



SW CALCULATION SUMMARY:-

SITE AREA = 2063m²
PREVIOUS DEVELOPMENT; REFER TO CCTV SURVEY
IMPERMEABLE AREAS DRAINING TO EXISTING SW NETWORK
HARDSTANDINGS/BUILDINGS = 0.200ha
PERMEABLE GRASSED / LANDSCAPED AREAS = 0.006ha

RUNOFF DURING 1in1yr EVENT, REFER TO EXISTING MODEL MICRODRAINAGE OUTPUT = 28.0l/s (SURCHARGED)
30% BETTERMENT = **18.5 l/s**
PROPOSED DISCHARGE (150mm Ø PIPE @ 1:100 GRADIENT, NON SURCHARGED) = **16.0l/s (0.75 times full depth)**

PROPOSED IMPERMEABLE AREA = 0.175ha
PROPOSED PERMEABLE AREA = 0.032ha
PROPOSED ATTENUATION TO PROVIDE SUFFICIENT CAPACITY DURING THE 1in100yr+40%CC EVENT = **49.4m³** @ 100% VOID RATIO

- NOTES:**
- ALL DRAINAGE POSITIONS, QUANTITIES & INVERTS SUBJECT CHANGE FOLLOWING DETAILED DESIGN.
 - (*) DENOTES ASSUMED INVERT LEVEL NOT RECORDED WITHIN CCTV SURVEY PROVIDED
 - SW & FW CONNECTION POINTS TO SWW SEWER NETWORK SUBJECT TO SSW APPROVAL & S106 WIA 1991 AGREEMENTS PRIOR TO CONSTRUCTION & COMMUNICATION OF FLOWS.
 - MH COVERS AND FRAMES TO CONFORM TO BS EN 124: HIGHWAYS AND FOOTWAYS TO FRONT OF BUILDINGS (D400), FOOTWAYS TO REAR OF BUILDINGS (C250)
 - TYPE S BEDDING AND SURROUND TO ALL PIPES EXCEPT IN THE FOLLOWING CIRCUMSTANCES, IN WHICH TYPE Z BEDDING AND SURROUND ARE TO BE USED:
IN BACK GARDENS OF HOUSES WHERE DEPTH TO CROWN OF PIPE IS LESS THAN 0.35m.
IN AREAS OF THE REAR OF FLATS AND PARKING WHERE DEPTH TO CROWN IS LESS THAN 0.9m.
IN AREAS OF ROAD WHERE DEPTH IS LESS THAN 1.2m.
 - ALL EXISTING MANHOLE INVERTS TO BE CHECKED AND REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF DRAINAGE WORKS. EXISTING PIPE CONNECTIONS ARE TO BE CCTV SURVEYED AND INSPECTED BY THE ENGINEER AND LOCAL AUTHORITY. IF THE PIPE CONNECTION IS FOUND TO BE DAMAGED OR IN DISTRESS, THE CONTRACTOR IS TO CARRY OUT REMEDIAL WORKS OR PROVIDE A NEW CONNECTION TO THE EXISTING SEWER (PIPE SIZE AND GRADIENT TO BE DETERMINED BY THE ENGINEER).
 - THE GRADIENTS INDICATED AGAINST THE DRAIN RUNS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL INSTALL DRAINS TO THE INVERT LEVELS SHOWN FOR EACH MANHOLE OR OTHER INDICATED POSITION.
 - ALL FW DRAINAGE TO BE 150mm DIAMETER UNLESS OTHERWISE NOTED.
 - ALL SW DRAINAGE TO BE 150mm DIAMETER UNLESS OTHERWISE NOTED.
 - ALL ADAPTABLE DRAINAGE (150mm-600mm) TO BE TWIN WALL UPVC PIPEWORK IN ACCORDANCE WITH BS-EN 13476-1:2007 AND TO ACHIEVE THE HAPAS SPECIFICATION ISSUED BY THE BBA.
 - ALL JOINTING IN ACCORDANCE WITH MANUFACTURERS TECHNICAL ADVICE & SPECIFICATION.
 - ALL NON ADAPTABLE DRAINAGE TO BE THE STANDARD UPVC 110mm, 160mm DRAINAGE AND MANUFACTURED TO BS-EN 1401 AND BS 4660 UNLESS NOTED OTHERWISE.
 - ALL STORM WATER DRAINAGE TO BE A MINIMUM OF 150mm DIAMETER UNLESS OTHERWISE NOTED.
 - SOIL & VENT PIPE LOCATION AND NUMBER TO BE CONFIRMED WITH ARCHITECT.
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS DRAWINGS, TOGETHER WITH THEIR LATEST SPECIFICATIONS, ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER (JUBB) AS SOON AS POSSIBLE.
 - FIGURED DIMENSIONS ONLY TO BE USED. ANY QUERIES OR DISCREPANCIES TO BE REFERRED TO THE ENGINEER (JUBB) IMMEDIATELY.
 - SVP/ISS LOCATION TO BE CONFIRMED BY ARCHITECT
 - RWP TO BE CONFIRMED BY ARCHITECT
 - EXISTING FW & SW DRAINAGE ONSITE ASSUMED TO BE PRIVATE, AND SERVING ONLY THE FORMER AMBULANCE HEADQUARTERS. SUBJECT TO CONFIRMATION BY SOUTH WEST WATER (SWW, AS THE STATUTORY UNDERTAKER) OF OWNERSHIP. ALTERATIONS TO ANY ADOPTED SEWER WILL BE SUBJECT TO A S185 WIA 1991 AGREEMENT WITH SWW.
 - ALL DISCHARGE RATES TO BE AGREED WITH SOUTH WEST WATER, DEVON COUNTY COUNCIL (AS LLFA LEAD LOCAL FLOOD AUTHORITY) AND EXETER CITY COUNCIL (AS PLANNING AUTHORITY).
 - WHERE SERVING ONLY THE FORMER BUILDING, EXISTING PRIVATE DRAINAGE TO BE GRUBBED UP AND/OR REMOVED.

P7	07/08/20	Revised Scheme	TDJ	GS
P6	06/02/20	Revised Scheme	TDJ	GS
P5	06/12/19	Amended to DCC comments	TDJ	SJ
P4	25/10/19	Amended to SWW comments	TDJ	GS
P3	10/10/19	Minor amendments	TDJ	GS
P2	07/10/19	Revised Site Layout	TDJ	GS
P1	30/07/19	Preliminary issue	ME	TDJ

Rev Date Description By Apvd

PROJECT:
GLADSTONE ROAD,
EXETER

TITLE:
DRAINAGE STRATEGY

CLIENT:
WATKINS JONES GROUP

SCALE@A1:
AS SHOWN

PROJECT REF:
19252
DRAWING No: 19252-JUBB-XX-00-DR-C-500
REV: P7

Revision Referencing
P = Preliminary A = Approval T = Tender C = Construction

