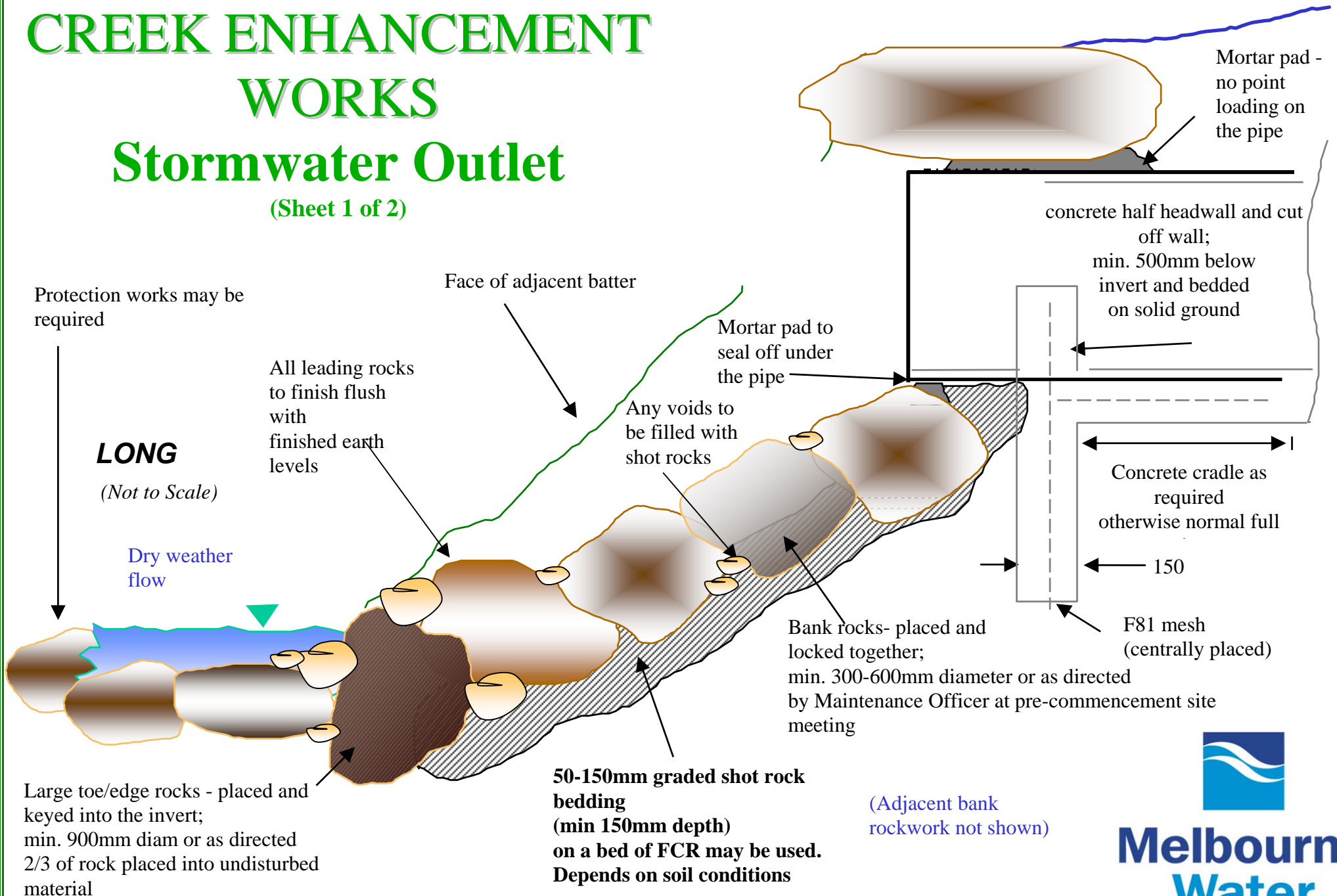


CREEK ENHANCEMENT WORKS

Stormwater Outlet

(Sheet 1 of 2)



LONG
(Not to Scale)

Protection works may be required

Dry weather flow

Face of adjacent batter

All leading rocks to finish flush with finished earth levels

Mortar pad to seal off under the pipe

Any voids to be filled with shot rocks

Bank rocks- placed and locked together; min. 300-600mm diameter or as directed by Maintenance Officer at pre-commencement site meeting

50-150mm graded shot rock bedding (min 150mm depth) on a bed of FCR may be used. Depends on soil conditions

(Adjacent bank rockwork not shown)

concrete half headwall and cut off wall; min. 500mm below invert and bedded on solid ground

Mortar pad - no point loading on the pipe

Concrete cradle as required otherwise normal full

150

F81 mesh (centrally placed)

Large toe/edge rocks - placed and keyed into the invert; min. 900mm diam or as directed 2/3 of rock placed into undisturbed material

TO BE USED AS A GUIDE ONLY

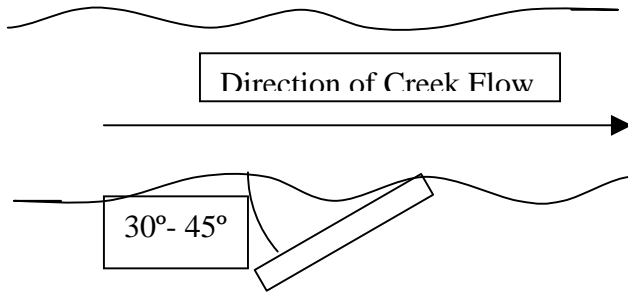


Melbourne Water

CREEK ENHANCEMENT WORKS

Stormwater Outlet

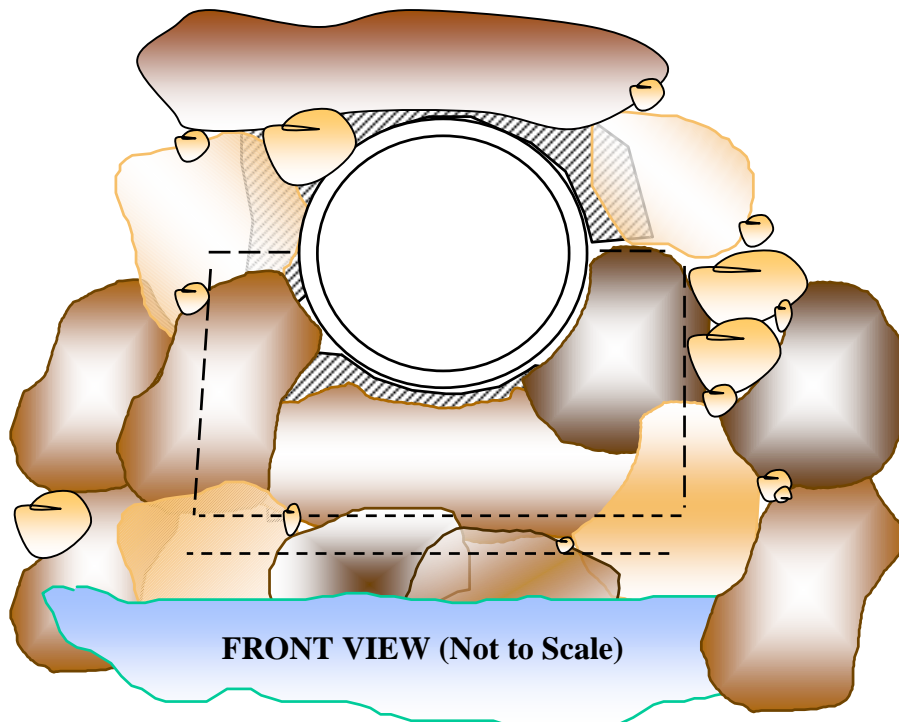
(Sheet 2 of 2)



- PROCEDURE**
- Prior to commencement of works, Maintenance Officer to be contacted to discuss on site the proposed works and "Permit to Work".
 - Excavate/box out to enable toe and perimeter rocks to be placed first.
 - Key toe rocks to two-thirds diameter into undisturbed material.
 - Infill the chute with rock spalls. The contractor shall use methods for handling and placement of rock that will avoid segregation of rock size fractions.
 - Rock shall be carefully placed into position. Rock shall not be dumped directly.
 - It is imperative that rock spalls used to form the rock chute are well graded with minimal voids to produce a blanket of interlocking rock.

GENERAL NOTES

- 1.5 m/sec max. outlet velocity ;
- Outlet pipe to be set back into the finished batter slope, pointing a max. of 45 degrees downstream ;
- Rocks abutting the pipe to have a mortar pad between the rock and the outside edge of the pipe (no point loading) ;
- Rockwork protection required for the bed and banks, from the end of pipe to the low flow water level. Rock protection required for the full erosion projection of the opposite bank and bed as required for the water flow profile when the outlet is flowing full;
- Rocks within the base to be placed on a FCR bedding to ensure the stormwater discharge is flowing over and around the rocks down into the creek, and not underneath. The remaining exposed dimension of the rockwork is to be a minimum of 150mm;
- Disturbed areas of existing bank resulting from these works are to be stabilised with revegetation.
- The outlet must be integrated into the bank and surrounding landscape to maximise aesthetics and minimise impacts
- Toe and side rocks are to adequately keyed into the bed of the creek.
- All voids shall be filled with smaller rocks.

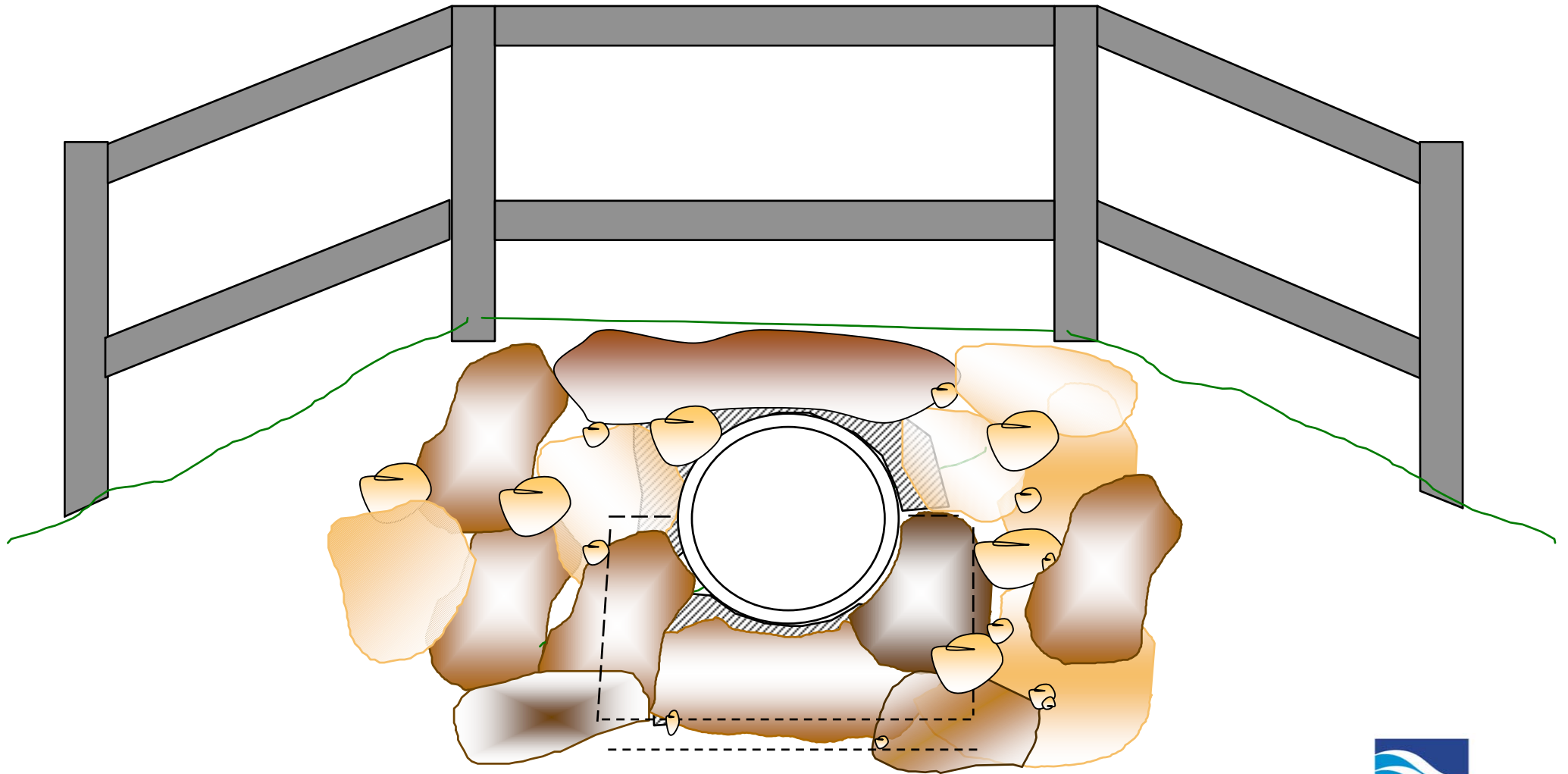


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Melbourne
Water

Pine Post and Rail Barrier to be installed around outlet structures



Note: Dimensions to suit size of outlet structure.
Rails must be permanently fixed to posts with no rotational movement.

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