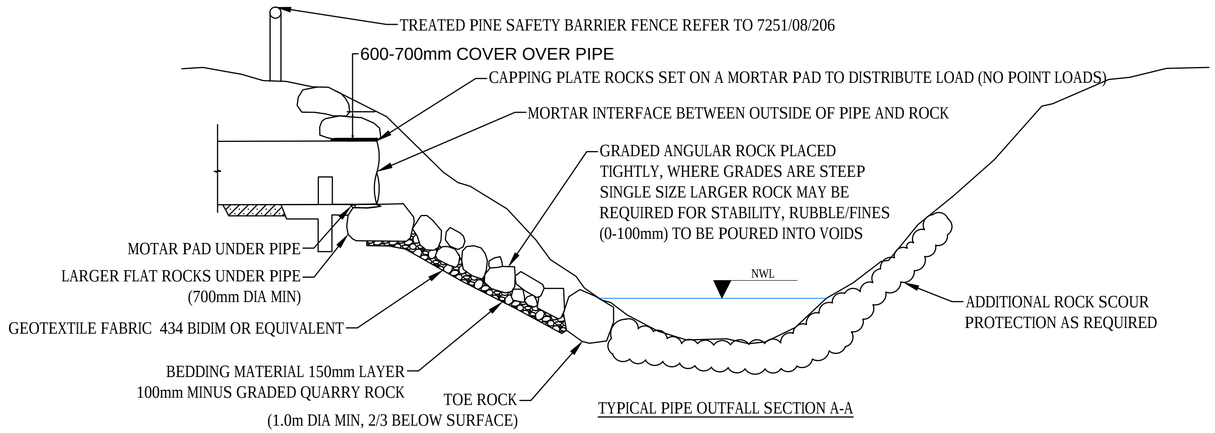
NOTE:

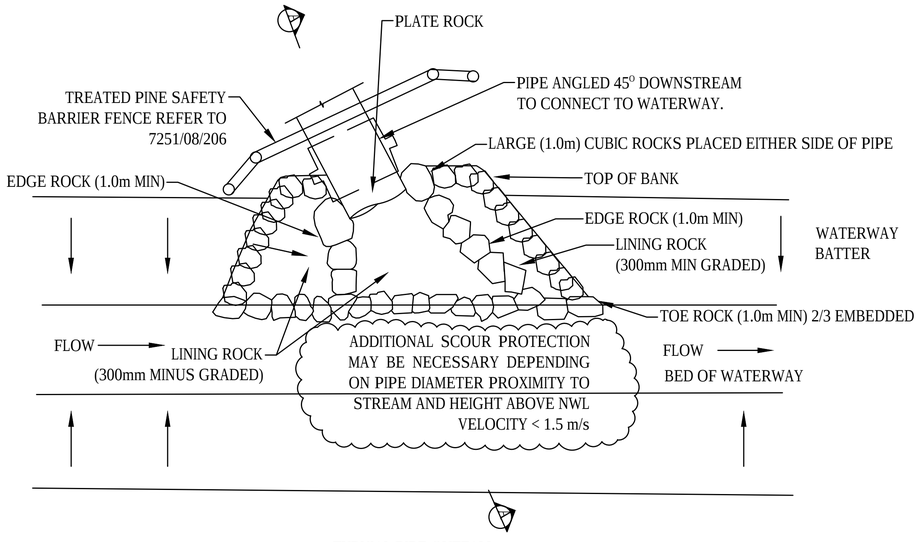
- PIPE OUTLET MUST NOT 'DAYLIGHT'. STOP PIPE AT MINIMUM COVER OF 600-700MM. OUTFALL MAY BE INSET AS SHOWN IN TOP DRAWING
- CUT OFF WALLS. BOTTOM MINIMUM 500MM INTO IN SITU. SIDE MINIMUM 1M INTO IN SITU
- FOR LARGER OUTFALL PIPES CONSTRUCT CONCRETE END WALLS (PARTICULARLY OUTFALLS LARGER THAN 1200MM DIA).
- EITHER GRADED ROCK WORK OR PLACED ROCK WORK DEPENDING ON THE GRADE AND WHETHER BELOW OR ABOVE NWL
- ENERGY DISSIPATION CAN BE ENHANCED WITH SHALLOW PLANTED INLET POOLS/SUMPS
- 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 LOADINGS);
- 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 EDGE ROCKS AE TO ADEQUATELY KEYED INTO THE BED OF THE CREEK.
- ALL VOIDS SHALL BE FILLED WITH A 0-100mm FCR MIX.
- APPROPRIATE SILT/DEBRIS CONTROL MEASURES MUST BE INSTALLED.

PROCEDURE

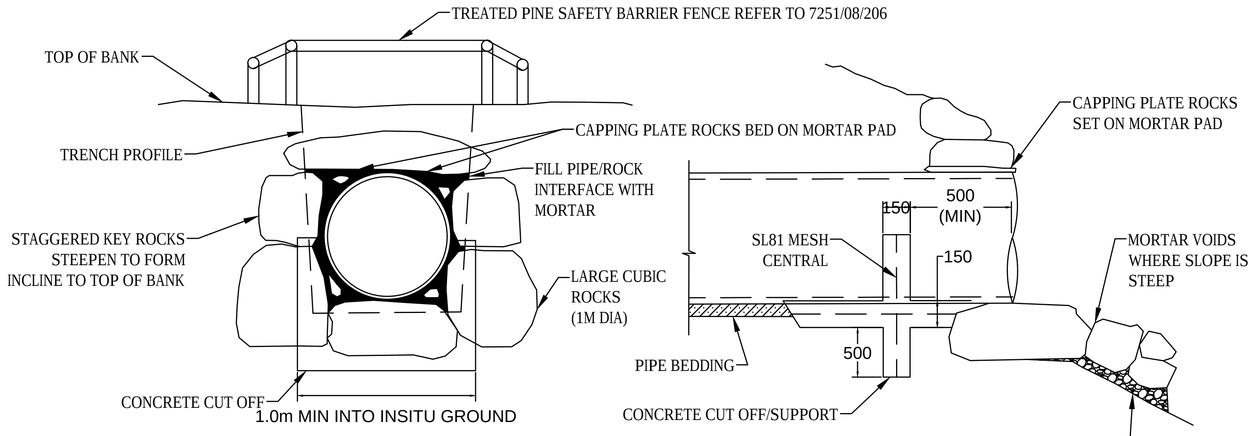
- EXCAVATE/BOX OUT TO ENABLE TOE AND MATERIAL.
- INFILL THE CHUTE WITH A 0-100mm FCR MIX. THE CONTRACTOR SHALL USE METHODS FOR HANDLING AND PLACEMENT OF ROCK THAT WILL AVOID SEGREGATION OF ROCK SIZE FRACTIONS.
- ROCK SHALL BE CAREFULLY PLACED INTO POSITION. ROCK SHALL NOT BE DUMPED DIRECTLY.
- IT IS IMPERATIVE THAT ROCK USED TO FORM THE ROCK CHUTE IS WELL GRADED WITH MINIMAL VOIDS TO PRODUCE A BLANKET OF INTERLOCKING ROCK.



TYPICAL PIPE OUTFALL SECTION A-A



TYPICAL PIPE OUTFALL



PIPE END DETAILS

REV	DESCRIPTION	COMPANY	PROJECT OR WO NUMBER	DRAWN	ENG. CHECK	PR. MAN. APP'D	DATE
B	WATERWAY DESIGN MANUAL	ALLUVIUM		JB			21/08/19
A	NOTATION AMENDMENTS	MW		MK			17/12/18

Melbourne Water

DRAFTER	DESIGNER	DESIGN MANAGER APPROVAL	PROJECT MANAGER APPROVAL
DRAFTING CHECK	ENGINEERING REVIEW		

TITLE: PIPE OUTFALL DRAWING

PROJECT DATUM

SCALE: NOT TO SCALE

Original Size: A1

MELBOURNE WATER CORPORATION

CODE	MWC DRAWING NUMBER	REV
C	7251/08/103	B