



GENERAL NOTES:

FOR DRAINAGE NOTES REFER TO DRAWING
500991-CUR-XX-00-DR-C-92530

DESIGN PHILOSOPHY

SURFACE WATER

EXISTING SW FLOW RATES:

1-YEAR 10.4 l/s
30-YEAR 28.6 l/s
100-YEAR 35.9 l/s
FLOW RATES BASED ON PROPOSED DEVELOPABLE AREA OF 0.18 Ha;
CALCULATED USING A MODEL OF THE EXISTING DRAINAGE NETWORK IN
MICRODRAINAGE

SOURCE CONTROL:

PROPOSED DISCHARGE RATES SET AT 5 l/s FOR ALL STORM EVENTS IN
ACCORDANCE WITH UNITED UTILITIES REQUIREMENTS:
DRAINAGE MODELS INCLUDE FOR A SURCHARGED OUTFALL LEVEL OF 37.410

STORAGE REQUIREMENT:

48m³ BASED ON CAUSEWAY FLOW DESIGN MODEL. DESIGNED TO HAVE NO
FLOODING FOR THE 1:100-YEAR STORM + 40% CLIMATE CHANGE
ALLOWANCE.

INFILTRATION:

SITE INVESTIGATION INDICATES THAT THE SUB-STRATA MAY BE SUITABLE
FOR INFILTRATION. HOWEVER, DUE TO THE PROPOSED & EXISTING BUILDING
LAYOUT, AND ALSO THE EXISTING PUBLIC SEWER UNDER THE CAR PARK,
THERE IS INSUFFICIENT SPACE TO LOCATE INFILTRATION FEATURES.

FOUL DRAINAGE

LEVELS INDICATE THAT PUMPING WILL NOT BE REQUIRED. TBC FOLLOWING
FURTHER DESIGN AND SURVEY WORK.

PEAK FOUL FLOWS ESTIMATED USING DISCHARGE UNIT METHOD BASED ON
M&E ENGINEER'S ABOVE GROUND DRAINAGE DESIGN:
NETWORK A: 8.9 l/s
NETWORK B: 7.5 l/s

DRAWING REFERENCES

TOPOGRAPHICAL SURVEY (DPR) RECEIVED 07.03.19
18607-T-ADDITIONAL AREA REV A1

ARCHITECT (HCD)

500991-HCD-ZZ-00-DR-A-9001 REV C01 SITE PLAN GA
500991-HCD-ZZ-00-DR-A-2300 REV C01 SLAB SETTING OUT LEVEL 00
500991-HCD-ZZ-00-DR-A-9002 REV C02 WATER TANK ROOM

M&E (AMEON)

500991-AME-ZZ-XX-DR-M-5201 REV C01 LEVEL 00 AGD LAYOUT
500991-AME-ZZ-XX-DR-M-5230 REV C01 AGD SCHEMATIC SHEET 1
500991-AME-ZZ-XX-DR-M-5231 REV C01 AGD SCHEMATIC SHEET 2
500991-AME-ZZ-XX-DR-M-5232 REV C01 RAINWATER SCHEMATIC
500991-AME-ZZ-XX-DR-M-9020 REV C04 SITE WIDE EXTERNAL M&E SERVICES
LAYOUT

LANDSCAPE ARCHITECT (WEDDLES)

1280-WLD-00-XX-DR-L-0001 REV-F LANDSCAPE GA PLAN

FOUNDATION LAYOUT (CURTINS)

500991-CUR-XX-00-FN-DR-S-16001 REV C02 FOUNDATION LAYOUT

CCTV SURVEYS:

S20263 CCTV SURVEY BY SEP DATED FEB 2020
ADDITIONAL SURVEY BY TEAM DRAINAGE DATED JUNE 2021

EXISTING PUBLIC SEWERS

PUBLIC SEWER LOCATIONS DERIVED FROM PDF OVERLAY OF UNITED
UTILITIES PUBLIC SEWER PLANS. RECEIVED 08.03.19

AS-BUILT DRAINAGE

AS BUILT DRAINAGE INFORMATION RECEIVED 15.09.22 FROM QED
CONSTRUCTION

FC01	FINAL CONSTRUCTION ISSUE	21.09.22	ATL	ATL
C06	AMENDED IN LINE WITH LLFA COMMENTS	08.03.22	ATL	ATL
C05	ATTENUATION TANK DETAILS AMENDED, DRAINAGE AMENDED TO SUIT ON-SITE CHANGES	08.02.22	ATL	CG
C04	DRAINAGE AMENDED TO SUIT REVISED EXISTING DRAINAGE LEVELS	23.12.21	ATL	ATL
C03	DRAINAGE AMENDED TO ACCEPT EXISTING COMBINED DRAINAGE	10.12.21	ATL	CG
C02	UPDATED IN LINE WITH DESIGN TEAM COMMENTS	09.11.21	ATL	ATL
C01	CONSTRUCTION ISSUE	20.09.21	ATL	MW
Rev:	Description:	Date:	By:	Chkd:



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Status:

FINAL CONSTRUCTION

Project:

KINCARDINE COURT

Orig Title:

PROPOSED DRAINAGE LAYOUT

Size:	Date:	Drawn By:	Designed By:	Checked By:
A1	20/09/21	ATL	ATL	MW

Scale: 1:200

Project No: Originator: Volume: Level: Type: Role: Category / Number: Rev:

500991 - CUR - ZZ - 00 - DR - C - 9500 - FC01

FINAL CONSTRUCTION

THE INFORMATION IS BASED ON CONFIRMATION FROM THE
CONTRACTOR OF THE INSTALLED DRAINAGE. THERE MAY BE
VARIATIONS ON SITE WHICH ARE NOT REFLECTED ON THIS
DRAWING AND HAS NOT BEEN VERIFIED.

KEY

— SITE BOUNDARY BASED ON ARCHITECT'S LAYOUT
500991-HCD-ZZ-00-DR-9001

EXISTING DRAINAGE

— EXISTING PUBLIC COMBINED SEWER (APPROXIMATE)
PUBLIC SEWER EASEMENT - 3m FROM CENTRELINE OF
SEWER (TBC)
— EXISTING HIGHWAY SURFACE WATER GULLY
(APPROXIMATE)
— EXISTING PRIVATE DRAINAGE

CONSTRUCTED DRAINAGE

— COMBINED DRAINAGE
— FOUL DRAINAGE
— SURFACE WATER DRAINAGE

— FLOW CONTROL CHAMBER

— CELLULAR ATTENUATION STORAGE

• BACKDROP
• SVP LOCATION/ FOUL GULLY
• RWP LOCATION
□ PROPOSED ROAD GULLY
— LINEAR DRAINAGE CHANNEL/ OUTLET UNIT - GATIC
CASTSLOT TREADSAFE
□ AB GATIC ACCESS BOX
□ OU GATIC OUTLET UNIT
— THRESHOLD DRAIN
— FOUNDATION

CAR PARK DRAINAGE TO BE
SERVED BY ROAD GULLIES/
LINEAR DRAINAGE AS SHOWN

ON-LINE ATTENUATION/
POLYSTORM PSM1 WITH PSM4
ACCESS CHANNEL (OSA)
14 x 3 x 1.2m
ATTENUATION VOLUME 48m³
BASED ON 95% VOID RATIO

LOCATION AND DEPTH OF PUBLIC
SEWER BASED ON SURVEY
INFORMATION PROVIDED BY
CONTRACTOR 22/10/21

SW9 6000
CL 38.98
IL 37.72

SW10 15000
CL 38.95
IL 37.04
FLOW CONTROL
HYDROGRABE OPTIMUM OSA
MODEL REF CUL-SHE-0092-
5000-2000-5000

CW1 12000
CL 38.90
IL 36.53
BD IL 36.89
INTERCEPTOR TRAP
ON INLET FROM SW
DRAINAGE

COMBINED CONNECTION TO EXISTING
PUBLIC COMBINED SEWER.
S106 AGREEMENT(PART 1) WITH UNITED
UTILITIES COMPLETED, REF EC3647

FOR DETAILS OF DRAINAGE
WITHIN BUILDING FOOTPRINT
REFER TO DRAWING
500991-XX-00-DR-C-92501

FWB4 4500
CL 39.18
IL 37.85
BD IL 38.70

FWB5 4500
CL 39.18
IL 37.83
BD IL 38.70

FWB6 4500
CL 39.17
IL 37.72

FWB7 4500
CL 39.17
IL 37.54

FWB8 4500
CL 39.17
IL 37.45

FWB9 4500
CL 39.17
IL 37.33

FWB10 4500
CL 39.17
IL 37.22

FWB11 4500
CL 39.17
IL 37.11

FWB12 4500
CL 39.17
IL 37.00

FWB13 4500
CL 39.17
IL 36.89

FWB14 4500
CL 39.17
IL 36.78

FWB15 4500
CL 39.17
IL 36.67

FWB16 4500
CL 39.17
IL 36.56

FWB17 4500
CL 39.17
IL 36.45

FWB18 4500
CL 39.17
IL 36.34

FWB19 4500
CL 39.17
IL 36.23

FWB20 4500
CL 39.17
IL 36.12

FWB21 4500
CL 39.17
IL 36.01

FWB22 4500
CL 39.17
IL 35.90

FWB23 4500
CL 39.17
IL 35.79

FWB24 4500
CL 39.17
IL 35.68

FWB25 4500
CL 39.17
IL 35.57

FWB26 4500
CL 39.17
IL 35.46

FWB27 4500
CL 39.17
IL 35.35

FWB28 4500
CL 39.17
IL 35.24

FWB29 4500
CL 39.17
IL 35.13

FWB30 4500
CL 39.17
IL 35.02

FWB31 4500
CL 39.17
IL 34.91

FWB32 4500
CL 39.17
IL 34.80

FWB33 4500
CL 39.17
IL 34.69

FWB34 4500
CL 39.17
IL 34.58

FWB35 4500
CL 39.17
IL 34.47

FWB36 4500
CL 39.17
IL 34.36

FWB37 4500
CL 39.17
IL 34.25

FWB38 4500
CL 39.17
IL 34.14

FWB39 4500
CL 39.17
IL 34.03

FWB40 4500
CL 39.17
IL 33.92

FWB41 4500
CL 39.17
IL 33.81

FWB42 4500
CL 39.17
IL 33.70

FWB43 4500
CL 39.17
IL 33.59

FWB44 4500
CL 39.17
IL 33.48

FWB45 4500
CL 39.17
IL 33.37

FWB46 4500
CL 39.17
IL 33.26

FWB47 4500
CL 39.17
IL 33.15

FWB48 4500
CL 39.17
IL 33.04

FWB49 4500
CL 39.17
IL 32.93

FWB50 4500
CL 39.17
IL 32.82

FWB51 4500
CL 39.17
IL 32.71

FWB52 4500
CL 39.17
IL 32.60

FWB53 4500
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IL 32.49

FWB54 4500
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FWB55 4500
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IL 32.27

FWB56 4500
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IL 32.16

FWB57 4500
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IL 32.05

FWB58 4500
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IL 31.94

FWB59 4500
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IL 31.83

FWB60 4500
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IL 31.72

FWB61 4500
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IL 31.61

FWB62 4500
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IL 31.50

FWB63 4500
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FWB65 4500
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FWB66 4500
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FWB67 4500
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FWB68 4500
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IL 30.84

FWB69 4500
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IL 30.73

FWB70 4500
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FWB71 4500
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IL 30.51

FWB72 4500
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FWB73 4500
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FWB74 4500
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IL 30.18

FWB75 4500
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IL 30.07

FWB76 4500
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IL 29.96

FWB77 4500
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FWB78 4500
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FWB79 4500
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FWB80 4500
CL 39.17
IL 29.52

FWB81 4500
CL 39.17
IL 29.41

FWB82 4500
CL 39.17
IL 29.30

FWB83 4500
CL 39.17
IL 29.19

FWB84 4500
CL 39.17
IL 29.08

FWB85 4500
CL 39.17
IL 28.97

FWB86 4500
CL 39.17
IL 28.86

FWB87 4500
CL 39.17
IL 28.75

FWB88 4500
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FWB89 4500
CL 39.17
IL 28.53

FWB90 4500
CL 39.17
IL 28.42

FWB91 4500
CL 39.17
IL 28.31

FWB92 4500
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IL 28.20

FWB93 4500
CL 39.17
IL 28.09

FWB94 4500
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IL 27.98

FWB95 4500
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IL 27.87

FWB96 4500
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FWB97 4500
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FWB98 4500
CL 39.17
IL 27.54

FWB99 4500
CL 39.17
IL 27.43

FWB100 4500
CL 39.17
IL 27.32

FWB101 4500
CL 39.17
IL 27.21

FWB102 4500
CL 39.17
IL 27.10

FWB103 4500
CL 39.17
IL 26.99

FWB104 4500
CL 39.17
IL 26.88

FWB105 4500
CL 39.17
IL 26.77

FWB106 4500
CL 39.17
IL 26.66

FWB107 4500
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IL 26.55

FWB108 4500
CL 39.17
IL 26.44

FWB109 4500
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FWB110 4500
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IL 26.22

FWB111 4500
CL 39.17
IL 26.11

FWB112 4500
CL 39.17
IL 26.00

FWB113 4500
CL 39.17
IL 25.89

FWB114 4500
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FWB115 4500
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FWB116 4500
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FWB117 4500
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FWB118 4500
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FWB119 4500
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FWB120 4500
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FWB121 4500
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IL 25.01

FWB122 4500
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FWB123 4500
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FWB131 4500
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IL 23.91

FWB132 4500
CL 39.17
IL 23.80

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