

## ATTACHMENT B

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### METHOD STATEMENT FOR PROPOSED LAGOON INFILLING WORKS

#### GENERAL

In order to reduce potential disturbance of the existing lagoon base sediment, which has relatively high total concentrations of some metals, it is proposed to use hydraulic fill techniques to place the initial layer of sand fill. It is expected that this will effectively isolate the fill from subsequent infilling operations. In order to reduce the risk of disturbance of this initial protective layer, no end tipping of fill into the lagoon will be allowed. Rather, following placement of the initial layer of fill, subsequent below water placement will be by means of a dragline crane using clamshell bucket.

#### SEQUENCE OF OPERATIONS

The following sequence of operations will be implemented:

- Construction of access road and parking areas
- Construction of access platform to lake level
- Establishment of hydraulic fill mixing and pumping equipment
- Hydraulic placement of initial layer of sand fill
- Construction of settlement lagoon and discharge to sewer
- Dragline placement of rocksand to water level
- Fill placement to final grade using conventional earthworks techniques

The attached Sketches illustrate the proposed methodology.

#### PROPOSED LAYOUT OF OPERATIONS

The attached drawing (SA 0360-1) shows a plan of the site with proposed locations for the access road, parking area, infill material storage area, settlement lagoons etc.

#### INFILL PROCEDURES

##### Placement of Initial Protective Sand Layer

In order to reduce the risk of undue disturbance of the lagoon base sediments, an initial layer of sand will be placed using hydraulic fill techniques from a floating pipeline. Rock sand will be screened and mixed with water prior to being pumped along a floating pipeline, refer Sketch A. Water for this operation will be recycled from the lagoon. The location of the discharge nozzle will be controlled by winching from fixed points around the perimeter of the lagoon. It is anticipated that a grid of 6 m by 6m will be adopted for discharge locations. This may be modified in the light of ongoing bathymetry. This process will be continued until a continuous layer of sand, approximately 1 m in thickness has been formed over the entire base of the lagoon.

Following hydraulic placement of the initial protective layer, subsequent fill will be carefully placed using a dragline crane with clamshell bucket, (Sketch B).

This methodology is proposed in order to allow the fill level to be raised uniformly and to reduce potential disturbance. Direct end tipping of fill into the lagoon will not be permitted as this could potentially displace the previously placed material. In order to reduce the risk of instability of the placed fill, fill placement will be controlled using bathymetry such that the below water slopes of the fill are not steeper than about 1V:5H. This operation will be continued until fill level is above water level.

Above water level, fill will be placed using conventional earth moving equipment, (Sketch C).

#### INFILL MATERIAL

The lagoon will be infilled using inert non-waste granular material. It is anticipated that this will comprise crushed rock/sand but other suitable materials may be considered.

#### WATER CONTROL

Lagoon water levels are currently some 3.5 m below surrounding ground levels. It is not anticipated that water level in the lagoon will rise significantly during the initial hydraulic fill operation as water will be recycled and fill placement will be relatively slow. During subsequent infilling, however, water level will be controlled by means of pumping to a settlement lagoon and subsequent discharge to sewer. Application has been made to Severn Trent Water for permission to discharge effluent from the site.