



## Memorandum

**TO:** City Planning

**FROM:** Policy Analyst, 3 Waters

**DATE:** 21 January 2019

**DIS-2018-1**

**NOTICE OF REQUIREMENT-MOSGIEL  
COMMUNITY AND RECREATIONAL AREA**

**SUBJECT:**

### **3 WATERS COMMENTS**

#### **1. The proposed activity**

The DCC is proposing to designate the "Mosgiel Community and Recreation Area" comprising Peter Johnstone Park (Reid Ave), Memorial Park (Gordon Rd) and Mosgiel Pool (215 Gordon Road) Mosgiel for the purposes of providing for a range of community and recreational amenities and facilities, including a new aquatic facility.

The 3 Waters Group was consulted early in the process and provided some initial comment on the proposal.

#### ***Existing services***

There are multiple significant Council services within the designation, including wastewater pipes both gravity and pumped between 150mm and 500mm diameter and two 750mm stormwater mains. There is also a stormwater swale parallel to Reid Avenue. There is an existing raw water bore, pump station and treatment station (Eden Street) within the designation boundary along with various watermains.

3 Waters also notes there are plans underway to locate a new stormwater pumping station in Reid Avenue to replace the existing stormwater pump station. The final location is yet to be determined but the new pumping station will be within the area of the proposed designation.

#### **2. Infrastructure requirements**

##### ***Dunedin Code of Subdivision and Development 2010***

Any development associated with this designation shall be undertaken in accordance with the requirements of the Dunedin Code of Subdivision and Development 2010, the Water Bylaw 2008 (revised 2011) and the Trade Waste Bylaw (2008).

Any changes to 3 Waters services associated with the designation require full consultation with, and approval by, the 3 Waters Group. Construction plans will be required for any new, altered, or replaced Council infrastructure affected or required by any activity within the scope of the designation.

#### ***Water services***

A review of the 3 Waters hydraulic water model indicates there may be demand issues during peak times in Mosgiel following the switch over from bore supply to Mt Grand Water Treatment Plant supply. Potential upgrades are being investigated. The anticipated water demand required for the facilities developed as part of the designation are not known at this stage. However, given the nature of the designation proposed which includes establishing a new pool and associated facilities, any outline plan must include expected flow demand information (peak flows and diurnal usage patterns) for the DCC 3 Waters Group to assess the water required for the development using the hydraulic model. A condition has been proposed for this purpose.

### ***Stormwater services***

To allow adequate pervious area for natural stormwater drainage, consideration of maximum site coverage and stormwater management for any future development of the site is important. 3Waters notes the stormwater network in the area around Hartstonge and Reid Avenue is already sensitive. Hartstonge and Reid Avenue are prone to significant flooding across the width of the road due to over flowing of the stormwater system and the swale in Reid Avenue during a 10% Annual Exceedance Probability (AEP) rainfall event. Reid Avenue is an area of particular concern with regards to stormwater flooding with rainfall as low as 50% AEP (1 in 2 year) event causing issues.

The applicant proposes to provide a specific stormwater assessment when the hard stand area increases by more than 2.1% or 4500 m<sup>2</sup>. As the proposed location currently has stormwater flooding issues, any development of the pervious area of the site needs to be carefully planned to ensure flooding is not made worse.

3 Waters considers a stormwater management plan should be required for any outline plan for the site. Proposed condition 13 on stormwater should be amended to ensure that where there is any increase in impermeable area a stormwater management plan is required.

Note that 3 Waters is planning capital investment in 2019 with the construction of the new Reid Avenue Stormwater pump station. Upgrades of stormwater pipes will also be part of this work programme once the pump station has been completed.

### ***Wastewater services***

The Mosgiel wastewater network is already sensitive to significant overflows, flooding and surcharge in a 10% AEP (1 in 10 year) rainfall event and any additional demand will have a negative impact. During significant rainfall events network flooding is still widespread.

The anticipated wastewater discharge from the facilities developed as part of the designation are not known at this stage. The reticulated wastewater network needs to be able to cope with the discharge from a pool open year-round, and any associated facilities.

3 Waters has also not reviewed the effect of this type of trade waste loading on the Mosgiel Wastewater Treatment Plant (WWTP). Flows from the Mosgiel WWTP are transferred to the Green Island WWTP for further treatment by a pump station and pipeline with a set pump capacity.

Any outline plan must include an assessment of the effects of the wastewater discharge impact on the reticulated wastewater network, including the expected flow discharges and diurnal flows.

### ***Existing Council services within the site***

There are several significant wastewater and stormwater pipes within the designation site. There is also an existing stormwater pump station and raw water bore, pump station and treatment station. Any new facility proposed must ensure unrestricted access to Council infrastructure is maintained.

3 Waters must give approval for any development within 3m of any 3 Waters infrastructure within the designation.

## **3. Consent conditions**

The following 3 Waters conditions should be imposed for the designation:

### **Water Services**

1. A specific water assessment using the calibrated hydraulic water model is required for the new pool facility and associated development to ensure the reticulated water network can provide sufficient water for the development.

### **Stormwater services**

2. For any increase in impermeable area, a stormwater management plan is required to determine whether a site-specific stormwater solution is necessary.

3. As part of such an assessment, consideration shall be given to whether stormwater detention via wetlands/greenspace is appropriate.

#### **Wastewater services**

4. Any outline plan must include an assessment of the effects of the anticipated wastewater discharge impact on the reticulated wastewater network, including the expected flow discharges and diurnal flows.

#### **Easements/existing infrastructure**

5. For any development within 3m of any 3 Waters infrastructure, written approval is required from the Development Engineer, 3Waters, prior to works commencing.
6. An easement in gross in favour of DCC over any existing, relocated or new 3 Waters infrastructure (including the proposed stormwater pumping station) will be required.

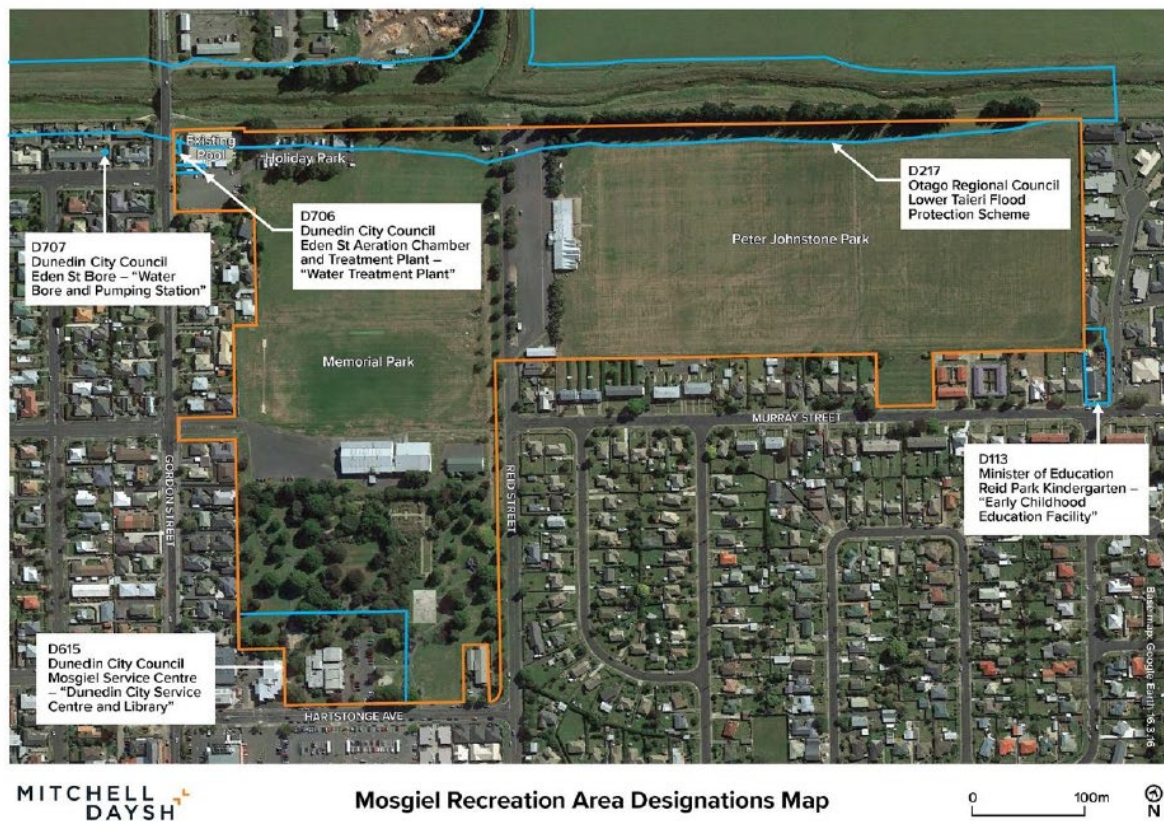
Policy Analyst

#### **3 Waters**

#### **Dunedin City Council**

CC: Development Engineer  
Asset Planning Team Leader

Graduate Hydraulic Modeller  
Network Contracts Manager



**Figure 2: Extent of the Designation**