

KEY:

- SITE BOUNDARY BASED ON LANDSCAPE ARCHITECT'S LAYOUT
- CV — CV — EXISTING PUBLIC COMBINED SEWER
- CV — CV — EXISTING PRIVATE COMBINED DRAINAGE
- — — EXISTING PRIVATE SURFACE WATER DRAINAGE
- — — EXISTING PRIVATE FOUL DRAINAGE
- PROPOSED COMBINED MANHOLE
- — — PROPOSED FOUL DRAINAGE
- PROPOSED FOUL DRAINAGE MANHOLE/ INSPECTION CHAMBER
- — — PROPOSED SURFACE WATER DRAINAGE
- — — PROPOSED SURFACE WATER ROUTED THROUGH PETROL INTERCEPTOR
- PROPOSED SURFACE WATER MANHOLE
- PROPOSED FLOW CONTROL MANHOLE
- — — PROPOSED CELLULAR ATTENUATION TANK
- PROPOSED BACKDROP
- — — PERFORATED PIPE IN LAND DRAIN/ PERMEABLE SUB-BASE & SOFT LANDSCAPING
- — — RETAINING WALL DRAIN

DRAINAGE TO BE ABANDONED NOT SHOWN FOR CLARITY. REFER TO DRAINAGE REMOVAL DRAWING NMGNPH-VV-XX-DR-C-9254

NOTE: SOME SYMBOLS & LABELS NOT NOTED FOR CLARITY - REFER TO 1:200 DRAINAGE LAYOUTS FOR FULL KEY.

DESIGN PHILOSOPHY

SURFACE WATER DESIGN

THE DESIGN PROVIDES CAPACITY UP TO THE 1 IN 100-YEAR STORM EVENT +40% CLIMATE CHANGE EVENT.
SW FLOW RATE: 50% REDUCTION OF EXISTING FLOWS, BASED ON MCC REQUIREMENTS. (REFER TO TABLE 1 FOR FLOWS) AS AGREED WITH UNITED UTILITIES (REFER TO E-MAIL DATED 16.12.20)

STORAGE REQUIREMENT 374M³

ATTENUATION PROVIDED WITHIN CELLULAR ATTENUATION TANKS & OVERSIZED PIPES
FOR DETAILS REFER TO TABLE 2

OUTFALLS:

WESTERN SIDE (OUTFALL 1) OUTFALLS TO EXISTING COMBINED DRAINAGE AT MANHOLE C1
EASTERN SIDE (OUTFALL 2) OUTFALLS TO EXISTING COMBINED DRAINAGE AT MANHOLE C2
CAR PARK (OUTFALL 3) OUTFALLS TO FUTURE CONNECTION TO MASTERPLAN DRAINAGE

LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED.
POLLUTION TREATMENT: HARDSTANDING SLOPES TOWARDS SOFT LANDSCAPE. PARTIAL INFILTRATION WITHIN SOFT LANDSCAPE AND TYPE 3 SUB-BASE AREAS.
REFER TO EXTERNAL WORKS PLAN NMGNPH-VV-XX-DR-C-9470 & 9471

FOUL WATER DESIGN

FW PEAK FLOW RATE: 35.9 L/S (BASED ON ESTIMATES USING DISCHARGE UNIT METHOD. CONFIRMATION OF DISCHARGE UNITS REQUIRED FROM M&E DESIGNER)

OUTFALL: DRAINAGE OUTFALLS TO EXISTING COMBINED DRAINAGE AT MANHOLES CA2 & CB2
LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED.

PERMEABLE PAVING AREAS NOT SHOWN
FOR CLARITY. REFER TO
NMGNPH-CUR-VV-XX-DR-C-9470 & 9471
FOR DETAILS

DESIGN NOTES:

- DISCHARGE RATES ARE BASED ON A 50% REDUCTION OF EXISTING RATES AS PER LLFA REQUIREMENTS AND AGREEMENT WITH UU.
- ONLY MAIN DRAINAGE RUNS ARE LABELLED FOR CLARITY. REFER TO DRAWINGS NMGNPH-CUR-00-XX-DR-C-9251 - 9253 FOR 1:200 DRAINAGE LAYOUTS.
- FOUL DRAINAGE HAS BEEN DESIGNED USING ESTIMATES TAKEN BASED ON DISCHARGE UNIT METHOD. CONFIRMATION OF DISCHARGE UNITS REQUIRED FROM M&E DESIGNER.

GENERAL NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
- DESIGN BASED ON TOPOGRAPHICAL SURVEY AND UNDERGROUND UTILITY SURVEY INFORMATION AVAILABLE AT THE TIME OF DESIGN.
- ALL EXISTING SEWERS, CONNECTIONS, PIPE SIZES AND INVERT LEVELS TO BE CONFIRMED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS TO ENSURE CONNECTIVITY. ANY VARIANCE FROM THE INFORMATION SHOWN SHOULD BE REPORTED TO THE ENGINEER FOR REVIEW.
- DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
- ALL DIMENSIONS ARE IN METRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.
- WHERE EXISTING DRAINAGE IS BEING USED, ALLOWANCES SHOULD BE MADE TO REMEDIATE THIS DRAINAGE IN LINE WITH AVAILABLE CCTV SURVEY INFORMATION.
- ALL EXISTING SERVICES TO BE LOCATED PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS, AND WHERE NECESSARY PROTECTION OR DIVERSIONS TO BE UNDERTAKEN TO AVOID CONFLICT WITH THE PROPOSED WORK.
- BUILDING LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED BY ARCHITECT/ LANDSCAPE ARCHITECT.
- OUTFALL CONNECTION(S) SUBJECT TO AGREEMENT WITH THE APPROVING AUTHORITY.
- THIS DRAWING IS PRELIMINARY AND IS SUBJECT TO CHANGE AT LATER STAGES.
- CONNECTION AND OUTFALL TO THE EXISTING SEWER NETWORK WITHIN THE EASTERN AREA OF THE SITE IS SUBJECT TO APPROVAL.

FOR FULL DRAINAGE NOTES REFER TO DRAWING
NMGNPH-CUR-VV-XX-DR-C-9250

DRAWING BASED ON:

EXISTING INFORMATION

- UNITED UTILITIES PUBLIC SEWER RECORDS EXTRACT DATED NOVEMBER 2018
- 2018 TOPOGRAPHICAL SURVEY 3654_GMMH BY AXIS SURVEYS DATED FEBRUARY 2020.
- UNDERGROUND SERVICES SURVEY 20B201/001-011 BY SURVEY OPERATIONS DATED MAY 2020.
- CCTV SURVEY BY LAYER SURVEYS DATED OCTOBER 2020

PROPOSED INFORMATION

ARCHITECTS LAYOUT: GILLING DOD ARCHITECTS

- NMGNPH-GDA-VV-00-DR-A-0001_P11
- NMGNPH-GDA-VV-01-DR-A-0001_P10

LANDSCAPE PLAN: ITERIAD

- NMGNPH-ITR-00-LG-DR-L-0010_P11

PROPOSED LEVELS: CURTINS

- 07856-CUR-00-XX-DR-C-9102 P08 WIP

FOUNDATIONS: CURTINS

- NMGNPH-CUR-V1-FN-DR-L-1601 P01 WIP
- NMGNPH-CUR-V2-FN-DR-L-1601 P01 WIP
- NMGNPH-CUR-V3-FN-DR-L-1601 P01 WIP
- NMGNPH-CUR-V4-FN-DR-L-1601 P01 WIP

FOUL POP-UPS

- NMGNPH-RAM-V1-00-DR-M-5221_P01
- NMGNPH-RAM-V2-00-DR-M-5222_P01
- NMGNPH-RAM-V3-00-DR-M-5223_P01
- NMGNPH-RAM-V4-00-DR-M-5224_P01
- NMGNPH-RAM-V5-01-DR-M-5225_P01
- NMGNPH-RAM-V6-01-DR-M-5226_P01
- NMGNPH-RAM-V7-01-DR-M-5227_P01
- NMGNPH-RAM-V8-01-DR-M-5228_P01

RWPs

- NMGNPH-GDA-VV-ZZ-DR-A-2000_P01

PROPOSED EXTERNAL SERVICES INFORMATION

- NMGNPH-RAM-VV-00-DR-E-6321 P02
- NMGNPH-RAM-VV-00-DR-P-5800 P06

TABLE 1 PROPOSED AND EXISTING SURFACE WATER DISCHARGE RATES

CATCHMENT	IMPERMEABLE AREA (Ha)	DISCHARGE FLOW RATES (l/s)		
		1-YR EVENT	30-YR EVENT	100-YR EVENT
CATCHMENT A	0.28	32	74	92
CATCHMENT B	0.55	62	124	131
CATCHMENT C	0.81	52	63	63
CATCHMENT D	0.74	81	173	173
TOTAL IMPERMEABLE AREA	2.38	227	434	459
INCLUDES 50% REDUCTION IN ACCORDANCE WITH MCC REQUIREMENTS				
WESTERN SIDE (OUTFALL 1)	0.90	61	118	125
EASTERN SIDE (OUTFALL 2)	0.72	48	94	100
CAR PARK (OUTFALL 3)*	0.19	5	5	5
PROPOSED	1.83	114	217	230

*CAR PARK DISCHARGE RATE SET AT 5 l/s AS CALCULATED GREENFIELD RUN-OFF IS TOO LOW TO RESTRICT.

P09	ISSUED FOR PLANNING UPDATE	17/12/21	ATL	ATL
P08	ISSUED FOR PLANNING CONDITION DISCHARGE	22/11/21	ATL	MW
P07	ISSUED FOR STAGE 4	29/10/21	ATL	MW
P06	AMENDED TO VALUE ENGINEERING DESIGN	24/06/21	RH	CG
P05	STAGE 3 ISSUE	18/01/21	ATL	MW
P04	ISSUED FOR PLANNING	16/09/20	ATL	MW
P04	ISSUED FOR PLANNING	16/09/20	ATL	MW

Rev:	Description:	Date:	By:	Chkd:
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Status:

STAGE 4

Project:

NEW PARK HOUSE

Orig Title:

PROPOSED DRAINAGE LAYOUT

Size:	Date:	Drawn By:	Designed By:	Checked By:
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A1	30/03/20	QJT	QJT	MW
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Scale: 1:500	Project No:	Originator:	Volume:	Level:	Type:	Role:	Category / Number:	Rev:
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NMGNPH - CUR - VV - XX - DR - C -	9250	-	P09					
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