REF No 22162

MRF-42 June 98

borehole no: BH42
sheet 1 of 3

engineering log – borehole

job no: file: 121518

project: MUSSELROE WIND FARM: PRELIMINARY GEOTECH INVESTIGATIONS
borehole location: GPS: 592973 E 5482218 N

hole commenced: 6/4/05
hole completed: 6/4/05
supervised by: [illegible]
log checked by: [illegible]

drill model and mounting: CMU MK 600 TRACK
hole diameter: 150 mm
slope: VERT deg.
bearing: deg.
R.L. surface: ~15 m
datum: NOT SURVEYED
operator: G BAKER.

method	penetration 1 2 3	support	water	notes samples, tests, etc	R.L. depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
HOLLOW FLIGHT AUGER								TOPSOIL, SAND, fine grained, brown, root fibres.	D	L		
				N* = 10 (3,5,5)	1.0		SM	SAND, fine grained, grey, some coarser quartz & angular material	D	L		No sample taken.
			▽	N* = 16 (2,5,11)	2.0			SAND, fine grained, light brown; becoming darker brown	M	L		
							GC CH	CLAY, fine grained, grey contains gravels sub rounded, (completely weathered granite)	M	MD	× ×	
					3.0			CONTINUED ONTO CORED BOREHOLE SHEET				

key

method
AS auger screwing*
AD auger drilling*
R roller/tricone
W washbore
CT cable tool
* bit shown by suffix:
B – blank bit
V – "V" bit
T – TC bit
e.g. ADT

support
C casing
M mud

penetration
no resistance ranging to refusal

water
10 Oct, 73 water level on date shown
water inflow
water outflow

notes – samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test: figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet
< PL
= PL
> PL

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense
D – dense
VD – very dense

A-1316

M & R F8

borehole no: BH42

sheet 2 of 3

engineering log — cored borehole

File No. 121518

project: MUSSELROE WIND FARM: PRELIMINARY GEOTECH INVESTIGATIONS.

borehole location: GPS: 592973 (E) 5482218 (N)

hole commenced: 6/4/05

hole completed: 6/4/05

supervised by: E. BIRCH

log checked by: T. BOWLING

drill model and mounting: CMV MK600 TRACK slope: VERT deg.

barrel type and length: HQTT 2.6m fluid bearing: deg.

R. L. surface: ~15 m

datum: NOT SURVEYED Driller G BAKER.

drilling information				rock substance			rock mass defects	
method	case-lift	water	R.L. depth metres	graphic log / core loss	substance description: rock type, grain characteristics, colour, structure, minor components.	weathering	strength Is(50) EL VL L M H VH EH	defect spacing mm 30 60 200 600 2000 >2000	defect description: thickness, type, inclination, planarity, roughness, coating. particular / general
			1.0						
			2.0		CONTINUED FROM BOREHOLE SHEET				
			3.0		GRANITE; coarse grained clay fines, plastic, orange	EW			
				CORE LOSS		HW			
			4.0	CORE LOSS					
HQTT 2.6m BARREL			5.0						30 blows for 12mm only bouncing.
			6.6						4.95 vertical to sub vertical joints closed.
			7.0						massive
			8.0						very soft & crumbly

N^{x} = 24 (5,10,14)

N^{x} > 60

$I_{s(50)}$ = 0.09

$I_{s(50)}$ = 0.09

key

method

AS auger screwing
AD auger drilling
R roller/tricone
W washbore
NMLC NMLC core drilling

case-lift

casing used
barrel withdrawn

water

10 Oct, 73 water level date shown
water inflow
partial drilling water loss
complete drilling water loss

graphic log/core loss

core recovered (hatching indicates material)
no core recovered

weathering

Fr — fresh
SW — slightly weathered
MW — moderately weathered
HW — highly weathered
EW — extremely weathered

strength (Indirect tensile strength)

EL — extremely low
VL — very low
L — low
M — medium
H — high
VH — very high
EH — extremely high

M & R F8

borehole no: BH42

sheet 2 of 3

engineering log — cored borehole

File No. 121518

project: MUSSELROE WIND FARM: PRELIMINARY GEOTECH INVESTIGATIONS

borehole location: GPS: 592973(E) 5482218(N)

hole commenced: 6/4/05

hole completed: 6/4/05

supervised by: E BIRCH

log checked by: T BOWLING

drill model and mounting: STRATA MK 600 TRACK

slope: VERT deg.

R. L. surface: ~15 m

barrel type and length: HQTT 2.6m

fluid

bearing: deg.

datum: NOT SURVEYED

Driller G BAKER

drilling information				rock substance					rock mass defects	
method	case-lift	water	R.L. depth metres	graphic log / core loss	substance description (rock type: grain characteristics, colour, structure, minor components.)	weathering	strength Is (50) EL VL L M H VH EH	defect spacing mm 30 100 300 >300	defect description (thickness, type, inclination, planarity, roughness, coating.) particular	general
HQTT 2.6m BARREL			9.0		GRANITE, coarse grained clay silty lines, pinky green grey in colour.	HW			sub vertical joints with fill	
	$I_s(50) = 1.91$ $I_s(50) = 2.22$		10.0							tends to break sub horizontally
			11.0			MW HW			11.15 45° open joint closed 11.40 sub vertical joint closed	11.05 – 12.10 crumbles
			12.0							

key

method

AS	auger screwing
AD	auger drilling
R	roller/tricone
W	washbore
NMLC	NMLC core drilling

case-lift

- casing used
- barrel withdrawn

water

- 10 Oct, 73 — water level, date shown
- water inflow
- partial drilling water loss
- complete drilling water loss

graphic log/core loss

- core recovered (hatching indicates material)
- no core recovered

weathering

Fr	fresh
SW	slightly weathered
MW	moderately weathered
HW	highly weathered
EW	extremely weathered

strength (Indirect tensile strength)

EL	extremely low
VL	very low
L	low
M	medium
H	high
VH	very high
EH	extremely high