

STORMWATER MANAGEMENT NOTES

- SM1. ALL STORMWATER PIPELINES ARE TO BE LAID ON SAND EVENLY GRADED TO THE INVERT LEVEL AND ALL FITTINGS TO BE IN ACCORDANCE WITH AS1260. MIN PIPELINE GRADIENT IS TO BE 1:100.
- SM2. SURFACE INLET GRATES ARE TO BE GALVANISED STEEL FABRICATION AT THE SPECIFIED DIMENSIONS AND INSTALLED WITH SUITABLE LOCK DOWN MECHANISM EG J-SPRING BOLT.
- SM3. ALL NEW DOWNPIPES ARE TO BE LOCATED BY HYDRAULIC CONSULTANT.
- SM4. ALL BUILDING DOWNPIPES AND IMPERVIOUS/PAVED AREAS ARE TO BE COLLECTED IN PVC PIPELINES, JOINT GLUE SEALED, AND CONNECTED TO THEIR RESPECTIVE DOWNSTREAM STORMWATER DRAINAGE STRUCTURES.
- SM5. ALL NEW AND EXISTING BUILDING ROOF AREAS ARE TO DRAIN TO THEIR RESPECTIVE RAINWATER TANKS FOR NON-POTABLE STORAGE WATER USE, IN ACCORDANCE WITH COUNCIL'S GUIDELINES.
- SM6. ALL BUILDING AND DWELLING ROOF GUTTERS WILL HAVE LEAF GUARD INSTALLED.
- SM7. ALL SITE GARDENS AND LANDSCAPE AREAS ARE TO BE IRRIGATED FROM ALL RAINWATER TANK NON-POTABLE STORAGE.
- SM8. WHERE POSSIBLE, ALL STORMWATER GENERATED ON DRIVEWAYS, ROADS AND ROOFS WILL DRAIN TO THE STORMWATER MANAGEMENT BASIN VIA GPTS AND BIORETENTION SYSTEMS FOR THE PURPOSE OF REMOVING NUTRIENTS, OILS, SILTS AND SEDIMENTS FROM STORMWATER RUNOFF.
- SM9. A STORMWATER MANAGEMENT BASIN WILL BE DESIGNED IN ACCORDANCE WITH THE WATER SENSITIVE URBAN DESIGN TECHNICAL GUIDELINES FOR WESTERN SYDNEY MAY 2004 AND AUSTRALIAN RUNOFF QUALITY WITH THE SYSTEM TO BE MAINTAINED ON A THREE MONTH BASIS.
- SM10. ON SITE DETENTION STORAGE IS TO BE PROVIDED WITHIN THE STORMWATER MANAGEMENT BASIN AND WILL BE SIZED BASED ON COUNCIL'S DEVELOPMENT CONTROL PLAN AND IS TO CAPTURE AS MUCH OF THE DEVELOPMENT AS POSSIBLE.
- SM11. SUITABLE SUBSOIL DRAINAGE SYSTEMS WILL BE PROVIDED BEHIND ALL RETAINING WALLS AND DWELLING FOOTINGS AND SEEPAGE COLLECTED WILL BE DISCHARGED INTO THE NEAREST DOWNSTREAM STORMWATER PIPED SYSTEM.
- SM12. WHERE ANY ISOLATED PROPOSED PIPELINE IS LOCATED WITHIN 2m OF A TREE THAT IS TO BE RETAINED, THE PIPELINE WILL BE THRUST BORED OR HAND/SPADE DUG TO REDUCE THE IMPACT OF EXCAVATION ADJACENT TO THE TREE. ALL WORKS TO BE SUPERVISED BY PROJECT ARBORIST.
- SM13. AN 'ONSITE DETENTION AND RAINWATER TANK MAINTENANCE SCHEDULE' IS TO BE PREPARED AND INCORPORATED INTO THE POSITIVE COVENANTS AND RESTRICTIONS ON USE OF LAND FOR THE SITE.
- SM14. LEVELS & ORIENTATION OF DRAINAGE STRUCTURES ARE NOT TO BE ALTERED FROM THAT SHOWN ON THE PLAN AND IS TO BE CHECKED ON COMPLETION BY THE ENGINEER.

RAINWATER TANK NOTES

- RWT1. ALL WORK IS TO CONFORM TO AS 3500.
- RWT2. RECYCLED STORMWATER OUTLET POINTS ARE TO BE LABELED "RECYCLED STORMWATER-NOT FOR DRINKING" IN ACCORDANCE WITH AS 1319.
- RWT3. TANKS IS TO BE PROVIDED WITH FILTRATION DEVICES TO ENSURE NO BLOCKAGE.
- RWT4. ALL RAINWATER TANKS WILL BE FITTED WITH A FIRST FLUSH DEVICE AND MAINTAINED ON A MONTHLY BASIS.
- RWT5. TANKS IS TO BE FITTED WITH A 'TOP UP' UNIT AND CONNECTED TO A POTABLE WATER MAINS.
- RWT6. ALL TOILET FLUSHING, IRRIGATION, POOL TOP UP, HOT WATER UNITS, LAUNDRY AND PAVEMENT WASHING IS TO BE SOURCED FROM RAINWATER TANKS.
- RWT7. RAINWATER PIPES SHALL BE CONTINUOUSLY MARKED "RAINWATER" IN ACCORDANCE WITH AS 1345.
- RWT8. ALL RAINWATER SERVICES ARE TO BE SEPARATED BY MINIMUM 300mm FROM ANY PARALLEL POTABLE WATER SUPPLY.
- RWT9. MOSQUITO SCREENING IS TO BE PLACED AT TANK'S INLET.

SITE HYDROLOGY		Annual Exceedance Probability %							
Parameters			63.2	50	20	10	5	2	1
EXISTING CATCHMENT SCENARIO		Catchment Imperv 15% of 5.022-ha							
Site boundaries		cum/s	0.31	0.37	0.56	0.70	0.86	1.13	1.34
DEVELOPED CATCHMENT SCENARIO		Catchment Imperv 35% of 5.022-ha							
Site draining away from SMB	1.26ha	cum/s	0.06	0.09	0.14	0.17	0.21	0.28	0.33
Site inflows into SMB	3.75ha	cum/s	0.33	0.39	0.59	0.74	0.91	1.19	1.42
SMB permissible discharges		cum/s	0.24	0.28	0.42	0.53	0.64	85	1.01
Estimated detention required		cum	48	63	95	120	148	196	233
Estimated SMB TWL		AHD	751.75	751.80	751.90	751.95	752.10	752.20	752.30

* Based on Rational Method calculations to approx peak flowrates and detention storage volumes within the Stormwater Management Basin

STORMWATER QUALITY TREATMENT STRATEGY

NorBE ASSESSMENT MUSIC RESULTS - SENT WATERNSW 23 OCTOBER 2020

CONTRIBUTING CATCHMENTS INTO WATER QUALITY TREATMENT MEASURES 4.46ha @ 19% IMPERVIOUS

RAINWATER TANK - 13.5KL ON EACH DETACHED DWELLING AND 170KL FOR MAIN BUILDING & ASSOCIATED BUILDINGS.

PLUMBED TO TOILET FLUSHING, IRRIGATION & WASHING MACHINE.

BIORETENTION FILTER AREA 908sqm @ 12% OF IMPERVIOUS CATCHMENT TO ACHIEVE NorBE

POLLUTION PARAMETER TREATMENT EFFICIENCIES >>>>>

FLOW 1%, PEAK FLOW -3%, TSS -78%, TP -57%, TN -47%, GP -92%

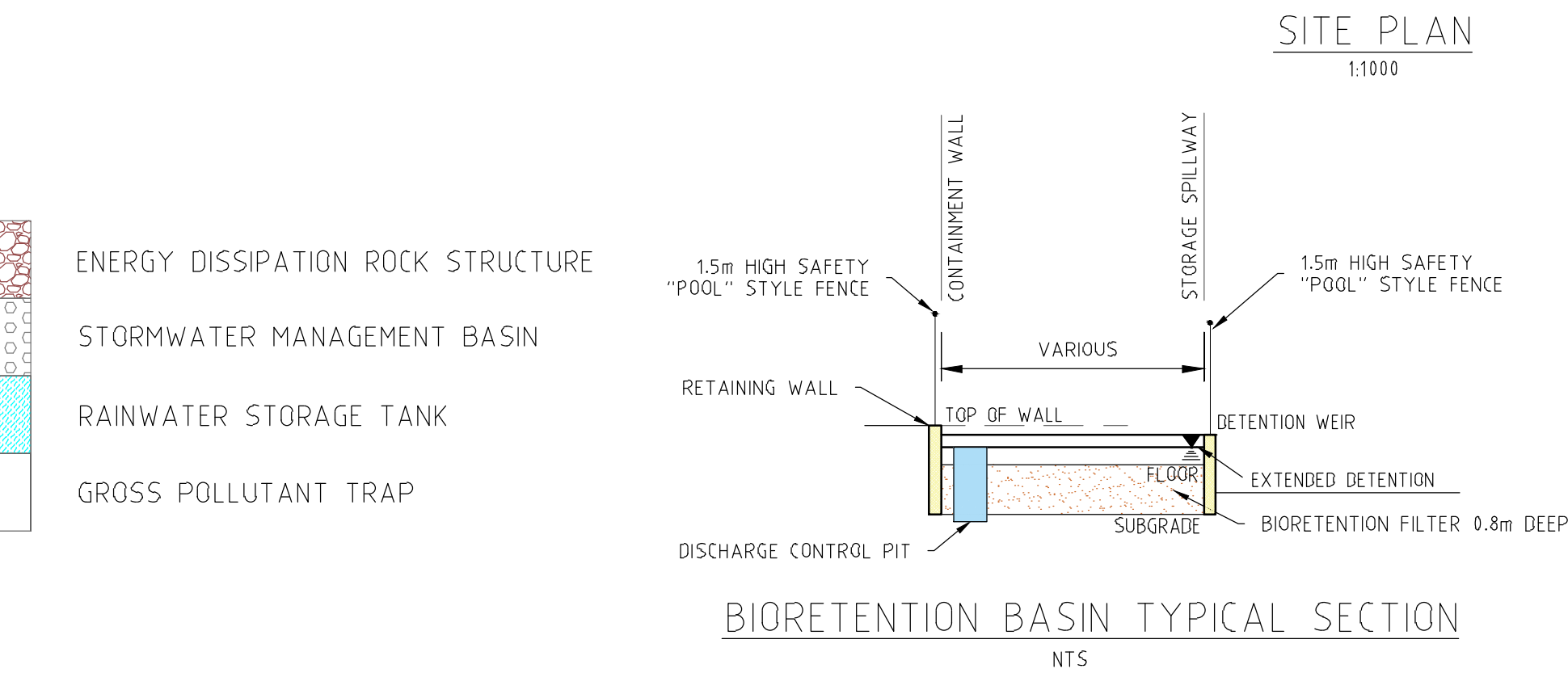
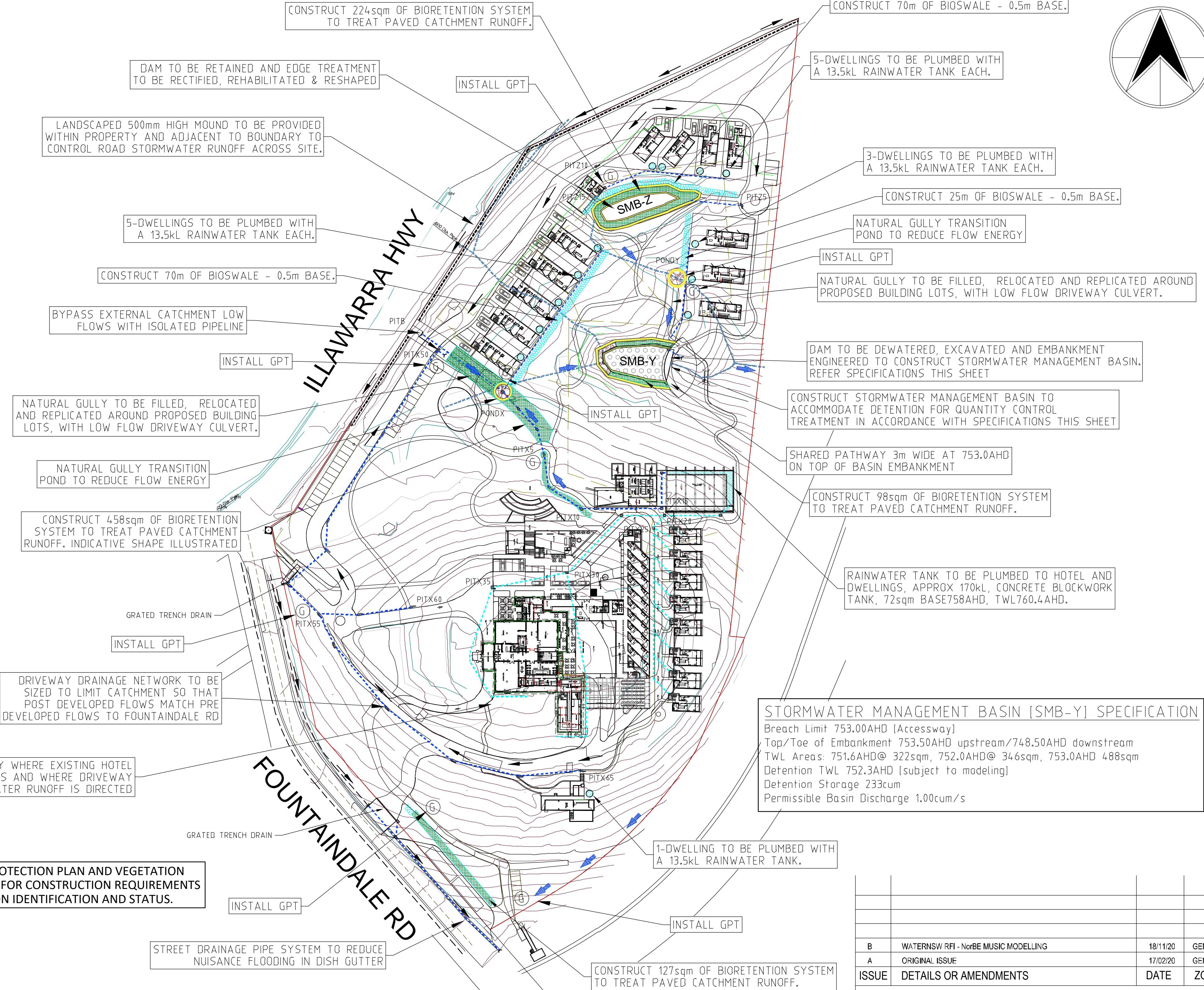
LEGEND

	EXISTING LEVEL		FLOWPATH/OVERFLOWS		ENERGY DISSIPATION ROCK STRUCTURE
	DESIGN LEVEL		SURFACE FLOWS		STORMWATER MANAGEMENT BASIN
	PROPOSED RAINWATER PIPELINE		PROPOSED SURFACE INLET PIT		RAINWATER STORAGE TANK
	PROPOSED STORMWATER PIPELINE		PROPOSED KERB INLET PIT - EKI		GROSS POLLUTANT TRAP

SCALES



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STORMWATER MANAGEMENT BASIN [SMB-Y] SPECIFICATION			
Breach Limit 753.00AHD [Accessway]			
Top/Toe of Embankment 753.50AHD upstream/748.50AHD downstream			
TWL Areas: 751.6AHD@ 322sqm, 752.0AHD@ 346sqm, 753.0AHD 488sqm			
Detention TWL 752.3AHD [subject to modeling]			
Detention Storage 233cum			
Permissible Basin Discharge 1.00cum/s			

B	WATERNSW RFI - NorBE MUSIC MODELLING	18/11/20	GENERAL
A	ORIGINAL ISSUE	17/02/20	GENERAL
ISSUE	DETAILS OR AMENDMENTS	DATE	ZONE

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PROJECT **THE ROBERTSON HOTEL
1 FOUNTAINDALE RD ROBERTSON**

TITLE **STORMWATER MANAGEMENT PLAN**

CLIENT **AEA GRAND HOTEL PTY LTD**

DRAWING No. **1939C01-101B** SHT 1/3

DRAWN-DESIGN-VERIFY
SS-DS-DS

DEVELOPMENT APPLICATION SUBMISSION

THIS DRAWING IS BASED ON THE FOLLOWING LAYOUTS AND MEASUREMENTS			
SURVEY		DATE	
ARCH		DATE	



PAVEMENT NOTES

- P1 ALL DRIVEWAY AREAS TO BE IN ASPHALT PAVEMENT IN ACCORDANCE WITH LANDSCAPE SPECIFICATION
- P2 ALL PAVEMENT MATERIAL TO BE PLACED IN LAYERS NOT EXCEEDING 150mm COMPACTED THICKNESS AND COMPACTED TO NOT LESS THAN, UNLESS ADVISED OTHERWISE;
- i. SUBGRADE MINIMUM DRY DENSITY RATIO OF 100% STANDARD IN ACCORDANCE WITH AS1289;
- ii. SUBBASECOURSE MINIMUM DRY DENSITY RATIO OF 95% MODIFIED IN ACCORDANCE WITH AS1289; AND
- iii. BASECOURSE MINIMUM DRY DENSITY RATIO OF 98% MODIFIED IN ACCORDANCE WITH AS1289.
- P3 A MINIMUM 50mm APPROVED GRANULAR BEDDING TO BE PROVIDED UNDER ALL CONCRETE.
- P4 ALL CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRESS GRADE OF 32MPa OR UNLESS OTHERWISE NOTED.

LEGEND

	ASPHALTIC CONCRETE PAVEMENT
	GRAVEL OR SOFT PAVEMENT
	PAVERS OR TEXTURED PAVEMENT
	OVERLAND FLOWS
	PROPOSED ASPHALT PAVEMENT EDGE
	PROPOSED KERB ONLY
	PROPOSED FLUSH KERB
	PROPOSED ROLL KERB AND GUTTER
	PROPOSED DISH GUTTER

B	WATERNSW RFI - NorBE MUSIC MODELLING	18/11/20	GENERAL
A	ORIGINAL ISSUE	17/02/20	GENERAL
ISSUE	DETAILS OR AMENDMENTS	DATE	ZONE

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PROJECT THE ROBERTSON HOTEL
1 FOUNTAINDALE RD ROBERTSON

TITLE ROAD & SITE PAVEMENT PLAN

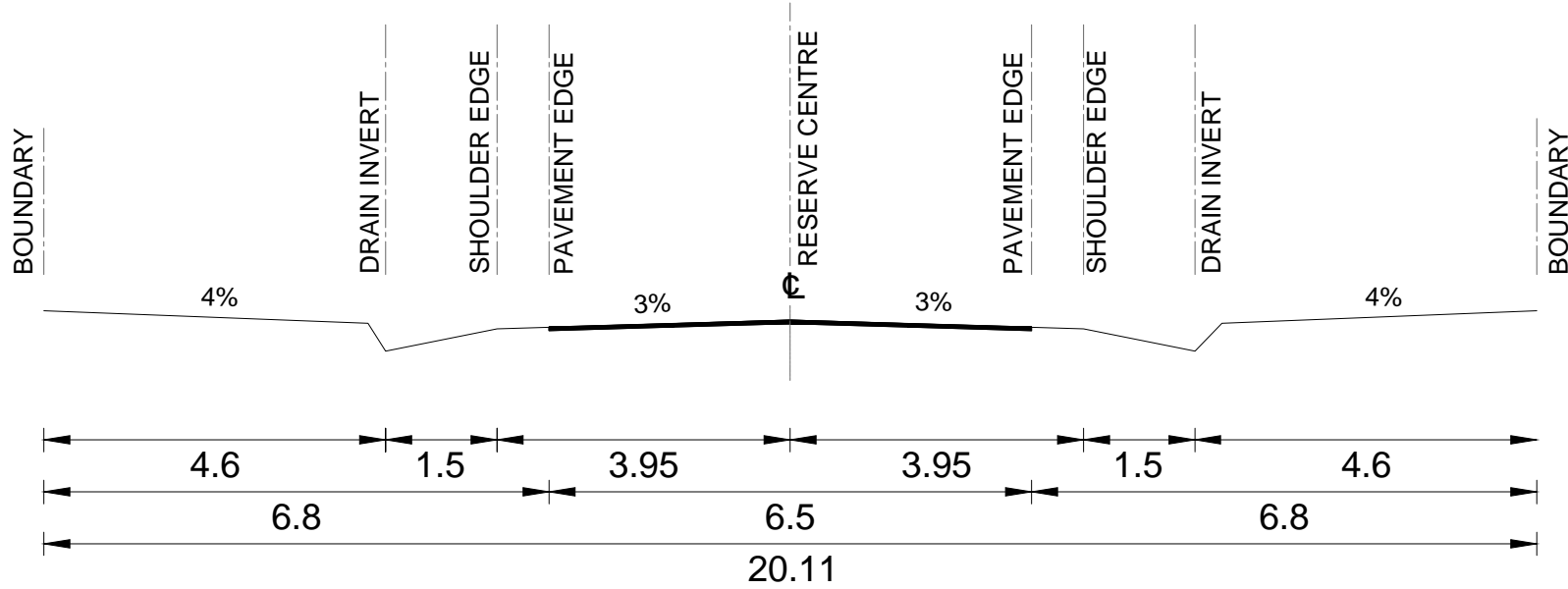
CLIENT AEA GRAND HOTEL PTY LTD

DRAWING No. 1939C01-103A

SHT 3/3

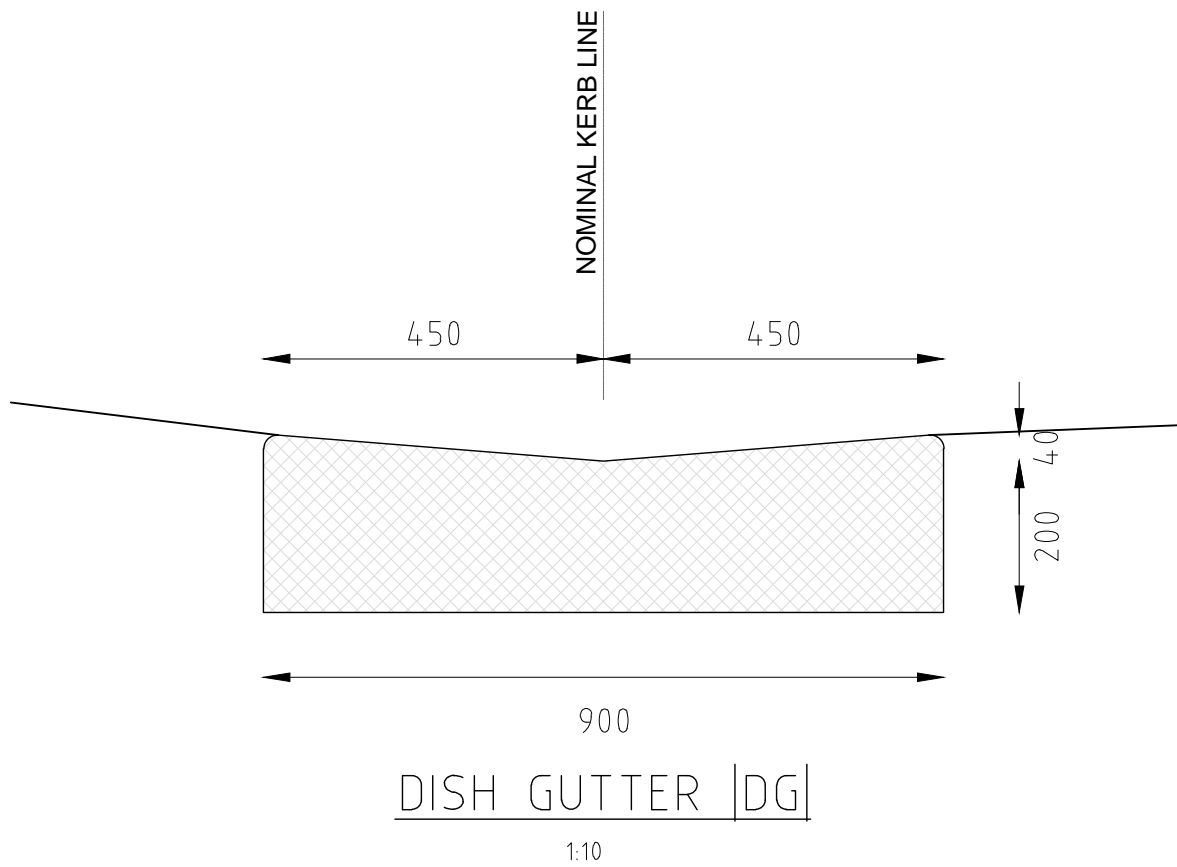
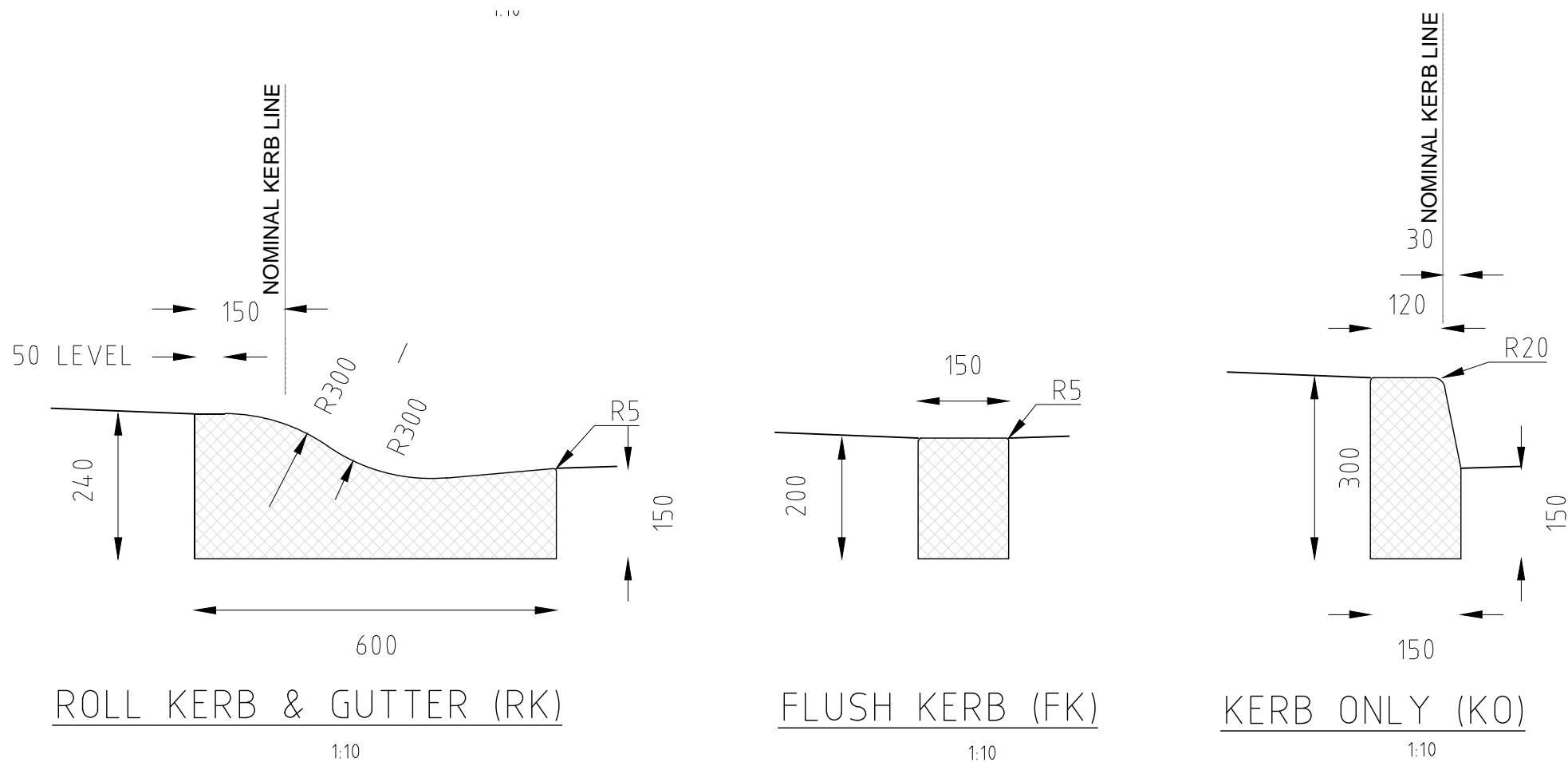
DRAWN-DESIGN-VERIFY
SS-DS-DS

DEVELOPMENT APPLICATION SUBMISSION



FOUNTAINDALE RD CARRIAGEWAY
RURAL ROAD WIDENING

SCALE 1:100



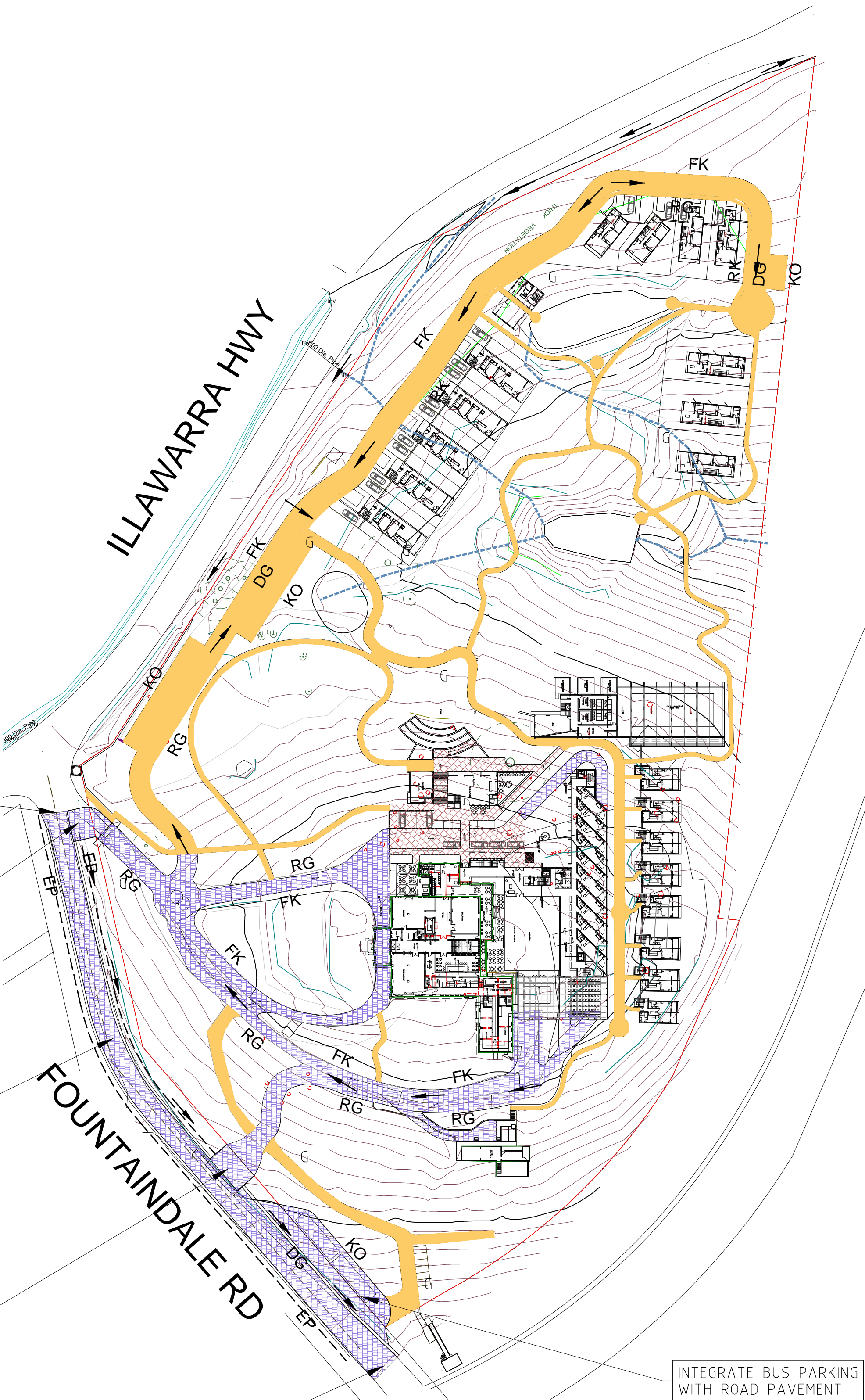
RETAIN EXISTING ASPHALT
PAVEMENT AND TRANSITION INTO
EXISTING PAVEMENT CONFIGURATION

DRIVEWAY 1 TO BE REALIGNED OUT OF
INTERSECTION WITH 7.0m WIDE HEAVY DUTY
PAVEMENT AND 4% FALL TO PAVEMENT EDGE IN
ACCORDANCE WITH COUNCIL STANDARDS.

FOUNTAINDALE RD CARRIAGEWAY TO BE UPGRADED TO
6.0m WIDE RURAL RD PAVEMENT WITH ASSOCIATED
TABLE DRAIN IN ACCORDANCE WITH COUNCIL STANDARDS.
ESTIMATED PAVEMENT WIDENING AREA 450sqm.
REFER THIS SHEET

DRIVEWAY 2 TO BE 12.6m WIDE HEAVY DUTY
PAVEMENT, ABOVE PIPE CROSSING WITH 4%
FALL TO PAVEMENT EDGE IN ACCORDANCE
WITH COUNCIL STANDARDS.

RETAIN EXISTING ASPHALT
PAVEMENT AND TRANSITION INTO
EXISTING PAVEMENT CONFIGURATION



INTEGRATE BUS PARKING
WITH ROAD PAVEMENT

SITE PLAN
1:1000

CAUTION:

1. UTILITY SERVICES SHOWN HEREON HAVE BEEN LOCATED WHERE POSSIBLE BY FIELD SURVEY. IF NOT ABLE TO BE LOCATED, SERVICES HAVE BEEN PLOTTED FROM THE RECORDS OF RELEVANT AUTHORITIES WHERE AVAILABLE. PRIOR TO EXCAVATION OR CONSTRUCTION ON THE SITE, THE RELEVANT AUTHORITY SHOULD BE CONTACTED FOR CONFIRMATION OF LOCATION OF SERVICES *** CALL BEFORE YOU DIG (CALL 1100) ***
2. THE BOUNDARIES SHOWN HEREON ARE APPROXIMATE ONLY. FOR ANY CONSTRUCTION ACTIVITIES PROPOSED IN CLOSE PROXIMITY TO THE BOUNDARIES, IT IS RECOMMENDED THAT THOSE BOUNDARIES BE MARKED TO AVOID POSSIBILITY OF ENCROACHMENT.



SCALES

