



Adelaide Festival Plaza Public Realm Works - Tower 2

Stage 1B-2 Stormwater Management Plan
Planning Approval

March 2025

This page left intentionally blank for pagination.

Mott MacDonald
383 Kent Street
Sydney
NSW 2000
PO Box Q1678
QVB Sydney NSW 1230
Australia

T +61 (0)2 9098 6800
mottmac.com

Walker Corporation
Level 21, Governor
Macquarie Tower
1 Farrer Place, Sydney
NSW 2000

Adelaide Festival Plaza Public Realm Works - Tower 2

Stage 1B-2 Stormwater Management Plan Planning Approval

March 2025

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	19.03.25	W. Phan	S. Daniels	B. Soo	Issue for Planning Approval

Document reference: 703104670 | 1 | A

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.

Contents

1	Introduction	1
1.1	Scope	1
1.2	Site Extents and Staging Plan	1
1.3	Stormwater Policy and Guidelines	2
2	Stormwater Drainage	3
2.1	Existing Stormwater System	3
2.1.1	Existing Council Drainage System	3
2.1.2	Existing Festival Plaza Drainage System	4
2.2	Stormwater Design	5
2.2.1	Stormwater Design Criteria	5
2.2.2	Proposed Drainage System	5
2.2.3	Stormwater Detention	6
2.2.4	Stormwater Quality	7
A.1	Stormwater Management Sketch	8

Figures

Figure 1-1: Site Extents for Festival Plaza Stage 1B-2	2
Figure 2-1: Existing drainage network	3
Figure 2-2: Assumed existing drainage system for Festival Plaza	4
Figure 2-3: Proposed Tower 2 Plaza Drainage Layout	6

1 Introduction

Mott Macdonald has been commissioned by Walker Corporation to prepare a Stormwater Management Report to support the Planning Approval of the Adelaide Festival Plaza Public Realm zone surrounding the proposed Festival Plaza Tower 2.

The redevelopment of the Festival Plaza precinct sited on the corner of North Terrace and King William Road involves multiple stakeholders including the South Australian Government, Adelaide Festival Centre, Sky City and the Walker Corporation.

Walker Corporation are proposing to develop a section of the precinct with a new 38-storey mixed-use tower and surrounding plaza, following on from the recent completion of the 29-storey commercial office tower, 5-level underground car park and integrated public plaza.

1.1 Scope

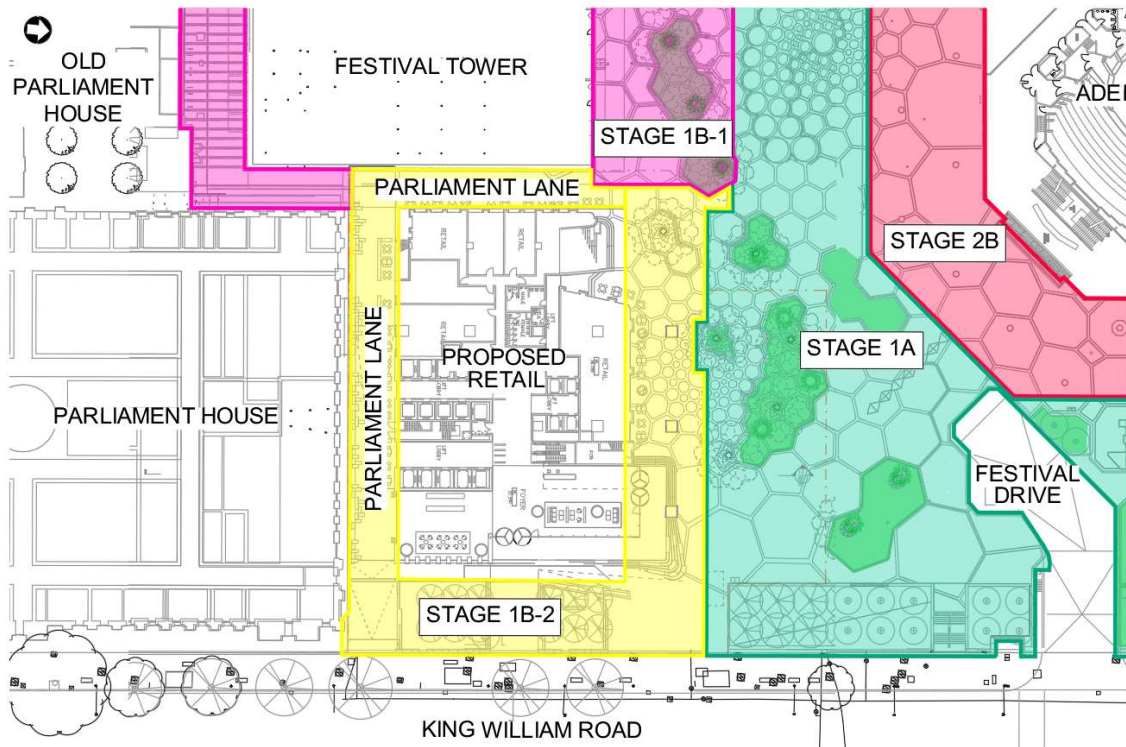
The scope of this report is on the stormwater management for the Festival Plaza precinct surrounding the proposed Festival Tower 2. The report will address the following engineering components:

- Existing stormwater system
- Proposed stormwater system
- Stormwater quality

1.2 Site Extents and Staging Plan

The Festival Plaza Precinct surrounding Tower 2 represents the remaining unfinished area of Festival Plaza, interfacing with the completed plaza areas adjacent (Stage 1B-1 to the west in magenta and Stage 1A to the north in green). Refer to Figure 1-1 for site extents and adjacent staging.

Figure 1-1: Site Extents for Festival Plaza Stage 1B-2



1.3 Stormwater Policy and Guidelines

The stormwater drainage for the proposed development will be designed to comply with the following guidelines:

- AS/NZS 3500.3:2015 – Plumbing and drainage – Part 3: Stormwater drainage
- Adelaide City Council – City Works Guidelines
- Australian Rainfall and Runoff 2019
- Water Sensitive Urban Design Technical Manual – Greater Adelaide Region, December 2010

2 Stormwater Drainage

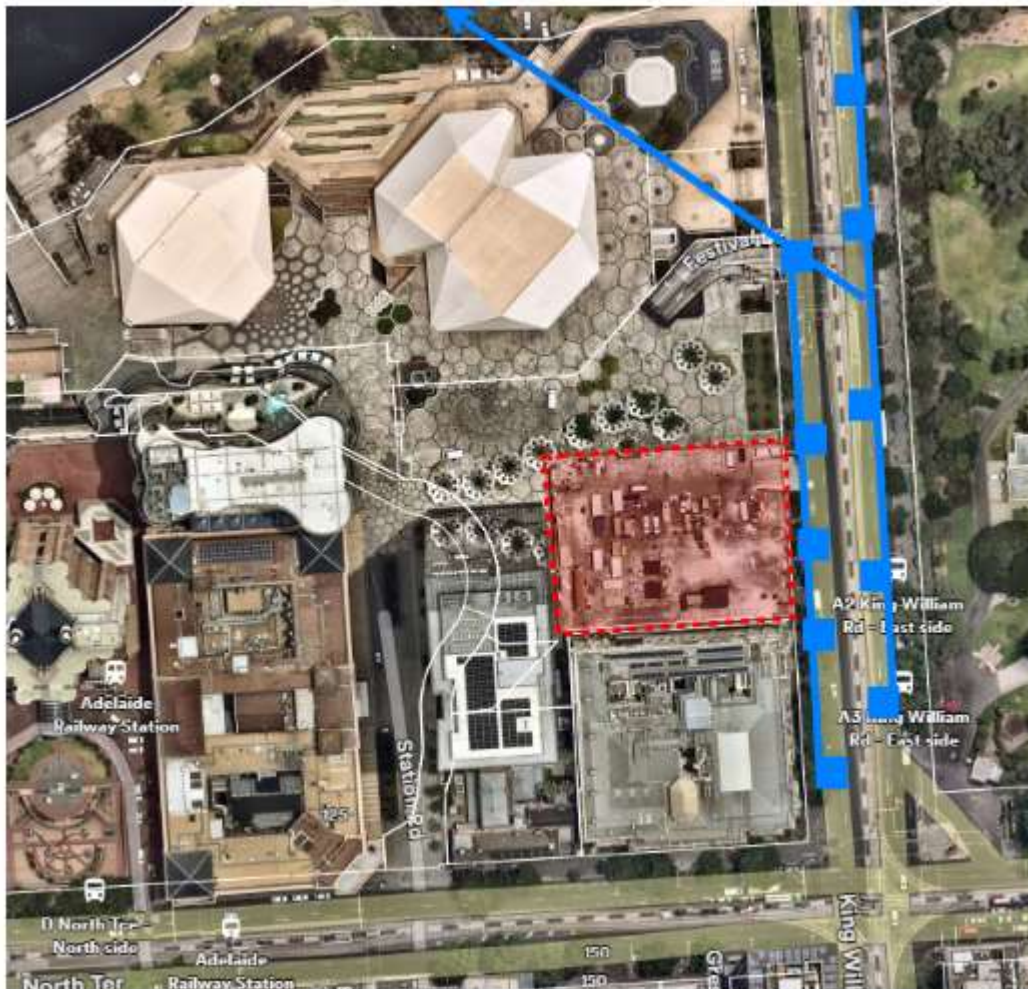
2.1 Existing Stormwater System

2.1.1 Existing Council Drainage System

The existing Festival Plaza site is shown in the Figure 2-1 below. The area outlined in red indicates the extent of the Stage 1B-2 boundary, with the proposed Tower 2 located within that area.

Illustrated in blue below is the approximate location of the existing Adelaide City Council drainage infrastructure along King William Road. The drainage infrastructure within the Festival Plaza site constructed in previous stages have a connection to the existing council drainage network which discharges to River Torrens.

Figure 2-1: Existing drainage network



2.1.2 Existing Festival Plaza Drainage System

The Festival Plaza development is a large multi-stage development that completed construction in 2020. As such, the drainage system within the Festival Plaza has gone through a number of changes over the recent years as different stages were completed.

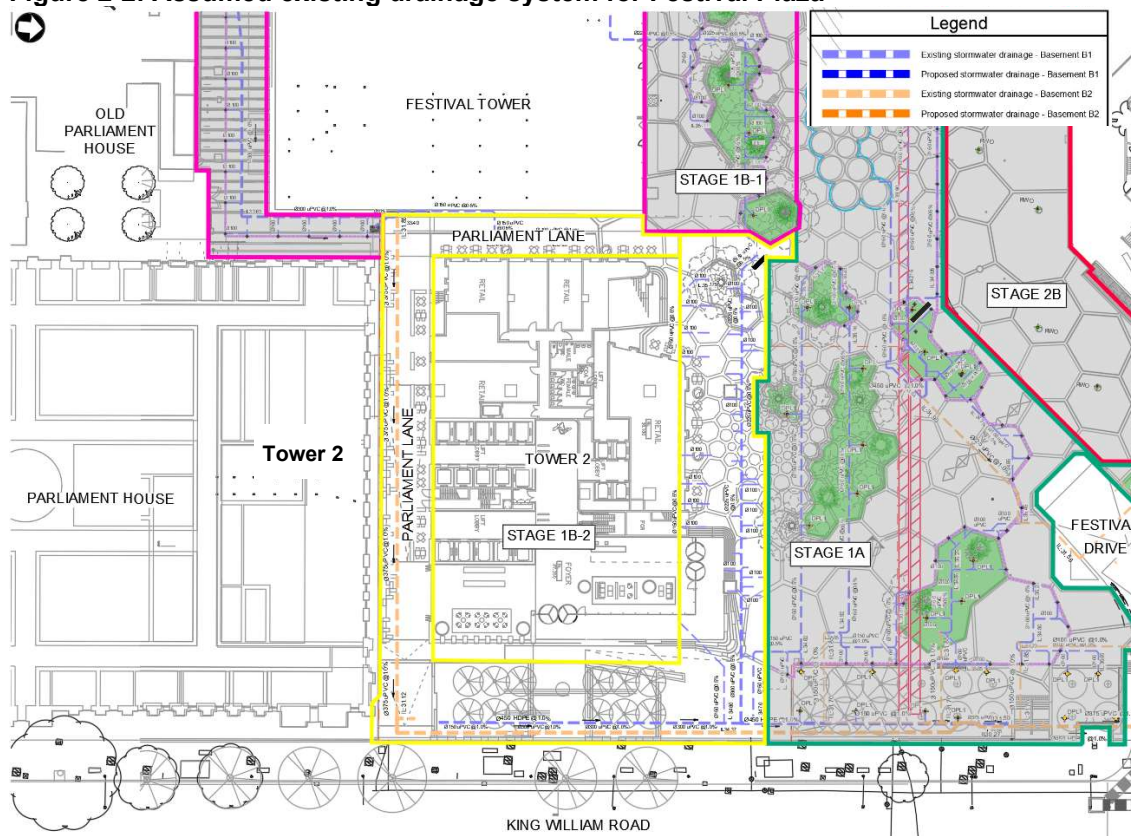
It is understood that all under-slab drainage has been constructed as part of the carpark works completed in 2020 with capped connections at the top of slab. Exact locations of these connections will be coordinated during the next design stages.

Plaza level drainage features such as grated drains, planter drain outlets and landscape drainage outlets were not constructed in this zone during the previous plaza works. The surface drainage system on the plaza level within Stage 1B-2 area will be in the current scope of works.

As this design develops into detail design, a WAE survey of drainage infrastructure will be required to coordinate and design the proposed drainage network for Stage 1B-2.

Figure 2-2 below shows a plan of the assumed existing drainage infrastructure constructed in completed stages of Festival Plaza development. Notably, there is a DN375 uPVC pipe in the Basement B2 level that runs along the southern boundary of Stage 1 B-2 then turning north along the eastern boundary, finally connecting into the existing council pipe in Stage 2C area.

Figure 2-2: Assumed existing drainage system for Festival Plaza



2.2 Stormwater Design

2.2.1 Stormwater Design Criteria

The major/minor approach to stormwater drainage is the recognised drainage concept for urban catchments within the City of Adelaide Council local government area.

The minor drainage system is comprised of the below ground pit and pipe network within the new local roads and is designed to control nuisance flooding and enable effective stormwater management for the site. Council's Development Controls requires that the minor system be designed for a minimum 20-year ARI with 150mm freeboard for areas other than local catchments within Park Lands.

The major drainage system incorporates overland flow routes through proposed road, hardstand and landscaped areas and is assessed against the 100-year ARI design storm event. The major system also exists to cater for minor system failures. In accordance with council's requirements, the major drainage system is to be designed in a manner that ensures that personal safety is not compromised. As such, all overland flow routes for the site are to be designed so that the maximum velocity-depth product shall not exceed $0.4\text{m}^2/\text{s}$ in accordance with standard engineering practice.

2.2.2 Proposed Drainage System

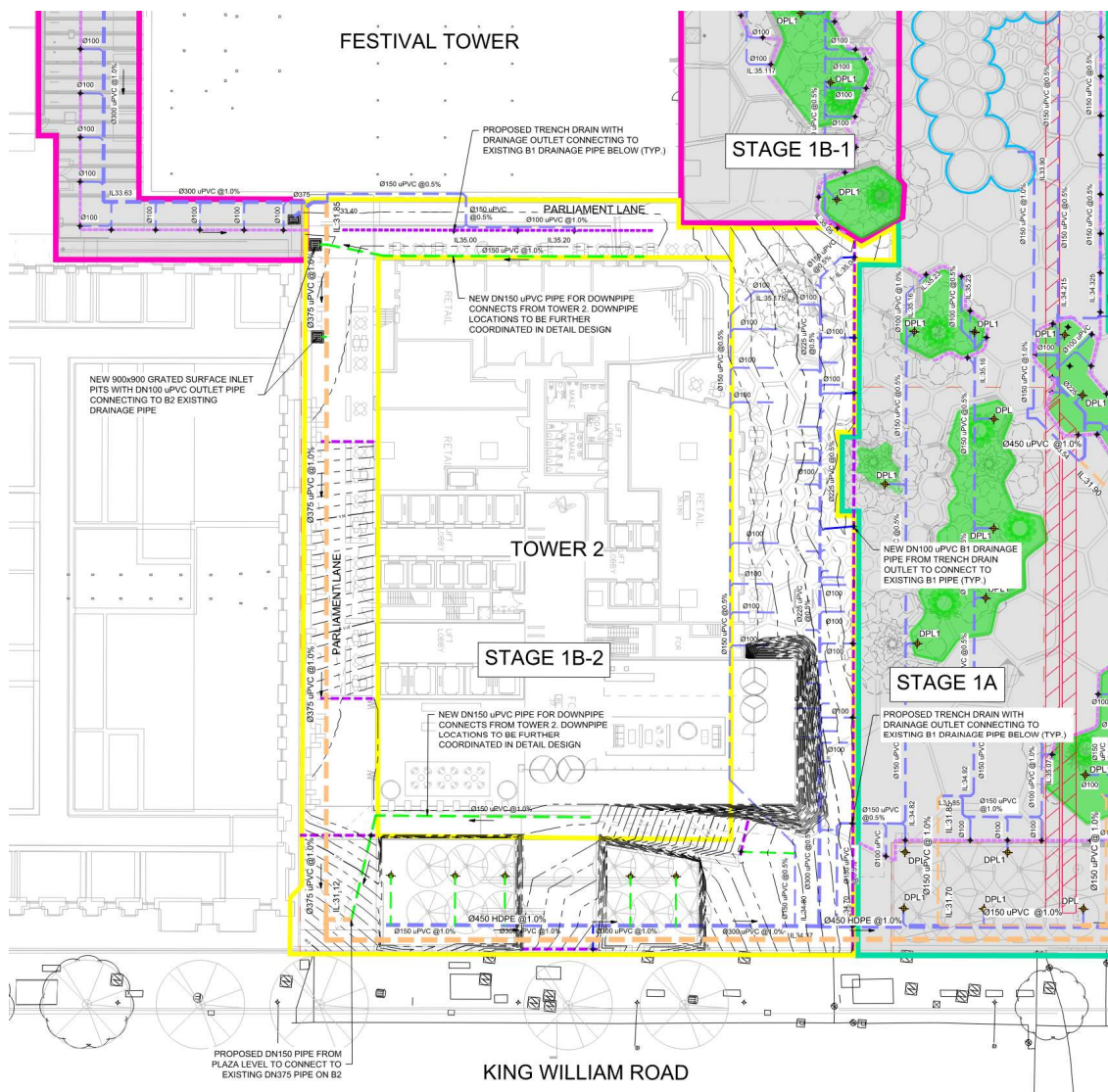
The proposed drainage system for Stage 1B-2 Tower 2 and plaza area will include a combination of trench drains, grated surface inlet pits and pipework connecting to the existing stormwater drainage in Basement B1 and B2 which were constructed as part previous stage works.

The proposed drainage strategy can be summarised below:

- 100mm wide trench drain along the low point of Parliament Lane between Festival Tower and Tower 2 connecting to the existing B1 drainage pipes
- Series of 100mm wide trench drain along south Parliament Lane between Tower 2 and Parliament House. These trench drains will have new connection to the existing B2 DN375 drainage pipe.
- DN150 uPVC pipes on the plaza level (shown in green) to be provided for downpipe connections on the east and western ends of Tower 2. The location of the downpipe connection pipes are shown indicatively and will need to be further coordinated in the detail design stage. These pipes will connect to the existing DN375 pipe in B2 basement.
- 100mm trench drain along the boundary between Stage 1A and Stage 1B-2 as the low point between the two stages. There will be multiple trench drain outlets connecting to the existing B1 basement drainage pipes.

Figure 2-3 below shows the proposed drainage layout overlayed on the existing drainage in B1 and B2 basement. Refer to Appendix A for the stormwater management sketch.

Figure 2-3: Proposed Tower 2 Plaza Drainage Layout



The existing stormwater pipes within the plaza area (on basement levels) were designed and constructed to cater for storms up and including 100 year ARI storm events. Therefore the capacity and freeboard requirements for the pit and pipe network had previously been assessed on DRAINS and demonstrated compliance to the freeboard requirements in the minor storm and overland flow criteria for the major storm.

2.2.3 Stormwater Detention

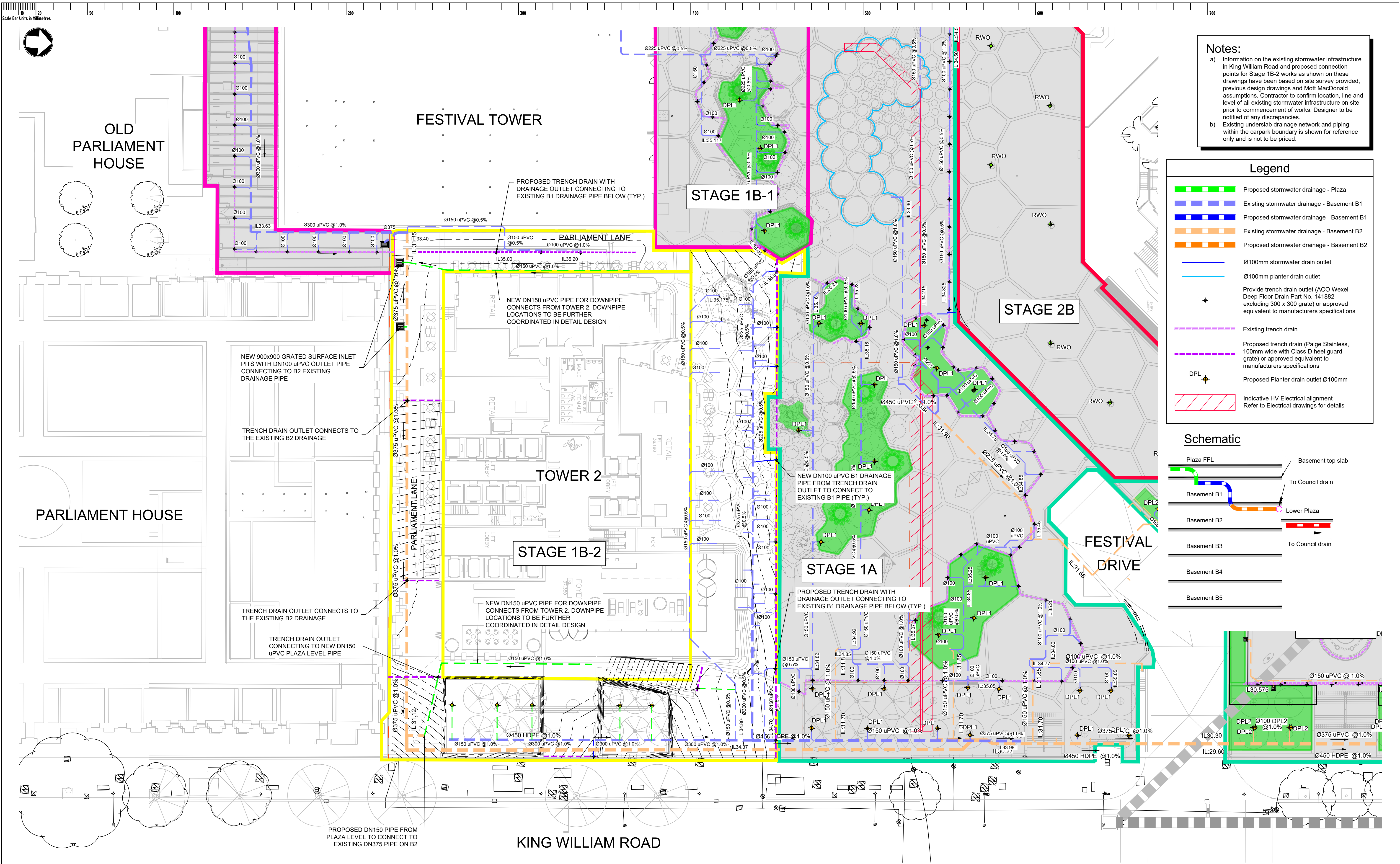
As per the Festival Square Stormwater Management Plan (Mott Macdonald, 2015), there is no requirement for stormwater detention for this development which includes Tower 2. The proposed Tower 2 buildings will have an equivalent impervious area to the existing site and therefore the amount of runoff generated will remain unchanged. As such the predevelopment and post development peak flows for the plaza area would be the same and hence stormwater detention is not required.

2.2.4 Stormwater Quality

As per the Festival Square Stormwater Management Plan (Mott Macdonald, 2015), there is no requirement for stormwater quality treatment required for Tower 2 building. This is because the stormwater collected from building roofs is considered to be clean water.

Further, it assumed that the plaza area around Tower 2 does not require stormwater water quality treatment like the other plaza areas constructed within Festival Plaza precinct. Therefore, no additional stormwater quality treatments are considered necessary as part of the new development.

A.1 Stormwater Management Sketch



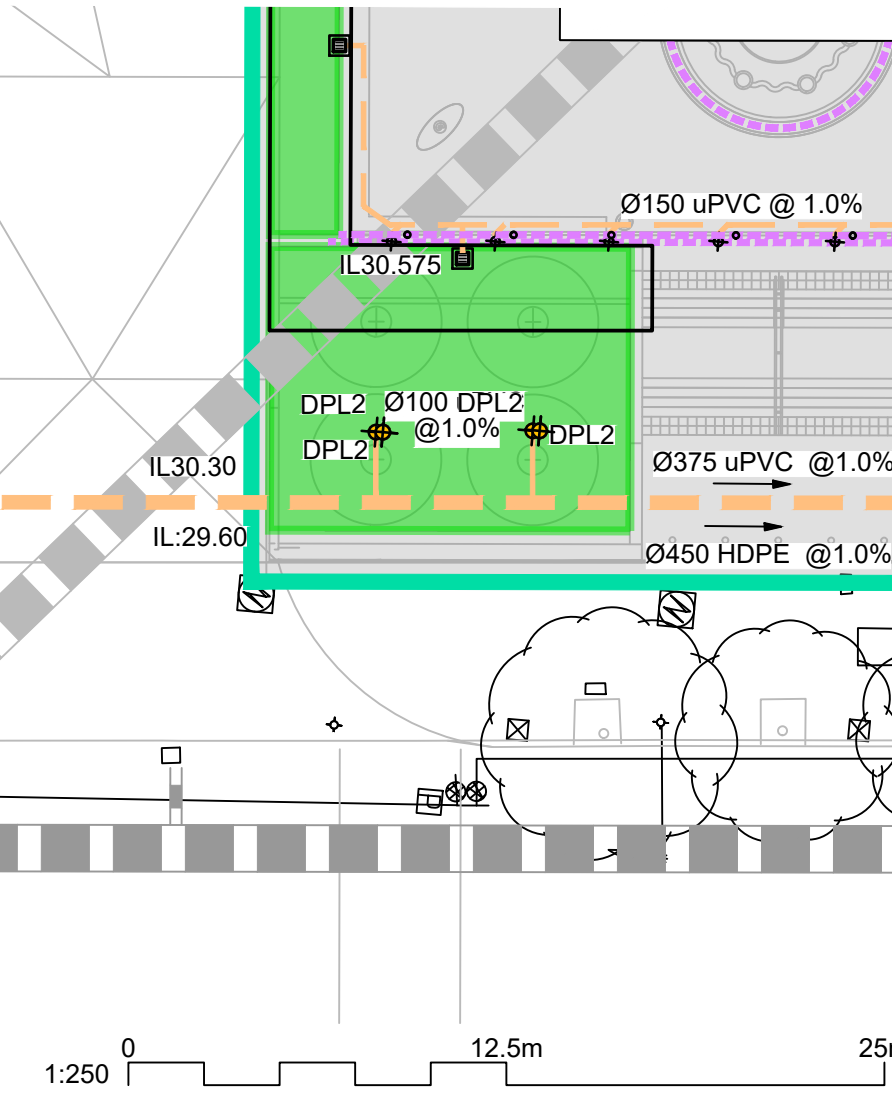
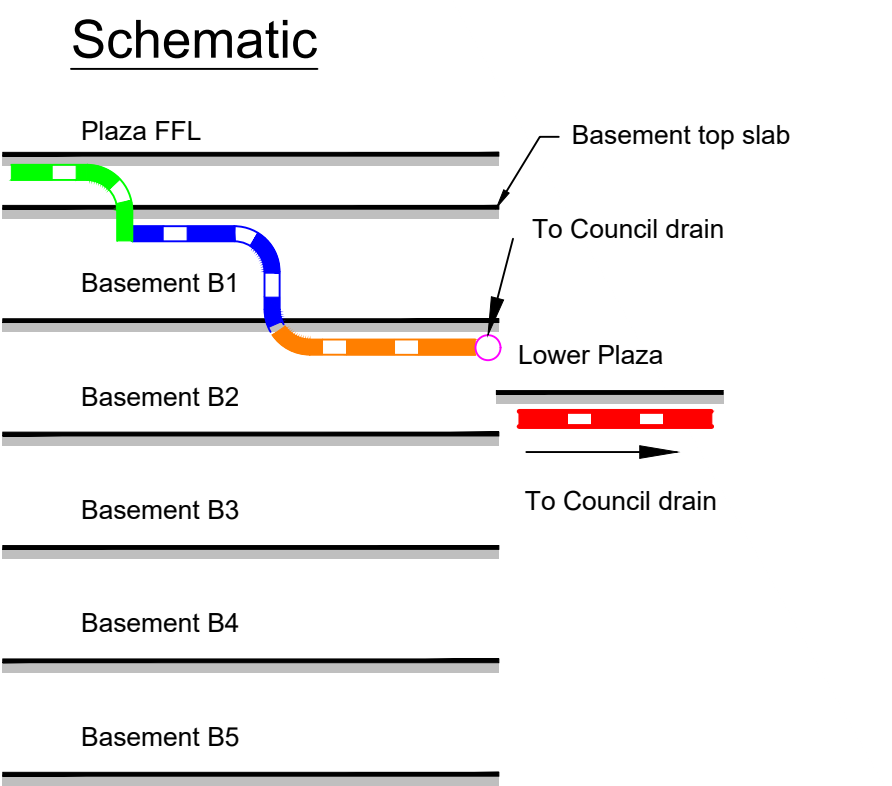
Notes:

a) Information on the existing stormwater infrastructure in King William Road and proposed connection points for Stage 1B-2 works as shown on these drawings have been based on site survey provided, previous design drawings and Mott MacDonald assumptions. Contractor to confirm location, line and level of all existing stormwater infrastructure on site prior to commencement of works. Designer to be notified of any discrepancies.

b) Existing underslab drainage network and piping within the carpark boundary is shown for reference only and is not to be priced.

Legend

- Proposed stormwater drainage - Plaza
- Existing stormwater drainage - Basement B1
- Proposed stormwater drainage - Basement B1
- Existing stormwater drainage - Basement B2
- Proposed stormwater drainage - Basement B2
- Ø100mm stormwater drain outlet
- Ø100mm planter drain outlet
- Provide trench drain outlet (ACO Wexel Deep Floor Drain Part No. 141882 excluding 300 x 300 grate) or approved equivalent to manufacturers specifications
- Existing trench drain
- Proposed trench drain (Paige Stainless, 100mm wide with Class D heel guard grate) or approved equivalent to manufacturers specifications
- DPL
- Proposed Planter drain outlet Ø100mm
- Indicative HV Electrical alignment
- Refer to Electrical drawings for details



DRAWINGS TO BE PRINTED AND READ IN COLOUR

REV.	DATE	AMENDMENTS	INT.
1	19/03/2025	ISSUE FOR INFORMATION	BS

CONTRACT EXECUTION CONTRACTOR DATE
WITNESS DATE
CONTRACT NAME
ADELAIDE FESTIVAL PLAZA PRECINCT UPGRADE
STAGE 1B-2 PUBLIC REALM ABOVE CARPARK

SITE ADDRESS
ADELAIDE FESTIVAL PLAZA PRECINCT
CORNER OF NORTH TERRACE AND KING WILLIAM ROAD
ADELAIDE SA 5000
DRAWING TITLE
STAGE 1B-2 - CIVIL WORKS
STORMWATER MANAGEMENT PLAN - PLAZA LEVEL

CONTRACT NO.
7441-A-2019
PSC JOB NO.
A16021
DPT ASSET NO.
07435
DPT DRAWING NO.
10888-SD-2021
DRAWN BY - CHECKED BY
WP BS
SCALE AND SHEET SIZE
1:250 @ A1
SHEET NO.
0150
REVISION
1



Government of South Australia
Department of Planning,
Transport and Infrastructure



© COPYRIGHT - GOVERNMENT OF SOUTH AUSTRALIA - DPT
SETTING OUT OF THE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR
ALL DIMENSIONS TO BE VERIFIED ON SITE
DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE SUPERINTENDENT
THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS

