

DETAILS FOR INSPECTION AND TEST PLAN

GROUTED ANCHOR TEST SPECIFICATION

TEST TYPE

1. ACCEPTANCE TESTS IN ACCORDANCE WITH SECTION 5 OF THE STANDARD BS EN ISO 22477-5 ARE TO BE CARRIED OUT ON PRODUCTION ANCHORS IN ACCORDANCE WITH TEST METHOD 1.
2. THE PROCEDURE FOR UNDERTAKING ACCEPTANCE TESTS ACCORDING TO TEST METHOD 1 IS DESCRIBED IN SECTION 8.4 OF THE STANDARD BS EN ISO 22477-5.
3. THE PROOF LOAD FOR THE TESTS IS TAKEN AS THE CALCULATED WORKING LOAD OF THE ACTIVE ROCKFALL NETTING FIXING ANCHOR.
4. THE TESTS SHALL BE CARRIED OUT TO A PROOF LOAD (Pp) OF **70kN**.

MEASUREMENT AND RESULTS

5. THE TEST INVOLVES MEASUREMENT OF TENDON END DISPLACEMENT VERSUS APPLIED LOAD FOR EACH LOAD STEP, AND AT THE PROOF LOAD Pp, MEASUREMENT OF TENDON END DISPLACEMENT VERSUS TIME.
6. THE FOLLOWING MEASUREMENT PROCEDURE SHALL BE FOLLOWED FOR PERFORMING ACCEPTANCE TESTS:

• THE AXIAL LOAD IS TO BE APPLIED INCREMENTALLY IN FIVE STAGES

• THE LOAD IS TO BE MAINTAINED CONSTANT FOR THE SPECIFIED PERIOD OF TIME

TEST FREQUENCY AND LOCATION

7. 2% OF THE TOTAL NUMBER OF ROCKFALL NETTING FIXING ANCHORS (WITH A MINIMUM OF THREE TESTS) SHALL BE CARRIED OUT.
8. ANCHORS TO BE TESTED SHALL BE SPACED EVENLY THROUGHOUT THE INSTALLATION.

CEMENT GROUT TEST SPECIFICATION

9. CEMENT GROUT SHALL BE TESTED IN ACCORDANCE WITH BS EN 196 (ALL PARTS).
10. AT LEAST ONE SAMPLE SHALL BE TAKEN FROM EACH FRESH GROUT BATCH.
11. THE GROUT SHALL NOT BE SUBJECT TO BLEEDING IN EXCESS OF 2% BY VOLUME THREE HOURS AFTER MIXING OR 4% MAXIMUM WHEN MEASURED AT 20°C IN A COVERED GLASS OR METAL CYLINDER OF 100mm INTERNAL DIAMETER AND WITH A GROUT DEPTH OF APPROXIMATELY 100mm. IN ADDITION THE WATER SHALL NOT BE RE-ABSORBED WITHIN 24 HOURS.
12. A SET OF THREE GROUT CUBES FROM EACH SAMPLE OF GROUT TAKEN SHALL BE PREPARED FOR CUBE STRENGTH DETERMINATION. A MINIMUM UNCONFINED COMPRESSIVE STRENGTH OF 40N/mm² AT 28 DAYS IS REQUIRED WHEN SAMPLES ARE MANUFACTURED, CURED AND TESTED IN ACCORDANCE WITH BS 1881-113:2011.

MATERIAL CERTIFICATION

13. MATERIAL CERTIFICATES FOR ALL ELEMENTS ARE TO BE PROVIDED TO THE ENGINEER PRIOR TO IMPLEMENTATION OF THE WORKS.

PERIOD(S) OF OBSERVATION										
LOAD LEVEL (% Pp)	LOAD (kN)	DISPLACEMENT (mm)								
		0 Secs	1 Min.	2 Mins.	3 Mins.	4 Mins.	5 Mins.	7 Mins.	10 Mins.	15 Mins.
10	7									
40	28									
55	39									
70	49									
85	60									
100	70			IF TOTAL DISPLACEMENT BETWEEN 2 AND 5 MINS IS ≥0.2mm, OBSERVATIONS SHALL BE TAKEN AT 7, 10 AND 15 MINS.						
10	7									

DO NOT SCALE FROM THIS DRAWING

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION.

RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DRA001.

CONSTRUCTION

1. RESTRICTED SITE / WORKING AT HEIGHT
2. INTERFACE WITH PUBLIC
3. NEAR TO WATERWAYS / TIDAL WORKING
4. GROUND INSTABILITY
5. SERVICES
6. UNSTABLE STRUCTURES
7. BOUNDARY MEASURES / VANDALISM
8. TRIP HAZARD
9. CORROSION
10. SITE DESIGNATIONS
11. ECOLOGY



MAINTENANCE AND INSPECTION

1. RESTRICTED SITE
2. INTERFACE WITH THE PUBLIC
3. TRIP HAZARD



OPERATION

1. TRIP HAZARD

FOR INFORMATION RELATING TO USE, CLEANING AND MAINTENANCE SEE THE HEALTH AND SAFETY FILE

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

NOTES

1. THIS TESTING PRO-FORMA MAY BE USED AS A TEMPLATE, OR THE CONTRACTOR MAY USE THEIR OWN FORMAT.

Rev	Date	Description	Drawn	Chkd	Appd

FOR LISTED BUILDING CONSENT

FAIRHURST

4th Floor, 300 Bath Street
GLASGOW G2 4JR
Tel: 0141 204 8800



DYSART HARBOUR AND TUNNEL
ROCK SLOPE REMEDIAL WORKS

INSPECTION AND TEST PLAN
DETAILS

Drawn	Date	Designed	Date
AC	21/02/25	HL	21/02/25
Checked	Date	Approved	Date
HL	21/02/25	ARB	21/02/25

A3	Scale	NTS	Fairhurst Ref	160757-9112
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Drawing Number	Revision
160757/9112	-