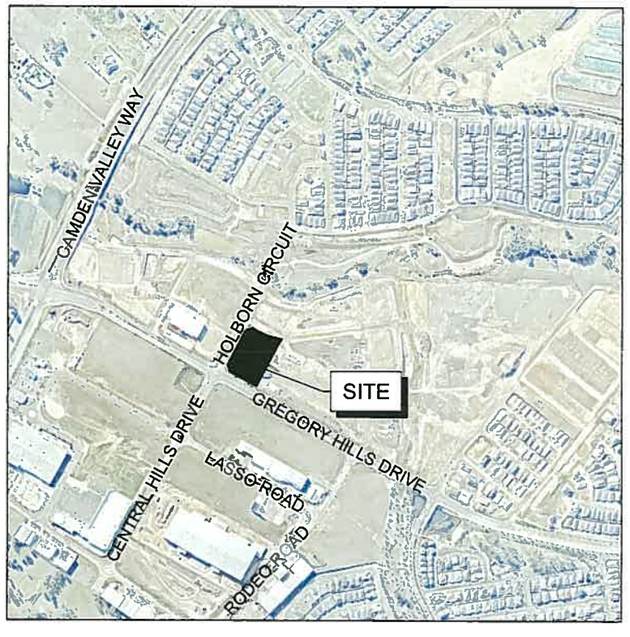


Locality Plan

Drawing List

Drawing Number	Drawing Title
0001	Cover Sheet
0002	Notes Sheet
0003	Notes and Legends Sheet
0004	Concept Erosion and Sediment Control Plan
0005	Concept Erosion and Sediment Control Details
0006	Bulk Earthworks Plan
0007	Siteworks Plan
0008	Stormwater Drainage Plan
0009	Pavement and Linemarking Plan
0010	Pavement and Siteworks Details
0011	Stormwater Drainage Details
0012	On-site Detention Tank Details
0013	Catchment Plan
0014	Turning Path Plan

Mott MacDonald

Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

Gregory Hills Corporate Park
Lot 1 - Gregory Hills Health Hub

Development Application Drawings

MMD-362693-C-DR-CA-0001 P3
Date: 17.03.16

Camden Council General Notes

CCGN1 All work to be carried out in accordance with Camden Council's Engineering Design and Engineering Construction Specifications and to the requirements of the Certifying Authority.

CCGN2 Inspections by Certifying Authority are required at the following stages and the works approved prior to continuance of any future work:

(a) Following installation of erosion and sediment control structures/measures.

(b) Prior to backfilling pipelines, subsoil drains and dams.

(c) Prior to casting of pits and other concrete structures, including kerb and gutter but following placement of footings, formwork, and reinforcement.

(d) Prior to placement of sub base and all subsequent pavement layers, a proof roller test of each pavement layer is required.

(e) Formworks prior to pouring concrete in parking area for footpath crossing and other associated work.

(f) Prior to backfilling public utility crossings in road reserves.

(g) Final inspections after all works are completed and 'works as executed' plans have been submitted to Council.

CCGN3 No trees are to be removed unless approval is granted by Council's Landscape Compliance Officer or as authorised by development consent.

CCGN4 Make smooth junctions with existing works.

CCGN5 No work is to be carried out on Council property or adjoining properties without the written permission from the owner/s.

CCGN6 Vehicular access and all utilities/services are to be maintained at all times to adjoining properties affected by construction.

CCGN7 All rubbish, buildings, sheds and fences to be removed to satisfaction of Council's Engineer.

CCGN8 Council Engineers have discretion to vary, as considered necessary, the engineering requirements in respect of a particular subdivision or development having regard to the site context.

Camden Council Earthworks Notes

CCEN1 Earthworks are to be carried out to the satisfaction of the Council. Unsuitable materials are to be removed from roads and lots prior to filling. The Contractor is to arrange and make available compaction testing results for all areas that contain fill in excess of 200 mm.

CCEN2 Compaction of earthworks shall continue until a dry density ratio of 95% for site filling and 100% for road pavement subgrades has been achieved in accordance with test method AS1289.5.3.1 or AS.1289.5.1.1. The control testing of earthworks shall be in accordance with the guidelines in AS3798 'Guidelines on Earthworks for Commercial and Residential Developments'. Where it is proposed to use test method AS1289.5.8.1 to determine the field density, a sand replacement method shall be used to confirm the results.

CCEN3 The suitable qualified Geotechnical Engineer, shall have a level 1 responsibility for all filling as defined in Appendix B AS3798 'Guidelines on Earthworks for Commercial and Residential Developments', and at the end of the works shall confirm the earthworks comply with the requirements of the specification and drawings by written notification.

CCEN4 In areas to be filled where the slope of the natural surface exceeds 1(V):4(H), benches are to be cut to prevent slipping of the placed fill material as required by the Council.

CCEN5 All batters are to be scarified to a depth of 50 mm to assist with adhesion of top soil to batter face.

CCEN6 Provide minimum 150 mm and maximum 300 mm topsoil with on footpaths, filled areas and all other areas disturbed during construction. Topsoiled areas to be stabilised with approved vegetation a maximum of 14 days after topsoiling and are to be watered to ensure germination.

CCEN7 The Contractor shall control sedimentation, erosion and pollution during construction in accordance with the requirements of the current edition of 'Managing Urban Stormwater: Soils and Construction' produced by Landcom.

CCEN8 A minimum 1 metre wide, continuous strip of couch grass shall be placed behind the back of all kerbs and other concrete structures immediately after the completion of the footpath grading or other elements as applicable, and shall be maintained and replaced as required during the construction maintenance period.

Camden Council Stormwater Notes

CCSN1 All pipes to be spigot and socket, rubber ring jointed.

CCSN2 All longitudinal pipelines in roads must be located under kerb and gutter and be backfilled with approved granular material unless otherwise approved by the Council Engineer.

CCSN3 Drainage lines must be backfilled with approved granular material in trafficable areas. Three (3) metres of subsoil drainage wrapped in geotextile stocking must be provided to all downstream pits.

CCSN4 All gully pits to Council's standard and lintels centrally placed at sag pits.

CCSN5 All pits must be benched and streamlined. Provide SL72 reinforcement and galvanised step irons in all pits over 1.2-metres deep as measured from the top of grate to the invert of the pit.

CCSN6 Concrete is to have minimum compressive strength of 32MPa at 28-days unless otherwise approved by the Council Engineer.

CCSN7 All interallotment drainage must have a minimum pipe diameter of 150 mm and a minimum grade of 1% unless otherwise approved by the Council Engineer.

CCSN8 All interallotment drainage lines must be laid centrally within drainage easements. Inspection pits must be provided at all changes of grade and direction.

CCSN9 Interallotment drainage lines must be installed after Sydney Water sewerage lines have been installed where sewer is proposed adjacent to interallotment drainage lines.

CCSN10 1% AEP overland flow paths must be formed and shown on 'works as executed' drawings.

CCSN11 All plans (both design and WAE) are to clearly delineate the extent/location of flood lines including the 5% AEP, 1% AEP and PMF.

CCSN12 Adequate provision is to be made to prevent scouring and sedimentation for all drainage works in accordance with Council's requirements.

CCSN13 Pit Lintels are to be stencilled with applicable distinction stencil available from Council.

CCSN14 Catch drains must be constructed as required by the approved plans or the Principal Certifying Authority.

CCSN15 Soil and Water Management Plans are to be prepared for all disturbed sites and adhered to at all times during the construction and maintenance periods.

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.

GN4 Where notes conflict preference shall be given to Camden Council notes

Siteworks Notes

SN1 Datum : Australian Height Datum (AHD)
Origin of levels : PM 168901, RL97.81
Origin of co-ordinates : Mapping Grid Of Australia (MGA)
Survey prepared by : Burton & Field
343 Hume Highway, Liverpool 2170
Tel: (02) 9602-1199 Fax (02) 9821-2620

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 subsidence's 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.

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.

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

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.

Stormwater Notes

SW1 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.

SW2 Equivalent strength fibrous reinforced concrete (F.R.C.) may be used subject to approval by the superintendent.

SW3 All pipe junctions up to and including Ø450mm and tapers, shall be via purpose made fittings (UNO).

SW4 Minimum grade to stormwater lines to be 1% (UNO).

SW5 Contractor to supply and install all fittings and specials including various pipe adaptors to ensure proper connection between dissimilar pipework.

SW6 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.

SW7 All in-situ concrete pits to be 32Mpa minimum at 28 days.

SW8 Pits and pipes in areas of salinity hazard shall have increased cover to any reinforcement.

SW9 Pits deeper than 1000mm shall have step irons installed in accordance with the local or statutory authority requirements.

SW10 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.

SW11 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.

SW12 Where stormwater lines pass under floor slabs DWV grade uPVC rubber ring joints are to be used (UNO).

SW13 Where subsoil drainage lines pass under floor slabs and vehicular pavements, unslotted uPVC DWV grade class SN8 pipe shall be used.

SW14 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.

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.

Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

Title
Gregory Hills Health Hub
Development Application

Notes Sheet

Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	Status		Rev	Sec	
N/A	APR		P3	STD	

Drawing Number
MMD-362693-C-DR-CA-0002

\\mottmac\projects\Sydney\Projects\362xxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0002.dwg Mar 17, 2016 - 1:41PM mcr55964

Bitumen Sealing Notes

Pavement Preparation

BS1 The surface to be sealed shall be dry and broomed before commencement of work to ensure complete removal of all superficial, foreign and loose matter.

BS2 If approved by the superintendent, all depressions or uneven areas are to be tack-coated and brought to general level of pavement with asphaltic concrete before sealing commences.

Material

BS3 Binder shall be class 170 to AS2008 -1997 - Residual Bitumen for Pavements, or approved proprietary material for priming and prime-sealing.

BS4 Aggregate shape, durability and wet to dry strength shall comply to AS2758.2 - 2009 - Aggregates and rock for Engineering Purposes for Class "N" Aggregates.

BS5 A 20kg sample of aggregate proposed for use shall be approved by the superintendent prior to use.

BS6 Aggregates shall be delivered uniformly precoated, excessive or uneven precoating may result in aggregates being rejected.

BS7 For two coat flush seals, the size of the aggregate for the second coat, while normally half that of the first coat, shall be dimensionally compatible with that of the first coat.

BS8 Precoating agents shall be compatible with the aggregates and binder to be used.

Design

BS9 Design of sprayed bituminous seals shall be carried out in accordance with the Austroads (NAASRA) publication, "Principles and Practice of Bituminous Surfacing, Volume 1 - Sprayed Work".

BS10 Where not indicated on the drawings, primers and primer-seals shall be designed to remain intact until final sealing takes place, having regard for the traffic and climatic conditions pertaining.

BS11 Unless otherwise specified, binder application rates shall be selected to fill 85% of the theoretical voids of the mat.

Primer-sealing

BS12 A single coat primer-seal using a suitable cut-back or proprietary binder shall be applied to basecourse material for protection of pavement during construction.

Bitumen Flush Sealing

BS13 Bitumen flush seals shall be either single or double coat as shown on the drawings, eg 20/10 indicates a double coat flush seal using two applications of bitumen and aggregate, the first aggregate layer being of 20mm nom. size, the second 10mm.

BS14 Cover aggregate shall be spread immediately after spraying of binder. In no case shall spreading be delayed more than 8 minutes (or so that bitumen has cooled such that adhesion of aggregate is compromised).

BS15 All spray records, aggregate supply tonnage and receipts shall be retained and passed onto the superintendent as part of the quality assurance procedures.

Flexible Pavement Notes

FP1 All sub-base and base course materials shall conform with RMS QA Specification 3051 "Unbound and Modified Base and Sub-base Materials for Surface Road Pavements.

FP2 All sub-base and base course materials shall be compacted to achieve the following compaction standards -

Base course
Minimum 98% MMDD AS1289.5.2.1 - 2003 - Methods of Testing Soils for Engineering Purposes

Sub-base
Minimum 98% MMDD AS1289.5.2.1 - 2003 - Methods of Testing Soils for Engineering Purposes

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 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.

Linemarking Notes

LM1 All linemarking works to be in accordance with either the current Australian standard AS1742.2-2009-Manual Uniform Traffic Control Devices, or as shown on the plans or as directed by the superintendent.

LM2 The scope of work shall include all pavement markings to roads.

LM3 The work carried out and testing performed shall comply with the current, relevant Australian standards and RMS standards where necessary.

LM4 All markings shall be spotted out and verified by the contractors representative prior to application.

LM5 Paint shall be applied at a wet thickness of between 0.35mm - 0.45mm.

LM6 Paint shall only be applied to clean and dry surfaces.

LM7 All longitudinal lines shall be applied by a self-propelled machine.

LM8 Linemarking removal shall be carried out by grinding or sandblasting. Removal by burning will not be permitted.

LM9 The extent of linemarking to be eradicated shall be confirmed on site prior to removal. Any markings incorrectly removed shall be reinstated at the contractor's expense.

LM10 All markings shall be completed in a workmanlike manner and be straight, smooth and with even curves. Any non-conforming work, shall be removed and reinstated at the direction of the superintendent at the contractor's expense.

LM11 Linemarking on AC pavements to be provided no sooner than 7-10 days once the asphalt has set.

Pavement Legend

- Driveway Pavement — Concrete driveway in accordance with Camden Council details.
- Carpark Pavement — For pavement details refer to drawing MMD-362693-C-DR-CA-0010
- Loading Dock Pavement — For pavement details refer to drawing MMD-362693-C-DR-CA-0010
- Footpath Pavement (Pavers) — For pavement details refer to drawing MMD-362693-C-DR-CA-0010
- Pavement Reinstatement — For pavement details refer to drawing MMD-362693-C-DR-CA-0010
- Landscape — Refer to Landscape Architect's specification for details.

Survey Legend

- 268°02' 198.12 — Existing boundary, bearing & distance
- PINE — Existing road name
- Existing kerb and spot levels
- MESH FENCE — Existing fence
- Existing spot level
- Existing earth batter
- TREE 0.3D RH 4.5 — Existing tree, level, (trunk diameter, height and spread)
- Existing sewer
- 250mm DIA PIPE INV 12.4 — Existing stormwater drainage
- Existing water
- Existing underground electrical
- Existing gasmain
- Existing recycled water
- Existing underground telecommunications
- 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
- Existing overhead electrical stanchion
- Existing pavement
- Major contour
- Minor contour
- Easement
- Existing retaining wall

Bulk Earthworks Legend

- ●B10.00 — Construct surface to bulk earthworks level
- BE10.00 — Construct surface to bulk earthworks platform level
- B10.00 — Construct surface to bulk earthworks contour level
- Batter 1 : 1 — Construct batter slope

Civil Works Legend

- ROAD No1 CH 200 — Road name / number
- Design control line and chainage
- Sawcut existing pavement
- KO — Construct kerb only
- RKT — Construct roll kerb and toe
- KR — Construct kerb pram ramp
- VC — Construct kerb vehicular crossing to Camden Council requirements
- Transition kerb profile over 1.5m
- RW — Construct retaining wall
- Construct batter

Civil Grading Legend

- Construct surface to level..
- ●P10.00 — Proposed level
- ●G10.00 — Grate level
- ●TOK10.00 — Top of kerb level
- ●P10.00* — Levels shown thus - P10.00* are to be confirmed on site prior to the commencement of works
- BUILDING FFL 10.00 — Finished floor level
- F10.00 — Major contour
- F9.50 — Minor contour
- XX % Fall — Construct finished surface to grade
- Batter 1 : 1 — Construct batter slope

Stormwater Drainage Legend

- A1 — Stormwater drainage structure / pit number Refer to pit schedule
- Surface inlet pit
- Junction pit
- SW — Stormwater drainage line
- USI 20.00 — Upstream invert level
- Ø300 'Z' — Pipe size / class
- 1.0 % — Grade
- 10.0m — Length
- DSI 10.00 — Downstream invert level
- SW — Downpipe connection
- Catch drain
- Construct subsoil drainage line
- SIR — Construct subsoil intermediate riser
- SHER — Construct subsoil high end riser
- Overflow path

Erosion and Sediment Control Legend

- Construct temporary sediment fence
- Install sandbag sediment traps
- Install haybale sediment traps
- Install temporary geotextile filter fabric drop inlet sediment trap
- Install temporary site access Refer to Camden Council standard drawings SD31 for details.

Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

Title
Gregory Hills Health Hub
Development Application

Notes and Legends Sheet

Designed	GC	Eng check	SR
Drawn	MMc	Coordination	SR
Dwg check	GC	Approved	AC
Scale at A1: N/A	Status: APR	Rev: P3	Sec: STD

Drawing Number
MMD-362693-C-DR-CA-0003

\\mottmac\project\Sydney\Projects\362xxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0003.dwg Mar 17, 2016 - 2.54PM mcr55964

HOLBORN CIRCUIT

GREGORY HILLS DRIVE

DIGITARIA DRIVE

Emergency overland flow from basin.

Basin excavation to be utilised as sedimentation basin.

Site access entry and exit. Location to be confirmed by the Contractor onsite.

POLLUTION WARNING SIGN - A sign must be erected at all entrances to the subdivision site prior to work commencing and maintained until the subdivision has reached 80% occupancy. the sign must be constructed of durable materials and be a minimum of 1200x900mm. the wording of the sign must be as follows:-

"WARNING UP TO $1,500 FINE. It is illegal to allow soil, cement slurry or other building materials to enter, drain or be pumped into the stormwater system.
Camden Council (02 4654 7777) - Solution to Pollution."

The warning and fine statement wording must be a minimum of 120mm high and the remainder a minimum of 60mm high. the warning and fine details must be in red bold capitals and the remaining words in dark coloured lower case letter on a white background, surrounded by a red border.

Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

1:200 0 10m 20m

Mott MacDonald
Level 10, 383 Kent Street
Sydney, NSW 2000
Australia
PO Box Q1678
QVB Sydney NSW 1230
T +61 (0)2 9098 5800
W www.mottmac.com.au

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

Title
Gregory Hills Health Hub
Development Application

Concept Erosion and Sediment Control Plan

Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	1:200	Status APR	Rev P3	Sec STD	

Drawing Number
MMD-362693-C-DR-CA-0004

\\mottmac\project\Sydney\Projects\362xxxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0004.dwg Mar 17, 2016 - 2:54PM
mcr55964

Soil and Water Management Notes

General Instructions

SWM01 These plans present a conceptual soil and water management plan (SWMP) only and shows a possible way of managing soil and erosion. The contractor shall be responsible for the establishment and management of the site and preparing a detailed plan and obtaining approval from the relevant authority prior to the commencement of any works.

SWM02 This plan is to be read in conjunction with the engineering plans and any other plans, written instructions, specification or documentation that may be issued and relating to development of the subject site.

SWM03 The contractor will ensure that all soil and water management works are consistent with 'Managing Urban Stormwater - Soils and Construction' - also known as 'The Blue Book'.

SWM04 All builders and sub-contractors shall be informed of their responsibilities in minimising the potential for soil erosion and pollution to downslope lands and waterways.

Erosion Control

SWM05 Water shall be prevented from entering the permanent drainage system until sediment concentration is less then or equal to 50mg/L, ie the catchment area has been permanently landscaped and / or any likely sediment has been filtered through an approved structure.

SWM06 Any sand used in the concrete curing process (spread over the surface) will be removed as soon as possible and within 10 working days from placement.

SWM07 Acceptable receptors will be constructed for concrete and mortar slurries, paints, acid washings, light-weight waste materials and litter.

SWM08 'Sediment' fencing will be installed as indicated on the plans and at the direction of site superintendent to ensure containment of sediment. The sediment fencing will outlet or overflow under stabilised conditions into the sediment basin, to safely convey water into a suitable filtering system should the pores in the fabric block.

SWM10 Stockpiles should not be located within 5m of trees and hazard areas, including likely areas of concentrated or high velocity flows such as waterways, drainage lines, paved areas and driveways. Where they are within 5m from such areas, special sediment control measures should be taken to minimise possible pollution to downstream waters. Measures should also be applied to prevent the erosion of the stockpile.

SWM11 All cut and fill batters are to be seeded and mulched within 14 days of completion of formation.

SWM12 Any existing trees which form part of the final landscaping plan will be protected from construction activities by-

a. Protecting them with barrier fencing or similar materials installed outside the drip line,
b. Ensuring that nothing is nailed to them,
c. Prohibiting paving, grading, sediment wash or placing of stockpiles within the drip line except under the following conditions,

(i) Encroachment only occurs on one side and no closer to the trunk than either 1.5 metres or half the distance between the outer edge of the drip line and the trunk, which ever is the greater,

(ii) A drainage system that allows air and water to circulate through the root zone (e.g. a gravel bed) is placed under all fill layers of more than 300 millimetres depth

(iii) Care is taken.

SWM13 During windy weather, large disturbed unprotected areas should be kept moist (not wet) by sprinkling with water to keep dust under control.

SWM14 Temporary protection from erosive forces will be undertaken on lands where final shaping has not been completed but works are unlikely to proceed for periods of two months or more (eg. on topsoil stockpiles). This may be achieved with a vegetative cover. A recommended listing of plant species for temporary cover is -

i) autumn/winter sowing	- oats/ryecorn at 20 kg/ha - japanese millet at 10 kg/ha
ii) spring/summer sowing	- japanese millet at 20 kg/ha - oats/ryecorn at 10 kg/ha

SWM15 Diversion banks / channels will be rehabilitated as soon as possible and within 5 working days from their final shaping. Other than in the winter months, suitable materials include turf grasses such as Couch or Kikuyu. During winter, or at other times when temporary rehabilitation (more than 3 months) is required, it is suggested that hessian cloth is used but only if tacked with appropriate pegs and an anionic bitumen emulsion. Foot and vehicular traffic should be kept away from these areas.

SWM16 Undertake site development works in accordance with the engineering plans. Where possible, phase development so that land disturbance is confined to areas of workable size.

Construction Sequence

SWM17 Where practical, the soil erosion hazard on the site should be kept as low as possible. To this end, works should be undertaken in the FOLLOWING SEQUENCE -

(i) Install inlet sediment traps to all gully pits fronting the site,

(ii) Install a 1.8m chain wire fence around the boundaries and attach hessian cloth or similar to it on the windward side (ties at the top, centre and bottom and at 1m intervals or as instructed by the superintendent),

(iii) Install geofabric sediment fence and sediment traps around all permanent stormwater reticulation structures as shown on the plan,

(iv) Construct stabilised construction entrance as shown on the plan or to location as determined by superintendent,

(v) Install diversion banks along the boundary where required, rehabilitate disturbed lands downslope from the basins within 20 working days,

(vi) Ensure that the sediment basin is directed onto a turfed area and drains to a suitable location. A temporary stormwater line may be necessary to convey the flows to this location. Construct diversion channels at the boundary to drain into the sediment basin as shown on plans,

(vii) At completion stabilise site and decommission sediment basin and all erosion control devices.

SWM18 Temporary soil and water management structures will be removed only after the lands they are protecting are rehabilitated.

SWM19 Final site landscaping will be undertaken as soon as possible and within 20 working days from completion of construction activities.

Site Inspection and Maintenance

SWM20 At least weekly and after every rain fall event, the contractor will inspect the site and ensure that -

(i) Drains and all sediment control devices operate effectively and initiate repair or maintenance as required,

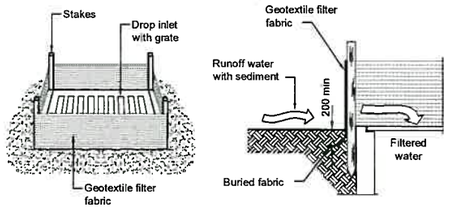
(ii) Receptors for concrete and mortar slurries, paints, acid washings, light-weight waste materials and litter are to be emptied as necessary. Disposal of waste shall be in a manor approved by the superintendent,

(iii) Spilled sand (or other materials) is removed from hazard areas, including likely areas of concentrated or high velocity flows such as waterways, gutters, paved areas and driveways,

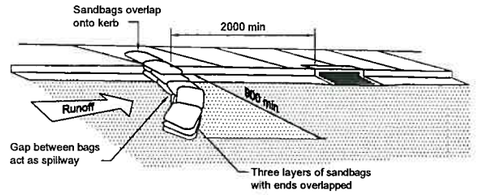
(iv) Sediment is removed from basins and / or traps when less than 20m³ of trapping capacity remain per 1000m² of disturbed lands, and / or less than 500mm depth remains in the settling zone. Any collected sediment will be disposed in areas where further pollution to down slope lands and waterways is unlikely,

(v) Rehabilitated lands have effectively reduced the erosion hazard and initiate upgrading or repair as appropriate.

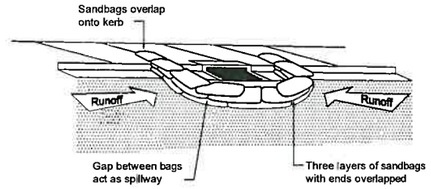
SWM21 The contractor shall provide all monitoring control and testing.



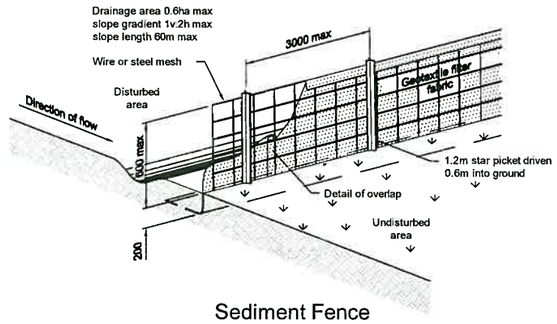
Sediment Trap for Drop Inlet
(Geotextile Filter Fabric)
NTS



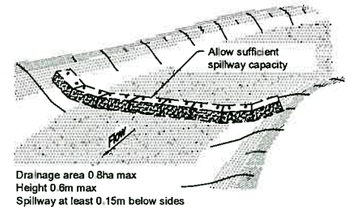
Sediment Trap for Kerb Inlet
(On Grade - Sandbag)
NTS



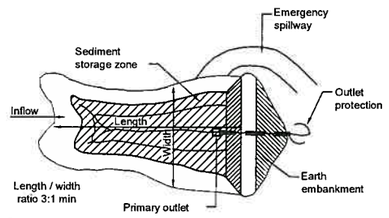
Sediment Trap for Kerb Inlet
(at Low Point - Sandbag)
NTS



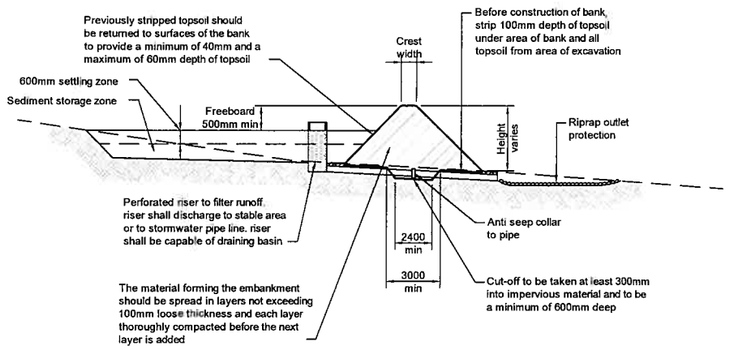
Sediment Fence
(Geotextile Filter Fabric)
NTS



Check Dam - Straw Bale
NTS



Sediment Basin (Typical) Plan - Type C Soils
NTS



Sediment Basin (Typical) Cross Section - Type C Soils
NTS

Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

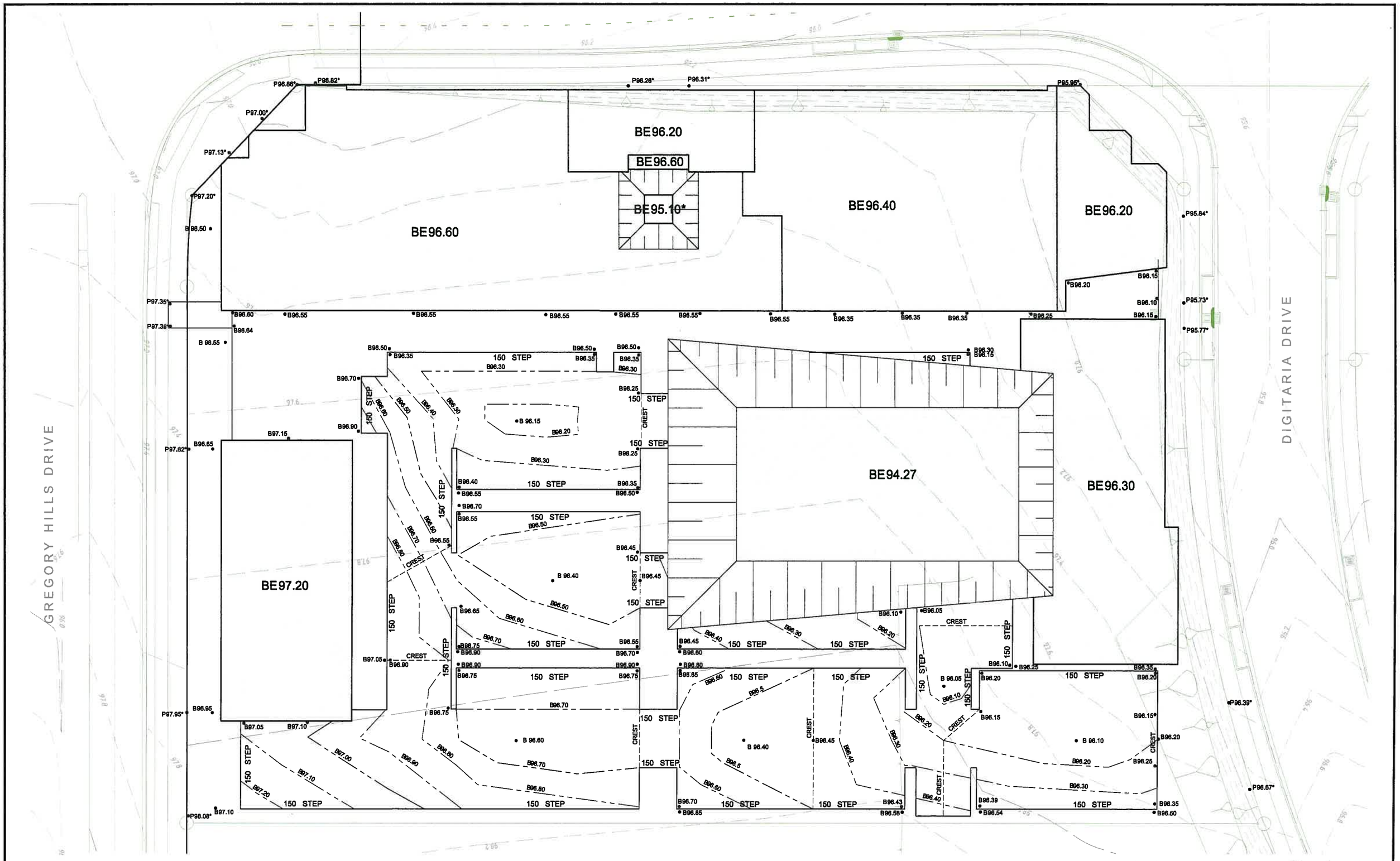
Title
Gregory Hills Health Hub
Development Application

Concept Erosion and
Sediment Control Details

Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	Status		Rev	Sec	
N/A	APR		P3	STD	

Drawing Number
MMD-362693-C-DR-CA-0005

\\mottmac\project\Sydney\Projects\36xxxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0005.dwg Mar 17, 2016 - 1:41PM
cav55940



Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

1:200 0 10m 20m

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

Title
Gregory Hills Health Hub
Development Application

Bulk Earthworks Plan

Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	1:200	Status	APR	Rev	P3
				Sec	STD

Drawing Number
MMD-362693-C-DR-CA-0006

\\mottmac\projects\Sydney\Projects\362xxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0006.dwg Mar 17, 2016 - 3:00PM mcr55964

GREGORY HILLS DRIVE

DIGITARIA DRIVE

BUILDING
FFL96.90

BUILDING
FFL96.90

BUILDING
FFL96.50

BUILDING
FFL96.50

BUILDING
FFL96.90

BUILDING
FFL96.90

BUILDING
FFL96.70

BUILDING
FFL96.70

BUILDING
FFL96.70

BUILDING
FFL96.50

BUILDING
FFL96.60

BUILDING
FFL96.60

BUILDING
FFL96.65

BUILDING
FFL97.50

BUILDING
FFL96.65

4.8 % Fall

3.4 % Fall

1 in 14 Fall

Provision for future
connection to adjacent site

Provision for future
connection to adjacent site

Crest level 96.45 for
Emergency overland flow path

Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

1:200 0 10m 20m

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

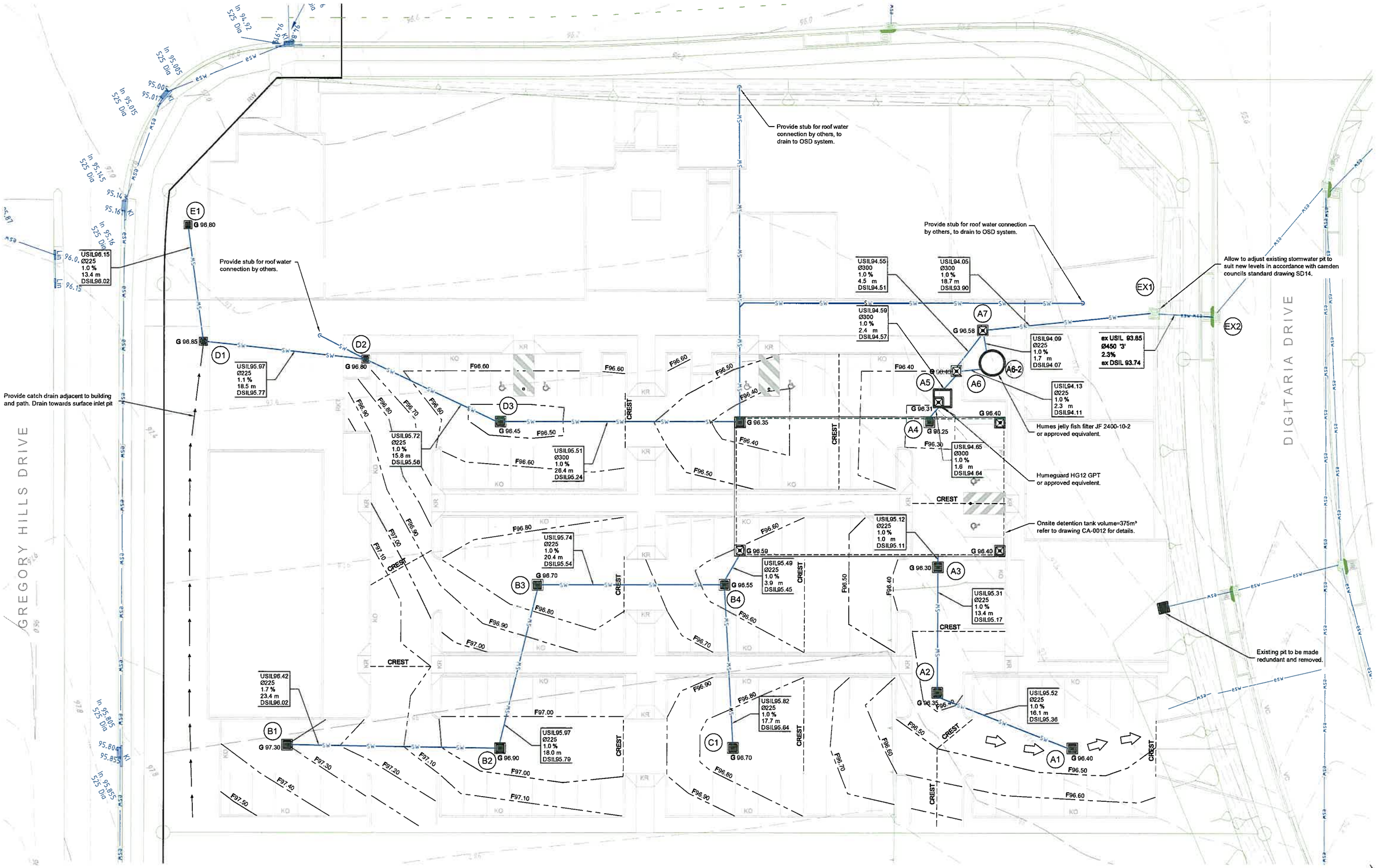
Title
Gregory Hills Health Hub
Development Application

Siteworks Plan

Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	1:200	Status APR	Rev	P3	Sec STD

Drawing Number
MMD-362693-C-DR-CA-0007

\\mottmac\project\Sydney\Projects\362xxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0007.dwg Mar 17, 2016 - 1:42PM
mcr55964



Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

1:200 0 10m 20m

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

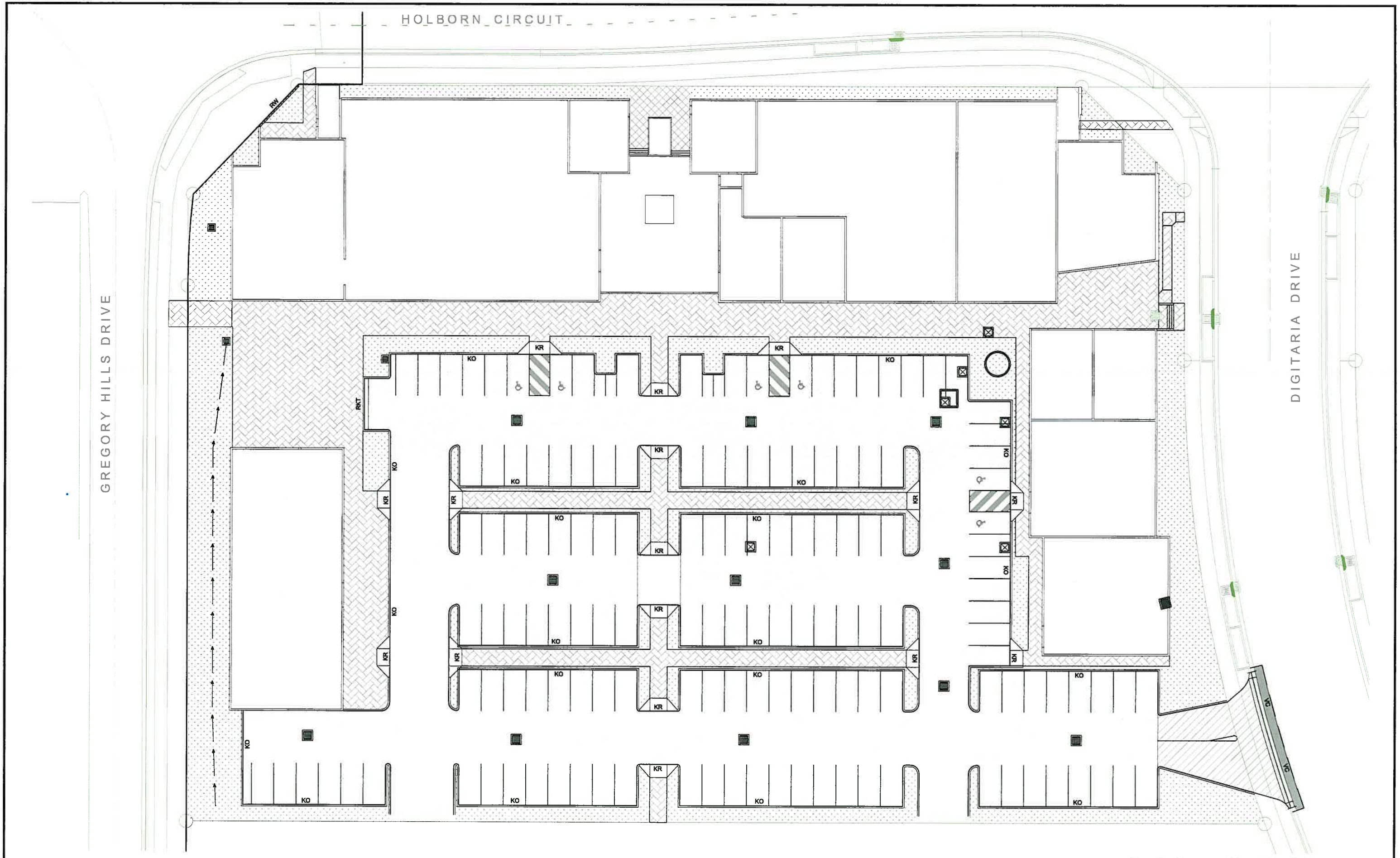
Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

Title
Gregory Hills Health Hub
Development Application

Stormwater Drainage Plan

Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	1:200	Status	APR	Rev	P3
Sec	STD				

Drawing Number
MMD-362693-C-DR-CA-0008



Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

1:200 0 10m 20m

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

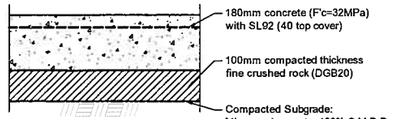
Title
Gregory Hills Health Hub
Development Application

Pavement and Linemarking Plan

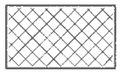
Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	1:200	Status APR	Rev	P3	Sec STD

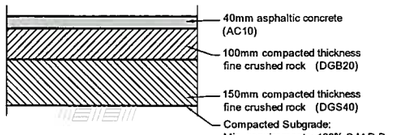
Drawing Number
MMD-362693-C-DR-CA-0009

\\mottmac\projects\Sydney\Projects\362xxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0009.dwg Mar 17, 2016 - 1:42PM
mcr55964

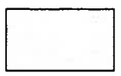


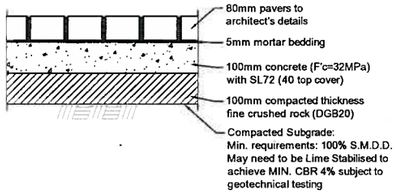
Loading Dock Pavement
1:10



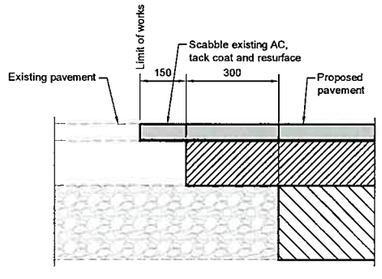


Carpark Pavement
1:10

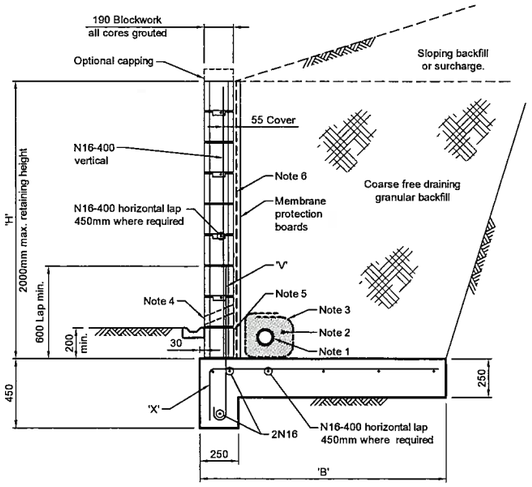




Footpath Pavement (Pavers)
1:10



Pavement Reinstatement
1:10



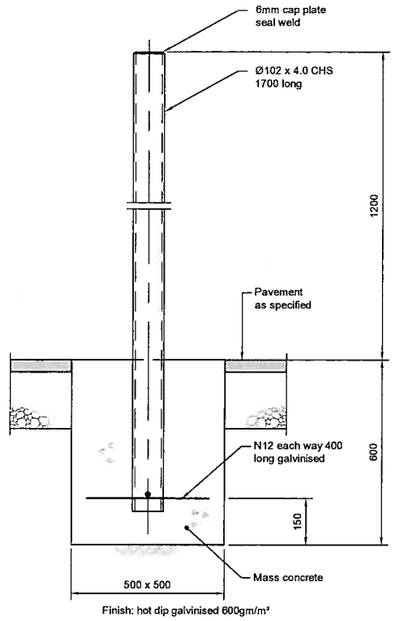
Retaining Wall Schedule		
Wall Height 'H'	Base Width 'B'	Bar Type 'X' & 'V'
800	800	N16-400
These dimesions are provided based on a 5kPa surcharge		

Retaining Wall Notes

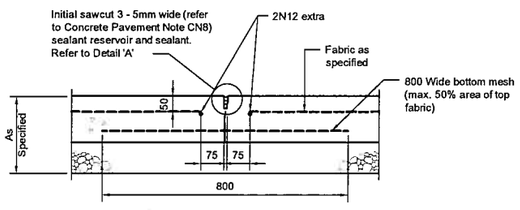
1. Ø100mm rigid slotted uPVC sub-soil pipe with filter sock (on min. 0.5% fall) to nearest available stormwater pit.
2. 150mm surround of 20mm blue metal or gravel.
3. Geofabric surround to be 'Bidum' A24 filter fabric or approved equal.
4. Provide Ø50 weep holes located above concrete dish drain at 1600 maximum centers.
5. Provide 'E' shaped clean-out block at base of retaining wall. omit horizontal bar from top of this block.
6. If tanking membrane is required the design and certification is to be provided by waterproofing specialist.

Pavement Notes

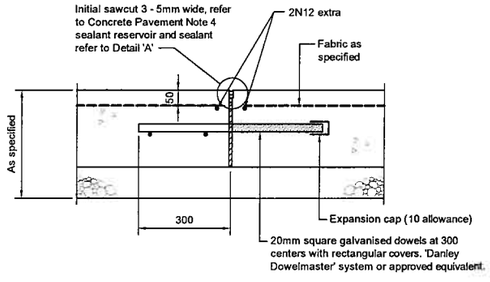
1. Pavement construction is to follow the general approach and specifications as outlined in the Geotechnical report.
2. All pavement design is subject to geotechnical / structural testing, investigation and design. The pavements listed on this drawing are provisional only.
3. Design subgrade CBR to be confirmed by geotechnical engineer during construction and select fill depth to be varied accordingly subject to test results.



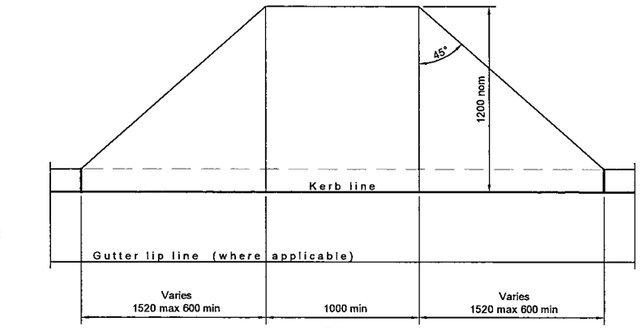
Bollard to Flexible Pavement
1:10



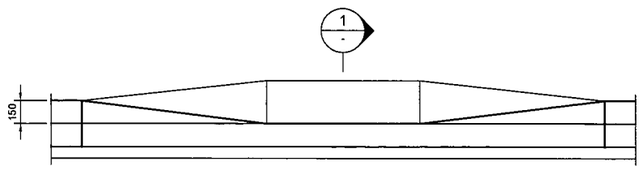
Contraction Joint (CJ)
1:10



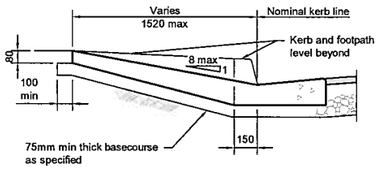
Expansion Joint (EJ)
1:10



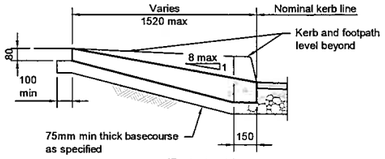
Plan
1:20



Elevation
1:20

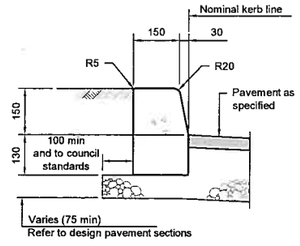


Section
1:20

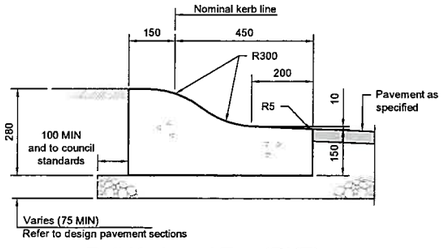


Section
1:20

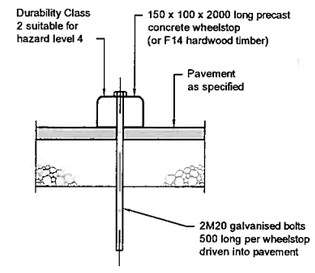
Keb Pram Ramp (KR)
1:20



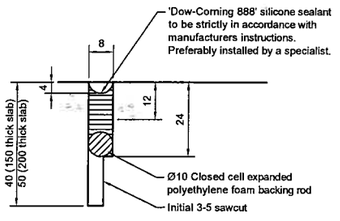
Kerb Only (KO)
1:10



Roll Kerb and Toe (RKT)
1:10



Wheel Stop (WSF) in Flexible Pavement
1:10



Detail 'A'
NTS

Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

1:10 0 500mm 1000mm
1:20 0 1000mm 2000mm

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

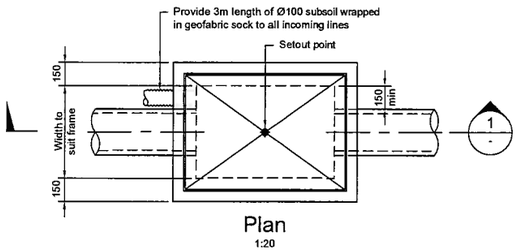
Title
Gregory Hills Health Hub
Development Application

Pavement and Siteworks Details

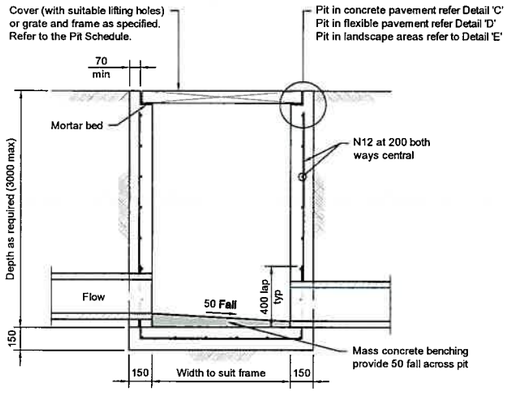
Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	1:10,20	Status	APR	Rev	P3
Sec	STD				

Drawing Number
MMD-362693-C-DR-CA-0010

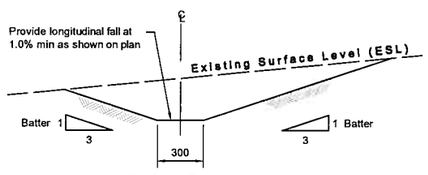
\\mottmac\project\Sydney\Projects\362xxxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0010.dwg Mar 17, 2016 - 2:54PM
mcr55964



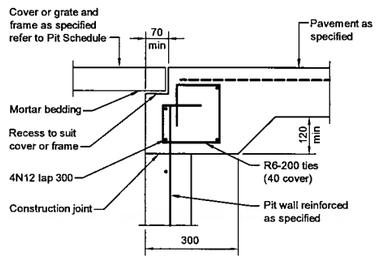
Plan
1:20



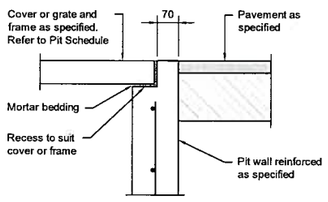
Surface Inlet / Junction Pit
(pipe sizes ≤Ø450)



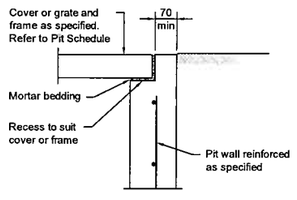
Catch Drain
1:20



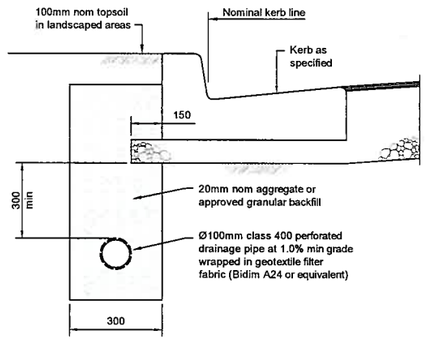
Detail 'C'
1.10



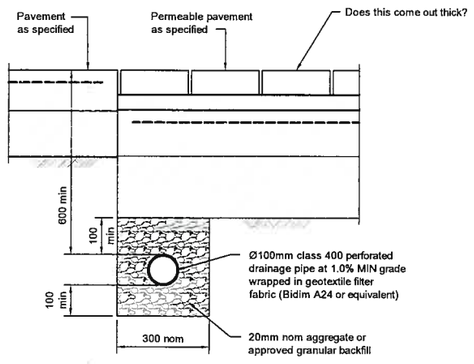
Detail 'D'
1:10



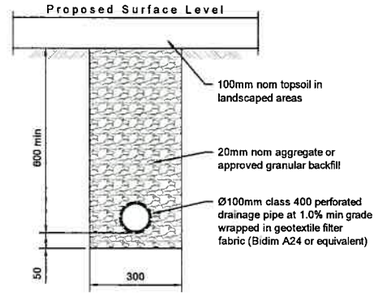
Detail 'E'
1:10



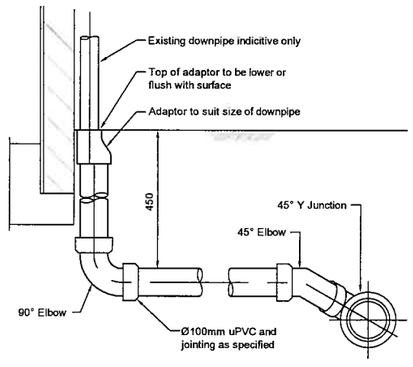
Subsoil Drainage Behind Kerbs
1:10



Subsoil Drainage
under Permeable Pavement
1:10



Subsoil Drainage in Landscaped Areas
1:10



PVC-U Downpipe Connection
1:10

Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

1:10 0 500mm 1000mm
1:20 0 1000mm 2000mm

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

Title
Gregory Hills Health Hub
Development Application

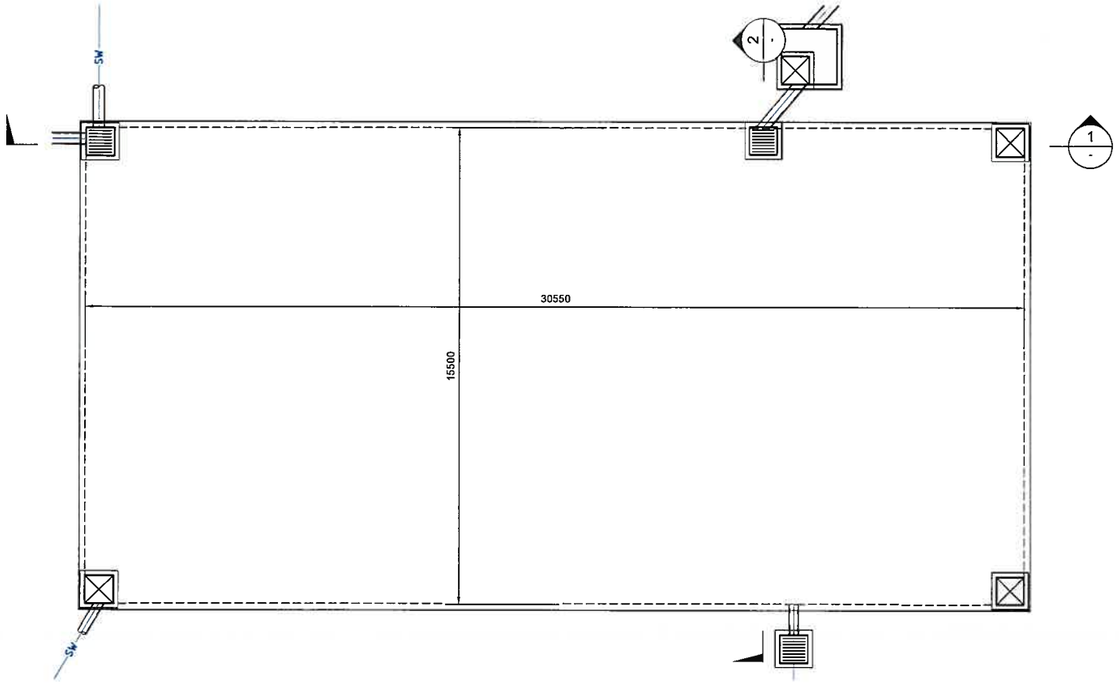
Stormwater Drainage Details

Designed	GC	Eng check	SR
Drawn	MMc	Coordination	SR
Dwg check	GC	Approved	AC
Scale at A1: 1:10, 20	Status: APR	Rev: P3	Sec: STD

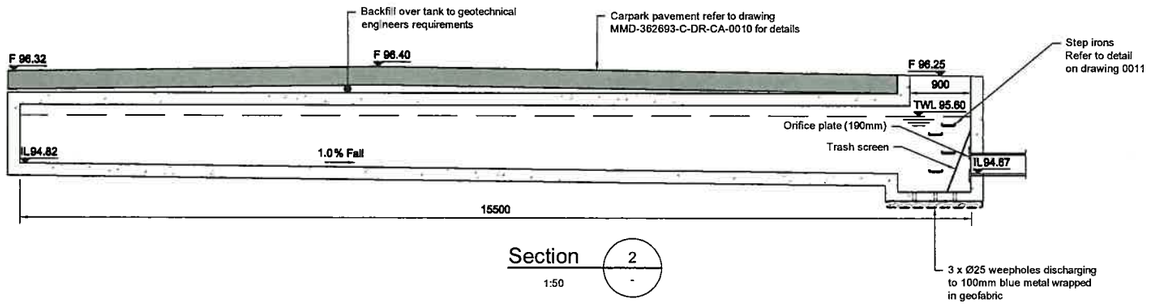
Drawing Number
MMD-362693-C-DR-CA-0011

\\mottmac\project\Sydney\Projects\362xxxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0011.dwg Mar 17, 2016 - 1:42PM
mcr55964

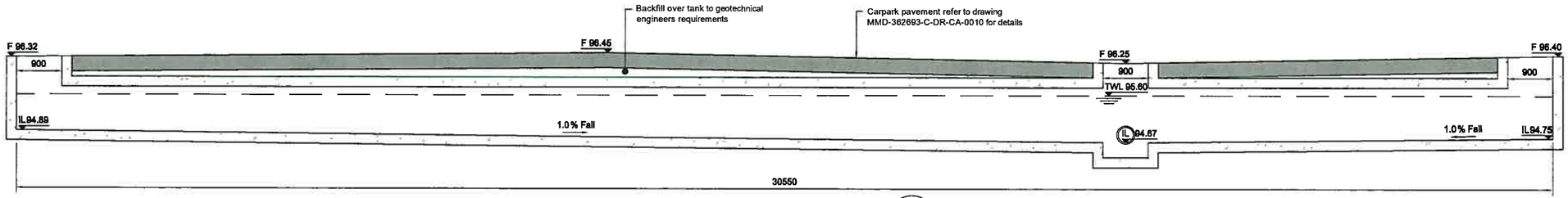
Note
Detention volume = 375m³ to top water level.



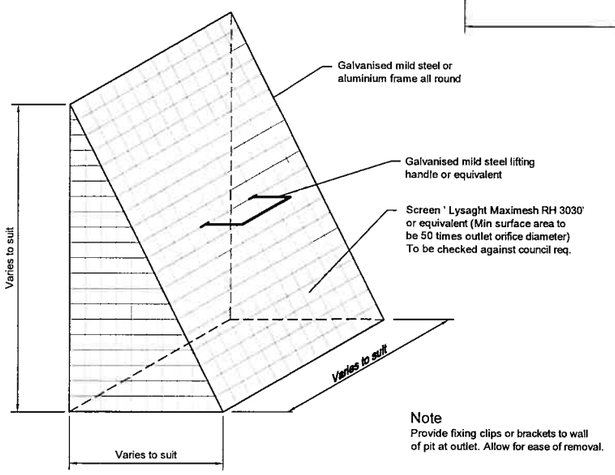
Onsite Detention Tank Plan
1:100



Section 2
1:50

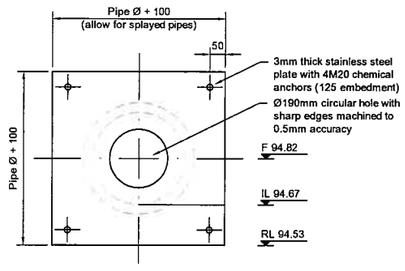


Section 1
1:50



Note
Provide fixing clips or brackets to wall of pit at outlet. Allow for ease of removal.

Typical Removable Screen Detail
NTS



Orifice Plate - Type A
1:10

Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

1:10 0 500mm 1000mm
1:50 0 2.5m 5m
1:100 0 5m 10m

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

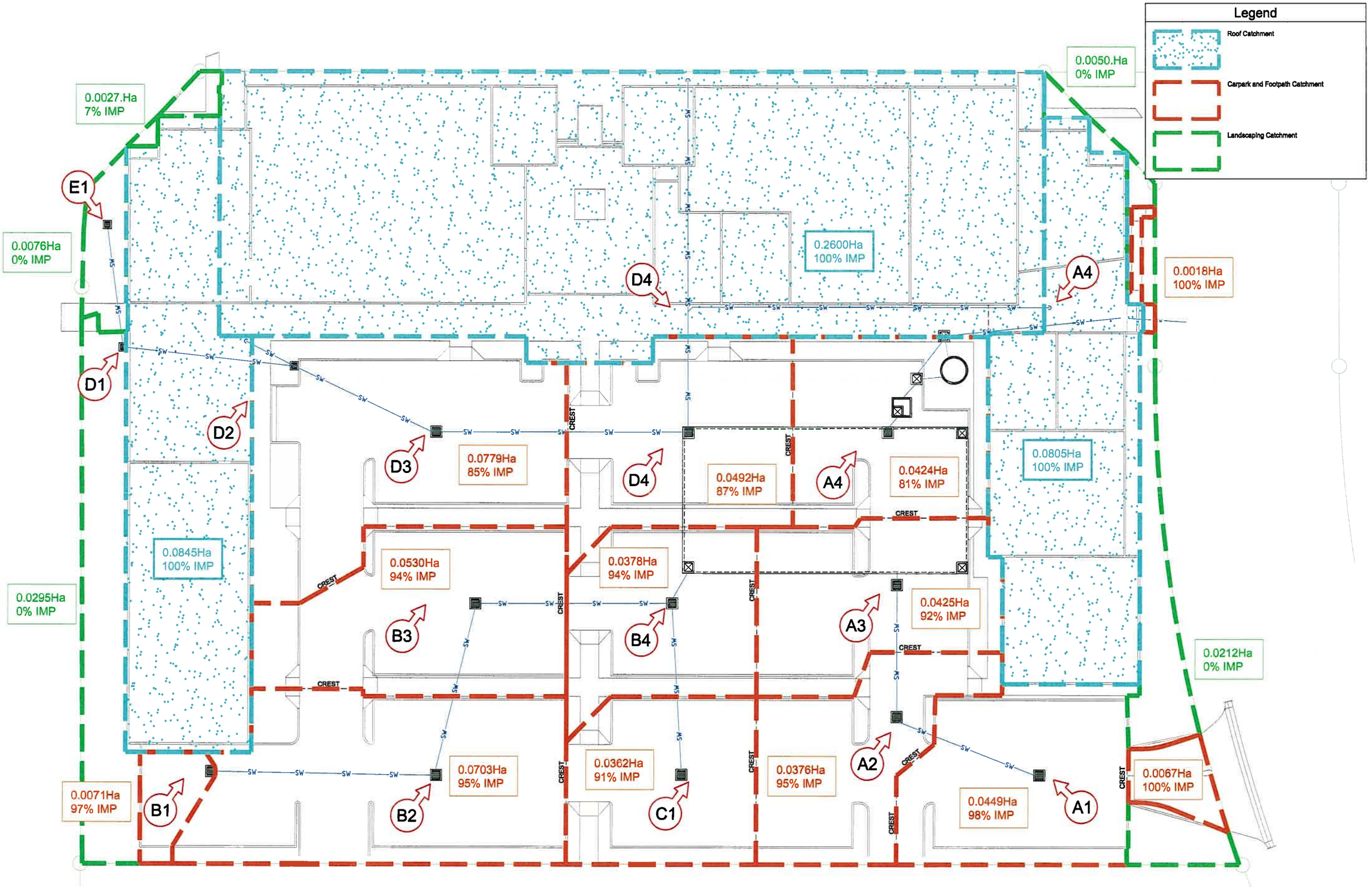
Title
Gregory Hills Health Hub
Development Application

On-site Detention Tank Details

Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	N/A	Status APR	Rev	P3	Sec STD

Drawing Number
MMD-362693-C-DR-CA-0012

\\mottmac\project\Sydney\Projects\362xxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0012.dwg Mar 17, 2016 - 1:42PM mcr55964



Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

1:200 0 10m 20m

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

Title
Gregory Hills Health Hub
Development Application

Catchment Plan

Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	1:200	Status	APR	Rev	P3
Sec	STD				

Drawing Number
MMD-362693-C-DR-CA-0013

\\mottmac\projects\Sydney\Projects\362xxxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0013.dwg Mar 17, 2016 - 1:43PM
mcr55964

HOLBORN CIRCUIT

GREGORY HILLS DRIVE

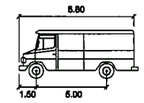
DIGITARIA DRIVE

SVEH
AUSTROADS (AU)

SERVICE_VEHICLE
AUSTROADS 2013 (AU)

Vehicle Turn Path Legend

- Vehicle and turn path control line
- Vehicle body
- Vehicle body clearence (0.3m)
- Vehicle, vehicle body and vehicle clearence
- Vehicle front tyres
- Vehicle rear tyres
- Vehicle, vehicle envelope



SVEH	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 28.2

Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	17.03.16	MMc	Issued for DA Approval	SR	AC
P2	28.10.15	MMc	Issued for DA Approval	SR	CA
P1	16.10.15	DRC	Issued for Draft Review	SR	CA

1:200 0 10m 20m

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

Client
Orca Partners Pty Ltd
PO Box 1515
Double Bay NSW 2028

Title
Gregory Hills Health Hub
Development Application

Turning Path Plan

Designed	GC		Eng check	SR	
Drawn	MMc		Coordination	SR	
Dwg check	GC		Approved	AC	
Scale at A1	1:200	Status	APR	Rev	P3
Sec	STD				

Drawing Number
MMD-362693-C-DR-CA-0014

\\mottmac\projects\Sydney\Projects\362xxx\362693\04 working\01 CAD\Civil\Drawings\MMD-362693-C-DR-CA-XX-0014.dwg Mar 17, 2016 - 1:43PM
mcr55964