

# Welcome



*09/01/2017 Artist rendering – Subject to change*

## Welcome to the McLoughlin Point Wastewater Treatment Plant Development Permit Open House.

The CRD has applied to the Township of Esquimalt for a Development Permit to construct the Wastewater Treatment Plant at McLoughlin Point, and our team is here to provide you with information and respond to your questions.

This is one of the Open Houses scheduled for residents of Esquimalt in support of the permit application. We will continue to engage with residents throughout the permitting process and into the construction phase to ensure that the community is fully informed on the project's progress.

# How We Got Here



In September 2016, the CRD Board approved a proposal by the Core Area Wastewater Treatment Project Board to build a wastewater treatment plant on CRD owned land at McLoughlin Point. The approved plant design was significantly revised from earlier plans to respond to the interests of the surrounding community:



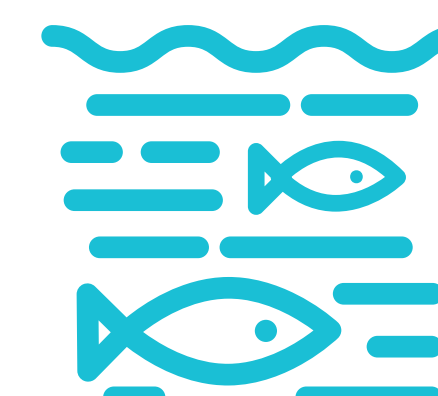
It is further set back from the shoreline



It has extensive landscaping and a multi-level green roof irrigated with treated water



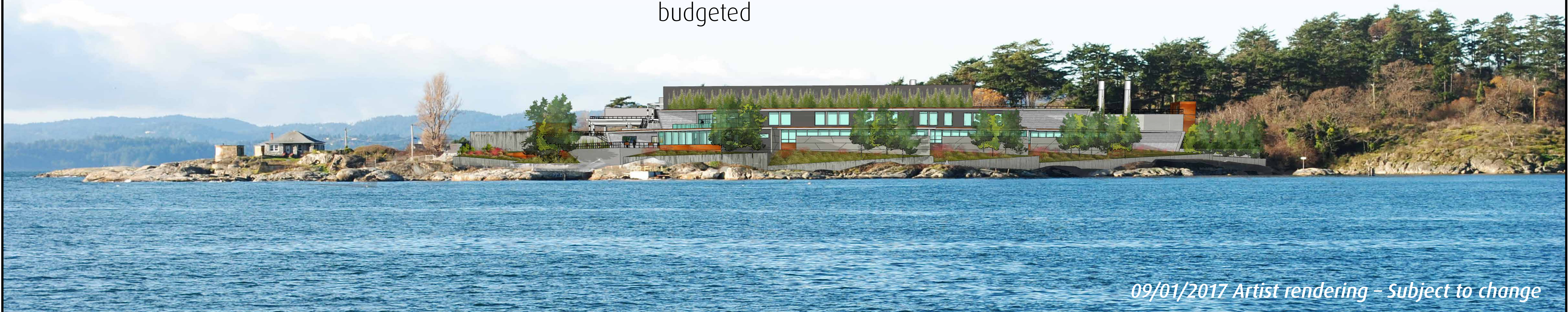
Further refinements to the exterior of the wastewater treatment plant and landscaping to address Design Review Committee and other input as part of the development permit process in Esquimalt are budgeted



The plant will go beyond secondary treatment and include tertiary treatment, providing even better protection of the marine environment



Odour control systems will reduce odour emissions to a level not detectable by humans at the property line



# Project Goals



Making a difference...together

## Goal

## Measurement

**MEET FEDERAL REQUIREMENTS FOR SECONDARY TREATMENT BY 2020**

Exceeded – wastewater will have tertiary treatment

**MINIMIZE COSTS TO RESIDENTS**

The capital cost of the proposal is approximately \$765 million; it is less expensive than previous plans and less expensive than the other short listed options (\$920 million for Rock Bay and \$1,010 million for a two plant solution at Rock Bay and McLoughlin Point); the proposal meets the deadline for federal funding, minimizing the risk of losing senior government funding

**OPTIMIZE OPPORTUNITIES FOR RESOURCE RECOVERY**

The plan includes a smaller investment than prior plans in the treatment of residual solids. As part of the plan there is a proposal for the CRD to engage in a separate comprehensive planning and consultation process to develop a waste management policy, including management of its solid and biosolid waste streams as part of an integrated resource management plan.

**REDUCE GREENHOUSE GAS EMISSIONS**

The plan reduces greenhouse gas emissions by 5-10 per cent, when compared with previous plans which included driers, pelletizing of biosolids, and hauling pellets to cement plants and other end users, who would be paid to take the product

**ADD VALUE TO THE SURROUNDING COMMUNITY AND ENHANCE LIVABILITY OF NEIGHBOURHOODS**

The plan recognizes that the wastewater and biosolids treatment facilities have external impacts:

- rather than co-locating the facilities, they are separated: one in Esquimalt; one in the existing Hartland landfill in Saanich, and the impacts of conveyancing are shared
- the impact of construction is distributed with a laydown area located in Rock Bay, Victoria
- the plan includes significant revisions to the wastewater plant design in response to public commentary and includes an allowance for further design revisions
- the plan recommends a program to improve the appearance of CRD sewage collection and treatment facilities, mitigating their impact on the host communities

# Development Permit and Rezoning Process



There are two different approval processes underway:

- a development permit application process which is initiated by the CRD, and
- a rezoning process led by the Township of Esquimalt.

## CRD DEVELOPMENT PERMIT PROCESS

**DEC 20, 2016**

Development permit application submitted by CRD/Project Board/  
Harbour Resource Partners

**JAN 11, 2017**

Design Review Committee

**JAN 12, 2017**

Wastewater Treatment Plant Open House

**JAN 14, 2017**

Wastewater Treatment Plant Open House

**FEB 27, 2017**

Council consideration of adoption of Zoning Amendment Bylaw;  
consideration of issuance of development permit

## TOWNSHIP OF ESQUIMALT REZONING PROCESS

**JAN 17, 2017**

Advisory Planning Commission (rezoning)

**FEB 6, 2017**

Council consideration of first and second reading Zoning  
Amendment Bylaw

**FEB 20, 2017**

Council public hearing for Zoning Amendment Bylaw  
(including all related amenity and other relevant agreements)

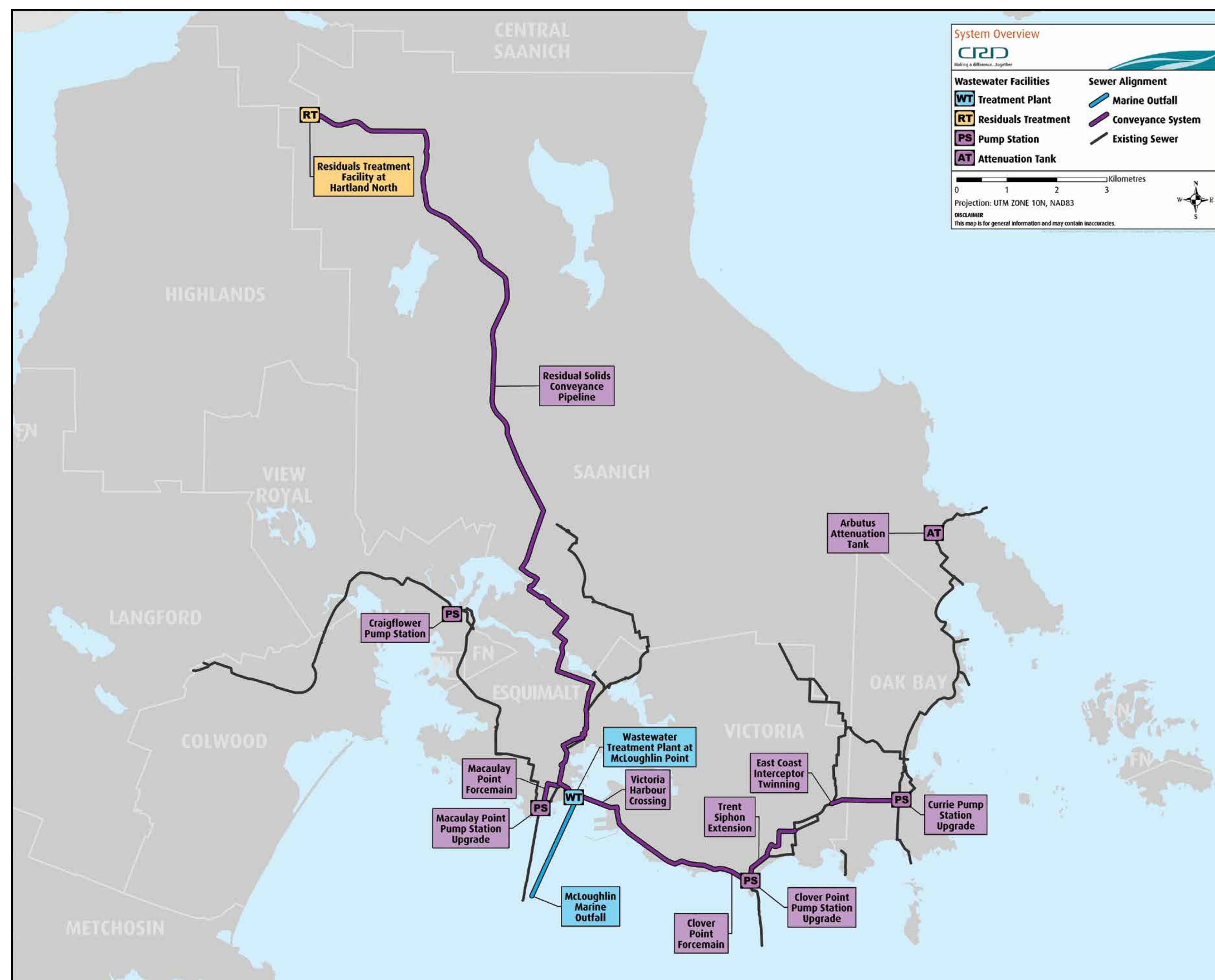
**FEB 27, 2017**

Council consideration of adoption of Zoning Amendment Bylaw;  
consideration of issuance of development permit

# Core Area Wastewater Treatment Project



The Core Area Wastewater Treatment Project consists of three main elements:



## WASTEWATER TREATMENT PLANT

Located at McLoughlin Point, the treatment plant will provide tertiary treatment to the core area's wastewater.

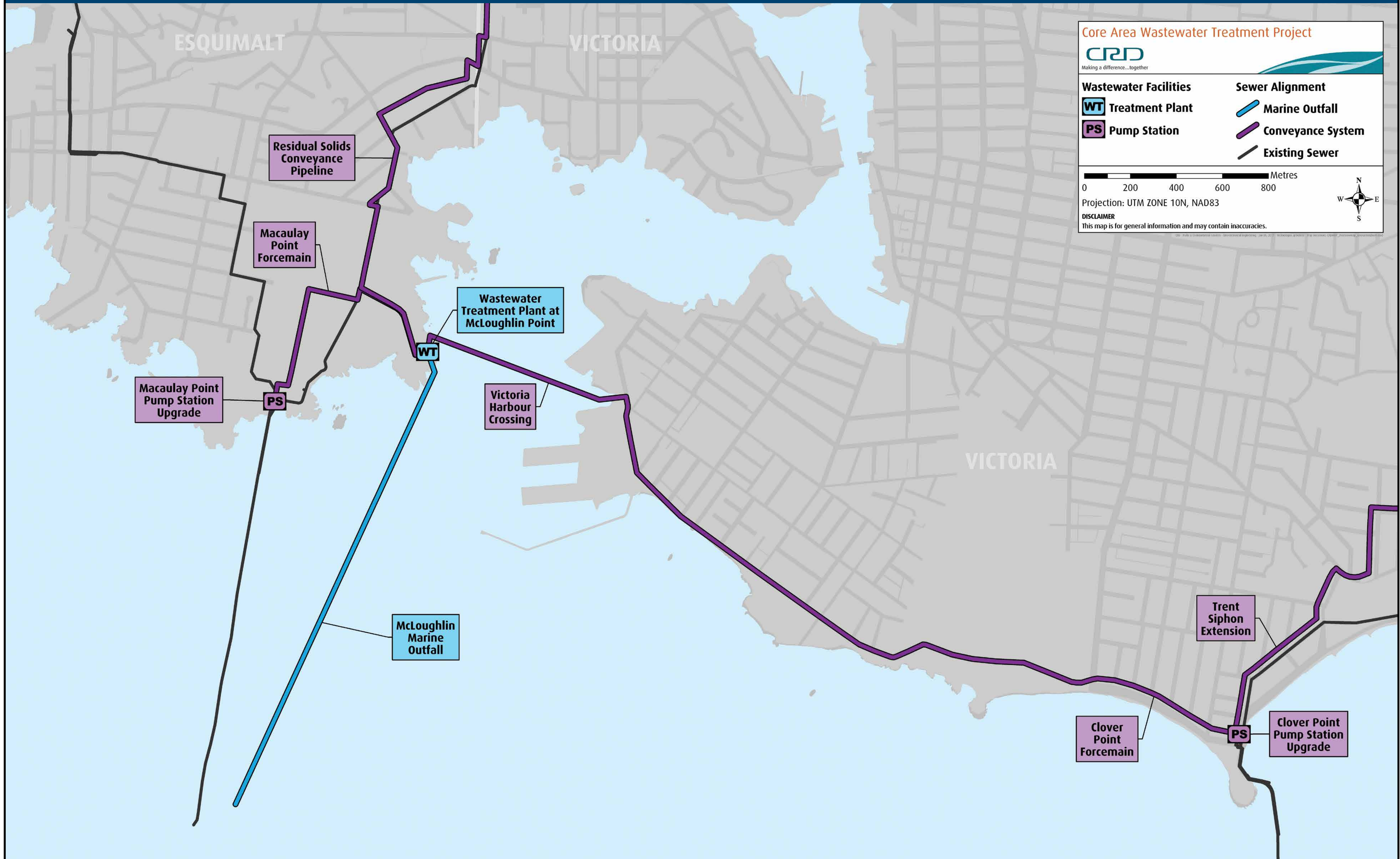
## RESIDUALS TREATMENT FACILITY

Residual solids from the wastewater treatment plant will be piped to Hartland landfill, where they will be turned into what are known as "Class A" biosolids. These biosolids are a high quality by-product treated such that it is safe for further use.

## CONVEYANCE SYSTEM

The conveyance system refers to the 'pumps and pipes' of the Core Area Wastewater Treatment Project. This system will carry wastewater from across the core area to the treatment plant. It will also send residual solids from the wastewater treatment plant to the residuals treatment facility.

# Core Area Wastewater Treatment Project



# McLoughlin Point Wastewater Treatment Plant – Plant Design



Situated at the entry of the harbour and along a prominent rocky shoreline, the design respects the natural setting and reflects the highest standard of design, materials and aesthetics.

The bulk of the plant is located at the west end of the site along Victoria View road, allowing the lower mass of the attractive Operations and Maintenance [O&M] building to screen the plant.

Over 80% of the roof of the O&M building will be planted to increase onsite habitat and provide storm water management.

The seawall system reflects the rugged and textured surface of the exposed-rock shorelines. The mass and length of the wall is broken up visually with different materials.

The landscape design is a major component of the project and will focus on providing screening of the treatment plant. The Operations and Maintenance Building presents an attractive view for those on the water and from viewpoints across the harbour.

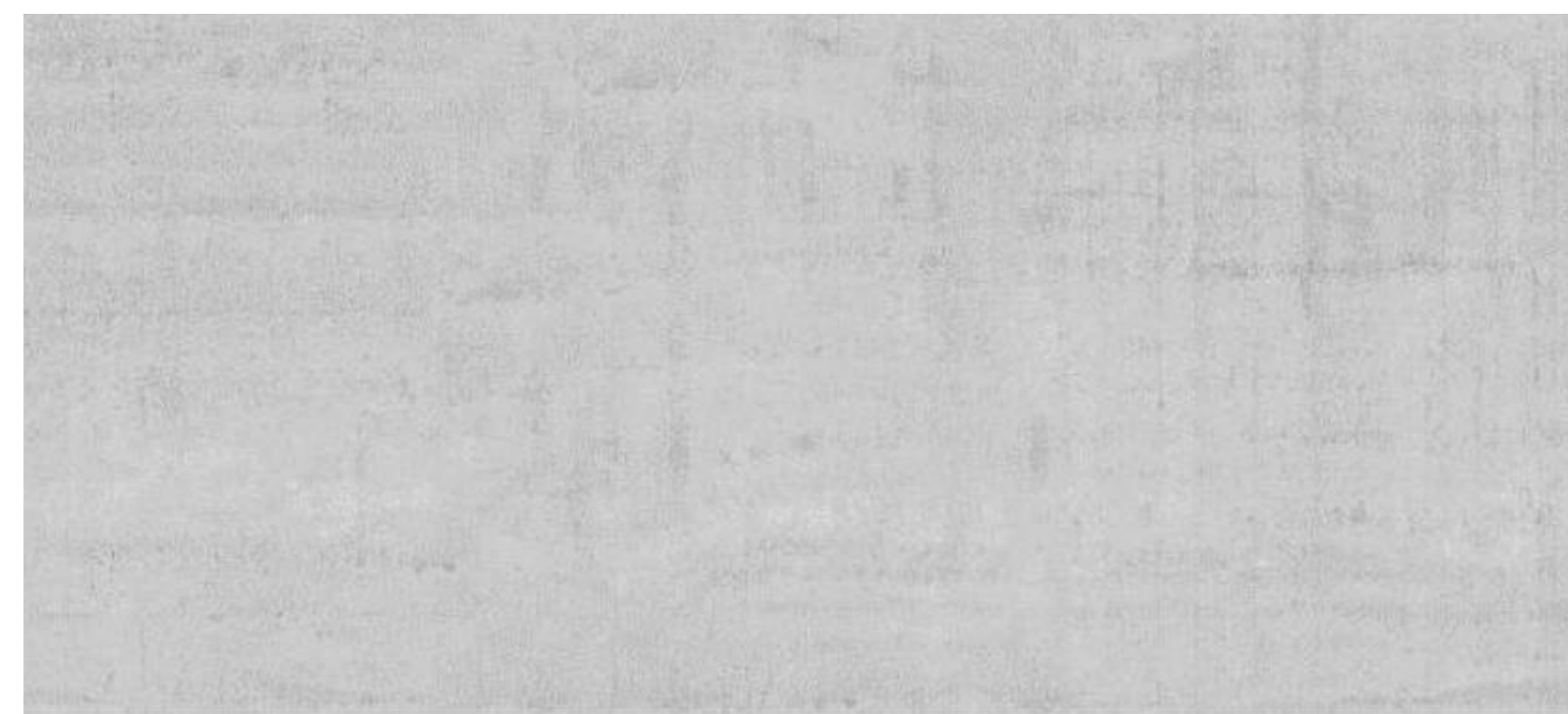


Landscape planting and other screening elements will be employed in areas where the plant is not screened by the O&M building. The roof of the O&M building will also incorporate extensive planting.

The O&M building will be designed and built to the level of LEED (2009) Gold, but will not be certified. There is no LEED standard or certification process for wastewater treatment plants.

A major component of the overall facility will be the opportunity for public education in the water cycle and particularly with stormwater management. An Education and Interpretive Centre has been incorporated on the second floor of the O&M building. A prominent observation deck will act as the front porch and gathering place for visitors to the site.

# McLoughlin Point Wastewater Treatment Plant – Material Details



**CONCRETE – ARCHITECTURAL  
FINISH (SMOOTH)**



**ANODIZED ALUMINUM  
GLAZING FRAME**



**WEATHERING STEEL PANEL**

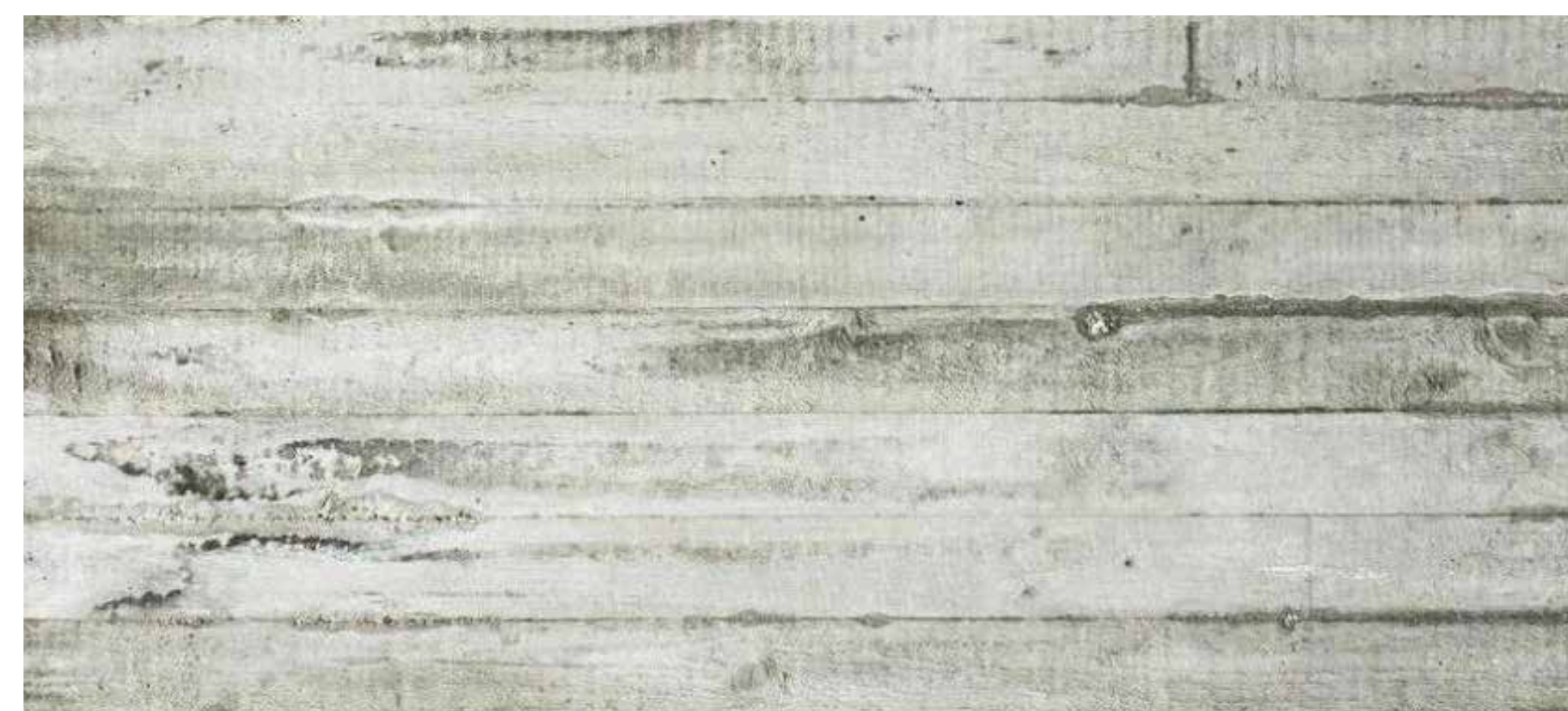


**CONCRETE – PRECAST CONCRETE  
PANEL**

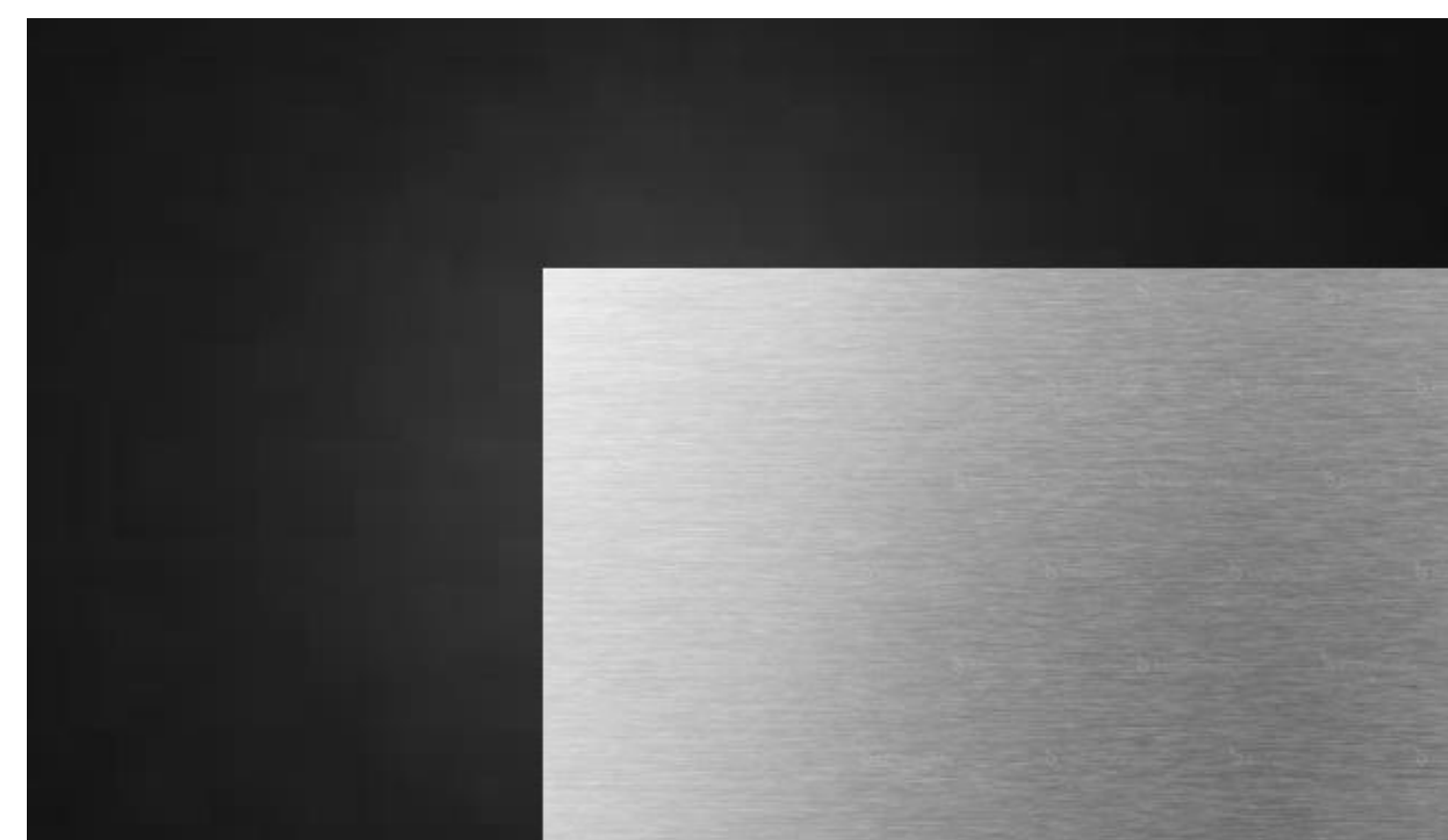
**GALVANIZED  
STEEL PLATE  
– VERTICAL**



**MASONRY CLADDING – DARK**



**CONCRETE – ARCHITECTURAL  
BOARDFORM**



**METAL CLADDING PANEL – LIGHT  
METAL CLADDING PANEL – DARK**



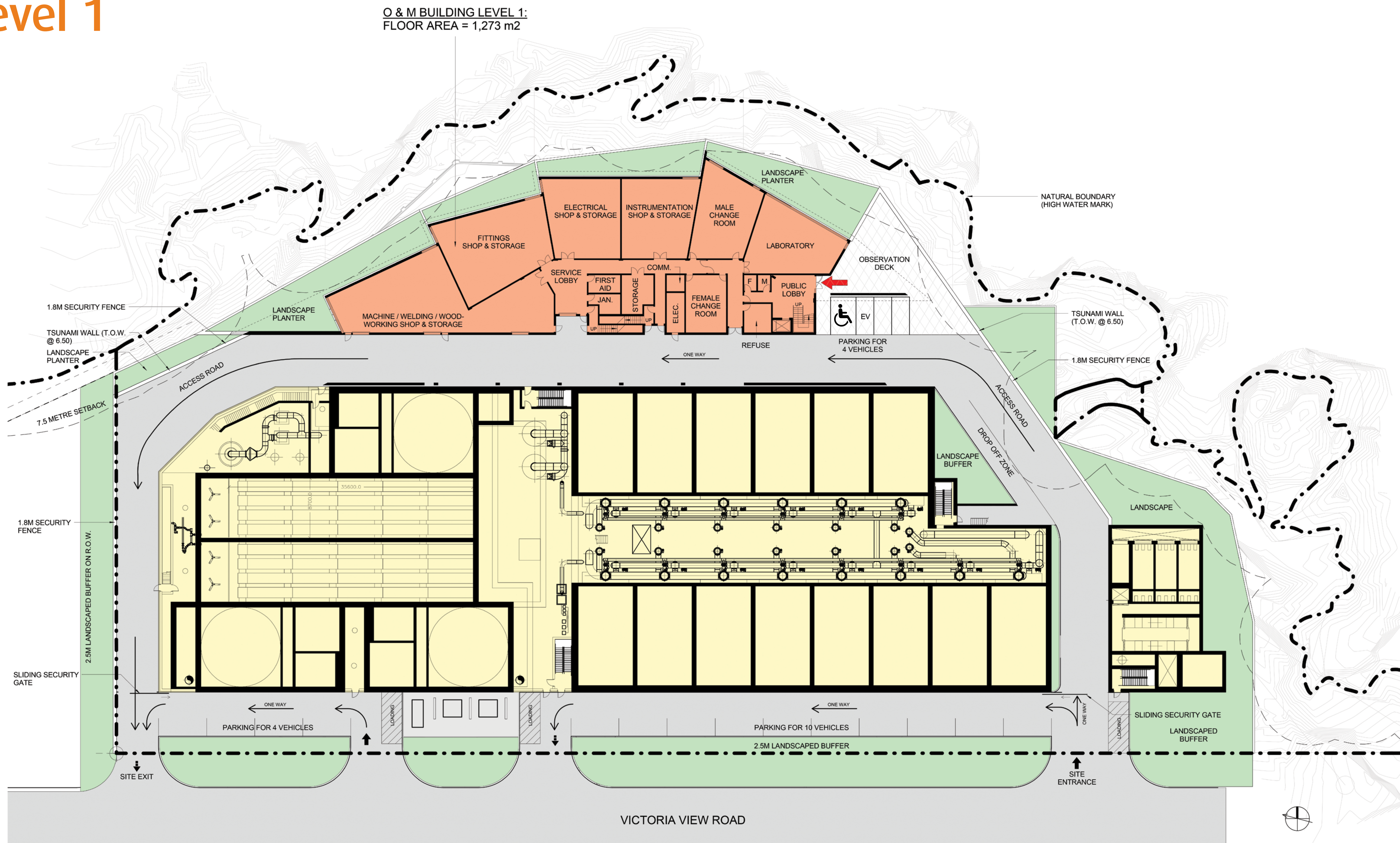
**MASONRY CLADDING – LIGHT**

*Indicative images only – Subject to change*



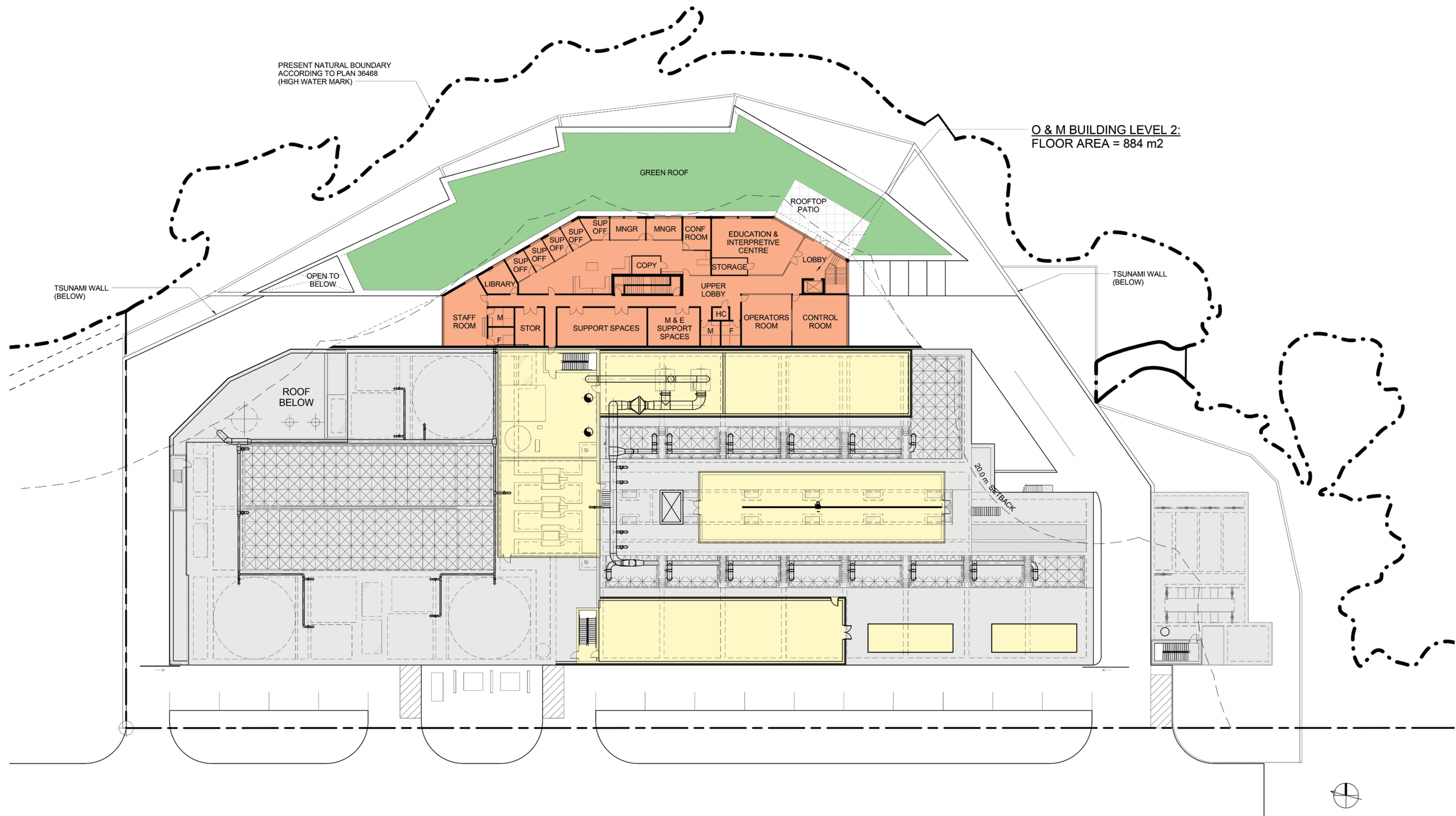
# McLoughlin Point Wastewater Treatment Plant – Floor Plan

## Level 1



# McLoughlin Point Wastewater Treatment Plant – Floor Plan

## Level 2



# McLoughlin Point Wastewater Treatment Plant – Building Elevations

## NORTH FACING



## EAST FACING



## SOUTH FACING



### CAPACITY

The treatment plant capacity of 108 megalitre/day was developed based on municipal requests which considered municipal sewage plans and growth rates.

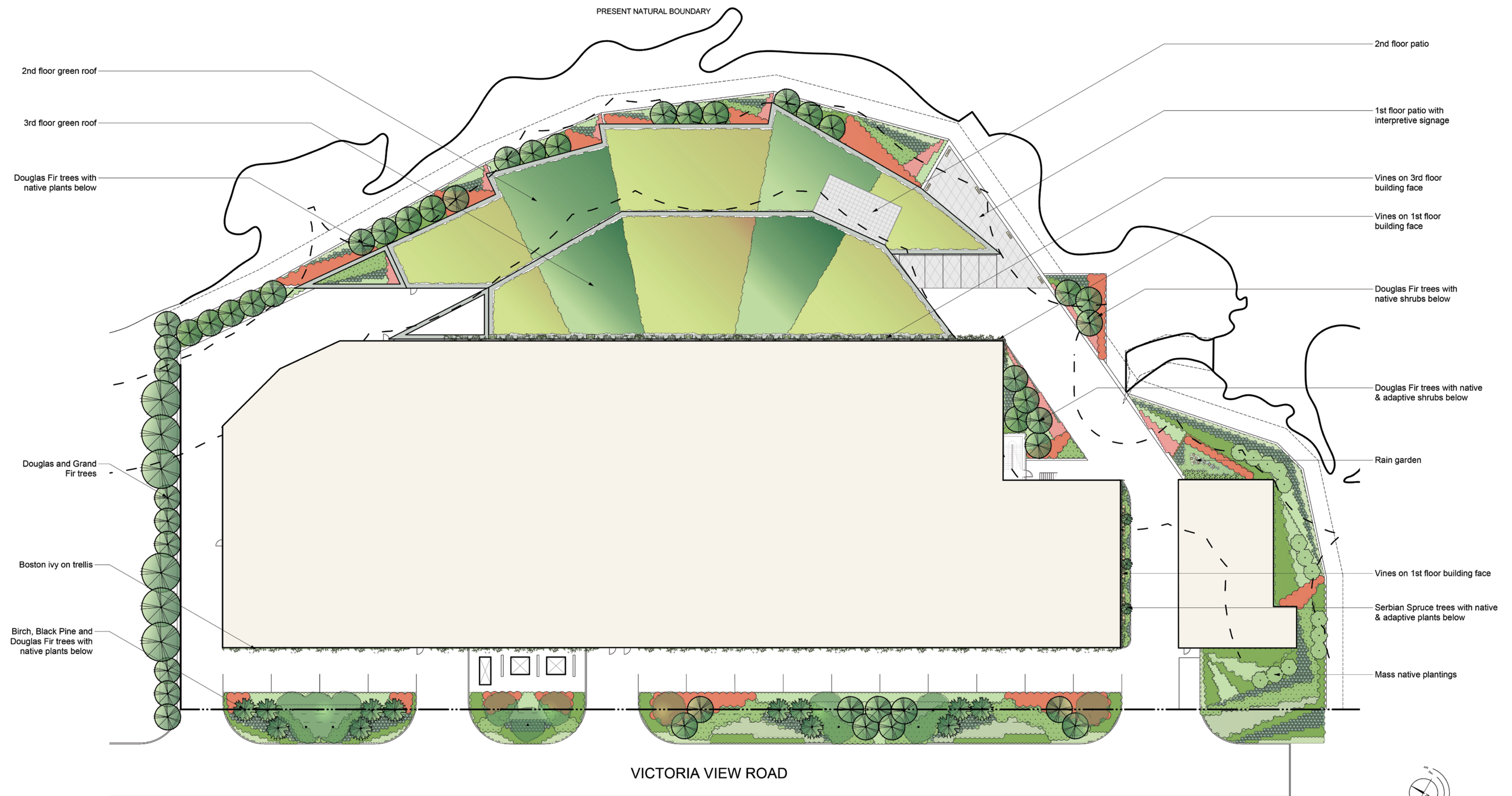
### SIZE

The total footprint of the buildings on the site is 8,670m<sup>2</sup> and the maximum building height is 15m.

### LIFE SPAN

The structural design life of the plant is 75 years. Process equipment, electrical equipment and instrumentation have a service life of between 10 to 25 years.

# McLoughlin Point Wastewater Treatment Plant – Landscape Plan

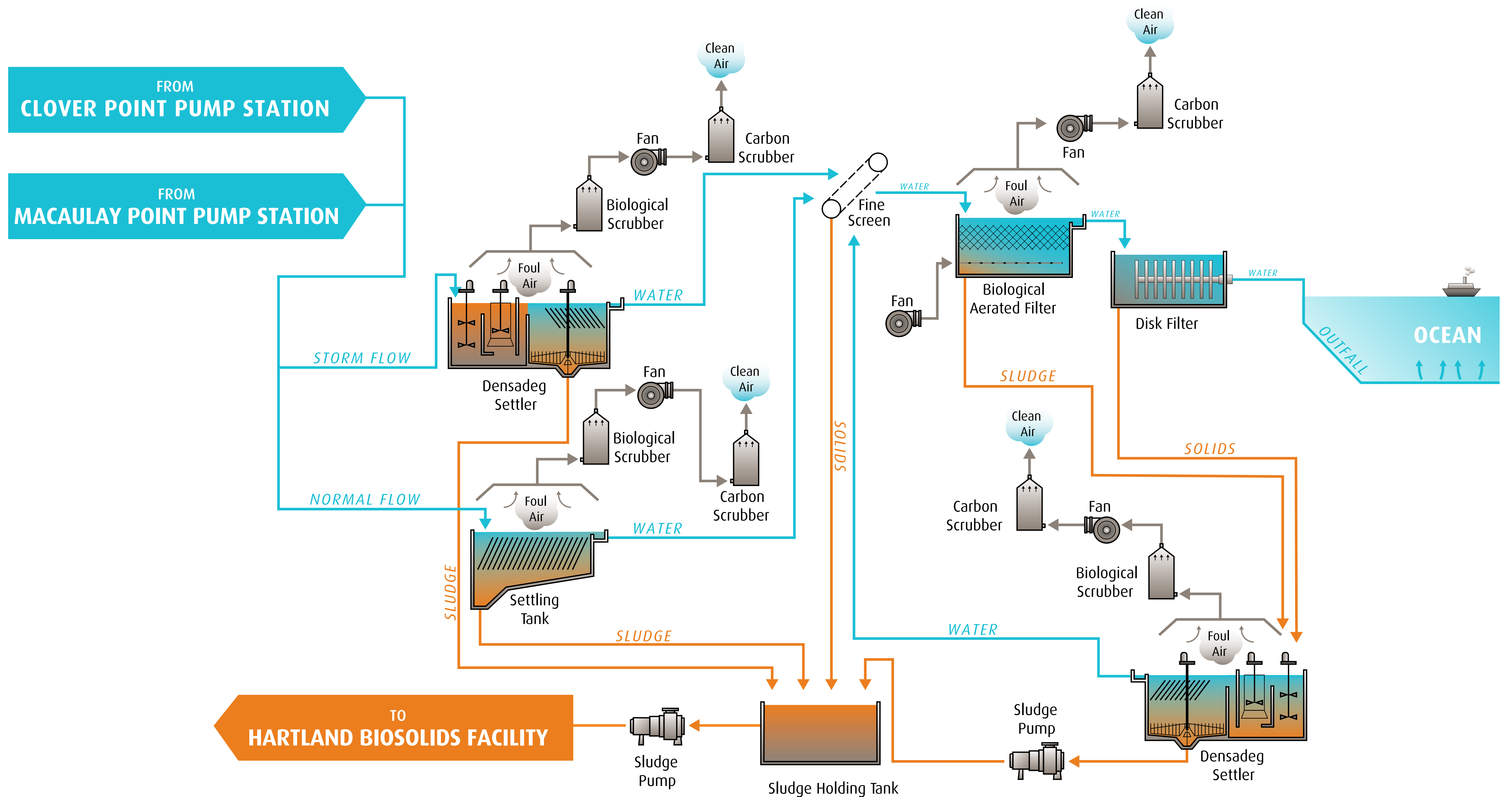


04/01/2017 – Subject to change

## TREES & PLANTS



# McLoughlin Point Wastewater Treatment Plant – How it Works



# Construction Impact Mitigation Measures



Construction of the McLoughlin Point Wastewater Treatment Plant is expected to begin with geotechnical investigations in January 2017. The project will be completed by the end of 2020.

A key consideration during the construction will be potential impacts on the surrounding community.

All construction activity will comply with bylaws regarding hours of work and noise levels, and regular communications from the project team will ensure residents receive advance notification of work activities in the community.

**More information on the project and further details regarding construction and impact mitigation measures will be shared with the public in the future.**