

PREPARING THE TEST AREA:

CONDUCT ALL NATIVE SOIL IDENTIFICATION TESTS ON A FRESHLY EXPOSED, DAMP, HAND-TRIMMED AREA OF THE TRENCH WALL IN THE PIPE ZONE. TAKE CARE THAT THE SOIL IN THE EXPOSED TEST AREA IS NOT COMPACTED OR LOOSENED DURING TRENCH EXCAVATION. IF THE SOIL IN THE TRENCH FLOOR AND WALL IS VERY DRY AT THE TIME THE TRENCH IS OPENED THEN FLOOD THE TEST AREA AND ALLOW TIME FOR THE WATER TO BE ABSORBED BY THE SOIL BEFORE IT IS TRIMMED AND TESTED.

IDENTIFYING CLAY SOILS:

A LUMP OF CLAY SOIL WILL BE DIFFICULT TO BREAK WHEN DRY. IT WILL BE STICKY AND NEED SOME EFFORT TO MOULD WITH THE FINGERS WHEN WET. CLAY WILL NOT WASH OFF EASILY. INDIVIDUAL CLAY PARTICLES ARE HARD TO SEE.

TESTING CLAY SOILS:

CLAY SOILS ARE BEST TESTED IN THE WALL OF THE TRENCH. THE FIST, THE THUMB OR THE THUMBNAIL ARE USED TO DETERMINE THE CONSISTENCY (STRENGTH) OF THE CLAY (SEE TABLE.)

IDENTIFYING CLEAN SAND SOILS:

THE INDIVIDUAL GRAINS OF SAND WILL BE VISIBLE TO THE EYE. A LUMP OF CLEAN SAND, IF IT CAN BE PICKED UP AT ALL, WILL CRUMBLE WITH VERY LITTLE EFFORT. CLEAN SAND WASHES OFF EASILY.

TESTING CLEAN SAND SOILS:

CLEAN SAND SOILS ARE BEST TESTED IN THE FLOOR OF THE TRENCH BY PUSHING WITH THE WHOLE BODY WEIGHT ON ONE FOOT. THE DEPTH OF THE DEPRESSION LEFT BY THE BOOT IS RELATED TO THE DENSITY OF THE SAND (SEE TABLE). TAKE CARE TO ENSURE THAT THE SAND IN THE TRENCH FLOOR WAS NOT COMPACTED OR LOOSENED DURING THE EXCAVATION OF THE TRENCH OR THE TRIMMING OF THE TEST AREA.

TESTING ROCK:

THE RECOMMENDED FIELD IDENTIFICATION TESTS FOR ROCK RELY ON OBSERVING THE EASE WITH WHICH THE ROCK CAN BE DUG WITH A PICK, AND ESTIMATING THE SPACING OF THE JOINTS IN THE ROCK. (JOINTS ARE COMMONLY CALLED CRACKS OR BREAKS). THE SPACING BETWEEN JOINTS IS IMPORTANT BECAUSE THE ALLOWABLE BEARING PRESSURE ON ROCK IS USUALLY CONTROLLED BY THE JOINTS IN IT, RATHER THAN THE INHERENT STRENGTH OF A FRAGMENT OF ROCK. JOINTS MAY BE TIGHTLY CLOSED (LIKE HAIRLINE CRACKS), BUT CAN ALSO BE OPEN (FILLED WITH AIR) OR FILLED WITH SOFT CLAY OR OTHER SOIL.

SOIL CLASSIFICATION	FIELD IDENTIFICATION TEST	AHBP kPa ▲
CLAY SOILS	VERY SOFT	< 50 *
	SOFT	< 50 *
	FIRM	< 50 *
SANDS	STIFF	50
	VERY STIFF	100
ROCK	HARD	200
	LOOSE CLEAN SAND	< 50 *
	MEDIUM-DENSE CLEAN SAND	50
ROCK	DENSE CLEAN SAND OR GRAVEL	100
	BROKEN OR DECOMPOSED ROCK	100
ROCK	SOUND ROCK	200
	UNCOMPACTED FILL DOMESTIC REFUSE	< 50 *

LEGEND

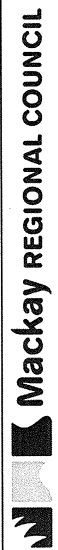
- ▲ AHBP ALLOWABLE HORIZONTAL BEARING PRESSURE FOR:
 - 10 mm MOVEMENT.
 - CENTRE OF THRUST 800 mm BELOW THE NATURAL SURFACE LEVEL.
 - HIGH WATER TABLE.
- * SPECIAL GEOTECHNICAL ASSESSMENT REQUIRED

MRC STANDARD DRAWINGS SUPERCEDES NS44 STANDARD DRAWINGS

COMMERCIAL SERVICES

EXECUTIVE MANAGER
MACKAY WATER & WASTE
RFBQ 7506

27 MAY 09
DATE
JASON DEVITT



STANDARD DRAWING
SOIL CLASSIFICATION GUIDE -
LINES & ALLOWABLE BEARING
PRESSURES FOR ANCHORS

DRAWING No.
A3-04276

AMEND. **B**

SHEET 1 OF 1

DRAWING FILE NAME M:\Engineering Services\Technical Services\Design\Projects\Standard drawings\Mackay Water\WSAA MRC\WAT CODE\A3-04276A	WSAA NO. WAT-1200
SURVEY N/A	DATE OF LAST EDIT May 21, 2009
SURVEY FILE No N/A	JOB No
LEVEL DATUM A.H.D.	MERIDIAN MGA-55
APPVD.	DESCRIPTION

B S/5	AMEND MCR SKN.	JC
A	MAY08	TFER TO MRC T.BLOCK
0		WSAA ORIG
NO.	DATE	DESCRIPTION