BGS ID: 728397 : BGS Reference: SK47SE64
British National Grid (27700) : 445200,372089

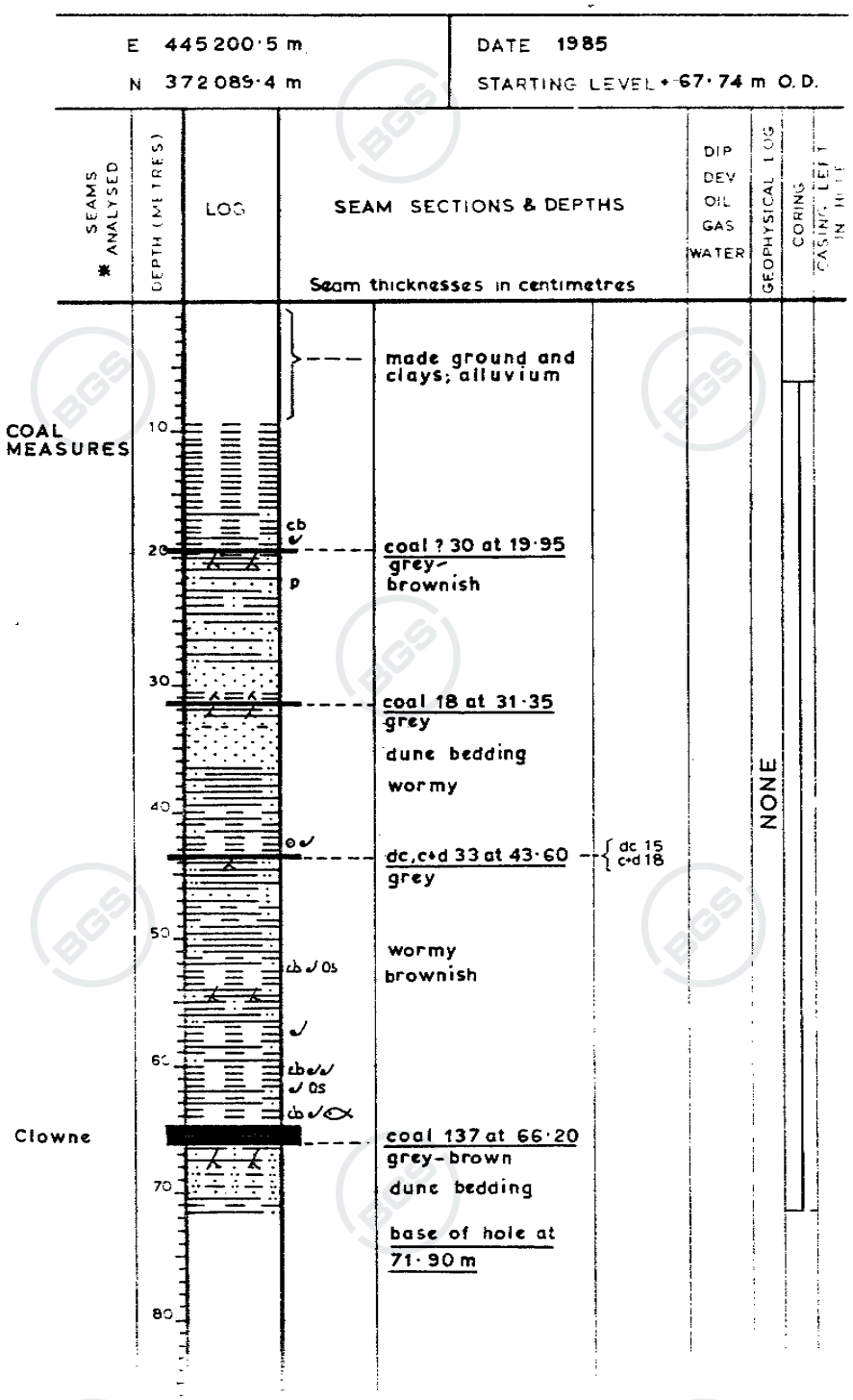
54A SK 47 SE/64 54A

MARKHAM COLLIERY

Borehole No.1 for proposed surface drift (1985)

E 445200·5 m
N 372089·4 m

DATE 1985
STARTING LEVEL +67·74 m O.D.



SK 47 SE/64

Section of: MARKHAM COLLIERY, Borehole No. 1
for proposed surface drift (1985)

Purpose: Site investigation

(Nat. Grid, Sheet & Qtr.)	B/H REG. NO.
SK47SE	54A

Exact Site: E.445200.5
N.372089.4

Level at which bore commenced relative to O.D. + 67.74m.

Date of Drilling: 7.3.85 to 13.3.85

Driller: Soil Mechanics Ltd.

Core examined by D.J. Green, N.C.B. Geologist

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS m	THICKNESS cm	DEPTH m	DEPTH cm
	See also the geotechnical log by Soil Mechanics Ltd.				
	Open hole to 6.00 m			0	00
MADE GROUND	tip material; boulders and red shale	4	50		
	water at 4 m			4	50
	clay, reddish-brown, firm; inclusions of tip material, mudstone and ironstone	1	50		
	Cores from 6.00 m			6	00
	Clay, reddish-brown, stiff, with coal and sandstone fragments	1	55		
(approx. boundary)	(recovery, 6.0 m - 7.55 m: 46%)			7	55
ALLUVIUM	Clay, stiff; grey and greenish grey, with occasional sandstone inclusions	1	00		
	(poor recovery)			8	55
	Clay, stiff, greyish, some ochre staining, sandy in parts; soft and wet	1	00		
(approx. boundary)	(poor recovery)			9	55

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COAL MEASURES						
Mudstone	laminated; weathered (0.65 recovered)	0	80		10	35
Mudstone	laminated; slightly weathered; (1.50 recovered)	2	20		12	55
Mudstone	laminated; highly weathered (1.07 recovered)	1	20		13	75
Mudstone	locally silty, occasional ironstone bands; weathered (1.30 recovered)	1	80		15	55
Core lost		0	70		16	25
Mudstone	locally silty; laminated; locally weathered	0	45		16	70
Mudstone	highly carbonaceous, shaly	0	15		16	85
Mudstone	silty, laminated; occasional ironstone bands; core completely fragmented (0.30 recovered)	1	70	approx.	18	55
Mudstone	locally silty, laminated, weathered	0	90	approx.	19	45
Mudstone	Carbonaceous; laminated; occasional thin shelled non-marine lamellibranchs	0	20	approx.	19	65
	detached					
COAL	mainly bright (0.06 recovered, cylinder); thickness uncertain contractor reports 0.30 cm attached	? 0	30	approx.	19	95

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Seatearth:				
Mudstone	unlaminated, grey; occasional irregular coaly laminae; common small polished surfaces; common roots; carbonaceous from 20.05 to 20.20			
		0	30	
				20 25
Siltstone	fine; locally muddy; brownish grey; unlaminated, occasional small polished surfaces; common roots	1	10	
				21 35
Siltstone	fine to medium; poorly laminated; grey; occasional roots (0.51 recovered)			
Sandstone	fine, massive; occasional root traces (0.42 recovered)	1	70	
Siltstone	medium to fine, poorly laminated; occasional ironstone bands; common plants including Calamites (0.50 recovered)			
				23 05
Siltstone	medium; strong, slurried texture	0	95	
				24 00
Siltstone	fine to medium; poorly laminated; common plant debris	0	45	
				24 45
Siltstone	fine with common sandstone fine laminae (70:30), locally ripple bedded	0	15	
				24 60
Sandstone	fine to medium with occasional thin siltstone fine laminae; common micaceous carbonaceous planes	0	26	
				24 86

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Siltstone	fine, laminated; abundant comminuted plant debris	0	58		25	44
Sandstone	fine to medium; common micaceous carbonaceous planes, locally ripple bedded	0	69		26	13
Siltstone	fine with common sandstone fine laminae and layers (60:40)	0	22			
	(100% recovery)				26	35
Siltstone	fine with common irregular sandstone fine laminae and layers (70:30), common load and pouch structures	0	54		26	89
Sandstone	fine with occasional discontinuous micaceous carbonaceous planes, becoming common in basal 0.10; ripple bedded towards the base; water	0	40		27	29
Siltstone	fine, laminated, occasional thin ironstone bands	0	32		27	61
Siltstone	fine to medium with occasional sandstone fine laminae	0	06		27	67
Core lost		0	82		28	49
Sandstone	fine to medium; occasional micaceous carbonaceous planes, sub-vertical unmineralised joint from 29.05 to base; local vague ripply bedding	1	59		30	08
Seatearth:						
Siltstone	fine, locally muddy; grey; unlaminated; common roots	0	47		30	55

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Mudstone	silty; grey; unlaminated; common small ironstone nodules; common roots including Stigmaria passage	0 40		30 95
Mudstone	grey; unlaminated; common roots detached	0 22		31 17
COAL	Coal, mainly bright 6(cylinders) Coal, mainly bright 10(fragments) Coal, bright 2(cylinder) attached	0 18		31 35
Seatearth:				
Mudstone	silty; grey; unlaminated; common irregular polished surfaces; common small ironstone nodules towards the base; abundant roots	0 43		31 78
Core lost		0 41		32 19
Siltstone	fine to medium; unlaminated; grey; abundant roots	0 63		32 82
Sandstone	fine with common siltstone fine laminae and thin layers (80:20) common micaceous carbonaceous planes; common roots, becoming less common towards the base	0 73		33 55
Sandstone	fine with occasional continuous and discontinuous micaceous carbonaceous planes; occasional iron rich laminae; vague ripples near the top; dune bedded in basal 1.30	2 52		36 07
Siltstone	fine with common sandstone fine laminae; core completely fragmented	0 17		36 24

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Core lost		0	11		
				36	35
Siltstone	fine with common sandstone fine laminae and thin layers 70:30, becoming 80:20 towards the base	0	20		
				36	55
Siltstone	fine to medium; laminated; occasional thin ironstone bands; occasional plant remains	3	40		
	passage			39	95
Mudstone	silty; laminated; occasional thin ironstone bands; locally common worm tracks	2	35		
				42	30
Mudstone	dark, slightly carbonaceous; laminated; common worm tracks locally common Planolites cf. ophthalmoides	0	25		
				42	55
Mudstone	carbonaceous, becoming silty towards the base, shaly, occasional non-marine lamellibranchs with mineralised shells including Anthracosia; occasional P.cf. ophthalmoides near the top; occasional pyritic burrows; occasional pyritic plant remains	0	72		
				43	27
	detached				
COAL AND DIRT	dirty coal 4(fragments) dirty coal 11(cylinders) coal and dirt 18(broken cylinders)	0	33		
	detached			43	60
Seatearth:					
Mudstone	unlaminated, grey; abundant roots	0	10		
				43	70
Siltstone	fine with common sandstone fine laminae and layers 70:30, becoming 80:20 towards the base; common roots	0	90		
				44	60

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Siltstone	fine to medium; unlaminated; grey; common comminuted plant debris; common roots	0	36	44	96
Siltstone	fine to medium with common sandstone fine laminae (80:20); common comminuted plant debris; occasional roots	0	19	45	15
Siltstone	fine to medium with occasional sandstone fine laminae (80:20); occasional roots including Stigmaria	0	75	45	90
Siltstone	fine to medium; poorly laminated, common comminuted plant debris	0	26	46	16
Sandstone	fine with occasional siltstone fine laminae and lenses (90:10) ripple bedded	0	38	46	54
Siltstone	fine, locally muddy, laminated sharp	0	75	47	29
Mudstone	silty, occasional minor siltstone fine passages, laminated; occasional plant remains	1	92	49	21
Siltstone	fine, locally muddy, laminated; occasional plant remains	2	14	51	35
Mudstone	silty, laminated; occasional thin ironstone bands; locally common worm tracks; occasional plant debris	1	12	52	47
Mudstone	carbonaceous, shaly; occasional small, irregular polished surfaces; occasional ostracods; occasional non-marine lamellibranchs including Naiadites	0	30	52	77

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Mudstone	dark, slightly carbonaceous; laminated; occasional burrows	0	10	52	87
Mudstone	laminated; common ironstone bands near the base, locally common worm tracks	0	85	53	72
Seatearth					
Siltstone	fine to medium; brownish; unlaminated; vague root traces	1	08	54	80
Siltstone	medium, unlaminated; grey; common roots	0	50		
	passage			55	30
Siltstone	medium with occasional irregular sandstone fine laminae (70:30); common roots	0	50	55	80
Siltstone	fine with occasional irregular sandstone fine laminae and patches (80:20); common small load-and-pouch structures; common small ironstone nodules in basal 0.10; rare roots	0	87	56	67
Siltstone	fine to medium; poorly laminated; occasional ironstone bands, occasional roots	0	13	56	80
Mudstone	silty, dark; laminated; occasional thin ironstone bands; locally common worm tracks	0	70	57	50
Mudstone	dark, laminated; common non-marine lamellibranchs including Anthracosia	0	15	57	65
Mudstone	silty; laminated; occasional thin ironstone bands; occasional sub-vertical unmineralised joints; locally common worm tracks; scattered plant debris	2	15	59	80

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Mudstone	highly carbonaceous; shaly; locally abundant well preserved non-marine lamellibranchs including Anthracosia	2	08		
				61	88
Siltstone	fine; poorly laminated; becoming muddy towards the base; locally abundant non-marine lamellibranchs including Anthracosia; locally abundant ostracods	0	30		
	passage			62	18
Mudstone	silty; dark; laminated; local slightly carbonaceous passages; abundant non-marine lamellibranchs including Anthracosia; locally common ostracods	0	92		
	passage			63	10
Mudstone	slightly carbonaceous; laminated; common non-marine lamellibranchs; occasional ostracods				
	passage	0	30		
				63	40
Mudstone	carbonaceous; shaly; common non-marine lamellibranchs near the top, occasionally below; common fish debris	1	09		
				64	49
Mudstone	silty, carbonaceous; laminated; becoming highly carbonaceous and shaly towards the base; occasional pyritic plant remains in basal 0.05	0	34		
				64	83
	attached				
CLOWNE SEAM	Coal, mainly bright 6(Broken cylinders) Coal, mainly bright 90(cylinders) Coal, mainly bright 6(Broken cyls & fragments) Coal, mainly bright 35(fragments) 137 cm	1	37		
	detached			66	20
Seatearth:					
Siltstone	fine; grey; unlaminated; common roots	0	03		
				66	23

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Mudstone	pale grey to brownish; unlaminated; common roots	0	17	66 40
Siltstone	medium to coarse; pale grey; unlaminated; occasional ironstone nodules; common roots	0	44	66 84
Sandstone	fine; grey; unlaminated; common roots	0	14	66 98
Sandstone	medium; unlaminated; grey, common roots	0	28	67 26
Siltstone	fine with common sandstone fine lenses (70:30); common roots	0	32	67 58
Sandstone	fine to medium; common irregular micaceous carbonaceous planes; vague ripples in basal 0.20; rare roots near the top	0	78	68 36
Siltstone	fine and sandstone fine, irregularly interlaminated and interlayered; common large load-and-pouch structures	0	38	68 74
Sandstone	fine with occasional siltstone fine laminae (90:10); strong; common micaceous carbonaceous planes; locally ripple bedded	0	47	69 21
Siltstone	fine with common sandstone fine laminae and lenses (90:10); occasional ironstone lenses	0	25	69 46
Siltstone	fine and sandstone fine (50:50); common micaceous carbonaceous planes; ripple bedded throughout with locally well developed ripple sets; minor load-and-pouch structures in top 0.10	0	32	69 78

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Sandstone	fine to medium; common micaceous carbonaceous planes; locally dune bedded	0	67		
	passage			70	45
Siltstone	fine with common sandstone fine laminae and lenses, 70:30 becoming 80:20 towards the base; common ripples; occasional minor erosional surfaces				
	passage	0	25		
				70	70
Siltstone	fine, locally muddy; laminated; occasional thin ironstone bands; occasional plant debris	0	30		
				71	00
Mudstone	silty, laminated; occasional plant debris	0	30		
				71	30
Siltstone	fine, laminated, rare plant debris	0	60+		
				71	90

Base of hole at 71.90 m

Photographs of the cores are available in the report by Soil Mechanics Ltd. on the proposed Markham Colliery surface drift (1985)

RP/0108r/PH