

DISCHARGE POINT 1
ATTENUATED FLOWS FROM LOT 1
TO DISCHARGE TO HOLLINSWORTH
ROAD DRAINAGE. REFER TO COSTIN
ROE SECTION 96 CIVIL PACKAGE
Co12829.06-DA FOR DETAILS.

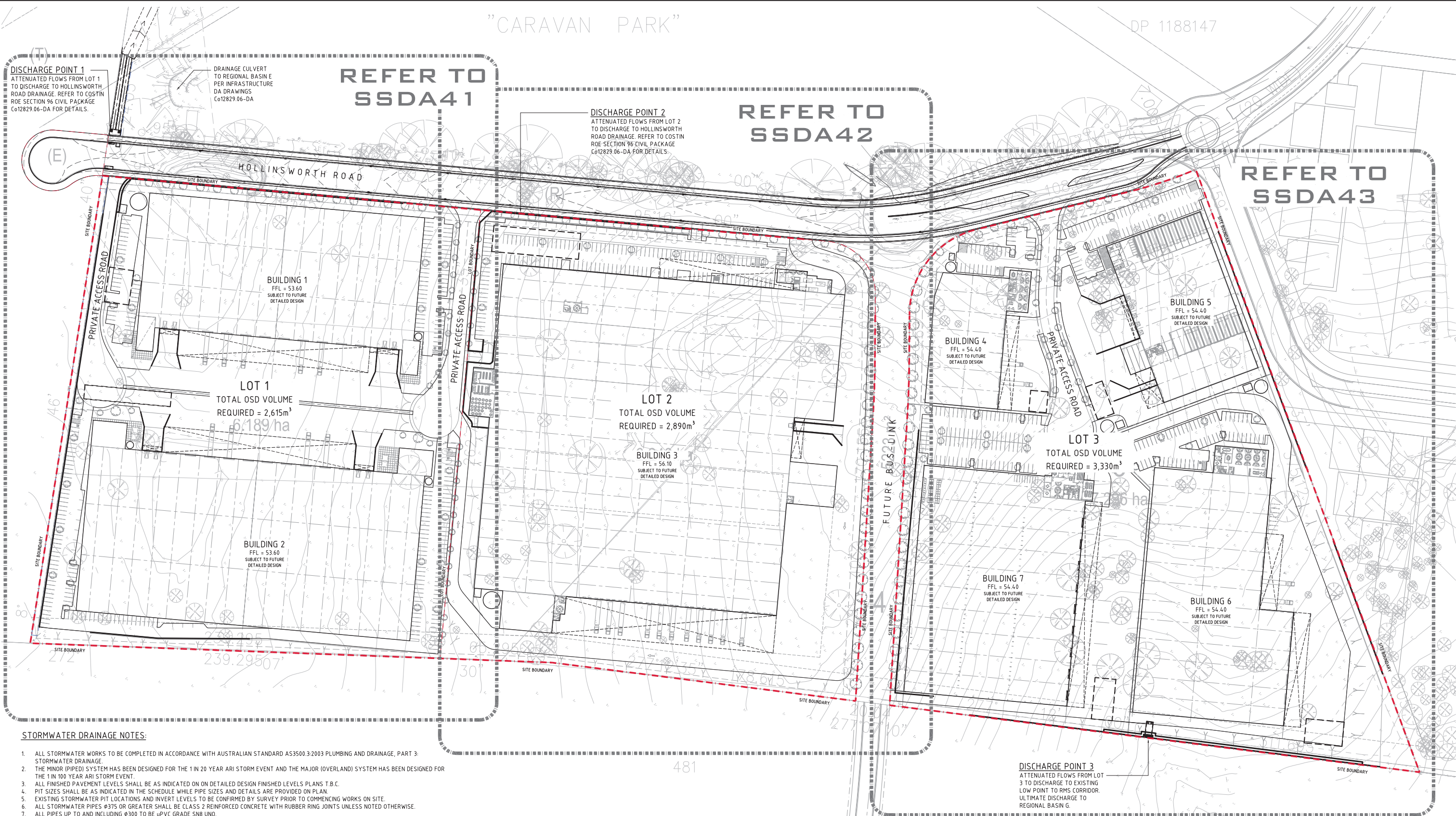
DRAINAGE CULVERT
TO REGIONAL BASIN E
PER INFRASTRUCTURE
DA DRAWINGS
Co12829.06-DA

REFER TO
SSDA41

DISCHARGE POINT 2
ATTENUATED FLOWS FROM LOT 2
TO DISCHARGE TO HOLLINSWORTH
ROAD DRAINAGE. REFER TO COSTIN
ROE SECTION 96 CIVIL PACKAGE
Co12829.06-DA FOR DETAILS.

REFER TO
SSDA42

REFER TO
SSDA43



STORMWATER DRAINAGE NOTES:

- ALL STORMWATER WORKS TO BE COMPLETED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS3500.3:2003 PLUMBING AND DRAINAGE, PART 3: STORMWATER DRAINAGE.
- THE MINOR (PIPED) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 20 YEAR ARI STORM EVENT AND THE MAJOR (OVERLAND) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 100 YEAR ARI STORM EVENT.
- ALL FINISHED PAVEMENT LEVELS SHALL BE AS INDICATED ON ON DETAIL DESIGN FINISHED LEVELS PLANS T.B.C.
- PIT SIZES SHALL BE AS INDICATED IN THE SCHEDULE WHILE PIPE SIZES AND DETAILS ARE PROVIDED ON PLAN.
- EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED BY SURVEY PRIOR TO COMMENCING WORKS ON SITE.
- ALL STORMWATER PIPES Ø375 OR GREATER SHALL BE CLASS 2 REINFORCED CONCRETE WITH RUBBER RING JOINTS UNLESS NOTED OTHERWISE.
- ALL PIPES UP TO AND INCLUDING Ø300 TO BE uPVC GRADE S88 UNO.
- PIPE CLASS NOMINATED ARE FOR IN-SERVICE LOADING CONDITIONS ONLY. CONTRACTOR IS TO MAKE ANY NECESSARY ADJUSTMENTS REQUIRED FOR CONSTRUCTION CONDITIONS.
- ALL CONCRETE PITS GREATER THAN 1000mm DEEP SHALL BE REINFORCED USING N12-200 EACH WAY CENTERED IN WALL AND BASE. LAP MINIMUM 300mm WHERE REQUIRED. ALL CONCRETE FOR PITS SHALL BE F'x 25 MPa. PRECAST PITS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
- IN ADDITION TO ITEM 6 ABOVE, ALL CONCRETE PITS GREATER THAN 300mm DEEP SHALL HAVE WALLS AND BASE THICKNESS INCREASED TO 200mm.
- PIPES SHALL BE LAID AS PER PIPE LAYING DETAILS. PARTICULAR CARE SHALL BE TAKEN TO ENSURE THAT THE PIPE IS FULLY AND EVENLY SUPPORTED. RAM AND PACK FILLING AROUND AND UNDER BACK OF PIPES AND PIPE FAUCETS, WITH NARROW EDGED RAMMERS OR OTHER SUITABLE TAMPING DETAILS.
- WHERE PIPE LINES ENTER PITS, PROVIDE 2m LENGTH OF STOCKING WRAPPED SLOTTED Ø100 uPVC TO EACH SIDE OF PIPE.
- ALL SUBSOIL DRAINAGE LINES SHALL BE Ø100 SLOTTED uPVC WITH APPROVED FILTER WRAP LAID IN 300mm WIDE GRANULAR FILTER UNLESS NOTED OTHERWISE. LAY SUBSOIL LINES TO MATCH FALLS OF LAND AND/OR 1 IN 200 MINIMUM. PROVIDE CAPPED CLEANING EYE (RODDING POINT) AT UPSTREAM END OF LINE AND AT 30m MAX. CTS. PROVIDE SUBSOIL LINES TO ALL PAVEMENT/ LANDSCAPED INTERFACES, TO REAR OF RETAINING WALLS (AS NOMINATED BY STRUCTURAL ENGINEER) AND AS SHOWN ON PLAN.
- ALL PIPE GRADES 1 IN 100 MINIMUM UNO.
- PROVIDE STEP IRONS IN PITS DEEPER THAN 1000mm.
- MIN. 600 COVER TO PIPE OBVERT BENEATH ROADS & MIN. 400 COVER BENEATH LANDSCAPED AND PEDESTRIAN AREAS.
- PIT COVERS IN TRAFFICABLE PAVEMENT SHALL BE CLASS D 'HEAVY DUTY', THOSE LOCATED IN NON-TRAFFICABLE AREAS SHALL BE CLASS B 'MEDIUM DUTY' UNO.
- PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
- DOWN PIPES (DP) TO BE AS PER HYDRAULIC ENGINEERS DETAILS WITH CONNECTOR TO MATCH DP SIZE UNO. ON PLAN. PROVIDE CLEANING EYE AT GROUND LEVEL.
- PIPE LENGTHS NOMINATED ON PLAN OR LONGSECTIONS ARE MEASURED FROM CENTER OF PITS TO THE NEAREST 0.5m AND DO NOT REPRESENT ACTUAL LENGTH. THE CONTRACTOR IS TO ALLOW FOR THIS.



SITE MASTERPLAN
SCALE 1:750

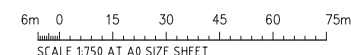
DRAWING LIST

DRAWING NO.	DRAWING TITLE
CO12829.06-SSDA40	SITE MASTERPLAN
CO12829.06-SSDA41	LOT 1 CONCEPT STORMWATER DRAINAGE PLAN
CO12829.06-SSDA42	LOT 2 CONCEPT STORMWATER DRAINAGE PLAN
CO12829.06-SSDA43	LOT 3 CONCEPT STORMWATER DRAINAGE PLAN
CO12829.06-SSDA44	CONCEPT STORMWATER MANAGEMENT STRATEGY
CO12829.06-SSDA45	CONCEPT STORMWATER MANAGEMENT DETAILS

DISCHARGE POINT 3
ATTENUATED FLOWS FROM LOT
3 TO DISCHARGE TO EXISTING
LOW POINT TO RMS CORRIDOR.
ULTIMATE DISCHARGE TO
REGIONAL BASIN G.

NOTE:
SSDA8606 DRAWINGS TO BE READ IN
CONJUNCTION WITH ENGINEERING
REPORT/STORMWATER MANAGEMENT PLAN
REF: Co12829.06-09.rpt

LEVELS NOTE:
LEVELS SHOWN TO BE ± 500mm FROM THOSE SHOWN.
FINAL LEVELS SUBJECT TO FINAL GEOTECHNICAL INVESTIGATIONS,
ARCHITECTURAL LAYOUT AND ACHIEVING A CUT TO FILL
EARTHWORKS BALANCE OVER THE PROPERTY.



FOR DEVELOPMENT APPLICATION

INGENIA
PROPERTY

DISCHARGE POINT 2
ATTENUATED FLOWS FROM LOT 2
TO DISCHARGE TO HOLLINSWORTH
ROAD DRAINAGE. REFER TO COSTIN
ROE SECTION 96 CIVIL PACKAGE
Co12829.06-DA FOR DETAILS.

STORMWATER MANAGEMENT SYSTEM 3
UNDERGROUND DETENTION/STORMFILTER TANK
APPROX. NUMBER OF SW360 CARTRIDGES = 125
APPROX. ACTIVE STORAGE VOLUME = 2,890m³
REFER TO STORMWATER MANAGEMENT CONCEPT ON
DRAWING SSDA44 & TYPICAL TANK ARRANGEMENT ON
SSDA45. FINAL CONFIGURATION T.B.C DURING DETAILED
DESIGN & WITH CO-ORDINATION WITH REGIONAL
BASINS

LOT 2

BUILDING 3
FFL = 56.10
SUBJECT TO FUTURE
DETAILED DESIGN

200 KL RAINWATER TANK

LOT 2 CONCEPT STORMWATER DRAINAGE
SCALE 1:500

RMS
CORRIDOR

FOR DEVELOPMENT APPLICATION

LEVELS NOTE:
LEVELS SHOWN TO BE ± 500mm FROM THOSE SHOWN.
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ARCHITECTURAL LAYOUT AND ACHIEVING A CUT TO FILL
EARTHWORKS BALANCE OVER THE PROPERTY.

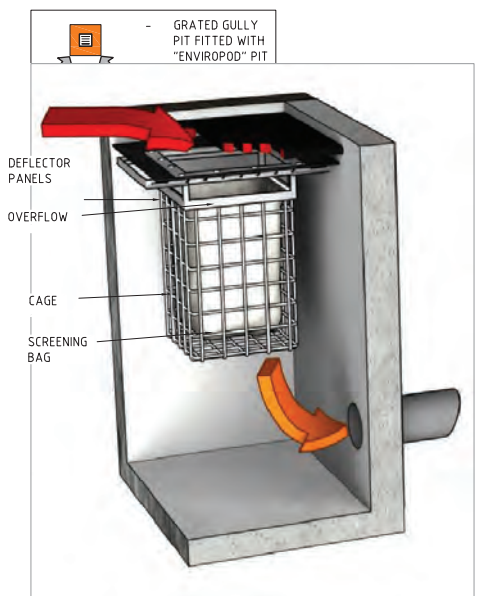
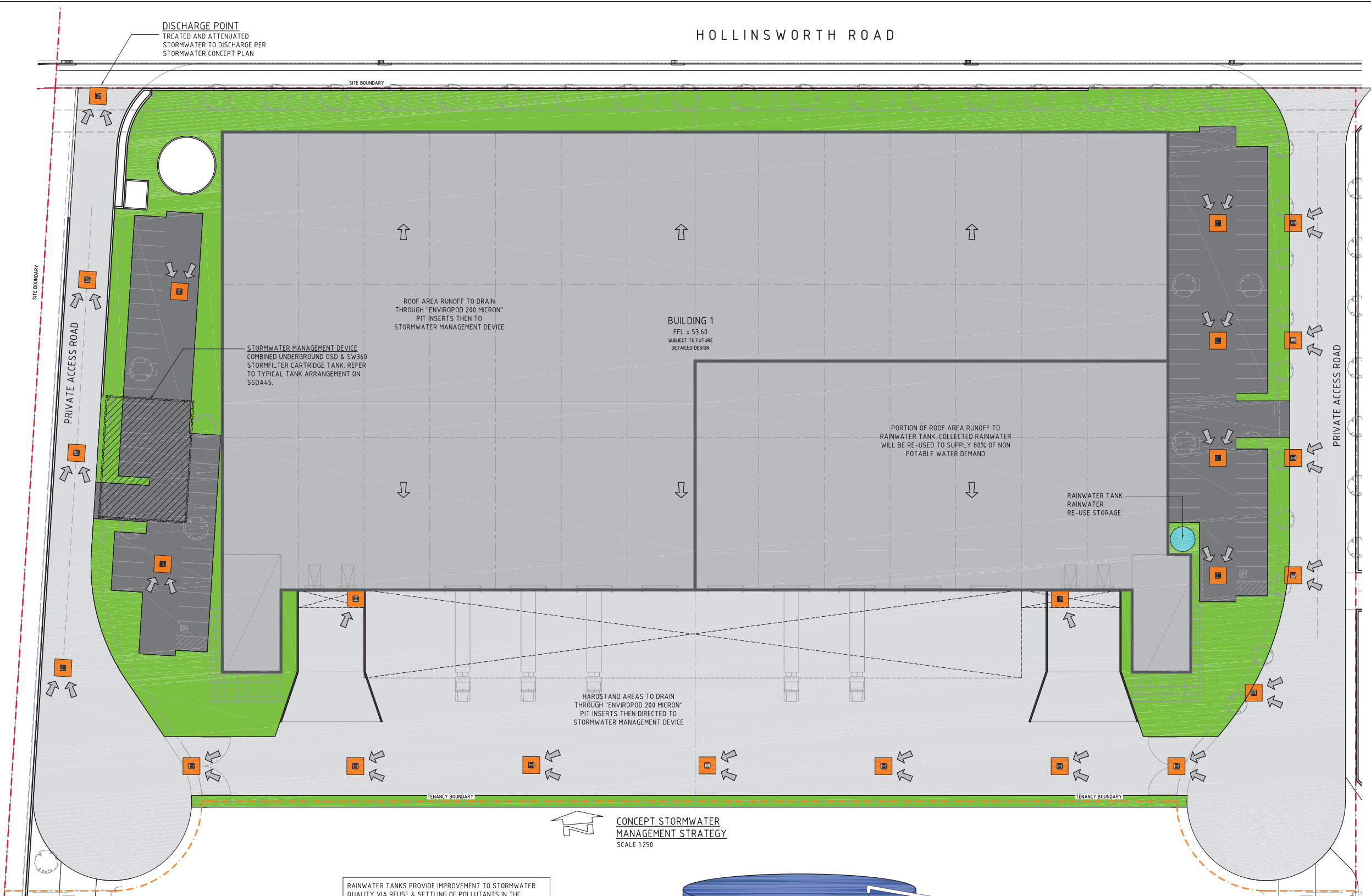
NOTE:
REFER TO DRAWING CO12829.06-SSDA40 FOR STORMWATER
DRAINAGE NOTES.

LEGEND:
LEVELS DATUM IS AHD.
EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY
INFORMATION PROVIDED BY LAND PARTNERS
REF: SY074063.000.1.1 DATED OCT' 2016.

→ - OVERFLOW PATH
— SW — - DRAINAGE LINE
--- - STORMWATER DRAINAGE EASEMENT

5m 0 10 20 30 40 50m
SCALE 1:500 AT A0 SIZE SHEET

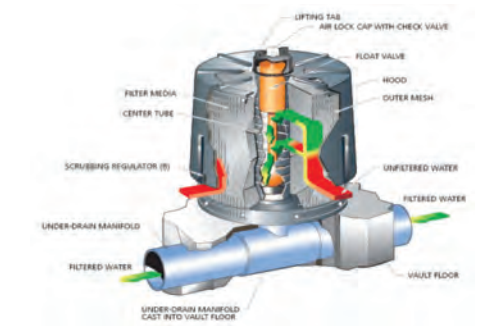
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										[watch this SPACE design]										LOGOS										STATE SIGNIFICANT DEVELOPMENT APPLICATION										Costin Roe Consulting Pty Ltd. Consulting Engineers										LOT 2 CONCEPT STORMWATER DRAINAGE PLAN																																																											
REVISED FOR UPDATED ARCHITECTURAL LAYOUT										22.11.17										B										Level 1, 8 Windmill Street																																																																															
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LITTER AND SEDIMENTS ARE TRAPPED IN PIT INSERT. TREATED WATER FILTERS OUT THROUGH THE BASE INTO THE IN-GROUND STORMWATER SYSTEM

STORMWATER PITS ARE FITTED WITH PIT INSERTS. POLLUTED WATER CARRYING SEDIMENTS AND LITTER ENTERS THE PIT INSERT. PITS ARE TO BE CLEANED EVERY SIX MONTHS (OR FOLLOWING A MAJOR STORM EVENT).

"ENVIROPOD 200 MICRON" PIT INSERT



A SERIES OF STORMFILTER CARTRIDGES ARE LOCATED IN AN UNDERGROUND TANK. STORMWATER WHICH IS PRETREATED BY THE ENVIROPOD PIT INSERTS IS THEN FILTERED THROUGH THE STORMFILTER CARTRIDGE & CLEAN FILTERED STORMWATER DISCHARGES FROM THE SITE.

"STORMFILTER" CARTRIDGE

STORMWATER SYSTEM MAINTENANCE NOTE:

THE STORMWATER SYSTEM IS TO BE REGULARLY MAINTAINED TO ENSURE THE ONGOING EFFECTIVENESS OF WATER QUALITY MEASURES. REFER TO STORMWATER MANAGEMENT REPORT Co12829.06-09.rpt BY COSTIN ROE CONSULTING FOR MAINTENANCE REQUIREMENTS.

WATER QUALITY TARGETS

POLLUTANT	ANNUAL PERCENTAGE REDUCTION
GROSS POLLUTANTS	100%
TOTAL SUSPENDED SOLIDS	85%
TOTAL PHOSPHORUS	65%
TOTAL NITROGEN	45%
TOTAL HYDROCARBONS	90%

NOTE

OSD COMPONENT OF SWM DEVICE TO BE CO-ORDINATED WITH REGIONAL BASIN CONSTRUCTION. OSD COMPONENT OF SWM TO BE OMITTED IF REGIONAL BASIN CONSTRUCTION COMPLETE

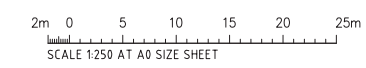
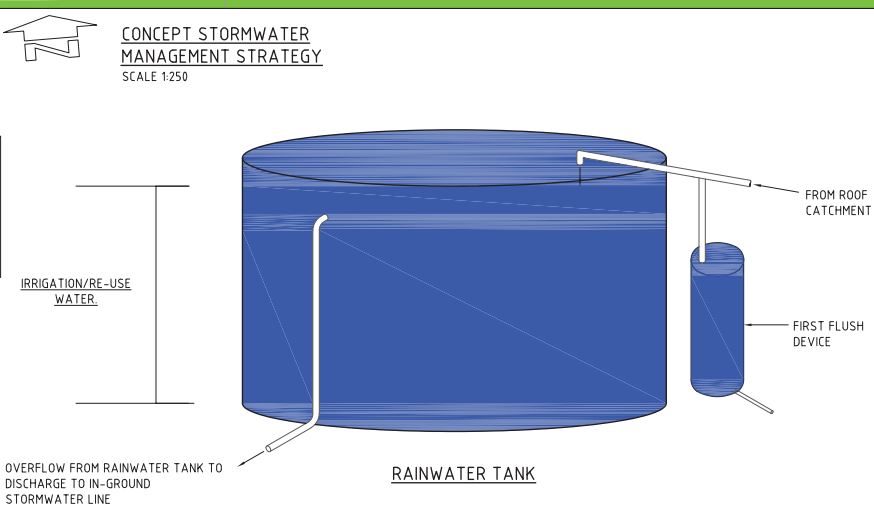
RAINWATER TANKS PROVIDE IMPROVEMENT TO STORMWATER QUALITY VIA REUSE & SETTLING OF POLLUTANTS IN THE TANKS.

REUSE WILL BE PROVIDED FOR NON-POTABLE APPLICATIONS SUCH AS TOILET FLUSHING & IRRIGATION OF LANDSCAPED AREAS. THE PROPOSED RAINWATER REUSE WILL PROVIDE A REDUCTION IN THE EXPECTED NON-POTABLE WATER DEMAND OF 80%.

RAINWATER TANK USAGE

ANNUAL WATER DEMAND FOR LANDSCAPING IRRIGATION 0.3kL/Ha/Yr

DAILY DEMAND FOR INTERNAL RAINWATER REUSE 0.1kL/TOILET/DAY



FOR DEVELOPMENT APPLICATION