



LEGEND

- BUILDING OUTLINE
- PROPOSED CONCRETE DRIVEWAY
- PROPOSED EXPOSED AGGREGATE CONCRETE FOOTPATH
- PROPOSED CONCRETE FOOTPATH
- PROPOSED STORMWATER PIPE
- PROPOSED STORMWATER PIT AND COVER LEVEL
- PROPOSED STORMWATER KERB INLET PIT AND COVER LEVEL
- EXISTING DRAINAGE STRUCTURE
- PROPOSED FLOOR WASTE AND COVER LEVEL
- PROPOSED DISH DRAIN
- MATCH TO EXISTING
- PROPOSED SPOT HEIGHT
- DENOTES DIRECTION OF FALL
- DENOTES PROPOSED BOLLARD
- PROPOSED RETAINING WALL
- PROPOSED FINISHED FLOOR LEVEL

STORMWATER MANAGEMENT PHILOSOPHY

NORTHROP CONSULTING ENGINEERS HAVE PREPARED A STORMWATER DRAINAGE DESIGN FOR THE PROPOSED BIORESOURCES DEVELOPMENT, WHICH INCLUDES THE CONSTRUCTION OF A NEW 2 STOREY BUILDING CONTAINING LABORATORIES AND ASSOCIATED PLANT AND STORAGE SPACES. THIS DESIGN HAS BEEN GENERALLY CONDUCTED IN ACCORDANCE WITH NEWCASTLE CITY COUNCIL (NCC) DCP (2012).

CURRENTLY THE SITE SUPPORTS EXISTING GLASSHOUSE BUILDINGS AND SURROUNDING PAVEMENTS, WITH SOME LANDSCAPE AREAS PRESENT AROUND THE PERIMETER. THE SITE IS APPROXIMATELY 90% IMPERVIOUS, WITH NO EXISTING STORMWATER DRAINAGE CONTROL FACILITIES NOTED. AS SUCH, ALL STORMWATER RUNOFF FROM ALL STORM EVENTS DISCHARGE FREELY TO THE SITES EXISTING STORMWATER DRAINAGE SYSTEM PRIOR TO ENTERING THE UPPER REACHES OF BOWINBAH CREEK (LOCATED ON THE PROPERTY) AND ULTIMATELY HEXHAM SWAMP.

THE PHILOSOPHY OF STORMWATER MANAGEMENT ON-SITE IS SUMMARISED AS FOLLOWS:

- RUNOFF FROM NEW ROOF AREAS WILL BE COLLECTED AND DIVERTED TO A NEW 40kL BELOW GROUND RAINWATER TANK LOCATED TO THE SOUTH OF THE PROPOSED BUILDING. THE PROPOSED RAINWATER TANK HAVE BEEN SIZED IN ACCORDANCE WITH NCC STORMWATER AND WATER EFFICIENCY DEVELOPMENT TECHNICAL MANUAL (UPDATED 2015) AND DCP (2012).
- GROUND FLOOR PAVED AREAS ARE GENERALLY COVERED BY THE OVERLYING BUILDING AND ROOF. STORMWATER RUNOFF FROM THESE AREAS WILL BE COLLECTED BY A PROPOSED PIT AND PIPE NETWORKS AND DISCHARGED TO THE EXISTING ONSITE DRAINAGE SYSTEM.

CALCULATIONS

- REQUIRED STORAGE WAS CALCULATED AT A RATE OF 25MM PER M2 OF SITE AREA IN ACCORDANCE WITH NCC DCP (2012) AND A 75% IMPERVIOUS SITE AREA):
 $(25/1000) \times 1400 = 35M3$

40M3 OF STORAGE WILL BE PROVIDE THROUGH THE INSTALLATION OF ROOF WATER TANKS, WHICH EXCEEDS COUNCIL'S MINIMUM STORAGE DEMANDS.

DRAWN: J. LEWIS
DESIGNED: C. SMITH
JOB MANAGER: C. SMITH
VERIFIER: VERIFIER

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT
1	ISSUED FOR APPROVAL	CS		CS	23.05.18	

THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

ARCHITECT

**DENTON
CORKER
MARSHALL**

SCALE 1:100 @ A1

ALL SETOUT TO ARCHITECT'S DRAWINGS. DIMENSIONS TO BE VERIFIED WITH THE ARCHITECT AND ON SITE BEFORE MAKING SHOP DRAWINGS OR COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.

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PROJECT

**UoN BIO-RESOURCES
FACILITY**

DRAWING TITLE

**CONCEPT STORMWATER
MANAGEMENT PLAN**

JOB NUMBER

NL171955

DRAWING NUMBER

C20

REVISION

1

DRAWING SHEET SIZE = A1



ISSUED FOR APPROVAL