall not vary more than 10mm from the specified plan level at any point and shall not deviate from the bottom of a 3m straight edge laid in any direction by more than 5mm.

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P7	27.07.2018	GAP	Re-Issued for Approval	DR	BS
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X

M M
MOTT MACDONALD

Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

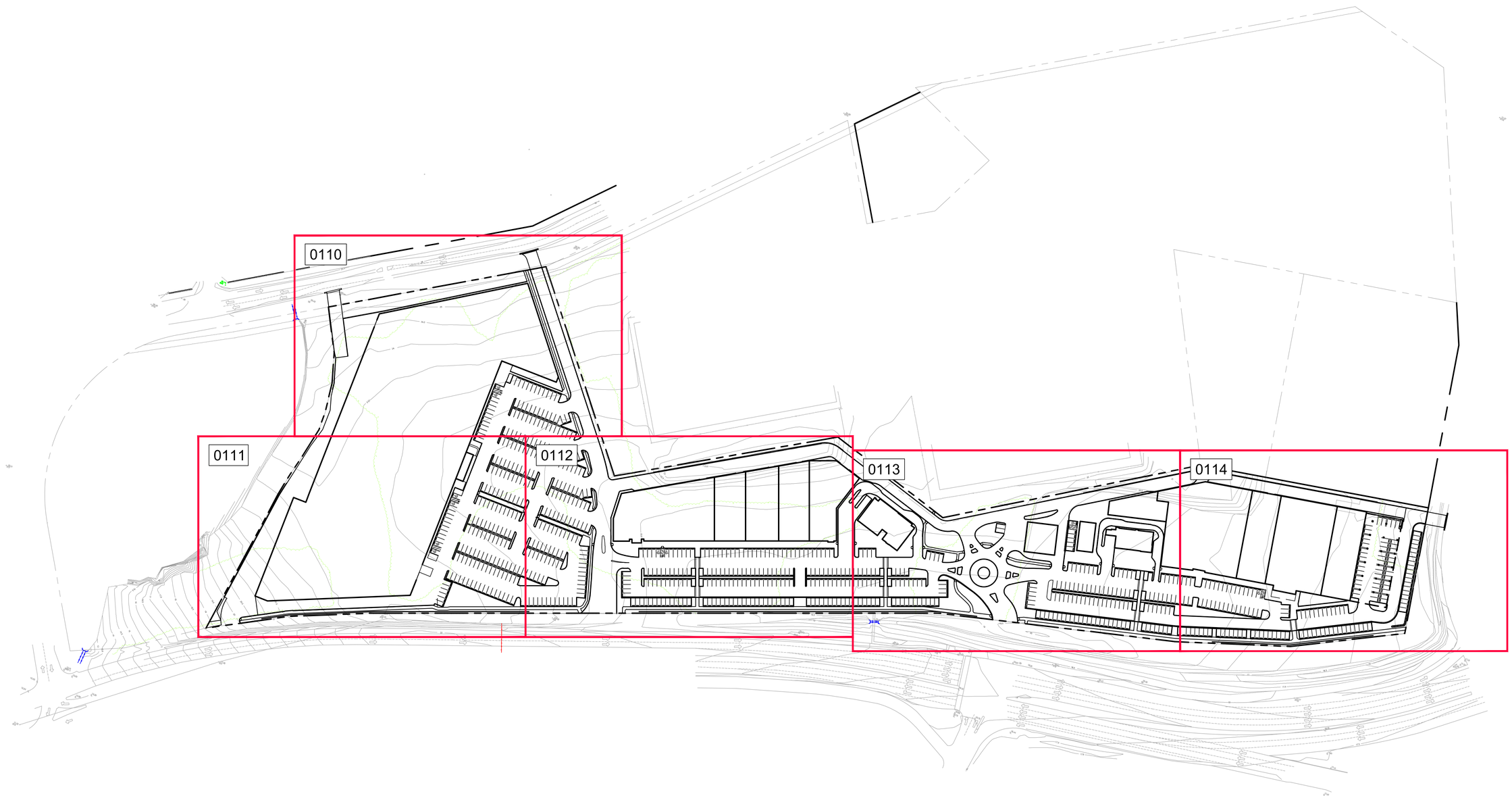
Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
General Notes and Legends
Sheet 1

Designed	A.Singh	Eng check	D. Reilly
Drawn	D.Chapman	Coordination	J. Gilligan
Dwg check	A.Singh	Approved	B.Soo

Scale at A1	Status	Rev	Security
	PRE	P7	STD

Drawing Number
MMD-382538-C-DR-00-S96-0002



Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X
P1	31.05.2017	DRC	Issued for Section 96 Approval	JG	X

1:1250 0 62.5m 125m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
General Arrangement Plan

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	

Scale at A1	Status	Rev	Security
1:1000	PRE	P6	STD

Drawing Number
MMD-382538-C-DR-00-S96-0005

Soil and Water Managenent Legend

- Construct temporary sediment fence
- Install strawbale sediment traps
- Install sediment trap for drop inlet
- Construct temporary stabilised site entry with shaker grid
- Construct temporary sediment basin
- Construct temporary diversion bank

Note

This plan is a concept only. It is created to highlight some of the sediment and erosion control measures which may appear. The contractor is responsible for the final design and ensuring all measures are taken to protect the environment.

Construct temporary sediment trap for drop inlet (geotextile filter fabric). Refer detail on drawing 0015 (typ)

Sediment storage to be provided in accordance with Landcom's "Managing Urban Stormwater: Soils and Construction" Sediment basin volume to be confirmed during detailed design stage

Construct temporary sediment basin. Refer detail on drawing 0015 (typ)

Construct temporary stabilised site entry with shaker grid. Refer detail on drawing 0015

Construct temporary sediment trap for drop inlet (geotextile filter fabric). Refer detail on drawing 0015 (typ)

Install temporary sediment fence around perimeter of site. Refer detail on drawing 0015 (typ)

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X
P1	31.05.2017	DRC	Issued for Section 96 Approval	JG	X

1:500 0 25m 50m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Soil and Water Management Plan
Sheet 1

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:500	PRE		P6	STD	

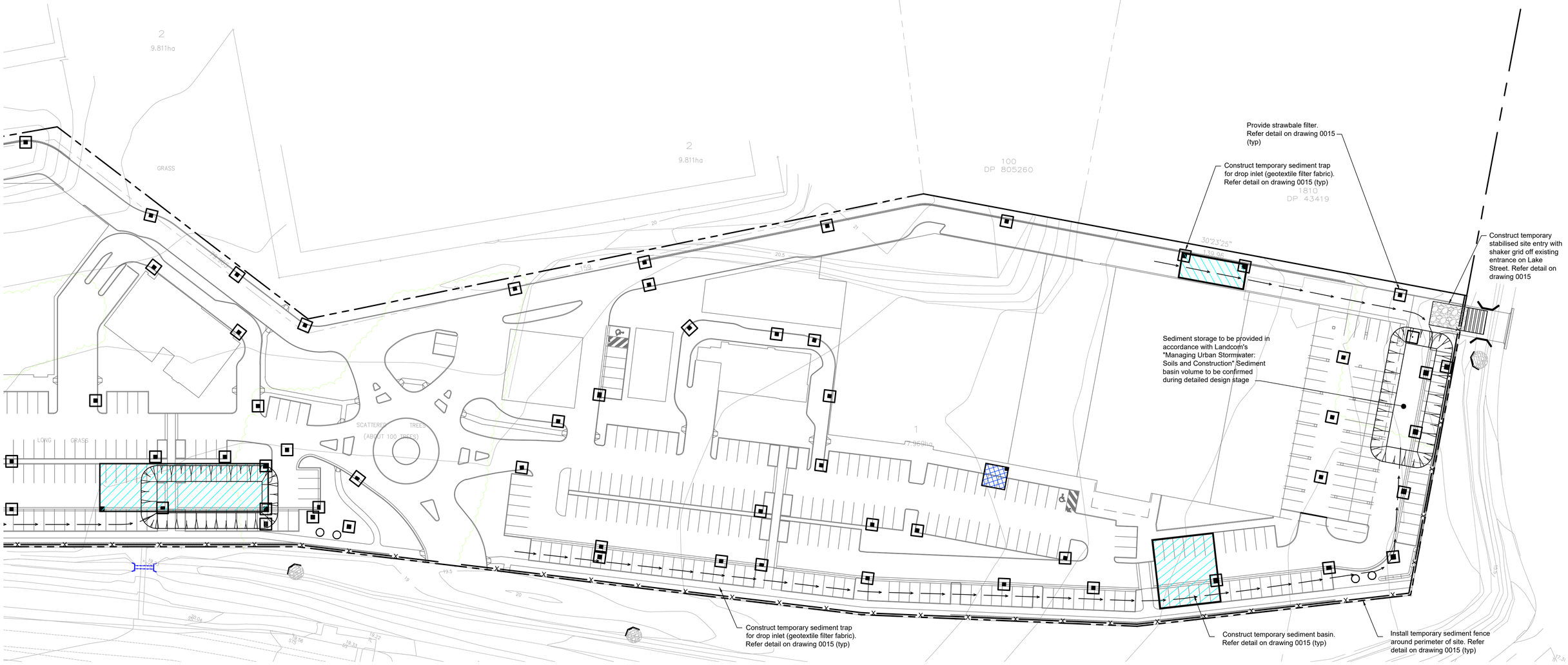
Drawing Number
MMD-382538-C-DR-00-S96-0010

Soil and Water Managenent Legend

- Construct temporary sediment fence
- Install strawbale sediment traps
- Install sediment trap for drop inlet
- Construct temporary stabilised site entry with shaker grid
- Construct temporary sediment basin
- Construct temporary diversion bank

Note

This plan is a concept only. It is created to highlight some of the sediment and erosion control measures which may appear. The contractor is responsible for the final design and ensuring all measures are taken to protect the environment.



Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X
P1	31.05.2017	DRC	Issued for Section 96 Approval	JG	X

1:1250 0 62.5m 125m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Soil and Water Management Plan
Sheet 2

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:500	PRE		P6	STD	

Drawing Number
MMD-382538-C-DR-00-S96-0011

Erosion and Sediment Control Notes

The following notes may not be relevant to each development.

General

1. ESCP refers to Erosion and Sediment Control Plan or a Soil and Water Management Plan (SWMP).
2. ESC refers to erosion and sediment control.
3. Sediment, includes, but is not limited to, clay, silt, sand, gravel, soil, mud, cement, and ceramic waste.
4. Any reference to the Blue Book refers to Managing Urban Stormwater - Soils and Construction. Landcom, 2004.
5. Any reference to the IECA White Books (2008) refers to IECA 2008. Best Practice Erosion and Sediment Control. Books 1-6.International Erosion Control Association (Australasia). Picton NSW.
6. Any material deposited in any conservation area from works associated with the development shall be removed immediately by measures involving minimal ground and/or vegetation disturbance and no machinery, or following directions by Council and/or within a timeframe advised by Council.

The ESCP

7. The ESCP and its associated ESC measures shall be constantly monitored, reviewed, and modified as required to correct deficiencies. Council has the right to direct changes if, in its opinion, the measures that are proposed or have been installed are inadequate to prevent pollution.
8. Prior to any activities onsite, the responsible person(s) is to be nominated. The responsible person(s) shall be responsible for the 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.
9. At least 14 days before the natural surface is disturbed in any new stage, the contractor shall submit to the Certifier, a plan showing ESC measures for that Stage. The degree of design detail shall be based on the disturbed area.
10. At any time during construction, the ESC measures onsite shall be appropriate for the area of disturbance and its characteristics including soils (in accordance with those required for the site as per DCP).
11. The implementation of the ESCP shall be supervised by personnel with appropriate qualifications and/or experience in ESC on construction sites.
12. The approved ESCP shall be available on-site for inspection by Council officers while work activities are occurring.
13. The approved ESCP shall be up to date and show a timeline of installation, maintenance and removal of ESC measures.
14. All ESC measures shall be appropriate for the Sediment Type(s) of the soils onsite, in accordance with the Blue Book, IECA White Books or other current recognised industry standard for ESC for Australian conditions.
15. Adequate site data, including soil data from a NATA approved Laboratory, shall be obtained to allow the preparation of an appropriate ESCP, and allow the selection, design and specification of required ESC measures.
16. All works shall be carried out in accordance with the approved ESCP (as amended from time to time) unless circumstances arise where:
    a) compliance with the ESCP would increase the potential for environmental harm; or
    b) circumstances change during construction and those circumstances could not have been foreseen; or
    c) Council 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. Additional ESC measures shall be implemented, and a revised ESCP submitted for approval to the certifier (within five 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 ESCP.
18. A copy of any amended ESCP shall be forwarded to an appropriate Council Officer, within five business days of any such amendments.

Site establishment including clearing and mulching

19. No land clearing shall be undertaken unless preceded by the installation of adequate drainage and sediment control measures, 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.
20. 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.
21. Trees and vegetation cleared from the site shall be mulched onsite within 7 days of clearing.
22. Appropriate measures shall be undertaken to control any dust originating due to the mulching of vegetation onsite.
23. 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.
24. 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.
25. Site exit points shall be appropriately managed to minimise the risk of sediment being tracked onto sealed, public roadways.
26. Stormwater runoff from access roads and stabilised entry/exit points shall drain to an appropriate sediment control device.
27. The Applicant shall ensure an adequate supply of ESC, and appropriate pollution clean-up materials are available on-site at all times.
28. 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.
29. 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.
30. 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.
31. Brick, tile or masonry cutting shall be carried out on a pervious surface (e.g. grass or open soil) and 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.
32. 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.
33. 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.
34. 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.
35. No more than 150m of a stormwater, sewer line or other service trench shall to be open at any one time.
36. Site spoil shall be lawfully disposed of in a manner that does not result in ongoing soil erosion or environmental harm.
37. Wherever reasonable and practicable, stormwater runoff entering the site from external areas, and non-sediment laden (clean) stormwater runoff entering a work area or area of soil disturbance, shall be diverted around or through that area in a manner that minimises soil erosion and the contamination of that water for all discharges up to the specified design storm discharge.

Site Management including Dust

38. 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 ESC measures.
39. 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.
40. The application of liquid or chemical-based dust suppression measures shall ensure that sediment-laden runoff resulting from such measures does not create a traffic or environmental hazard.
41. 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.
42. Once cut/fill operations have been finalised in a section, all disturbed areas that are not being worked on shall be stabilised in accordance with time lines in the Blue Book.
43. All reasonable and practicable measures shall be taken to prevent, or at least minimise, the release of sediment from the site.
44. Suitable all-weather maintenance access shall be provided to all sediment control devices.
45. Sediment control devices, other than sediment basins, shall be de-silted and made fully operational as soon as reasonable and practicable after a sediment-producing event, whether natural or artificial, if the device's sediment retention capacity falls below 75% of its design retention capacity.
46. All erosion and sediment control measures, including drainage control measures, shall be maintained in proper working order at all times during their operational lives.
47. Washing/flushing of sealed roadways shall only occur where sweeping has failed to remove sufficient sediment and there is a compelling need to remove the remaining sediment (e.g. for safety reasons). In such circumstances, all reasonable and practicable sediment control measures shall be used to prevent, or at least minimise, the release of sediment into receiving waters. Only those measures that will not cause safety and property flooding issues shall be employed. Sediment removed from roadways shall be disposed of in a lawful manner that does not cause ongoing soil erosion or environmental harm.
48. Sediment removed from sediment traps and places of sediment deposition shall be disposed of in a lawful manner that does not cause ongoing soil erosion or environmental harm.

Sediment Basins - installation, maintenance and removal including sediment traps

49. As-Constructed plans shall be prepared for all constructed Sediment Basins and associated emergency spillways. Such plans shall verify the basin's dimensions, levels and volumes comply with the approved design drawings. These plans may be requested by the Certifier or Council.
50. Sediment basins shall be constructed and fully operational prior to any other soil disturbance in their catchment.
51. Install an internal gated valve, or similar, in any outlet pipe once pipes installed, or install a sacrificial pipe from basin through wall to external outlet point. The valve shall be connected to a riser made from slotted pipe in the basin. The valve may be opened once captured water meets water quality requirements. The final setup for temporary internal outlet structures to be confirmed prior to construction with Council. This setup will enable discharge of treated water from site without need for pumping.
52. A sediment storage level marker post shall be with a cross member set just below the top of the sediment storage zone (as specified on the approved ESCP). At least a 75mm wide post shall be firmly set into the basin floor.
53. 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.
54. 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).
55. Prior to any forecast weather event likely to result in runoff, any basins/traps shall be dewatered to provide sufficient capacity to capture sediment laden water from the site.
56. Sufficient quantities of chemicals/agents to treat captured water shall be placed such that water entering the basin mixes with the chemical/agents and is carried into the basin to speed up clarification.
57. Any basin shall be dewatered within the X-day rainfall depth used to calculate the capacity of the basin, after a rainfall event.
58. Sufficient quantities of chemicals/agents to treat turbid water shall be securely stored on-site to provide for at least three complete treatments of all basins requiring chemically treatment onsite.
59. Prior to the controlled discharge (e.g. de-watering activities) from excavations and/or sediment basins, 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;
    c) Turbidity (measured in NTUs) to a maximum of 60 NTU); and
    d) EC levels no greater than background levels.
60. The Development Approval may require testing of additional water quality elements prior to discharge. E.g. heavy metals.
61. A sample of the released treated water shall be kept onsite in a clear container with the sample date recorded on it.
62. Water quality samples shall be taken at a depth no less than 200mm below the water surface of the basin.
63. No Aluminium based products may be used treat captured water 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.
64. The chemical/agent used in Type D and Type F basins to treat captured water captured in the basin shall be applied in concentrations sufficient to achieve Council's water quality objectives within the X-day rainfall depth used to calculate the capacity of the basin, after a rainfall event.
65. All Manufacturers' Instructions shall be followed for any chemicals/agents used onsite, except where approved by the Responsible Person or an appropriate Council Officer.
66. 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.
67. 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.
68. 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.
69. Suitable all-weather maintenance access shall be provided to all sediment control devices.
70. Materials, whether liquid or solid, removed from any ESC measures during maintenance or decommissioning, shall be disposed of in a manner that does not cause ongoing soil erosion or environmental harm.
71. All sediment basins shall remain fully operational at all times until the basin's design catchment achieves 70% ground cover or surface stabilisation acceptable to Council.
72. The ESC measures installed during the decommissioning and rehabilitation of a sediment basin shall comply with same standards specified for the normal construction works.
73. A sediment basin shall not be decommissioned until all up-slope site stabilisation measures have been implemented and are appropriately working to control soil erosion and sediment runoff..
74. Immediately prior to the construction of the permanent stormwater treatment device, appropriate flow bypass conditions shall be established to prevent sediment-laden water entering the device.

Revegetation/Stabilisation

75. Temporary Stabilisation may be attained using vegetation, non rewettable soil polymers, or pneumatically applied erosion controls.
76. 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.
77. Once cut/fill operations have been finalised in a section, all disturbed areas that are not being worked on shall be stabilised in accordance with time lines in the Blue Book.
78. The LMCC Seed mix shall be used unless stated on the ESCP/SWMP. Do we need to specify here or refer to another section or the consent (landscape Plan)?
79. The pH level of topsoil shall be appropriate to enable establishment and growth of specified vegetation prior to initiating the establishment of vegetation.
80. Non rewettable binder shall be used in all hydromulch/hydroseed/polymer mixes on slopes or works adjacent to a water course.
81. Soil ameliorants shall be added to the soil in accordance with an approved Landscape Plan, Vegetation Management Plan, and/or soil analysis.
82. 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.
83. Procedures for initiating a site shutdown, whether programmed or un-programmed, shall incorporate revegetation of all soil disturbances unless otherwise approved by Council. The stabilisation works shall not rely upon the longevity of non-vegetated erosion control blankets, or temporary soil binders.

Site Monitoring and Maintenance

84. 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.
85. All ESC measures shall be inspected and any maintenance undertaken immediately:
    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.
86. 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.
87. All environmentally relevant incidents shall be recorded in a field log that shall remain accessible to all relevant regulatory authorities.
88. All water quality data, including dates of rainfall, dates of testing, testing results and dates of water release, 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 [insert name of regulatory authority] on request.
89. At nominated instream water monitoring sites, a minimum of 3 water samples shall be taken and analysed, and the average result used to determine quality.

Instream Works

90. All instream works (including in or adjacent to watercourses natural or manmade, flowing or not) shall be carried out in accordance with the IECA White Books.

Note

This plan is a concept only. It is created to highlight some of the sediment and erosion control measures which may appear. The contractor is responsible for the final design and ensuring all measures are taken to protect the environment.

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X
P1	31.05.2017	DRC	Issued for Section 96 Approval	JG	X

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

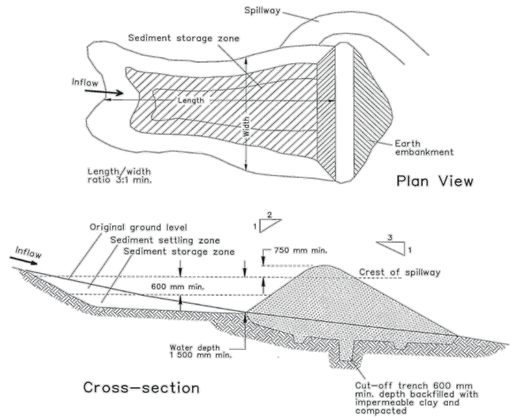
Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Soil and Water Management
Notes and Details Sheet

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	

Scale at A1	Status	Rev	Security
As Shown	PRE	P6	STD

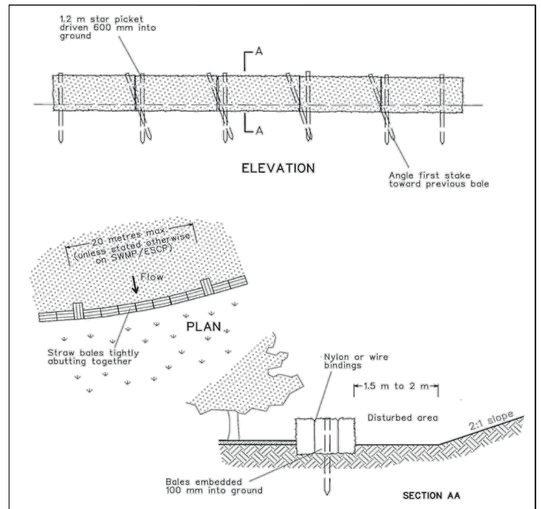
Drawing Number
MMD-382538-C-DR-00-S96-0115



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.

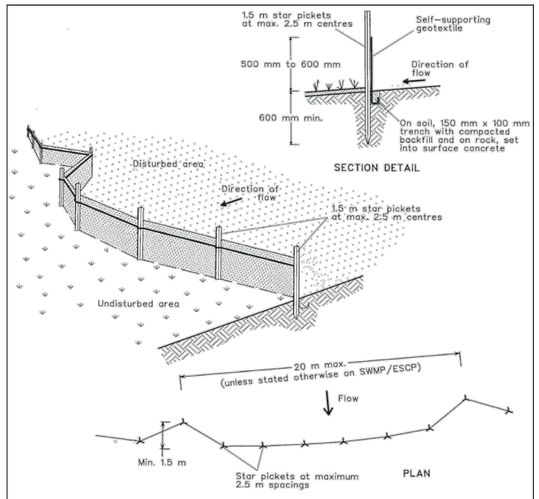
EARTH BASIN - WET SD 6-4
(APPLIES TO 'TYPE D' AND 'TYPE F' SOILS ONLY)



Construction Notes

1. Construct the straw bale filter as close as possible to being parallel to the contours of the site.
2. Place bales lengthwise in a row with ends tightly abutting. Use straw to fill any gaps between bales. Straws are to be placed parallel to ground.
3. Ensure that the maximum height of the filter is one bale.
4. Embed each bale in the ground 75 mm to 100 mm and anchor with two 1.2 metre star pickets or stakes. Angle the first star picket or stake in each bale towards the previously laid bale. Drive them 600 mm into the ground and, if possible, flush with the top of the bales. Where star pickets are used and they protrude above the bales, ensure they are fitted with safety caps.
5. Where a straw bale filter is constructed downslope from a disturbed batter, ensure the bales are placed 1 to 2 metres downslope from the toe.
6. Establish a maintenance program that ensures the integrity of the bales is retained - they could require replacement each two to four months.

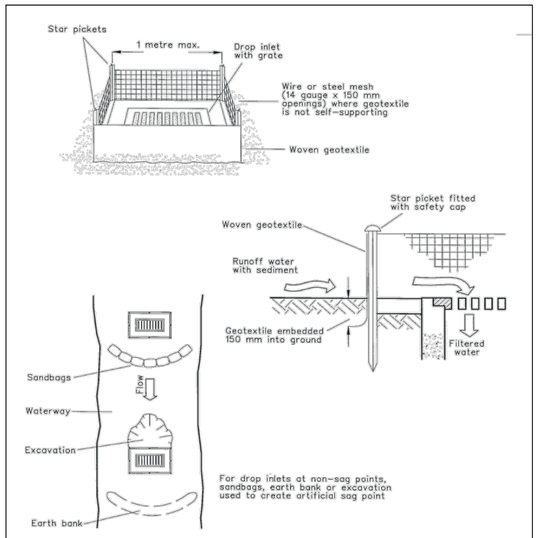
STRAW BALE FILTER SD 6-7



Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

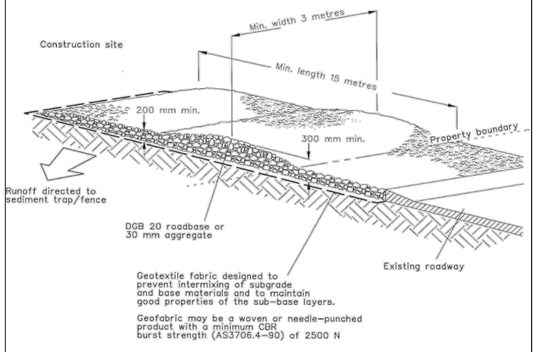
SEDIMENT FENCE SD 6-8



Construction Notes

1. Fabricate a sediment barrier made from geotextile or straw bales.
2. Follow Standard Drawing 6-7 and Standard Drawing 6-8 for installation procedures for the straw bales or geofabric. Reduce the picket spacing to 1 metre centres.
3. In waterways, artificial sag points can be created with sandbags or earth banks as shown in the drawing.
4. Do not cover the inlet with geotextile unless the design is adequate to allow for all waters to bypass it.

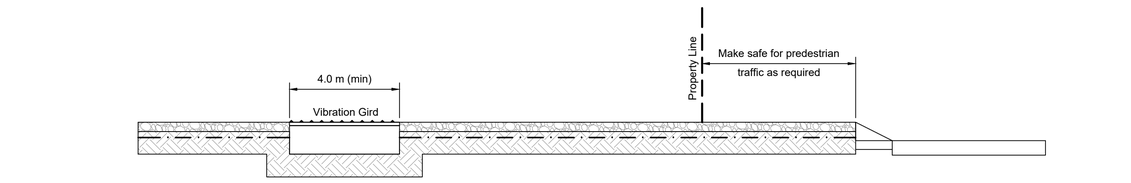
GEOTEXTILE INLET FILTER SD 6-12



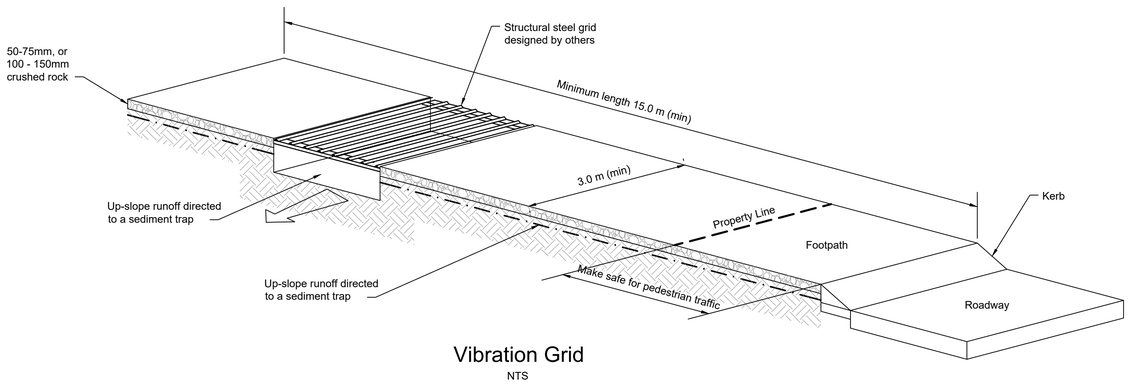
Construction Notes

1. Strip the topsoil, level the site and compact the subgrade.
2. Cover the area with needle-punched geotextile.
3. Construct a 200-mm thick pad over the geotextile using road base or 30-mm aggregate.
4. Ensure the structure is at least 15 metres long or to building alignment and at least 3 metres wide.
5. Where a sediment fence joins onto the stabilised access, construct a hump in the stabilised access to divert water to the sediment fence

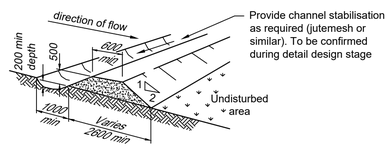
STABILISED SITE ACCESS SD 6-14



Vibration Grid
NTS



Vibration Grid
NTS



(For catchment of 2ha or less)

Diversion bank
(with channel)
NTS

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X
P1	31.05.2017	DRC	Issued for Section 96 Approval	JG	X

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Soil and Water Management
Notes and Details Sheet

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1: As Shown	Status: PRE		Rev: P6	Security: STD	

Drawing Number
MMD-382538-C-DR-00-S96-0016

Note: Refer to separate Drawings by Northrop for proposed upgrade works to Pacific Highway

Allow to fall verge from boundary back to roadway to divert surface runoff from upstream catchment in South Street around site towards downstream channel to the south.

Construct heavy duty vehicle crossing and driveway access. All works to be accordance with Lake Macquarie City Council specifications and details.

Construct heavy duty vehicle crossing and driveway access. All works to be accordance with Lake Macquarie City Council specifications and details.

Proposed driveway grades will impact existing utilities in the verge and may need to be diverted or encased subject to further review as part of the detailed design phase of the project (typ).

Match to existing levels along property boundary (typ).

Bunnings
FFL 23.50

For continuation refer to Dwg No 0111

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P7	27.07.2018	GAP	Re-Issued for Approval	DR	BS
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X

1:250 0 12.5m 25m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Siteworks and Stormwater Plan
Sheet 1

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev		Security
1:500	PRE		P7		STD

Drawing Number
MMD-382538-C-DR-00-S96-0110

For continuation refer to Dwg No 0110

Note: Refer to separate Drawings by Northrop for proposed upgrade works to Pacific Highway

Note: Roofwater from southern portion of new Bunnings building to discharge directly to below ground Rainwater harvesting tank to supply water for re-use on site. Details to be confirmed by Hydraulic Engineer during detailed design stage.

Bunnings
FFL 23.50

Roofwater from northern portion of new Bunnings building to discharge directly to below ground pit and pipe network either via conventional or siphonic drainage to Hydraulic Engineers future detail (typ)

Proposed below ground rainwater tank to collect roof water from new Bunnings building with overflows to below-ground detention tank. Details to be confirmed in detailed design stage.

Below ground OSD Tank No.E7
Storage Volume: 459m³
100yr TWL: RL 19.97
Details to be confirmed during detailed design stage.

Below ground OSD Tank No.A9
Storage Volume: 952m³
100yr TWL: RL 20.79
Details to be confirmed during detailed design stage

Install Humegard GPT or approved equivalent to manufacturer's specifications.

Install Jellyfish filter (JF2250-5-1) or approved equivalent to manufacturers specification.

Proposed flow split pit with internal weir to divert treatable flow rate to water quality devices. Details to be confirmed during detailed design stage.

Siter stormwater flows to discharge to drainage channel in Pacific Highway as per existing scenario. Provide scour protection to suit. Details to be confirmed during detailed design stage.

For continuation refer to Dwg No 0112

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P7	27.07.2018	GAP	Re-Issued for Approval	DR	BS
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X

1:250 0 12.5m 25m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Siteworks and Stormwater Plan
Sheet 2

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:500	PRE		P7	STD	

Drawing Number
MMD-382538-C-DR-00-S96-0111

Note: Refer to separate Drawings by Northrop for proposed upgrade works to Pacific Highway

Allow to intercept and divert upstream catchment from playing fields though site. Details to be confirmed.

Roofwater from western portion of tenancies T1 - T5 to discharge directly to below ground pit and pipe network either via conventional or siphonic drainage to Hydraulic Engineers future details (typ)

T1 Anaconda
FFL 21.25

T2
FFL 21.25

T3
FFL 21.25

T4
FFL 21.25

T5
FFL 21.25

Note: Roofwater from eastern portion of tenancies T1 - T5 to discharge directly to below ground Rainwater harvesting tank to supply water for re-use on site. Details to be confirmed by Hydraulic Engineer during detailed design stage.

Proposed below ground rainwater tank to collect roof water from new tenancies T1 - T5 with overflows to below-ground detention tank. Details to be confirmed in detailed design stage.

Proposed flow split pit with internal weir to divert treatable flow rate to water quality devices. Details to be confirmed at detailed design stage.

Install Humegard GPT or approved equivalent to manufacturer's specifications.

Install Jellyfish filter (JF2250-10-2) or approved equivalent to manufacturer's specification.

For continuation refer to Dwg No 0111

For continuation refer to Dwg No 0113

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P7	27.07.2018	GAP	Re-Issued for Approval	DR	BS
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X

1:250 0 12.5m 25m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Siteworks and Stormwater Plan
Sheet 3

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:250	PRE		P7	STD	

Drawing Number
MMD-382538-C-DR-00-S96-0112

P:\Sydney\Projects\3Bxxxx\382538 Blueprint Windale\04 Working\01 CAD\Civil\Drawings\MMD-382538-C-DR-00-S96-0110-0119.dwg Jul 27, 2018 - 8:45AM sim55925

Note: Refer to separate Drawings by Northrop for proposed upgrade works to Pacific Highway

Note: Approx. alignment of existing optic fibre cable through site

Match to existing levels along property boundary (typ).

Inset 'A'
1:250

Fast Food
FFL 21.00

Petrol
FFL 19.40

Fast Food
FFL 19.40

Below ground OSD Tank No.H5
Storage Volume: 425m³
100yr TWL: 19.37
Details to be confirmed during detailed design stage.

Install Jellyfish filter (JF2250-9-2) or approved equivalent to manufacturer's specification.

Install Humegard GPT or approved equivalent to manufacturer's specifications.

Site stormwater flows to discharge to drainage channel in Pacific Highway as per existing scenario. Provide scour protection to suit. Details to be confirmed during detailed design stage.

Site stormwater flows to discharge to drainage channel in Pacific Highway as per existing scenario. Provide scour protection to suit. Details to be confirmed during detailed design stage.

For continuation refer to Dwg No 0112

For continuation refer to Dwg No 0114

For continuation refer to Inset 'A'

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P7	27.07.2018	GAP	Re-Issued for Approval	DR	BS
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X

1:250 0 12.5m 25m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Siteworks and Stormwater Plan
Sheet 4

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:250	PRE		P7	STD	

Drawing Number
MMD-382538-C-DR-00-S96-0113

P:\Sydney\Projects\38xxxx\382538 Blueprint Windale\04 Working\01 CAD\Civil\Drawings\MMD-382538-C-DR-00-S96-0110-0119.dwg Jul 27, 2018 - 8:45AM ian.bosse

Note: Refer to separate Drawings by Northrop for proposed upgrade works to Pacific Highway

Below ground OSD Tank No. S4
Storage Volume: 257m³
100yr TWL: RL 19.07
Details to be confirmed during detailed design stage.

Plot of 20yr ARI Flood Level within site boundary.

Roofwater from western portion of tenancies T6 - T8 to discharge directly to below ground pit and pipe network either via conventional or siphonic drainage to Hydraulic Engineers future details (typ)

Provide culvert crossing beneath driveway access to suit existing swale in verge. Details to be confirmed in detailed design stage.

Construct heavy duty vehicle crossing and driveway access. All works to be accordance with Lake Macquarie City Council specifications and details.

Sawcut existing pavement and provide deeplift pavement. Make smooth connection to existing. All works in accordance with council requirements. (typ)

Site stormwater flows to discharge to drainage channel in Lake Street as per existing scenario. Provide scour protection to suit. Details to be confirmed during detailed design stage.

Min. top of retaining wall RL16.65 along property boundary to provide freeboard to carpark from mainstream flood levels in Lake Street.

Rovide nom 300mm landscape bund along property boundary. Min top of bund RL 16.85 to provide freeboard to carpark from mainstream flood levels in Lake Street. To be confirmed during detailed design stage.

Note: Roofwater from eastern portion of tenancies T6 - T8 to discharge directly to below ground Rainwater harvesting tank to supply water for re-use on site. Details to be confirmed by Hydraulic Engineer during detailed design stage.

Proposed below ground rainwater tank to collect roof water from new tenancies T6 - T8 with overflows to below-ground detention tank. Details to be confirmed in detailed design stage.

Below ground OSD Tank No. T9
Storage Volume: 366m³
100yr TWL: RL 17.48
Details to be confirmed during detailed design stage.

Proposed flow split pit with internal weir to divert treatable flow rate to water quality devices. Details to be confirmed at detailed design stage.

Install Humegard GPT or approved equivalent to manufacturer's specifications.

Install Jellyfish filter (JF3250-17-3) or approved equivalent to manufacturers specifications.

T6
FFL 19.40

T7
FFL 19.40

T8 Spotlight
FFL 19.40

For continuation refer to Dwg No 0113

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P7	27.07.2018	GAP	Re-Issued for Approval	DR	BS
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X

1:250 0 12.5m 25m

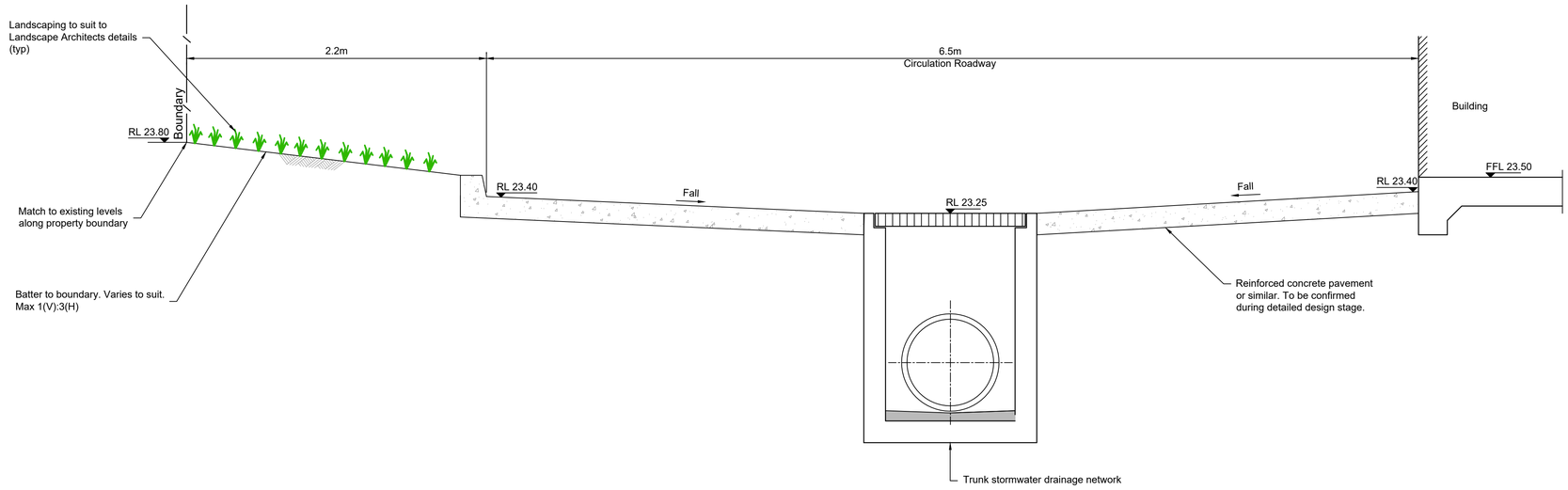
MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

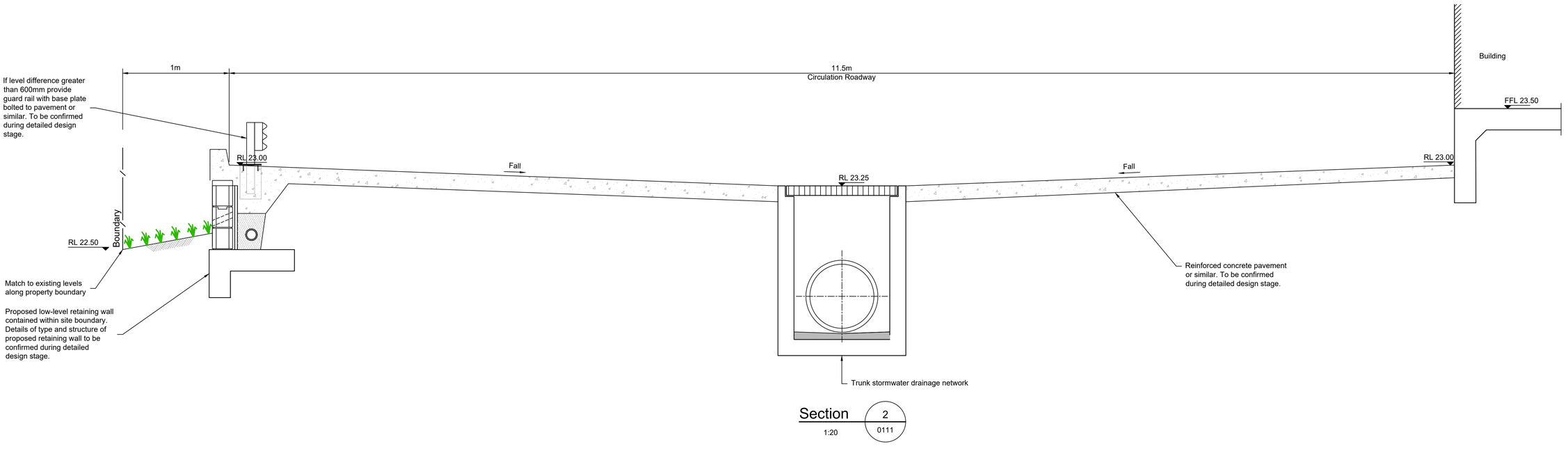
Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Siteworks and Stormwater Plan
Sheet 5

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	1:250	Status	PRE	Rev	P7
				Security	STD

Drawing Number
MMD-382538-C-DR-00-S96-0114



Section 1
1:20 0110



Section 2
1:20 0111

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P2	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P1	15.12.2017	DRC	Issued for Coordination	JG	X

1:20 0 1m 2m

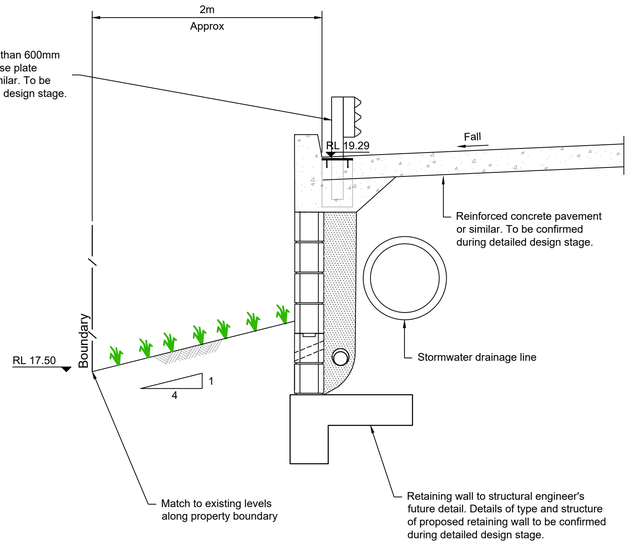
MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

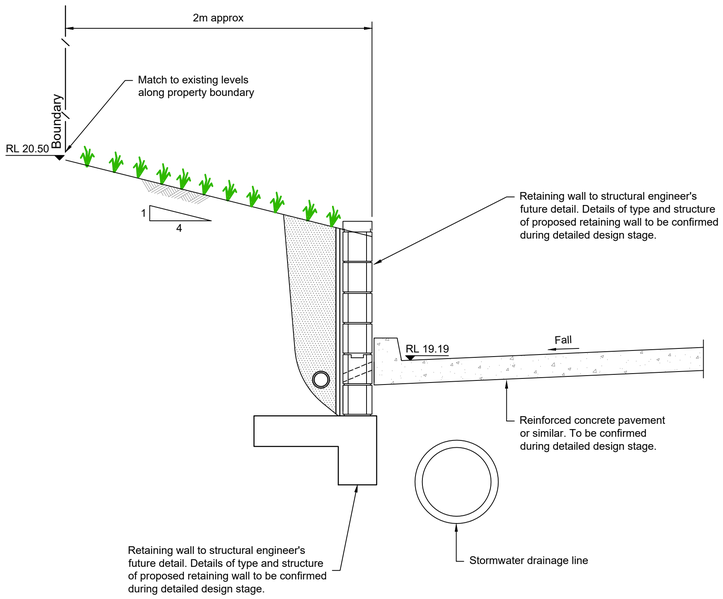
Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Site Sections
Sheet 1

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:20	PRE		P3	STD	

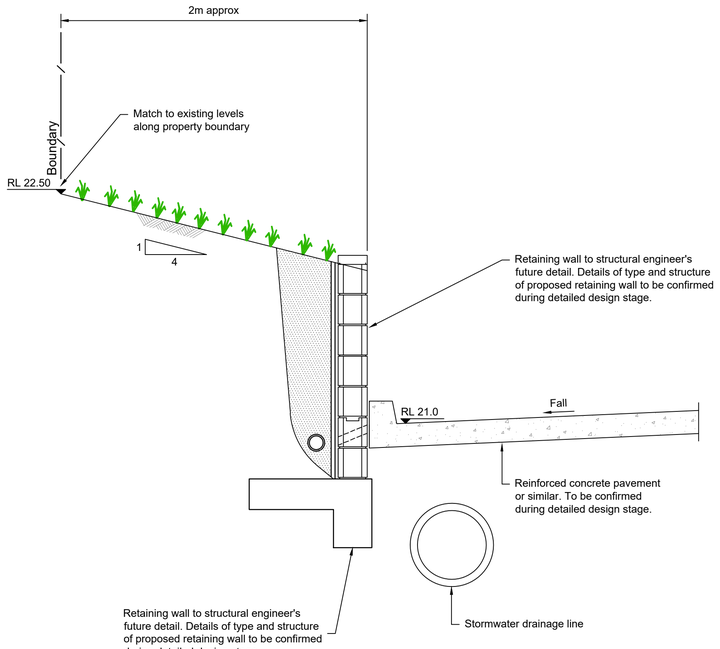
Drawing Number
MMD-382538-C-DR-00-S96-0120



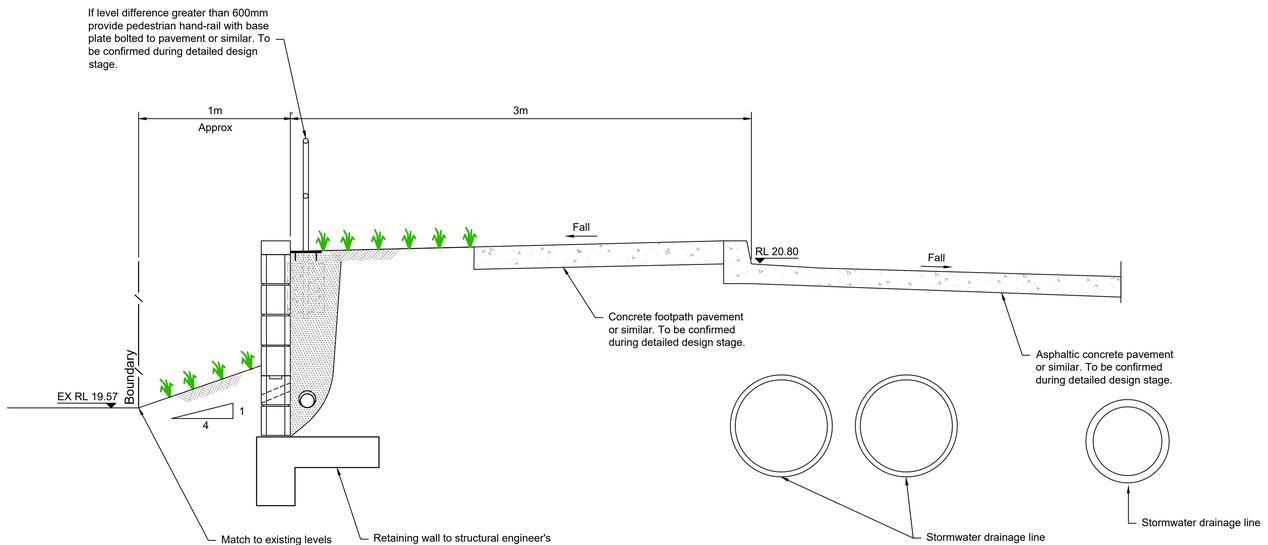
Section 4
1:20
0114



Section 6
1:20
0114



Section 3
1:20
0112



Section 5
1:20
0112

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P2	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P1	15.12.2017	DRC	Issued for Coordination	JG	X

1:20 0 1m 2m

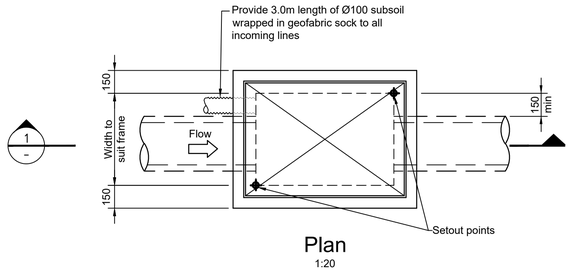
MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

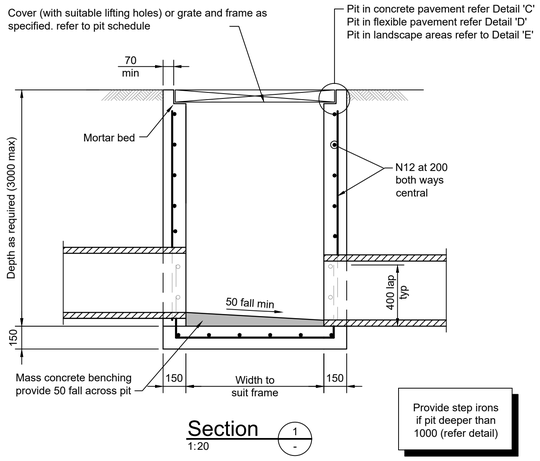
Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Site Sections
Sheet 2

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:20	PRE		P3	STD	

Drawing Number
MMD-382538-C-DR-00-S96-0121

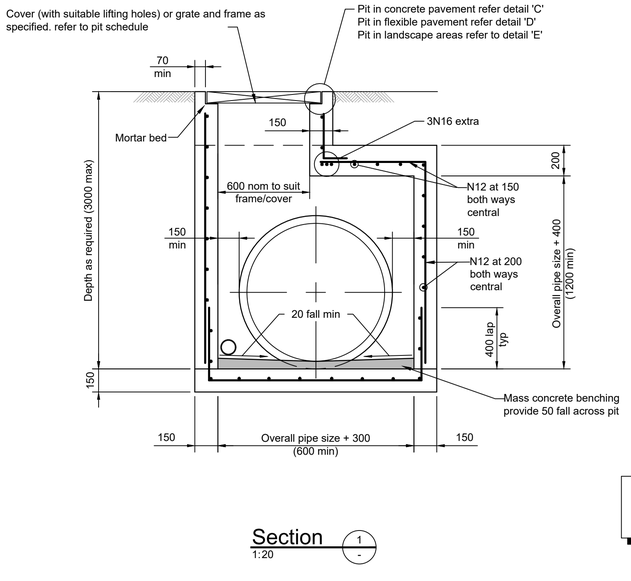


Plan
1:20

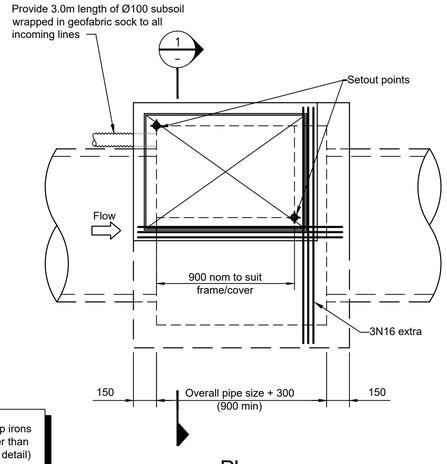


Section
1:20

Surface inlet / Junction pit
(pipe sizes ≤ Ø450)

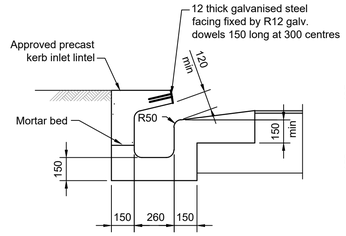


Section
1:20

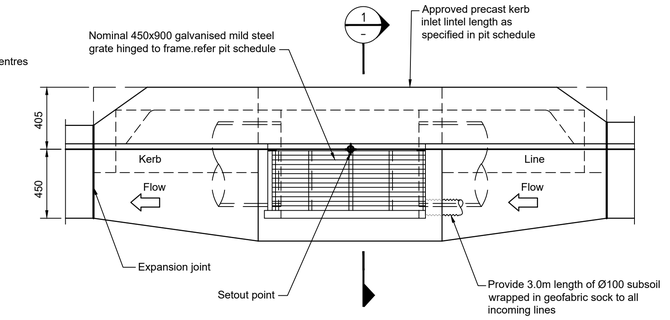


Plan
1:20

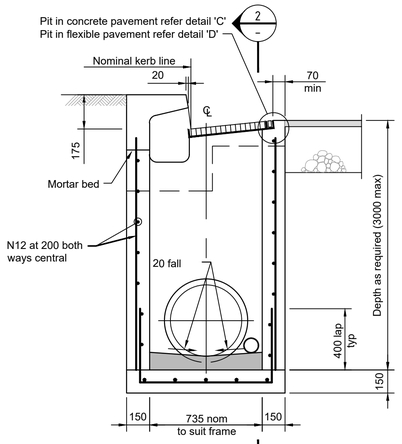
Surface inlet / junction pit
(pipe sizes > Ø450)



Section
1:20

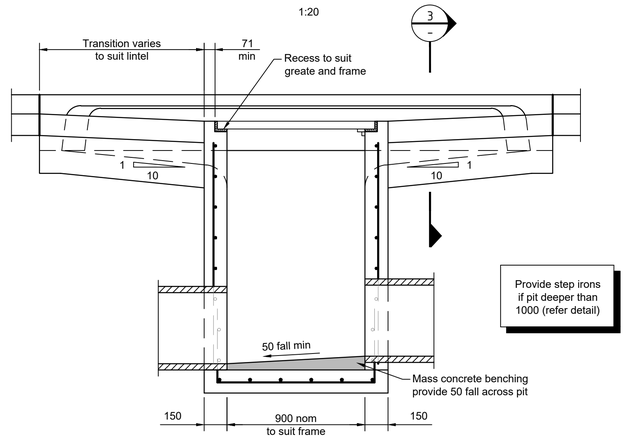


Plan
1:20

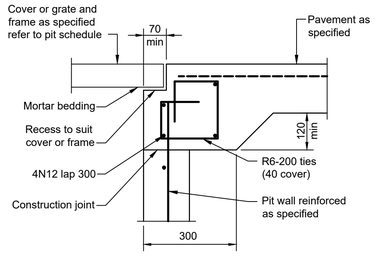


Section
1:20

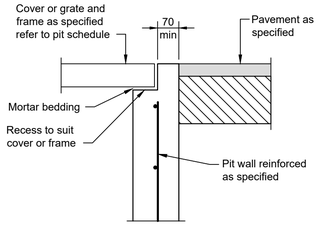
Grated kerb inlet pit at sag
(pipe sizes ≤ Ø450)



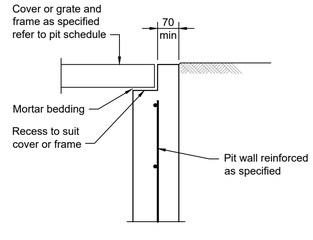
Section
1:20



Detail 'C'
1:10



Detail 'D'
1:10



Detail 'E'
1:10

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X
P1	31.05.2017	DRC	Issued for Section 96 Approval	JG	X

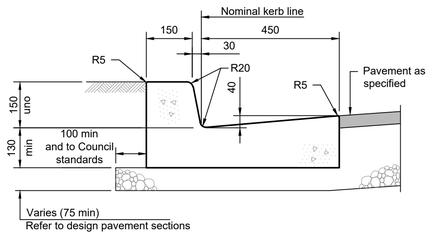
MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Stormwater Details
Sheet 1

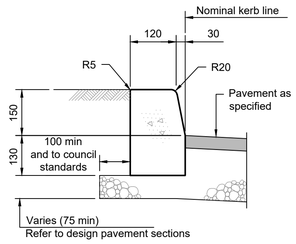
Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1: As Shown	Status: PRE		Rev: P6	Security: STD	

Drawing Number
MMD-382538-C-DR-00-S96-0150



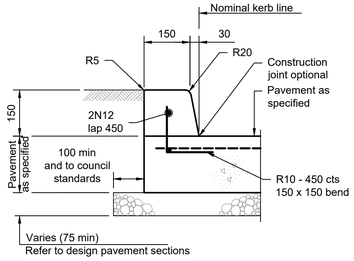
Kerb and Gutter (KG)

1:10



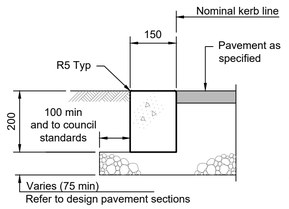
Kerb Only (KO)

1:10



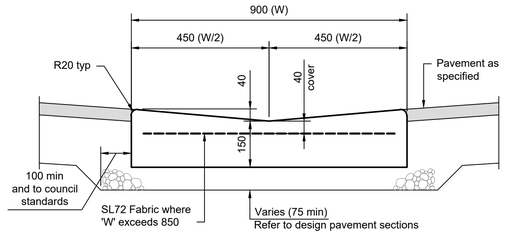
Integral Kerb (IK)

1:10



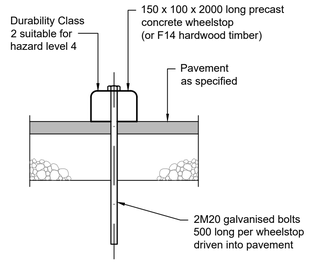
Flush Kerb (FK)

1:10



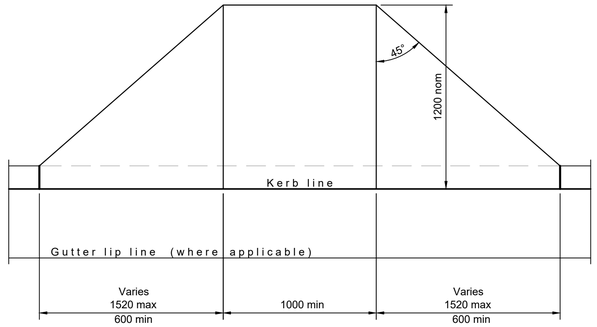
Dish Drain (DD)

1:10

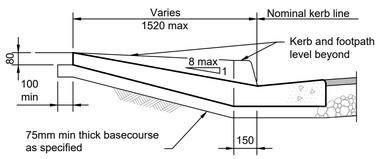


Wheel Stop (WSF)
in Flexible Pavement

1:10



Plan

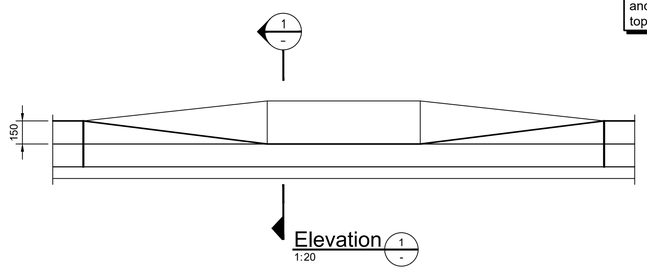


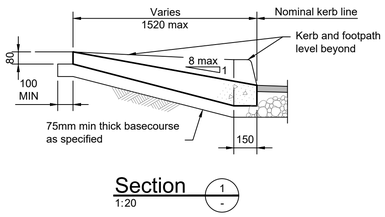
Section 1/-

1:20

(For kerb and gutter)

Design note
Check landing extent
and tactile indicator req's
top of ramp 1200 min

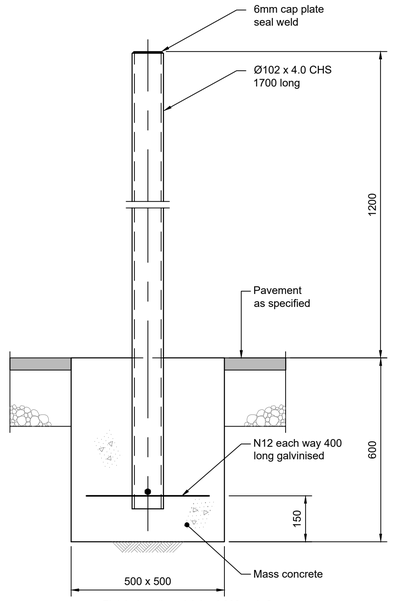




(For kerb only)

Pram Ramp (PR)

1:20



Finish: hot dip galvinised 600gm/m²

Bollard to Flexible Pavement

1:10

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P6	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P5	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P4	15.12.2017	DRC	Issued for Coordination	DR	X
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X
P1	31.05.2017	DRC	Issued for Section 96 Approval	JG	X

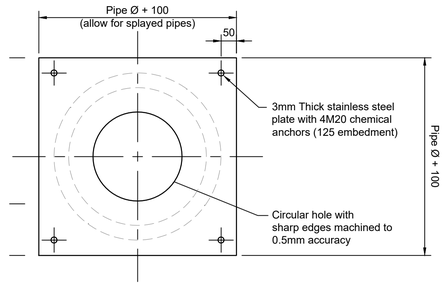
MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Siteworks Details
Sheet 1

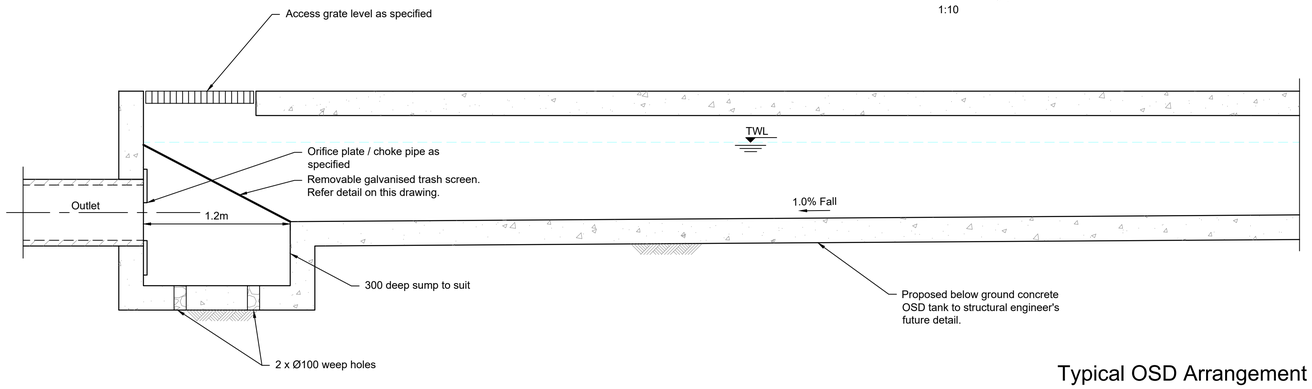
Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1: As Shown	Status: PRE		Rev: P6	Security: STD	

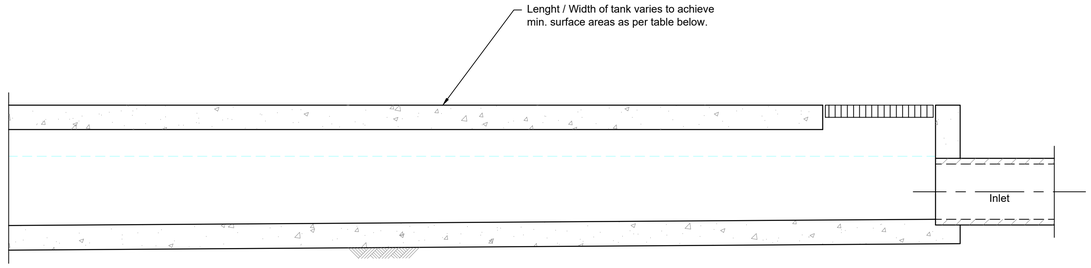
Drawing Number
MMD-382538-C-DR-00-S96-0160



Orifice Plate - Type A

1:10

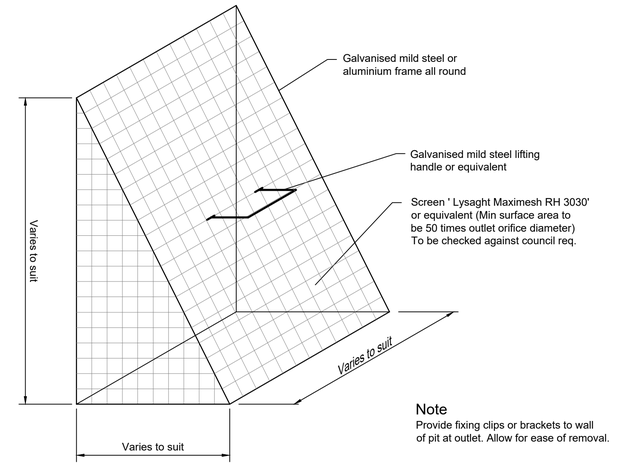




Typical OSD Arrangement

1:25

On-Site Detention Summary				
Tank	Outlet Type	Surface Area (m²)	100yr TWL	100yr Storage Volume (m³)
A9	Ø609 Orifice Plate	750	RL 20.79	952
E7	Ø290 Orifice Plate	420	RL 19.92	459
H5	2 x Ø525 Choke Pipes	475	RL 19.37	425
S4	Ø130 Orficie Plate	100	RL 19.07	257
T9	2 x Ø525 Choke Pipes	250	RL 17.48	366



Typical Removable Screen Detail

NTS

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	02.07.2018	GAP	Re-Issued for Approval	DR	BS

1:10 0 500mm 1000mm
1:25 0 1250mm 2500mm

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Typical OSD Tank Details
Sheet 1

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	1:50	Status	PRE	Rev P1	Security STD

Drawing Number
MMD-382538-C-DR-00-S96-0179

Legend

- DRAINS catchment boundary
- Catchment Area = 1.22Ha / Discharge Location = E10 — DRAINS catchment summary and discharge location
- Contributing flows from upstream catchment

Contributing flows from upstream playing fields to the west

Catchment Area = 2.06Ha
Discharge Location = A14

Catchment Area = 1.22Ha
Discharge Location = E10

Catchment Area = 2.32Ha
Discharge Location = A14

Catchment Area = 1.98Ha
Discharge Location = H9

Catchment Area = 2.44Ha
Discharge Location = T16

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P5	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P4	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X
P1	31.05.2017	DRC	Issued for Section 96 Approval	JG	X

1:1000 0 50m 100m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

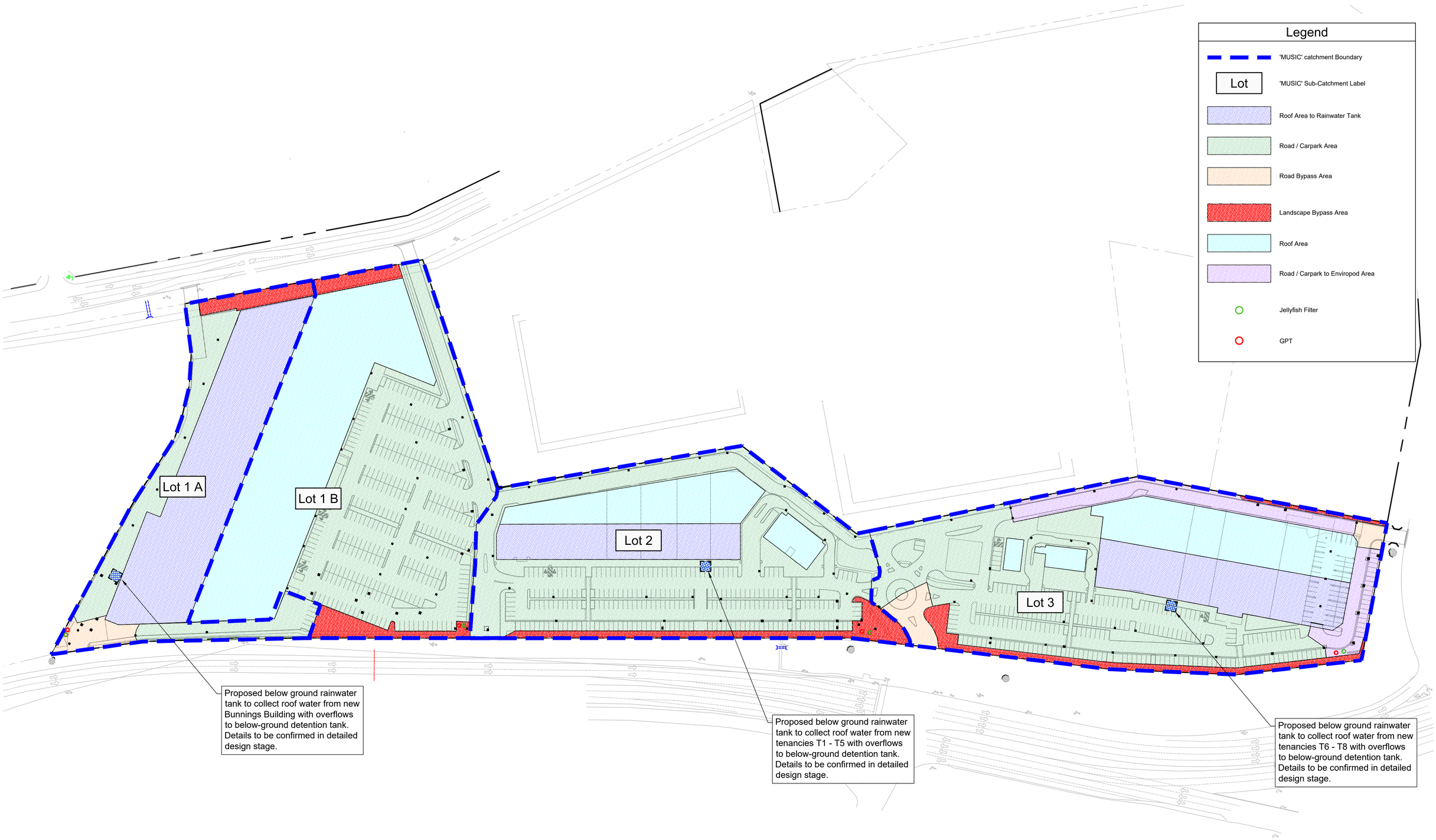
Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
DRAINS Catchment Plan

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:1000	PRE		P5	STD	

Drawing Number
MMD-382538-C-DR-00-S96-0180

p:\Sydney\Projects\38xxxx\382538 blueprint windale\04 working\01 CAD\Civil\Drawings\MMD-382538-C-DR-00-S96-0180.dwg Jul 3, 2018 - 11:33AM rei55920



Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P5	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P4	19.12.2017	DRC	Re-Issued for Approval	DR	BS
P3	04.07.2017	JN	Re-Issued for Section 96 Approval	JG	X
P2	23.06.2017	DRC	Issued for Section 96 Approval	JG	X
P1	31.05.2017	DRC	Issued for Section 96 Approval	JG	X

1:1000 0 50m 100m

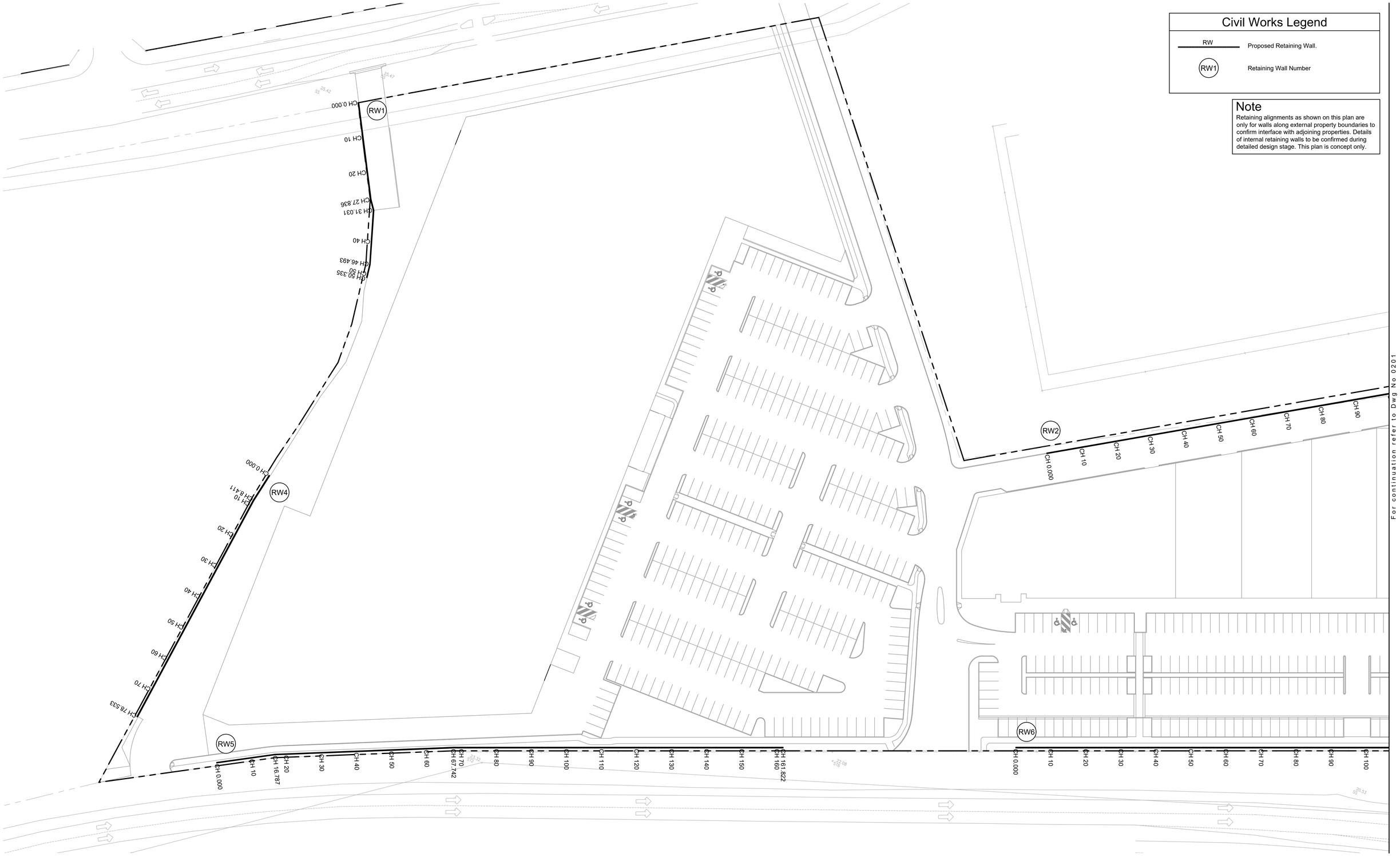
MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
MUSIC Catchment Plan

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:1000	PRE		P5	STD	

Drawing Number
MMD-382538-C-DR-00-S96-0181



Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P1	25.06.2017	GAP	Issued for Information	DR	X

1:500 0 25m 50m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Retaining Wall Alignment Plan
Sheet 1

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	1:500	Status	PRE	Rev	P2	Security	STD

Drawing Number
MMD-382538-C-DR-00-S96-0200

Civil Works Legend

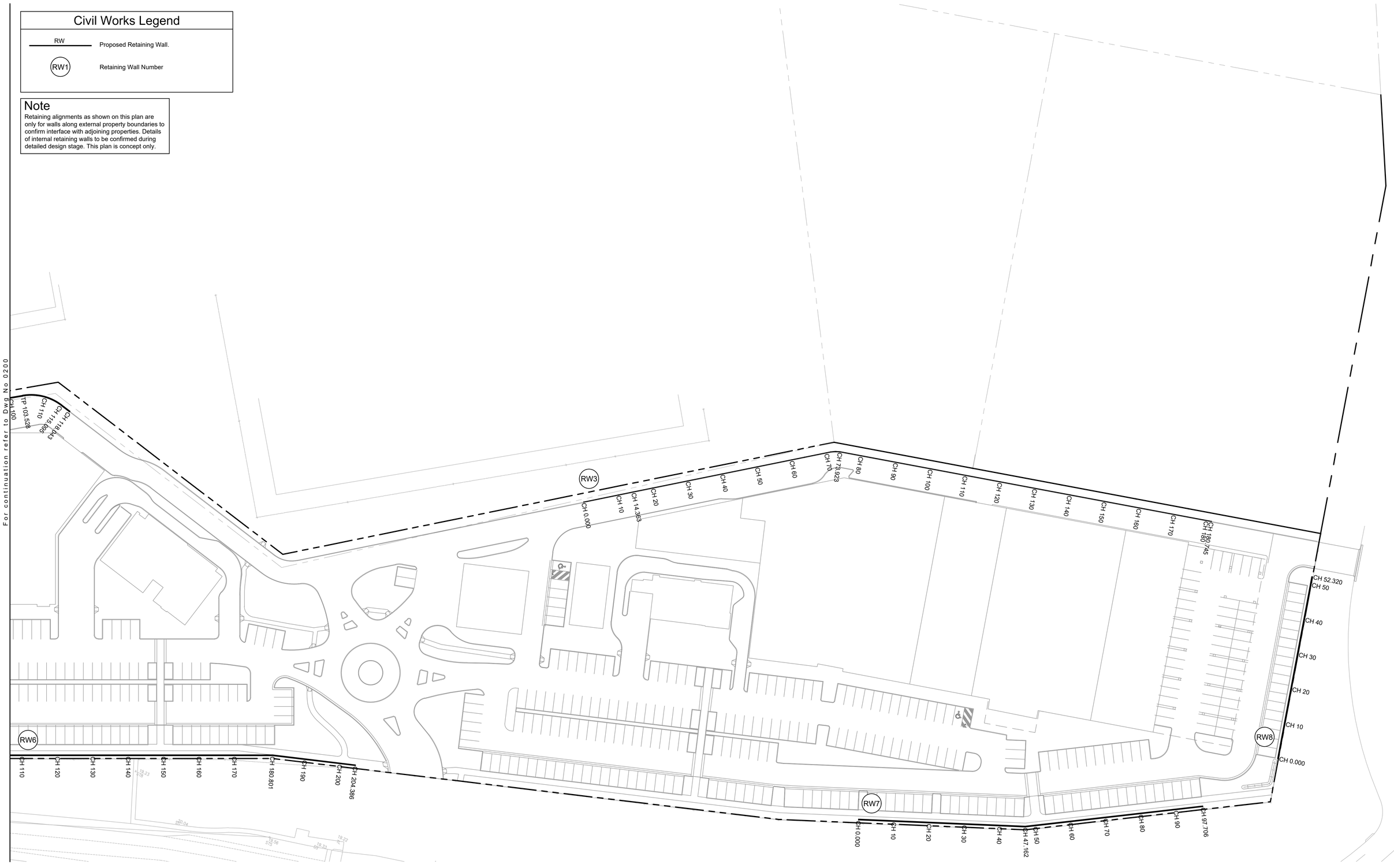
RW — Proposed Retaining Wall.

RW1 — Retaining Wall Number

Note

Retaining alignments as shown on this plan are only for walls along external property boundaries to confirm interface with adjoining properties. Details of internal retaining walls to be confirmed during detailed design stage. This plan is concept only.

For continuation refer to Dwg No 0200



Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P1	25.06.2017	GAP	Issued for Information	DR	X

1:1250 0 62.5m 125m

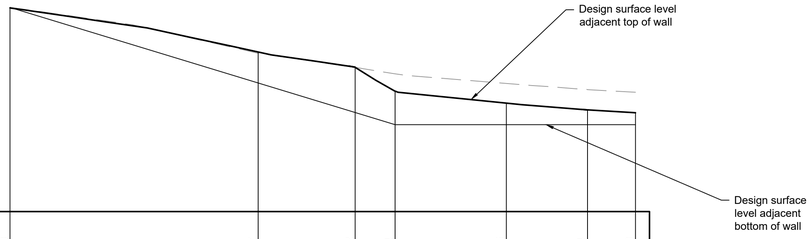
MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Retaining Wall Alignment Plan
Sheet 2

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:500	PRE		P2	STD	

Drawing Number
MMD-382538-C-DR-00-S96-0201

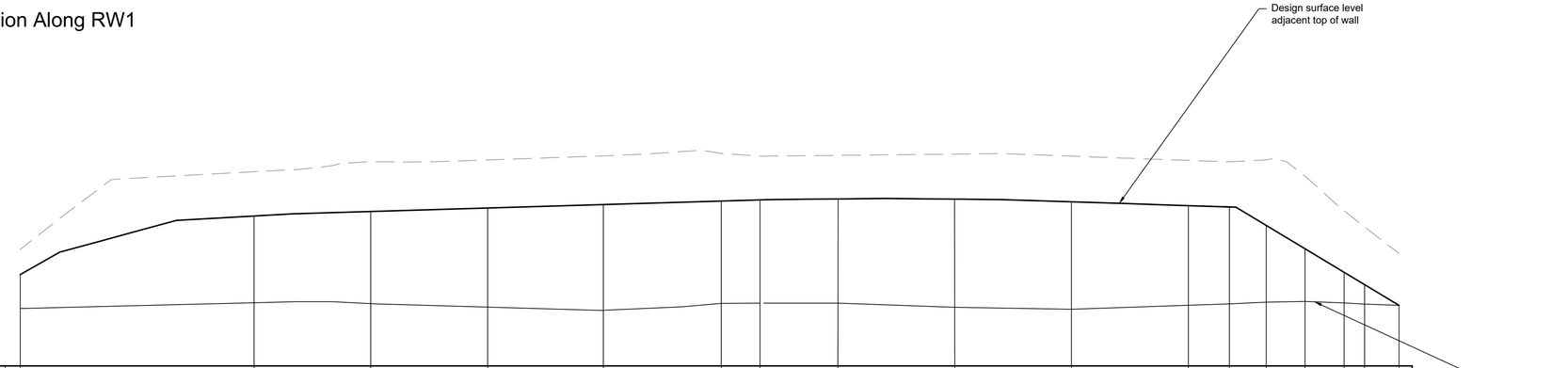


Datum RL 22.0

Design Surface Level TOW	25.29	24.57	24.32	23.94	23.75	23.64	23.59
Design Surface Level BOW	25.29	24.07	23.60	23.40	23.40	23.40	23.40
Height (m)	0.00	0.50	0.72	0.54	0.35	0.24	0.19
Existing Level	25.29	24.55	24.32	24.22	24.06	23.97	23.92
Chainage	0.000	20.000	27.824	31.038	40.000	46.548	50.407

1:250 Hor - 1:50 Ver

Longitudinal Section Along RW1



Datum RL 20.0

Design Surface Level TOW	21.56	22.56	22.64	22.70	22.76	22.82	22.84	22.86	22.85	22.81	22.74	22.72	22.41	22.00	21.60	21.39	21.04	
Design Surface Level BOW	20.98	21.08	21.07	21.01	20.95	21.07	21.07	21.08	21.00	20.97	21.04	21.06	21.09	21.11	21.08	21.06	21.04	
Height (m)	0.58	1.48	1.57	1.69	1.81	1.75	1.77	1.78	1.85	1.84	1.70	1.66	1.32	0.89	0.52	0.33	0.00	
Existing Level	21.99	23.32	23.50	23.52	23.59	23.64	23.59	23.60	23.63	23.59	23.52	23.50	23.53	23.25	22.66	22.38	21.92	
Chainage	0.000	20.000	30.000	40.000	49.916	60.000	63.333	70.000	80.000	90.000	100.000	103.528	106.667	110.000	113.333	115.095	118.043	

1:250 Hor - 1:50 Ver

Longitudinal Section Along RW2

Note:
Retaining wall elevations are from design finished surface to design finished surface and do not allow for footings or structures above/below design finished surface level at top or base of wall. To be confirmed at detailed design stage.

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P1	25.06.2017	GAP	Issued for Information	DR	X

1:250 0 12.5m 25m
1:50 0 2.5m 5m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

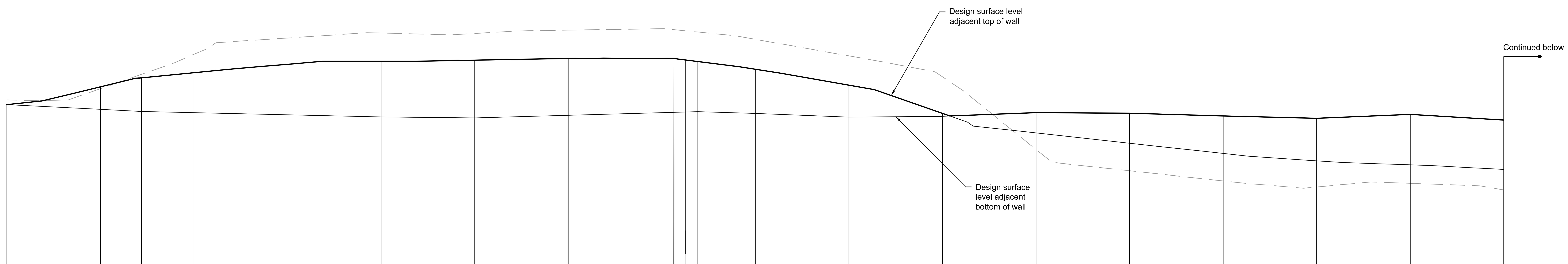
Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Retaining Wall Longsections
Sheet 1

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	

Scale at A1	Status	Rev	Security
As Shown	PRE	P2	STD

Drawing Number
MMD-382538-C-DR-00-S96-0210

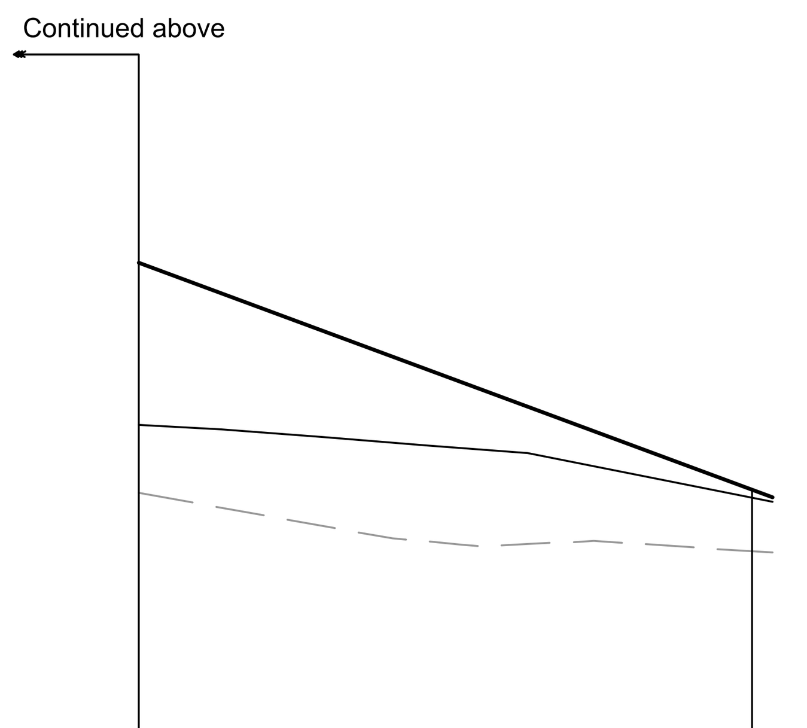


Datum RL 16.0

Design Surface Level TOW	19.45	19.83	20.02	20.13	20.37	20.40	20.43	20.43	20.40	20.37	20.20	19.86	19.26	19.27	19.26	19.20	19.15	19.24	19.12
Design Surface Level BOW	19.45	19.34	19.30	19.27	19.18	19.16	19.22	19.28	19.29	19.29	19.26	19.18	19.20	18.84	18.62	18.40	18.24	18.16	18.06
Height (m)	0.00	0.49	0.72	0.86	1.19	19.16	1.24	1.15	1.11	1.08	0.94	0.68	0.06	0.43	0.64	0.80	0.91	1.08	1.06
Existing Level	19.55	19.79	20.09	20.52	20.98	20.97	21.04	21.05	21.02	21.00	20.84	20.49	20.04	18.49	18.03	17.81	17.68	17.76	17.62
Chainage	0.000	10.000	14.363	20.000	40.000	50.000	60.000	71.283	72.551	73.857	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000

1:250 Hor - 1:50 Ver

Longitudinal Section Along RW3

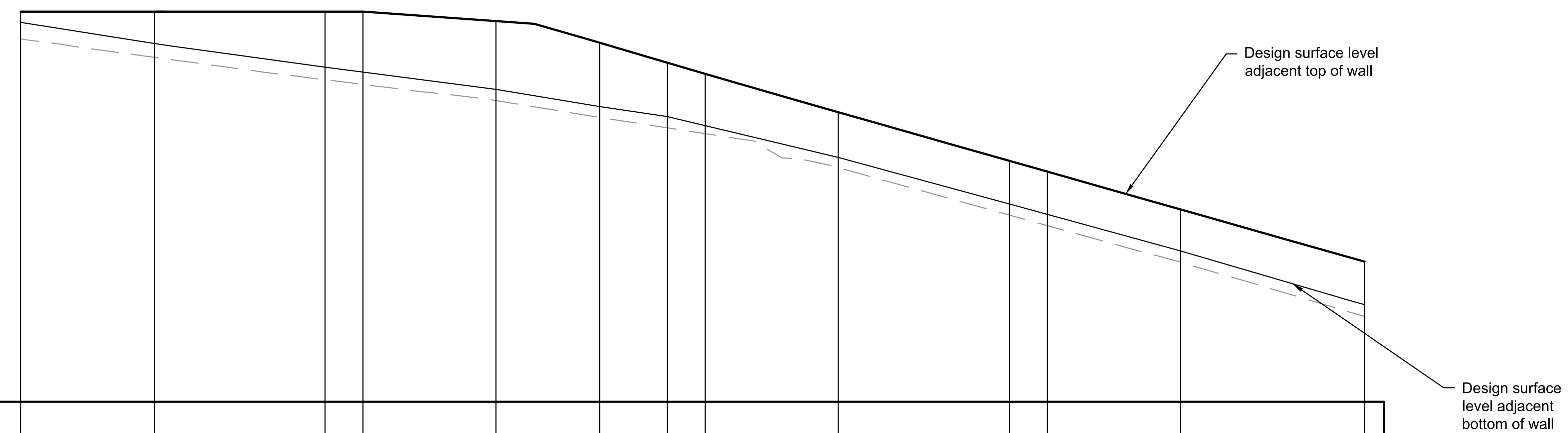


Datum RL 16.0

Design Surface Level TOW	19.12	17.64
Design Surface Level BOW	18.06	17.59
Height (m)	1.06	0.05
Existing Level	17.62	17.24
Chainage	160.000	180.000

1:250 Hor - 1:50 Ver

Longitudinal Section Along RW3 cont'd



Datum RL 19.0

Design Surface Level TOW	23.55	23.55	23.55	23.55	23.44	23.19	22.96	22.82	22.38	21.81	21.68	21.24	20.63
Design Surface Level BOW	23.43	23.18	22.90	22.85	22.64	22.45	22.33	22.22	21.85	21.31	21.18	20.76	20.13
Height (m)	0.12	0.37	0.65	0.70	0.80	0.74	0.63	0.60	0.53	0.50	0.50	0.48	0.50
Existing Level	23.23	23.02	22.76	22.70	22.51	22.32	22.20	22.13	21.73	21.18	21.06	20.63	20.00
Chainage	0.000	7.816	17.777	20.000	27.777	33.841	37.780	40.000	47.780	57.780	60.000	67.780	78.533

1:250 Hor - 1:50 Ver

Longitudinal Section Along RW4

Note:
Retaining wall elevations are from design finished surface to design finished surface and do not allow for footings or structures above/below design finished surface level at top or base of wall. To be confirmed at detailed design stage.

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P1	25.06.2017	GAP	Issued for Information	DR	X

1:250 0 12.5m 25m
1:50 0 2.5m 5m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

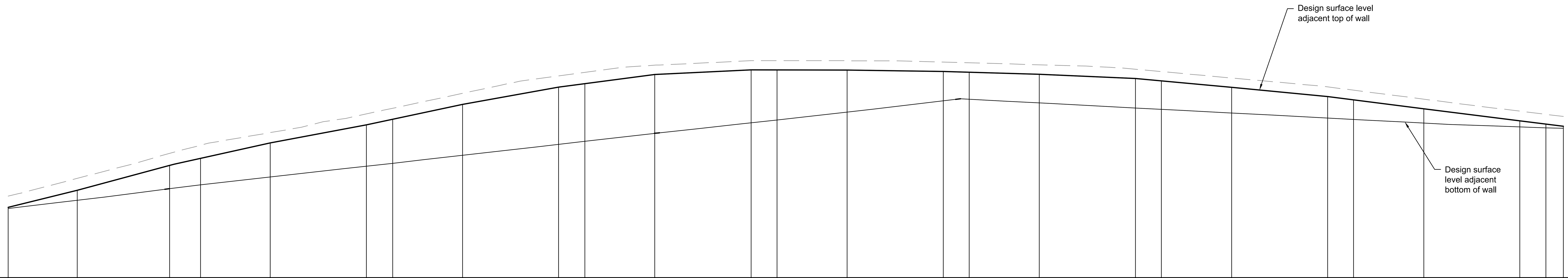
Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Retaining Wall Longsections
Sheet 2

Designed	A.Singh		Eng check	D. Reilly
Drawn	D.Chapman		Coordination	J. Gilligan
Dwg check	A.Singh		Approved	B.Soo

Scale at A1	Status	Rev	Security
As Shown	PRE	P2	STD

Drawing Number
MMD-382538-C-DR-00-S96-0211



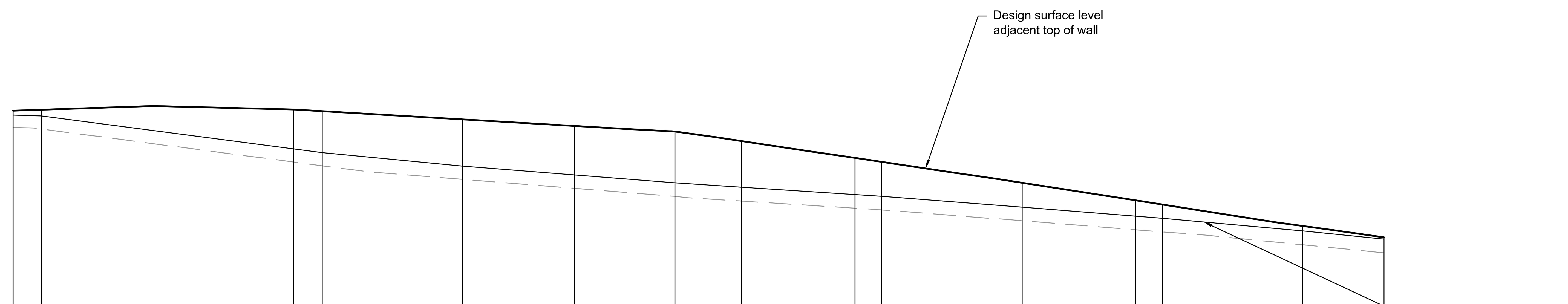
Datum RL 19.0

Row													
Design Surface Level TOW	20.47	20.82	21.34	21.48	21.81	22.18	22.30	22.61	22.97	23.04	23.23	23.33	23.33
Design Surface Level BOW	20.44	20.61	20.85	20.94	21.10	21.32	21.38	21.55	21.78	21.84	22.00	22.22	22.28
Height (m)	0.03	0.21	0.49	0.54	0.71	0.86	0.92	1.06	1.19	1.20	1.23	1.11	1.05
Existing Level	20.70	21.07	21.59	21.76	22.02	22.41	22.53	22.84	23.20	23.28	23.43	23.52	23.52
Chainage	0.000	7.188	16.787	20.000	27.268	37.268	40.000	47.268	57.268	60.000	67.268	77.299	80.000

Row													
Design Surface Level TOW	23.32	23.30	23.28	23.24	23.15	23.10	22.97	22.78	22.71	22.52	22.27	22.20	22.15
Design Surface Level BOW	22.45	22.69	22.72	22.64	22.54	22.51	22.43	22.33	22.30	22.22	22.14	22.12	22.11
Height (m)	0.87	0.61	0.56	0.60	0.61	0.59	0.54	0.45	0.41	0.30	0.13	0.08	0.04
Existing Level	23.52	23.49	23.48	23.44	23.34	23.29	23.16	22.98	22.91	22.72	22.47	22.40	22.36
Chainage	87.299	97.299	100.000	107.299	117.299	120.000	127.299	137.299	140.000	147.299	157.299	160.000	161.822

1:250 Hor - 1:50 Ver

Longitudinal Section Along RW5



Datum RL 16.0

Row															
Design Surface Level TOW	18.80	18.81	18.82	18.80	18.68	18.58	18.50	18.37	18.13	18.07	17.77	17.52	17.46	17.16	17.00
Design Surface Level BOW	18.74	18.73	18.26	18.20	18.01	17.89	17.77	17.71	17.61	17.58	17.43	17.30	17.27	17.09	16.97
Height (m)	0.06	0.08	0.56	0.60	0.67	0.69	0.73	0.66	0.52	0.49	0.34	0.22	0.19	0.07	0.03
Existing Level	18.56	18.54	18.07	18.02	17.82	17.70	17.58	17.51	17.41	17.39	17.23	17.10	17.07	16.89	16.78
Chainage	0.000	2.031	20.000	22.031	32.031	40.000	47.161	51.907	60.000	61.907	71.907	80.000	81.907	91.907	97.706

1:250 Hor - 1:50 Ver

Longitudinal Section Along RW7

Note:
Retaining wall elevations are from design finished surface to design finished surface and do not allow for footings or structures above/below design finished surface level at top or base of wall. To be confirmed at detailed design stage.

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P1	25.06.2017	GAP	Issued for Information	DR	X

1:250 0 12.5m 25m
1:50 0 2.5m 5m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

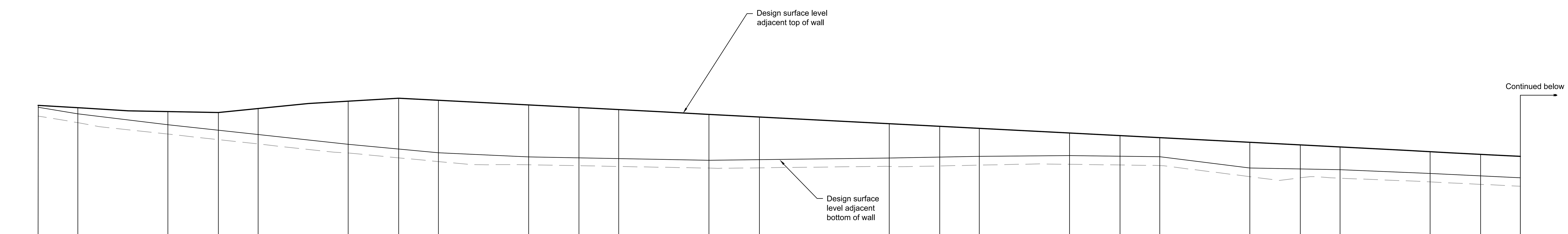
Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Retaining Wall Longsections
Sheet 3

Designed	A.Singh	Eng check	D. Reilly
Drawn	D.Chapman	Coordination	J. Gilligan
Dwg check	A.Singh	Approved	B.Soo

Scale at A1	Status	Rev	Security
As Shown	PRE	P2	STD

Drawing Number
MMD-382538-C-DR-00-S96-0212

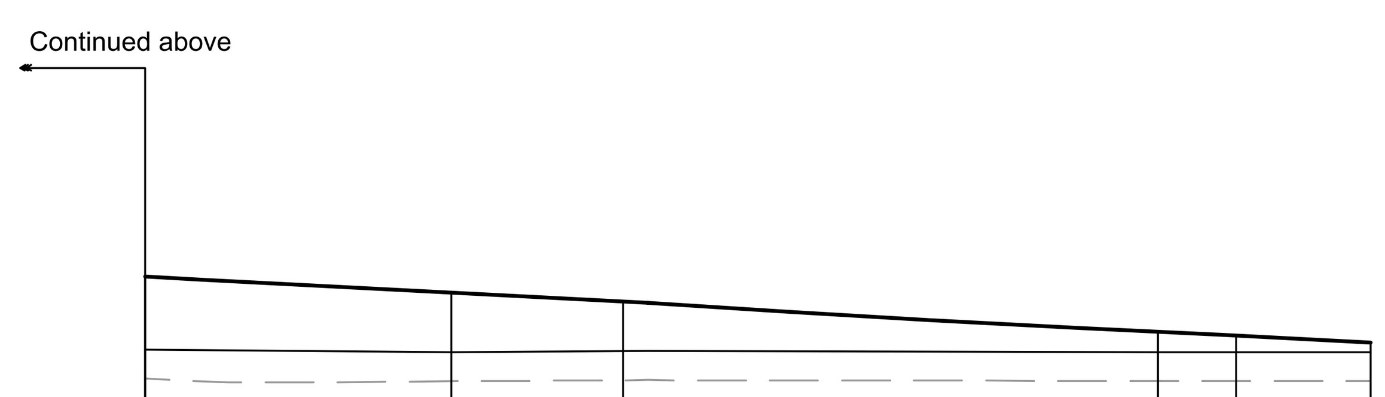


Datum RL 18.0

Design Surface Level TOW	20.90	20.84	20.76	20.74	20.83	20.99	21.06	21.01	20.91	20.85	20.80	20.70	20.64	20.49	20.43	20.39	20.28	20.22	20.18	20.08	20.02	19.97	19.87	19.81	19.76
Design Surface Level BOW	20.86	20.71	20.47	20.34	20.25	20.03	19.93	19.84	19.75	19.73	19.71	19.68	19.69	19.72	19.75	19.76	19.78	19.77	19.75	19.51	19.48	19.47	19.38	19.33	19.29
Height (m)	0.04	0.13	0.29	0.40	0.58	0.96	1.13	1.17	1.16	1.12	1.09	1.02	0.95	0.77	0.68	0.63	0.50	0.45	0.43	0.57	0.54	0.50	0.49	0.48	0.47
Existing Level	20.66	20.51	20.26	20.14	20.04	19.84	19.73	19.65	19.58	19.56	19.54	19.50	19.51	19.54	19.55	19.57	19.59	19.57	19.56	19.31	19.29	19.28	19.20	19.14	19.10
Chainage	0.000	4.404	14.404	20.000	24.404	34.404	40.000	44.404	54.404	60.000	64.404	74.404	80.000	94.404	100.000	104.404	114.404	120.000	124.404	134.404	140.000	144.404	154.404	160.000	164.404

1:250 Hor - 1:50 Ver

Longitudinal Section Along RW6

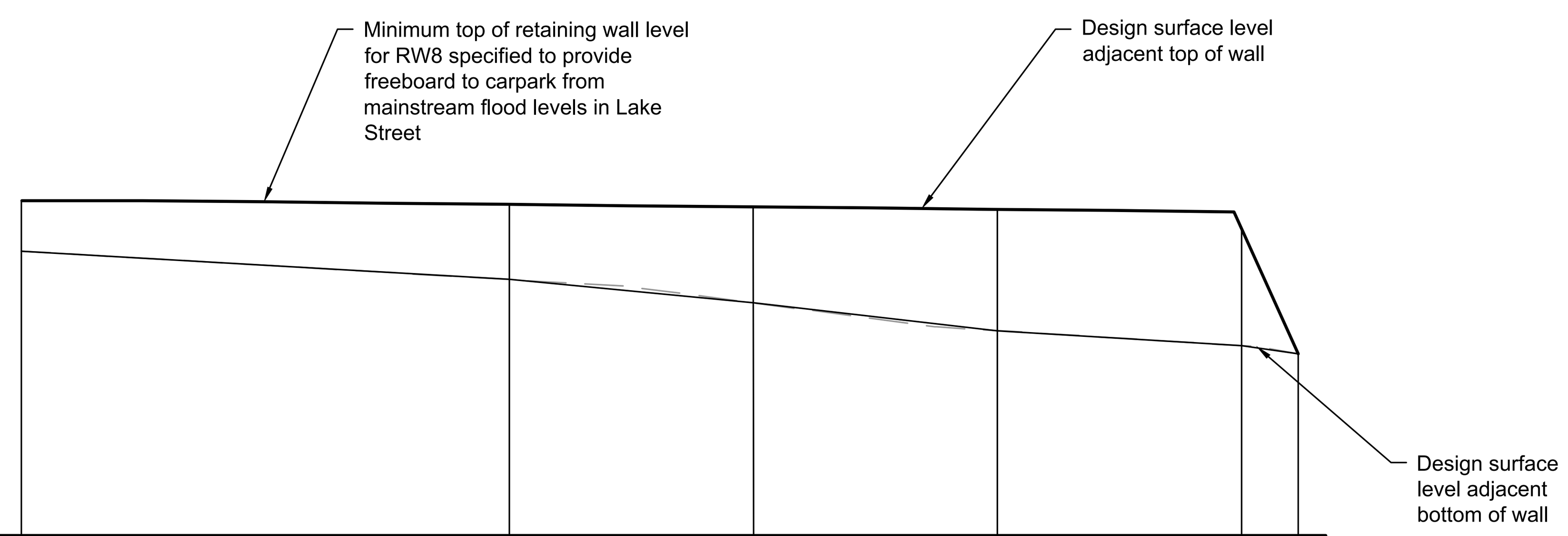


Datum RL 18.0

Design Surface Level TOW	19.76	19.66	19.60	19.40	19.38	19.34
Design Surface Level BOW	19.29	19.27	19.28	19.27	19.27	19.27
Height (m)	0.47	0.39	0.32	0.13	0.11	0.07
Existing Level	19.10	19.08	19.09	19.08	19.08	19.08
Chainage	164.404	174.404	180.000	197.445	200.000	204.386

1:250 Hor - 1:50 Ver

Longitudinal Section Along RW6 cont'd



Datum RL 14.0

Design Surface Level TOW	16.74	16.71	16.69	16.67	16.51	15.49
Design Surface Level BOW	16.33	16.09	15.90	15.68	15.55	15.49
Height (m)	0.41	0.62	0.79	0.99	0.96	0.00
Existing Level	16.33	16.09	15.90	15.68	15.55	15.49
Chainage	0.000	20.000	30.000	40.000	50.000	52.320

1:250 Hor - 1:50 Ver

Longitudinal Section Along RW8

Note:
Retaining wall elevations are from design finished surface to design finished surface and do not allow for footings or structures above/below design finished surface level at top or base of wall. To be confirmed at detailed design stage.

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P1	25.06.2017	GAP	Issued for Information	DR	X

1:250 0 12.5m 25m
1:50 0 2.5m 5m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Retaining Wall Longsections
Sheet 4

Designed	A.Singh	Eng check	D. Reilly	
Drawn	D.Chapman	Coordination	J. Gilligan	
Dwg check	A.Singh	Approved	B.Soo	
Scale at A1: As Shown	Status: PRE	Rev: P2	Security: STD	

Drawing Number
MMD-382538-C-DR-00-S96-0213

Depth Range Legend

<-2.0m	0m to 0.2m
-2.0m to -1.8m	0.2m to 0.4m
-1.8m to -1.6m	0.4m to 0.6m
-1.6m to -1.4m	0.6m to 0.8m
-1.4m to -1.2m	0.8m to 1.0m
-1.2m to -1.0m	1.0m to 1.2m
-1.0m to -0.8m	1.2m to 1.4m
-0.8m to -0.6m	1.4m to 1.6m
-0.6m to -0.4m	1.6m to 1.8m
-0.4m to -0.2m	1.8m to 2.0m
-0.2m to 0m	>2.0m

Earthworks Notes

Estimated volumes between existing survey and design surface levels only i.e. no benching has been applied. To be confirmed at detailed design stage. It is the contractors responsibility to verify all volumes prior to construction:

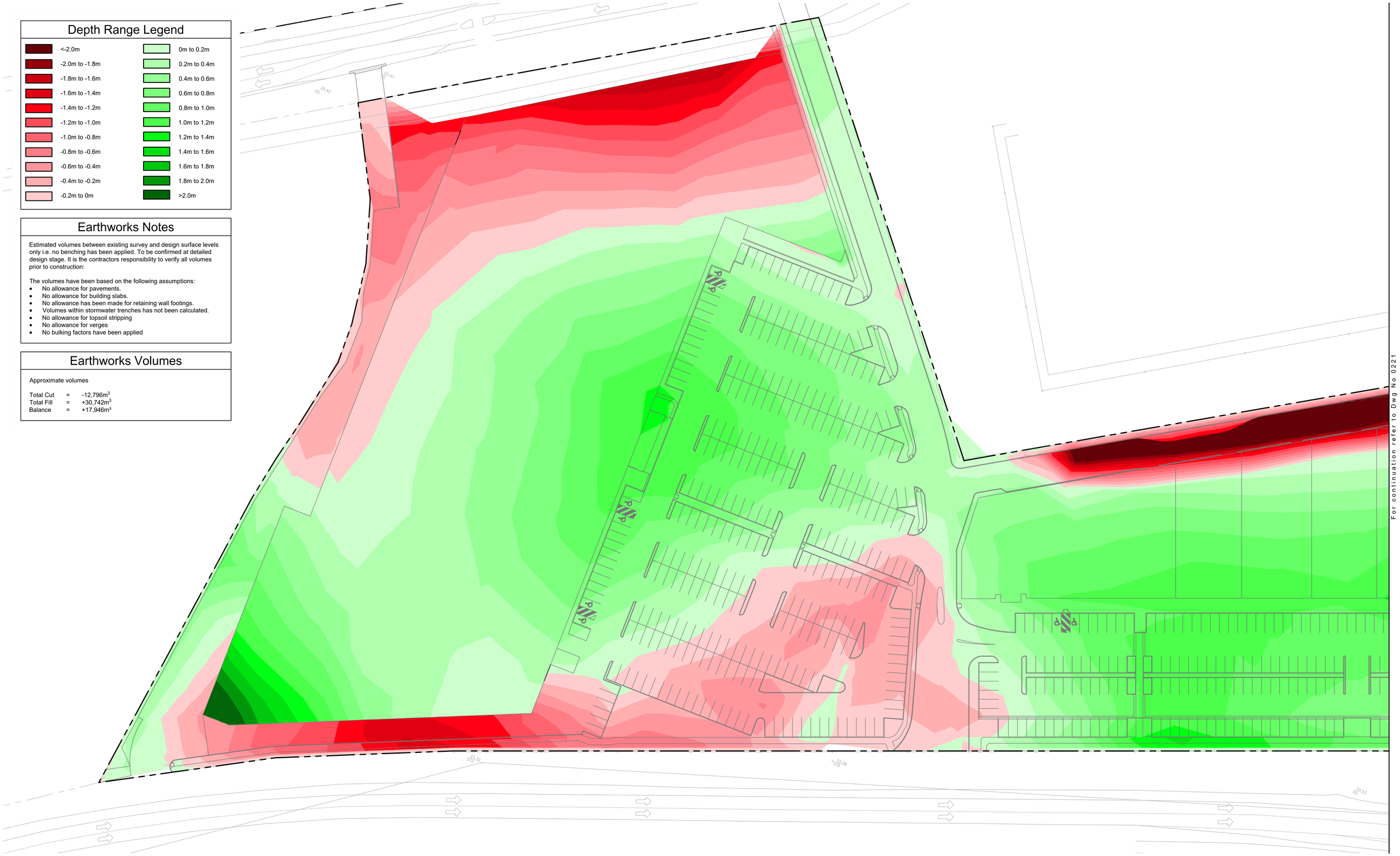
The volumes have been based on the following assumptions:

- No allowance for pavements.
- No allowance for building slabs.
- No allowance has been made for retaining wall footings.
- Volumes within stormwater trenches has not been calculated.
- No allowance for topsoil stripping
- No allowance for verges
- No bulking factors have been applied

Earthworks Volumes

Approximate volumes

Total Cut	=	-12,796m^3
Total Fill	=	+30,742m^3
Balance	=	+17,946m^3



Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P1	25.06.2017	GAP	Issued for Information	DR	X

1:500 0 25m 50m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

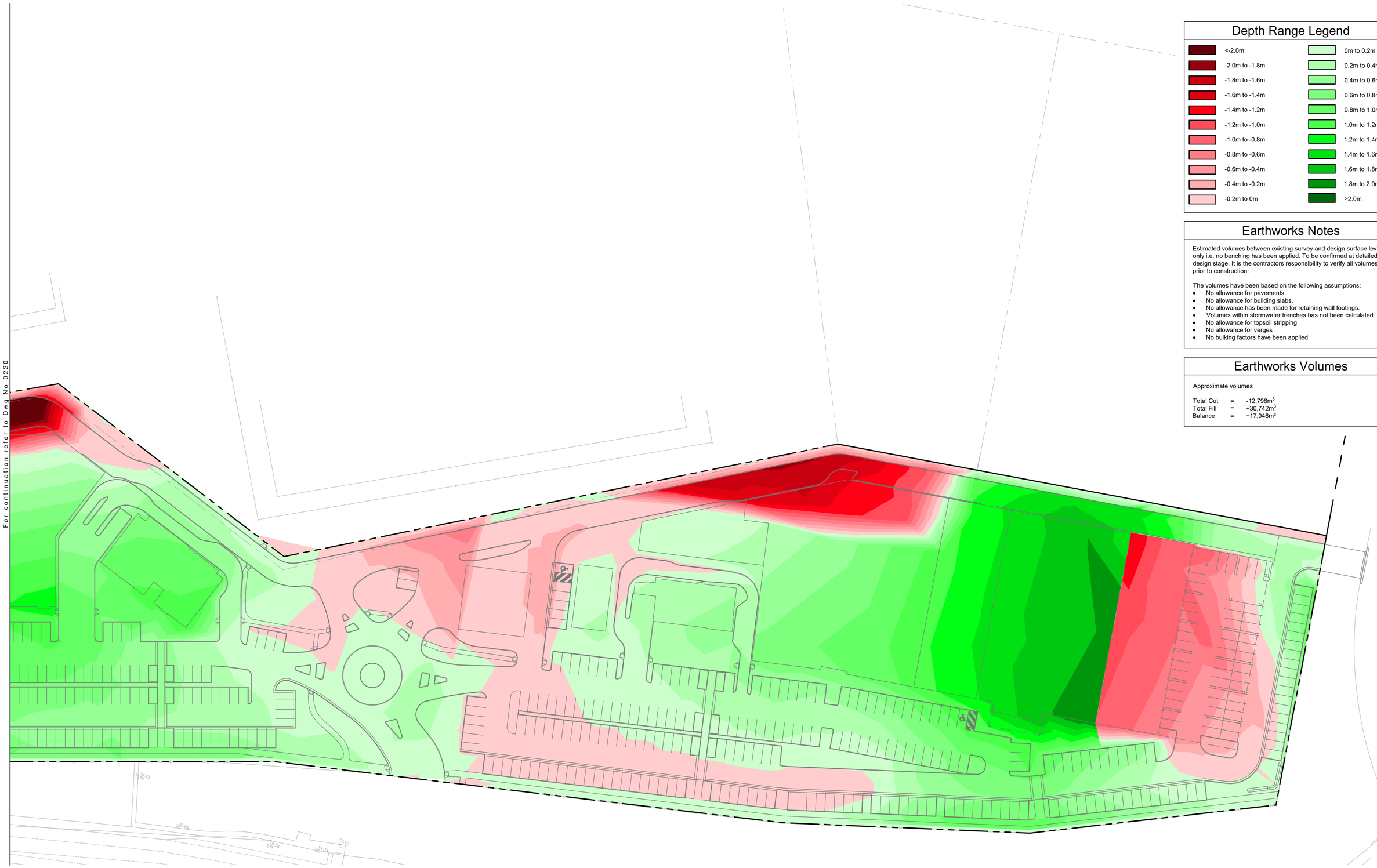
Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Concept Cut and Fill Plan
Sheet 1

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:500	PRE		P2	STD	

Drawing Number
MMD-382538-C-DR-00-S96-0220

For continuation refer to Dwg No 0220



Depth Range Legend

<-2.0m	0m to 0.2m
-2.0m to -1.8m	0.2m to 0.4m
-1.8m to -1.6m	0.4m to 0.6m
-1.6m to -1.4m	0.6m to 0.8m
-1.4m to -1.2m	0.8m to 1.0m
-1.2m to -1.0m	1.0m to 1.2m
-1.0m to -0.8m	1.2m to 1.4m
-0.8m to -0.6m	1.4m to 1.6m
-0.6m to -0.4m	1.6m to 1.8m
-0.4m to -0.2m	1.8m to 2.0m
-0.2m to 0m	>2.0m

Earthworks Notes

Estimated volumes between existing survey and design surface levels only i.e. no benching has been applied. To be confirmed at detailed design stage. It is the contractors responsibility to verify all volumes prior to construction:

The volumes have been based on the following assumptions:

- No allowance for pavements.
- No allowance for building slabs.
- No allowance has been made for retaining wall footings.
- Volumes within stormwater trenches has not been calculated.
- No allowance for topsoil stripping
- No allowance for verges
- No bulking factors have been applied

Earthworks Volumes

Approximate volumes

Total Cut	=	-12,796m^3
Total Fill	=	+30,742m^3
Balance	=	+17,946m^3

Re-Issued for Approval

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	02.07.2018	GAP	Re-Issued for Approval	DR	BS
P1	25.06.2017	GAP	Issued for Information	DR	X

1:1250 0 62.5m 125m

MOTT MACDONALD
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678, QVB Sydney
NSW 1230, Australia
T +61 (0)2 9098 6800
W www.mottmac.com

Client
Blueprint
1A, 100 Market St,
South Melbourne, Vic 3205
P 03 9675 4770 F 03 9675 4775
info@blueprintaustalia.com.au

Title
Spotlight Property Group
Bennetts Green, Pacific Highway
Civil Works
Concept Cut and Fill Plan
Sheet 2

Designed	A.Singh		Eng check	D. Reilly	
Drawn	D.Chapman		Coordination	J. Gilligan	
Dwg check	A.Singh		Approved	B.Soo	
Scale at A1	Status		Rev	Security	
1:500	PRE		P2	STD	

Drawing Number
MMD-382538-C-DR-00-S96-0221