



4 April 2019

**Podium 1 Pty Ltd
C/O Felicity Richardson
SP Projects
PO Box 454,
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Drainage Strategy - 21, 75 and 115 Key Lane, Pakenham

Stormy Water Solutions drawing 1863/DEVP/1 details the drainage strategy for the Cardinia Motor Recreation and Education Park site at 21, 75 and 115 Key Lane, Pakenham.

This strategy consists of:

- Augmenting 850 metres of the McGregor Road Drain which runs north to south through the subject site,
- Diverting a small percentage of the McGregor Road Drain flow into the subject site for additional treatment and to provide landscape wetland features within the site,
- Retrofitting waterways, sediment ponds and wetlands along the McGregor Road Drain to perform flood conveyance, flood reduction and stormwater treatment functions, and
- Using the "lower" water levels of the wetland systems to facilitate site drainage outfall and outfall for upstream and adjacent catchments.

Agreement AR283639T, pursuant to Section 173 of the *Planning and Environment Act 1987* between Cardinia Shire Council and Melbourne Water Corporation (MWC) advances specific drainage objectives in regard to the site proposals. The proposed drainage strategy meets these objectives and consequently produces other significant benefits such as:

- Clearly defining regional drainage infrastructure, thus significantly reducing uncertainties in planning processes for Cardinia Shire Council and MWC going forward,
- Ensuring a free draining outfall for the subject site which also allows for free draining outfalls for surrounding properties,
- Provides an outfall for the future Precinct Structure Plan (PSP) and Melbourne Water Drainage Scheme upstream of the Cardinia Motor Recreation and Education Park which should significantly reduce both the fill costs for development in the future upstream PSP, and the size of conveyance infrastructure required (i.e. the ultimate waterway corridor width required through the PSP region),

- Provides a drainage strategy which allows for stormwater treatment for the total McGregor Road Drain catchment to current best practice requirements prior to discharge into Toomuc Creek, and
- Details waterway and wetland proposals which drastically reduce the flood impact on Lots 1 and 3 from about 300 mm above natural surface (typically) to below the current natural surface level.

Asset Ownership/Maintenance

At this stage, all drainage assets shown on plan 1863/DEVP/1 are servicing DS1501.

Maintenance and ownership obligations will be captured in the maintenance agreement to be formulated as required under the S173 Agreement.

Staging of Works

At this stage it is assumed that for development of Lot 3, the following is required as Stage 1 of the drainage works:

- Excavation and land shaping of the proposed constructed waterway along the northern and eastern boundary of the subject site;
- Excavation and land shaping of the proposed internal wetlands (including construction of the culverts interconnecting the systems);
- Excavation and land shaping of the proposed external wetlands; and
- Any fill required onsite to meet freeboard provisions.

Planting and landscaping of drainage assets can occur as a later stage of the development.

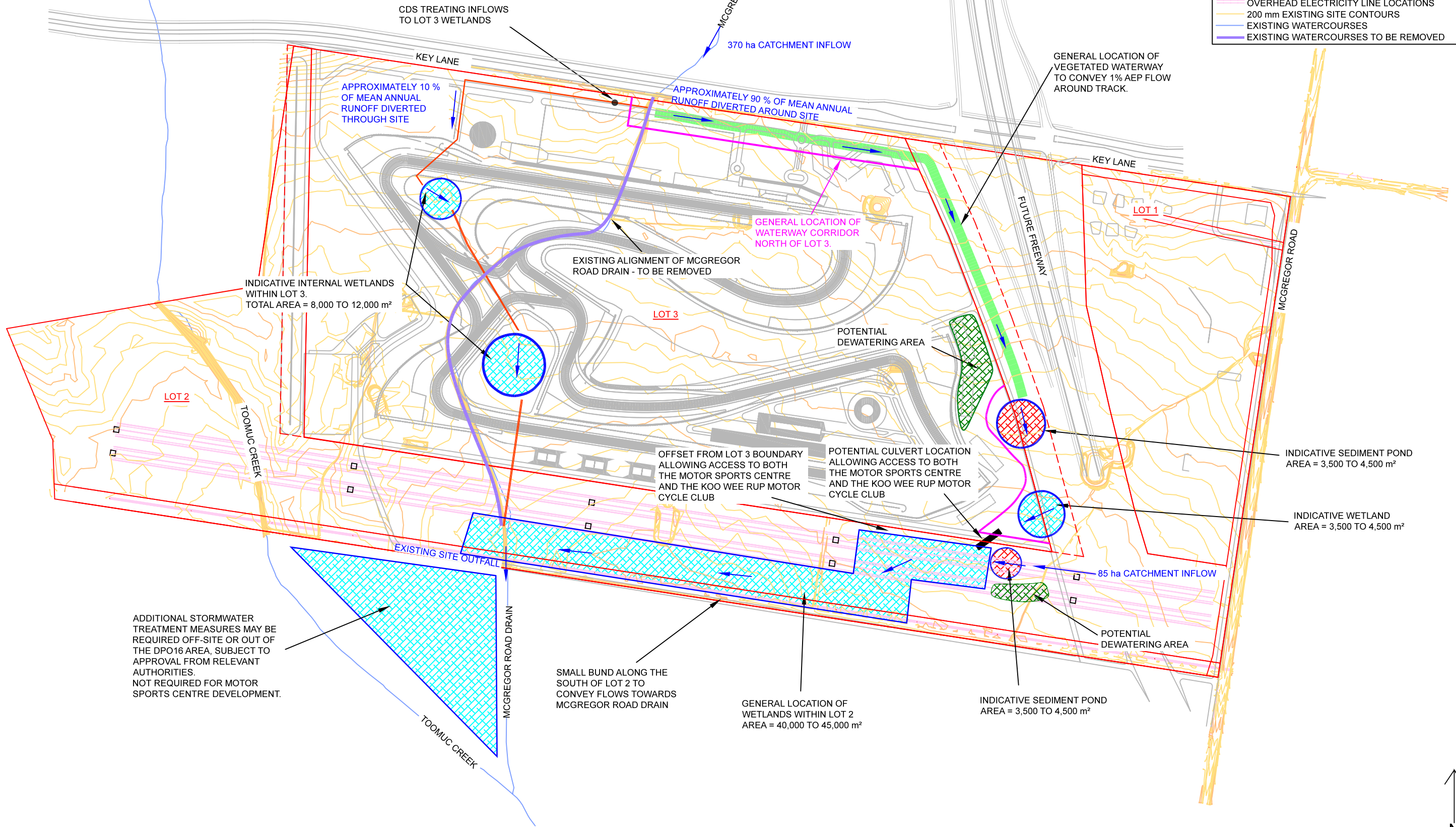
Regards



Valerie Mag
Stormy Water Solutions

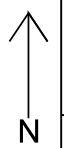
NOTES:
 1) THE SWMP LAYOUT PRESENTED IS BASED ON THE CIRCUIT LAYOUT SHOWN. IF THE CIRCUIT LAYOUT CHANGES THE SWMP LAYOUT CAN BE MODIFIED ACCORDINGLY.
 2) APPROPRIATE CONSIDERATION OF THE ENVIRONMENTAL MANAGEMENT PLAN WILL BE GIVEN IN CONJUNCTION WITH THIS STORMWATER MANAGEMENT STRATEGY THOUGH ANY SUBSEQUENT PLANNING PERMIT APPLICATIONS.

- LEGEND:**
- INDICATIVE SITE BOUNDARY
 - INDICATIVE DRAINAGE RESERVE WITHIN LOT 3
 - INDICATIVE WATERWAY
 - INDICATIVE FLOW DIRECTION
 - INDICATIVE WETLAND
 - INDICATIVE SEDIMENT POND
 - INDICATIVE SEDIMENT DEWATERING AREA
 - INDICATIVE CIRCUIT LOCATION
 - INDICATIVE TRUNK DRAINAGE THROUGH TRACK
 - PYLON LOCATIONS
 - OVERHEAD ELECTRICITY LINE LOCATIONS
 - 200 mm EXISTING SITE CONTOURS
 - EXISTING WATERCOURSES
 - EXISTING WATERCOURSES TO BE REMOVED



ADDITIONAL STORMWATER TREATMENT MEASURES MAY BE REQUIRED OFF-SITE OR OUT OF THE DPO16 AREA, SUBJECT TO APPROVAL FROM RELEVANT AUTHORITIES. NOT REQUIRED FOR MOTOR SPORTS CENTRE DEVELOPMENT.

PRELIMINARY DRAFT
 SUBJECT TO CHANGE SCALE: 0 50 100 200m



REVISION B - ADDITIONAL NOTE ADDED	26 AUGUST 2019
REVISION A - UPDATED GIVEN SJB REQUESTS	17 JULY 2019
DRAFT	8 MARCH 2019
REVISION	DATE



DESIGNED	Michael Mag	PLAN REF.	#
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AUTHORISED BY			

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CARDINIA MOTOR SPORTS CENTRE
 PRELIMINARY STORM WATER DEVELOPMENT PLAN
 OVERVIEW

SCALE: AS SHOWN
SHEET 1 OF 1
DRAWING No. 1863/DEVP/1